Monaco Products Catalog

Monaco Enterprises, Inc.

Contact Information

Monaco Enterprises, Inc. P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Identification

Monaco Product Catalog 2023 Edition
Release Date 5/23

Trademark Notice

The Monaco logo and MEI are registered trademarks of Monaco Enterprises, Inc.
All other logos and trademarks are the property of their respective organizations.

Copyright Notice

©2023, Monaco Products Catalog, All Rights Reserved.

Content

This index is not intended to cover all details or variations in equipment and is not meant to provide a guide for configuration, design, or implementation of the devices described. The information in this catalog can often change without notice. If you require additional information, contact Monaco Enterprises to answer your questions or to request an updated index.

A Message from Monaco Enterprises

Monaco Enterprises, Inc. has been providing quality alarm system products since 1971. We specialize in developing technologically advanced, reliable fire, security, and mass notification systems.

Monaco's goal is to provide unsurpassed customer support. We serve our customers by helping them identify their needs and by providing the products that best meet their unique applications.

This catalog represents a sample of our products. Contact us so we can assist you in selecting the products that best meet your base's particular needs for various applications—fire detection, fire management, mass notification, reporting and receiving, force protection, security, and more.

Contact our Customer Service Department at (509) 926-6277 to receive a current price list or for information about quantity pricing, delivery, local representation, and training programs.

How to Use this Catalog

This is an electronic document with specific "go to" links without page numbers. It serves the user best on a computer.

- If you know the name or product type, go to the Table of Contents - Index by Product Name section, locate the product name of interest, then click on the product name to advance to product's cut sheet.
- If you want to search by product number, go to the Index by Product Part Number section, locate the product number of interest, and click on one of the cut sheets described in the sub-list below the product number of interest. This will advance you to the part number of interest on the cut sheet described in the sub-list.
  - If there is not a sub-list of cut sheet descriptions below the product number of interest, click on the product number to advance to the product of interest's cut sheet.

Table of Contents - Index by Product Name

Section 1. Central Receiving Systems

Monitor, 23.5 in., IPS. 192-048-01
Monitor, 55 in. LED. 192-055-10
KVM Rack-mount Extender Tray 200-477-00
General Purpose Input/Output (GPIO) for D-21 . . . . . 227-045-01, 227-056-00
D-21 View Generator. 227-062-30
Remote Display Controller (for use with View Generator). 227-063-01
D-21 Solid-State Weather Station Kit 299-016-01
D-21 Station Alerting System Color Annunciator. 710-073-00, 710-073-01, 369-035-00, 369-035-01
D-21 System VoIP Link Assembly with Desktop Microphone. 122-018-04
D-21 System VoIP Link Assembly with Desktop Microphone. 122-018-05
D-21 System UPS Network Monitoring For Workstation Desks 404-167-00
D-21 System UPS Network Monitoring For Racks. 404-168-00
Color Laserjet Printer with Ethernet Adaptor 205-064-01
D-21 System Point Reporting Upgrade Kit 207-946-00
D-21 Active911 Notification Interface 207-973-22

D-21 Emergency Management

D-21 Incident and Emergency Management Systems. 227-010-xx, 227-011-xx, 227-012-xx, 227-020-10, 227-020-13
Repair by Replacement/Technology Upgrade. 227-020-xx
D-21® EM Mobile Client Laptop 227-098-30
D-21® EM Mobile Client Tablet. 227-099-30

D-21 Fire – Reserved

D-21 MNS – Reserved

D-21 Security – Reserved

D-21 Tone Alerting Panel

D-21 Tone Alerting Panel 227-095-00

Rack-mount Cabinets

Rack Cabinets 104-011-00, 104-012-00

Rack-mount Shelves

Rack Shelf 081-214-02
Rack Shelf 081-215-01

Rack Blank Panels

Rack Blank Panel. 085-214-0x

Network Switching

Switch, Industrial, 5 Port Ethernet. 200-438-00
Fiber Module, Transceiver Hot Plug for DODIN Switch 200-444-02
Fiber Module, 1000BASE-LX, Hot Plug, SFP 200-444-06
Fiber Module, Optical Transceiver Hot Plug, SFP 200-457-00
KVM Switch 200-461-00
Ethernet Switch Assembly with 24-Port SFP, Managed Layer 3 200-471-11

Switch Assembly, 24 Port, 4SFP, Managed, Layer 2, POE, 1U 200-481-01
Switch Assembly, 48 Port, 2 SFP+, Managed, Layer 2, 1U. 200-482-01
Switch Assembly, 12 Port, SFP, Managed, Layer 3, 1U, DODIN. 200-484-01
Switch Assembly, 12 Port, SFP, Managed, Layer 3, 1U 200-485-01
Switch Assembly, 24 Port, 8SFP+, Managed, Layer 2/3, DoDIN 200-491-01
Switch Assembly, 24 Port, 4 SFP+, Managed, Layer 2/3, DoDIN 200-498-01
Switch Assembly, 48 Port, 4 SFP+, Managed, Layer 2/3 200-501-01

Section 2. Central Receiving Supplemental Equipment

Indoor/Outdoor PA Speaker, White, Curved Design 124-077-00
Outdoor PA Speaker Horn, Surface-mount, Bidirectional Bells 124-087-01
Indoor PA Speaker, 2 ft. Square, White, Ceiling Tile 124-089-00
Indoor PA Speaker, 8 in. Round, White, Ceiling-mount 124-090-00
Radio Interface, Digital Signal Processor, 4-wire 194-509-01
Network Time Protocol (NTP) Time Server 194-518-01, 194-518-11
VoIP Module for Live Voice MNS 194-523-01
Ethernet Firewall, 8-Port, 10/100/1000, VPN 200-442-21
Digital Voice Recorder. 203-033-01
Digital Voice Recorder. 203-058-08, 203-058-16
Switch, Service Bypass Panel. 392-100-00
UPS External Battery Pack. 403-020-00
UPS, Network Devices, 2000VA, 120V, 2U 404-099-10
UPS, 1500VA, 120V, Rack Tower, LCD. 404-105-00
UPS Battery Backup, 1500VA, 230V 404-112-01

Live Voice Radio Switch

Live Voice Input Radio Switch 194-541-01

Section 3. Building Transceivers

BT2-3 to BT-X Conversion Kit, Large or Small Enclosure. 227-646-xx
BT2 to BT-X Conversion Kit, Standard Enclosure 227-647-xx

BT-XF (Fire Only)

BT-XF, BT-XFH, BT-XFH EN 227-600-xx, 227-601-xx, 227-603-xx, 227-605-xx, 227-606-xx, 227-607-00
BT-XF Outdoor Pull Station, AC Powered 227-665-xx
BT-XF Outdoor Pull Station, Solar Power. 227-668-xx

BT-X MNS (In-Building Mass Notification)

BT-XF to BT-XM Upgrade Kit 227-422-99
BT-XM In-Building Mass Notification Communicator. 227-621-xx, 227-622-xx, 227-623-xx

BT-XM2 (In-Building Mass Notification with Monaco FACP Interface)

BT-XM2 Interface Conversion Kits. 227-371-02, 227-372-0x, 227-623-MN, 227-811-MN

BT-X Access Control

BT-XS Security Communicator 227-61x-xx, 227-630-xx, 227-648-xx, 227-649-xx

BT-X Intrusion Detection – Reserved

BT-X Wide Area Controller (WAC) (Outdoor Giant Voice Mass Notification)

Wide Area Mass Notification Speaker Station, 1600 W 227-671-xx, 227-634-xx, 227-634-CE, 227-661-xx, 124-080-00

BT-8 (Fire Only)

BT2-8 Building Transceivers 227-245-xx, 227-246-xx, 227-247-xx, 227-271-xx

BT-X Accessories

BT-X Planner 207-607-00

Section 4. RFMs and Repeaters

RFMs (Radio Frequency Modem)

RFM-X Radio Frequency Modem (RFM-X), NEMA 4X Enclosure 227-325-xx
RFM-X Ethernet Network Assembly, 4X 227-325-N1
RFM-XHR Radio Frequency Modem 227-317-xx
RFM-X Ethernet Network Assembly, Rack-mount 227-317-N1
RFM-XH Hardwire Modem 227-323-00
D-21 RFM King-Fisher Interface 227-333-NR
RFM-XHR-HP High Power Radio Frequency Modem 227-334-xx
RFM 7000H Harlow Modem 227-312-00

Repeaters

RFM-XR Repeaters 227-329-xx, 227-358-xx, 227-359-xx

RFM Accessories

RFM Rack-mount Kits 085-800-01, 085-800-02, 085-800-04, 227-327-00
Device Server 204-004-00

Section 5. Addressable Fire Alarm Control Panels

Monaco Addressable+ Planner 207-617-00
MAAP(+) Point Reporting Addressable FACP 227-85x-xx, 227-86x-xx, 227-85x-EN, 227-86x-EN
Remote Display Unit for MAAP(+) and MAAP-2 . . . . . 710-070-01, 710-070-02

Addressable Accessories

Annunciator, Text 710-054-01

Section 6. Addressable Fire Alarm Control Panels with MNS

MAAP-X Addressable Fire Alarm MNS Voice Evacuation Panel 227-95x-xx, 227-96x-xx, 227-95x-EN, 227-96x-EN, 227-912-xx
MAAP-X Addressable FACP MNS Voice Evac Panel Upgrade Kit 227-912-xx
MAAP-X Addressable Fire Alarm Expansion Backplane 176-273-99
MAAP-X Addressable Fire Alarm Sub-Panel 700-101-00
Local Operating Console/Remote Display Unit 710-072-01, 710-072-02
Local Operating Console Keypad 710-072-51, 710-072-52
MAAP-X Planner Kit 207-625-00
MAAP-X Push-to-Talk MNS Microphone 122-012-00, 122-012-05
MAAP-X Push-to-Talk Paging Microphone 122-012-06
MAAP-X Text Display, 24 VDC, Two Line, Multicolor 710-075-01

MNS Accessories

Audio Booster Panels 703-16x-00, 703-20x-00

Section 7. Conventional Fire Alarm Control Panels

M Conventional Planner 207-813-00
M-2 Conventional FACP with Integrated Radio Transceiver 227-55x-xx, 227-56x-xx, 227-570-xx, 227-587-xx
M-2 Conventional FACP, Mass Notification 227-55x-MN, 227-56x-MN, 227-570-MN
Interface PCB, 4-Zone Alarm, 4-Zone Alarm/Trouble 175-047-00, 176-133-00, 176-177-00, 790-026-00

Section 8. Mass Notification (MNS)

Non-Monaco Mass Notification Panels – Reserved

MNS Accessories

In-Building, 40 Watt, Mass Notification Panel 703-228-00, 703-228-01

Section 9. Addressable Intelligent Devices and Modules

Detectors

Heat Detector, 135°F Fixed/Rate-of-Rise, AP/CLIP, Type II 721-134-00
Heat Detector, 135°F Fixed Temperature, AP/CLIP, Type II 722-129-00
Heat Detector, 190°F Fixed High Temperature, AP/CLIP, Type II 722-413-00
Explosion-proof Smoke Detector 723-373-00
Smoke Detector, AP/CLIP, Type II 723-601-00
Smoke Detector, Remote Test Capable in Duct, AP/CLIP, Type II 723-602-00
Smoke Detector, 135°F Fixed Temperature, AP/CLIP, Type II 723-603-00
Smoke Detector, Heat, Infrared, AP Only, Type II 723-606-00
Smoke Detector, High Sensitivity, AP Only, Type II 723-607-00
CO Detector, AP Only, Type II 725-603-00
Fire and CO Detector, AP Only, Type II 725-604-00
Smoke and CO Detector, AP Only, Type II 725-605-00
Duct Smoke Detector 723-370-00, 723-371-00
Reflected Beam Smoke Detector 725-002-00

Bases

Detector Base, Sounder, Plug-in, 6.875 in., AP Only, Type II 729-209-00, 729-212-00
Detector Base, Sounder, Plug-in, 6.875 in., AP/CLIP, Type II 729-210-00, 729-211-00
Detector Base, Isolator, Plug-in, 6.85 in., AP/CLIP, Type II 729-213-00
Detector Base, Relay, Plug-in, 6.85 in., AP/CLIP, Type II 729-214-00
Detector Base, Standard, Plug-in, 4 in., AP/CLIP, Type II 729-215-00
Detector Base, Standard, Plug-in, 6 in., AP/CLIP, Type II 729-228-00

Modules

Module, Ten Input Monitor, CLIP, Type I 729-162-00
Module, Monitor, AP/CLIP, Type II 729-217-00
Module, Mini-Monitor, AP/CLIP, Type II 729-218-00
Module, Zone Interface, AP/CLIP, Type II 729-219-00
Module, Supervised NAC Control, AP/CLIP, Type II 729-225-00
Module, Relay Control, AP/CLIP, Type II 729-221-00
Module, Ten Input Monitor, AP/CLIP, Type II. 729-223-00
Module, Six Relay Control, AP/CLIP, Type II 729-224-00
Module, Dual Input Monitor, AP/CLIP, Type II 729-220-00
Module, Fault Isolator 729-140-00

Section 10. Conventional Detection Devices

Smoke Detectors

Smoke Detector, 2- or 4-Wire, Photoelectric. 723-002-00
Smoke Detector, 2- or 4-Wire, Photoelectric, 135°F Fixed. 723-003-00
Smoke Detector 723-340-00, 723-340-01, 723-508-00, 723-508-01
Smoke Detector 723-372-00
Reflected Beam Smoke Detector 725-313-00

Heat Detectors

Heat Detector, 194° Fixed Temperature Rate Compensation 721-107-00
Heat Detector, 194° Fixed Temperature Rate Compensation 721-108-00
Heat Detector, 135° Fixed Temp/Rate Comp, Explosion-Proof 721-109-00
Heat Detector, 194°F Fixed Temp/Rate Comp, Explosion-Proof 721-110-00
Heat Detector, 135° Fixed Temperature Rate Compensation 721-117-00
Heat Detector, 135°F Fixed Temperature/Rate-of-Rise 721-122-00
Heat Detector, 135°F Fixed Temperature/Rate-of-Rise 721-123-00
Heat Detector, 135°F Fixed Temperature/Rate Compensation 721-125-00
Heat Detector, 135°F Fixed Temperature/Rate-of-Rise 721-127-00
Heat Detector, 135°F Fixed Temperature/Rate-of-Rise 721-128-00
Heat Detector, 194° Fixed Temperature Rate Compensation 721-132-00
Heat Detector, 135° Fixed Temperature Rate Compensation 721-133-00
Heat Detector, 190°F Fixed Temperature/Rate-of-Rise 721-404-00
Heat Detector, 200°F Fixed Temperature/Rate Compensation 721-405-00
Heat Detector, 194°F Fixed Temperature/Rate-of-Rise 721-407-00
Heat Detector, 194°F Fixed Temperature/Rate-of-Rise 721-408-00
Heat Detector, 135°F Fixed Temperature 722-123-00
Heat Detector 722-125-00, 722-409-00
Heat Detector 135°F Fixed Temperature 722-127-00
Heat Detector, 194°F Fixed Temperature 722-408-00

Duct Detectors

Duct Smoke Detector, Photoelectric 723-367-00
Duct Smoke Detector 723-368-00
Duct Smoke Detector, Photoelectric 723-369-00

Flame Detectors – Reserved

Pull Stations

Pull Station, Dual Action/Single Action Fire Alarm, NEMA 4X 708-015-01, 708-015-03
Pull Station, Single Action 708-022-00
Pull Station, Single Action 708-025-01
Pull Station, Single Action 708-025-03
Pull Station, Dual Action 708-026-01
Pull Station, Dual/Single Action 708-031-00

Flow Switches

Pressure-Type Waterflow Switch 514-001-00
Pressure-Type Supervisory Switch 514-003-00

Tamper Switches

Outside Screw & Yoke Valve Supervisory/Tamper Switch 514-000-00, 514-000-01

Carbon Monoxide Detectors

Carbon Monoxide Detector 725-602-00, 725-602-01

Bases

Detector Base, Plug-in, 2-Wire 729-097-00
Detector Base, Plug-in, 2-Wire 729-150-00
Detector Base, Plug-in, 4-Wire 729-151-00

Accessories

Remote Test Station 729-108-00
Remote Test Station with Key 729-138-00

End-of-Line Supervision Relays

End-of-Line Power Supervision Relay Module 790-012-00
End-of-line Power Supervision Relay Module 790-013-01

Section 11. Notification Appliance Devices

Horns

Outdoor Horn, Red, Wall-mount, Type I 585-067-01
Indoor Mini-Horn, Wall-mount, Type I 585-081-00
Indoor Horn, Red, Wall-mount, Type I 585-100-00
Indoor Horn, White, Wall-mount, Type I 585-104-00
Explosion-proof Horn 585-110-00

Strobes

Explosion-proof Strobe Light for Hazardous Locations 367-033-00
Outdoor Strobe, Wall-mount, Red, Type II 367-050-00
Indoor/Outdoor Strobe, White, Wall-mount, Type II 367-050-10
Indoor Strobe, Wall-mount, White, Type II 367-057-00
Indoor Strobe, Ceiling-mount, White, Type II 367-058-00
Indoor Strobe, Ceiling-mount, White, Type II 367-059-00, 367-064-00
Outdoor Strobe, Red, Wall-mount, Type I 367-066-00

Outdoor Strobe, White, Wall-mount, Type I 367-066-01
Outdoor Strobe, White, Wall-mount, Type I 367-066-02
Outdoor Strobe, White, High Candela, Wall-mount, Type I 367-066-03
Indoor Strobe, Multi-Candela, White, Wall-mount, Type II 367-075-00
Strobe, Hazardous Locations, 285 Candela, Explosion Proof 367-088-00
Indoor Strobe, 115/177 Candela, Ceiling-mount, White, Type II 367-089-00
Indoor Strobe, Multi-Candela, Ceiling-mount, Red, Type II. 367-090-00
Indoor Strobe Ceiling-mount, White, Type II 367-091-00
Indoor Strobe, Wall-mount, Red, Type II 367-092-00
Weatherproof Strobe, Wall-mount, Amber 367-096-00
Indoor Strobe, Red, Wall-mount, Type I 367-097-00
Indoor Strobe, White, Wall-mount, Type I 367-098-00
Indoor Strobe, White, Wall-mount, Type I 367-099-00
Indoor Strobe, White, Wall-mount, Type I 367-100-00
Indoor Strobe, White, Wall-mount, Type I 367-101-00
Indoor Strobe, Red, Ceiling-mount, Type I 367-102-00
Indoor Strobe, White, Ceiling-mount, Type I 367-103-00
Indoor Strobe, Red, Wall-mount, Type I 367-104-00
Indoor Strobe, White, Ceiling-mount, Type I 367-105-00

Horn Strobes

Indoor Horn Strobe, Multitone, Wall-mount, Type II 585-018-00
Outdoor Horn Strobe, Multitone, Wall-mount, Red, Type II 585-059-00
Indoor Horn Strobe, Multitone, Wall-mount, Red, Type II. 585-065-00
Outdoor Horn Strobe, 4-Wire, Red, Wall-mount, Type I 585-068-00
Outdoor Horn Strobe, Red, Wall-mount, Type I 585-069-00
Outdoor Horn Strobe, White, High Candela, Wall-mount, Type I 585-097-00
Outdoor Horn Strobe, Red, High Candela, Wall-mount, Type I 585-097-01
Indoor Horn Strobe, Red, Wall-mount, Type I 585-098-00
Indoor Horn Strobe, Red, Ceiling-mount, Type I 585-099-00
Indoor Horn Strobe, Red, Wall-mount, Type I 585-101-00
Indoor Horn Strobe, White, Wall-mount, Type I. 585-102-00
Indoor Horn Strobe, White, Wall-mount, Type I. 585-103-00
Indoor Horn Strobe, White, Ceiling-mount, Type I. 585-105-00
Indoor Horn Strobe, 4-Wire, White, Wall-mount, Type I 585-106-00
Indoor Horn Strobe, 4-Wire, Red, Wall-mount, Type I. 585-107-00
Indoor Horn Strobe, 4-Wire, White, Ceiling-mount, Type I 585-108-00
Indoor Horn Strobe, 4-Wire, Red, Ceiling-mount, Type I. 585-109-00
Explosion-proof Horn Strobe, Hazardous Locations, Grey. 585-111-00

Speakers

Weatherproof Horn Speaker, Grey, Surface-mount. 124-042-00
Cluster Speakers, 2-, 3-, or 4-Horn Speaker System 124-050-00, 124-051-00, 124-052-00
Outdoor Speaker, White, Square, Weatherproof, Type II 124-069-00
Outdoor Speaker, White, Wall-mount, Type I. 124-072-00
Outdoor Speaker, Red, Wall-mount, Type I 124-072-50
Indoor Speaker, White, Wall-mount, Type I 124-091-00
Indoor Speaker, Red, Wall-mount, Type I. 124-092-00
Indoor Speaker, Red, Ceiling-mount, Type I. 124-093-00
Indoor Speaker, White, Ceiling-mount, Type I 124-094-00
Indoor Speaker, White, Ceiling-mount, Type I 124-095-00
Explosion-proof Speaker 124-097-00
Selectable Output Speaker, Outdoor, Ceiling-mount, Type I 124-098-00

Speaker Strobes

Indoor Speaker Strobe, Wall-mount, White, Type II 580-05x-xx, 580-06x-00, 580-07x-00, 580-081-00
Speaker Strobe, White, Ceiling-mount, Indoor, Type II 580-062-00
Indoor Speaker Strobe, Ceiling-mount, White, Type II 580-064-00
Indoor Speaker Strobe, MC, Wall-mount, White, Type II 580-068-00
Indoor Speaker Strobe, 8 in., Ceiling-mount, White, Type II 580-074-00
Outdoor Speaker Strobe, 180cd, Wall-mount, White, Type II 580-075-00
Indoor Speaker Strobe, White, Ceiling-mount, Type II 580-077-00
Outdoor Speaker Strobe, 180cd, Wall-mount, White, Type II 580-078-00
Indoor Speaker Strobe, Self-Amp, Ceiling-mount, Type II 580-079-00
Indoor Speaker Strobe, Wall-mount, White, Type II, ... 580-081-00
Outdoor Speaker Strobe, White, Wall-mount, Type I 580-087-00
Outdoor Speaker Strobe, Red, Wall-mount, Type I 580-088-00
Indoor Speaker Strobe, 8 in., Ceiling-mount, White, Type II 580-099-00
Outdoor Speaker Strobe, White, Ceiling-mount, Type I 580-104-00
Outdoor Speaker Strobe, White, Wall-mount, Type I 580-105-00
Outdoor Speaker Strobe, White, Ceiling-mount, Type I 580-106-00
Indoor Speaker Strobe, Red, Wall-mount, Type I 580-107-00
Indoor Speaker Strobe, White, Wall-mount, Type I. 580-108-00
Indoor Speaker Strobe, White, Wall-mount, Type I. 580-110-00
Indoor Speaker Strobe, White, Wall-mount, Type I. 580-111-00
Indoor Speaker Strobe, White, Ceiling-mount, Type I. 580-112-00
Indoor Speaker Strobe, White, Ceiling-mount, Type I. 580-113-00
Indoor Speaker Strobe, White, Wall-mount, Type I. 580-114-00
Indoor Speaker Strobe, Red, Wall-mount, Type I 580-115-00
Speaker Strobe for Hazardous Locations 580-117-00
Speaker Strobe LED for Hazardous Locations. 580-117-01, 580-117-02, 580-117-03
Indoor Speaker Strobe, White, Ceiling-mount, Type I. 580-118-00
Drop-in Speaker Strobe, Tile, White, Ceiling-mount, Type I 580-119-00
Indoor Speaker Strobe, White, Ceiling-mount, Type II 580-120-00

Bells

Motorized Vibrating Alarm Bell. 581-422-00, 581-473-00
Vibrating Alarm Bell, Explosion-proof 581-423-00, 581-451-00

Chimes

Indoor Chime, Red, Wall-mount, Type I 587-009-00

Chime Strobes

Indoor Chime Strobe, Red, Wall-mount, Type I 587-008-00

MNS Wide Area

MNS Driver Amplifier with Speaker Arrays - Reserved

Bases – Reserved

Accessories

Sync Module, Type I 367-047-00
Sync Module, Type II. 367-036-00
Indoor Strobe Plate, Wall-mount, Red, Type II 367-049-00
Universal Expander Plate, Indoor, White, Wall-mount, Type I. 369-036-00
Universal Expander Plate, Indoor, White, Wall-mount, Type I. 369-037-00
Universal Expander Plate Back Box Skirt 588-101-00

Section 12. Security Devices

Door Station Camera, Indoor/Outdoor, White 192-296-01
Outdoor Network Camera, Fixed 192-279-11

Motion Detectors – Reserved

Door Mags – Reserved

Accessories – Reserved

Section 13. Generic Accessories

Wire Mold – Reserved

Off-the-Shelf Generic Electrical Boxes – Reserved

Section 14. Supplemental Equipment

Cabinet, Fire Alarm Terminal, 32 point 081-243-00
Cabinet Assembly, Record Document Storage 081-261-01
Enclosure, Rail-mount, Steel, Powder Coated 081-262-00
Current In-rush Limiter 176-257-00
4-wire Data Fiber Optic Media Converter 194-532-00
Fiber Optic Media Converter 194-534-00
Contact Mapping Data Transmitter/Receiver Pair 196-400-00, 197-700-00
Ethernet Firewall, 8-Port, 10/100 VPN 200-442-11
Ethernet Switch, Managed 10-Port, L2 200-459-01
KVM Assembly 200-464-03, 200-470-04
KVMA Single and Dual-Monitor Extender Kit 200-476-01, 200-476-02
Key Switch, FACP Suspend on Test 510-319-10
USB Serial Adaptor, High Speed 649-118-00
HVAC Shutdown Kit 708-032-01
Emergency Message Display 710-057-00
Annunciator, Red LED, Remote 729-091-00

Battery Enclosures

Enclosures with Batteries 081-155-00, 081-156-0x, 081-172-00, 081-177-00, 081-182-00
Batteries 400-70x-00, 400-71x-00, 400-720-00

Auxiliary Power Supplies

UPS Kit, 1200W, 120V 404-064-01
NAC Distributed Power Supply 404-073-00
UPS 120 VAC, 60 Hz, 800 W 404-111-10, 404-111-11
UPS 120 VAC, 60 HZ, 400W 404-114-01

Power Supply/Battery Chargers

Power Supply/Battery Charger, 24 VDC, 3 Amp, 115 VAC 404-095-00
Power Supply/Battery Charger 24 VDC, 10/8 Amp, 115 VAC 404-098-00
Power Supply/Battery Charger 24 VDC, 8/10 Amp, 230 VAC 404-098-10
Power Supply/Battery Charger, 12/24 VDC, 6A, 115/230 VAC 404-150-00
Power Supply/Battery Charger, 24 VDC, 10/8A, 115 VAC 404-190-00
Power Supply/Battery Charger, 24 VDC, 10/8A, 220 VAC 404-194-00

NAC Boosters

NAC Distributed Power Extender 404-126-00, 404-126-01
NAC Distributed Power Extender 404-164-00

Relays

Relay, SPDT, 120-277 VAC, 10A 451-700-00, 451-700-01
Relay, SPDT, 24 VDC, 7A 453-100-00
Relay, SPDT, 24 VDC, 7A 453-102-00, 453-103-00
Relay, DPDT, 24 VDC, 7A 453-104-00, 453-105-00
Relay, SPDT, 24 VDC/VAC, 10A 453-106-00, 453-106-01
Relay, SPDT, 24 VDC/VAC, 10A 453-107-00, 453-107-01
Relay, DPDT, 24 VDC/VAC, 10A 453-110-00, 453-110-01
Relay, SPDT, 10–30 VDC, 10A Input 453-111-00, 453-111-01
Relay, SPDT, 24 VDC/VAC, 7A and 10A 453-114-00
Relay, Time Delay, SPDT, 10A 453-117-00

AC and DC Surge Protection

Surge Protector, Transient, 2-Outlet Direct Plug In 210-505-00
Surge Protector Kit, 120 VAC, Transient 210-509-00, 210-510-00
Surge Protector, Signal Line 210-511-00
Surge Protector, Initiating/Indicating Circuit, 24 VDC 210-514-00
Surge Protectors, 120 VAC, 240 VAC, and 120/240 VAC 210-524-00, 210-555-00, 210-556-00
Surge Protector, 4-Wire Leased Line, 5V, SPD 210-526-00
Surge Suppressor, RJ-45 Ethernet 210-540-00
Surge Protector Module and Base 210-549-xx, 210-550-xx, 210-551-xx
Surge Protector, Series Wired, Single Phase 210-562-00

Enclosure Heater

Silicone Rubber Enclosure Heater 532-001-00, 532-002-00

Section 15. Test Equipment

Test Equipment

Programmable Scanner 196-100-00
Signal Direction Finder (SDF) 225-791-00
Signal Receiving Device (SRD) 225-793-xx
Wattmeter Kit, 25–1,000 MHz, 5 to 500 Watt, Fixed Element RF 290-050-01
Analog/Digital Multimeter 290-701-01
RF Communications Service Monitor Kit 297-002-00
Dynamic Battery Analyzer 297-300-00
Dual Mode Battery Analyzer 297-301-00

Monaco FACP, BT-X, Repeater Planner Programmer Suite

Monaco Planner Suite/Programmer 225-163-00
BT-XM In-Building MNS Communicator Tester 227-451-xx

Section 16. Cables

Fire – Reserved

MNS – Reserved

Signaling Line Circuit (SLC)

Cable, Fire Alarm 621-02x-00, 621-040-00, 621-06x-00, 621-07x-00

Communication

Cable, Audio, Control, Communications, Instrumentation 621-026-00
Cable, RS-485, Plenum and Non-Plenum 621-083-00, 621-084-00

CAT5

Cable, CAT5E Network 624-026-00

CAT6

Cable, CAT6 Plenum and Non-Plenum 624-03x-00, 624-04x-00
Cable, CAT6A OSP Broadband 624-050-00

Section 17. Antenna Systems

VHF Antennas

VHF Antenna, Omnidirectional 190-211-0x, 190-212-00, 190-400-00, 190-418-xx
VHF Antenna, Omnidirectional, Collinear, 136–174 MHz 190-244-00, 190-245-00, 190-246-00, 190-247-00
VHF Antenna, Yagi Directional 190-401-xx

UHF Antennas

UHF Antenna, Omnidirectional 190-216-xx, 190-249-00, 190-403-xx, 190-409-xx, 190-417-xx
UHF Antenna, Omnidirectional, Collinear, 400–470 MHz 190-241-00, 190-242-00, 190-243-00
UHF Antenna, Yagi Directional 190-410-xx

Antenna Mounting Hardware

Antenna Mounting Hardware 199-008-00, 199-010-00, 199-011-00, 199-012-00
Antenna Mount Clamp Set 199-056-00

Coaxial Cables

Coaxial Cable, 50 ohms, Mini RG-8X 620-023-00, 625-100-0X, 626-000-0X
Coaxial Cable, 50 ohms, Low-Loss 620-026-00
Coaxial Cable, 50 ohm, 1/4 in. Heliax, Superflex 620-029-00
Coaxial Cable, 50 ohm, 1/2 in. Heliax, Superflex 620-030-00
Coaxial Cable, 50 ohms, 1/2 in. Heliax, LDF 620-031-00
Coaxial Cable, 50 ohms, 5/8 in. Heliax, LDF 620-032-00
Coaxial Cable, 50 ohms, 7/8 in. Heliax, Foam 620-033-00

Coaxial Connectors, Adaptors

Ground Rod and Clamp, Copper, for Lightning 661-000-00, 661-001-00
Air Terminal Hardware, Copper, for Lightning 661-002-00, 661-004-00

Crimp Kit

Coaxial Cable Tool Kit 303-000-00

Lightning Arrestors

Lightning Arrestors and Kits 198-021-xx, 198-022-xx

Central Receiving Systems Catalog Section 01

Section 1. Central Receiving Systems

Monitor, 23.5 in., IPS. 192-048-01
Monitor, 55 in. LED. 192-055-10
KVM Rack-mount Extender Tray 200-477-00
General Purpose Input/Output (GPIO) for D-21 . . . . . 227-045-01, 227-056-00
D-21 View Generator. 227-062-30
Remote Display Controller (for use with View Generator). 227-063-01
D-21 Solid-State Weather Station Kit 299-016-01
D-21 Station Alerting System Color Annunciator. 710-073-00, 710-073-01, 369-035-00, 369-035-01
D-21 System VoIP Link Assembly with Desktop Microphone. 122-018-04
D-21 System VoIP Link Assembly with Desktop Microphone. 122-018-05
D-21 System UPS Network Monitoring For Workstation Desks 404-167-00
D-21 System UPS Network Monitoring For Racks. 404-168-00
Color Laserjet Printer with Ethernet Adaptor 205-064-01
D-21 System Point Reporting Upgrade Kit 207-946-00
D-21 Active911 Notification Interface 207-973-22

D-21 Emergency Management

D-21 Incident and Emergency Management Systems. 227-010-xx, 227-011-xx, 227-012-xx, 227-020-10, 227-020-13
Repair by Replacement/Technology Upgrade 227-020-xx
D-21® EM Mobile Client Laptop 227-098-30
D-21® EM Mobile Client Tablet. 227-099-30

D-21 Fire – Reserved

D-21 MNS – Reserved

D-21 Security – Reserved

D-21 Tone Alerting Panel

D-21 Tone Alerting Panel 227-095-00

Rack-mount Cabinets

Rack Cabinets 104-011-00, 104-012-00

Rack-mount Shelves

Rack Shelf 081-214-02
Rack Shelf 081-215-01

Rack Blank Panels

Rack Blank Panel. 085-214-0x

Network Switching

Switch, Industrial, 5 Port Ethernet 200-438-00
Fiber Module, Transceiver Hot Plug for DODIN Switch 200-444-02
Fiber Module, 1000BASE-LX, Hot Plug, SFP 200-444-06
Fiber Module, Optical Transceiver Hot Plug, SFP 200-457-00
KVM Switch 200-461-00
Ethernet Switch Assembly with 24-Port SFP, Managed Layer 3 200-471-11
Switch Assembly, 24 Port, 4SFP, Managed, Layer 2, POE, 1U 200-481-01
Switch Assembly, 48 Port, 2 SFP+, Managed, Layer 2, 1U 200-482-01
Switch Assembly, 12 Port, SFP, Managed, Layer 3, 1U, DODIN 200-484-01
Switch Assembly, 12 Port, SFP, Managed, Layer 3, 1U 200-485-01
Switch Assembly, 24 Port, 8SFP+, Managed, Layer 2/3, DoDIN. 200-491-01
Switch Assembly, 24 Port, 4 SFP+, Managed, Layer 2/3, DoDIN 200-498-01
Switch Assembly, 48 Port, 4 SFP+, Managed, Layer 2/3 200-501-01

Click to go back to "Table of Contents - Index by Product Name"

Central Receiving Systems

Monitor, 23.5 in., IPS

192-048-01

Description

This widescreen monitor features IPS panel technology for crisp type and colorful images, even at off-angles.

Features

- Flicker-free technology
- Less than 0.3 watts Off Mode power consumption
- 30% recycled materials
- VESA compatible
- Ergonomic, height adjustable stand (HAS)
- Thin, black bezel

Specifications

AC Input Power	100 to 240 VAC
Power Consumption	25 watts (maximum)
Screen Size	23.5 in. (596.9 mm)
Screen Type	Flat Screen Video Monitor
Display Resolution	1920 x 1080
Active Display Area	18.77 in. x 10.56 in. (476.64 mm x 268.11 mm)
Aspect Ratio	16:9
Color Support	16.7M
Brightness	250 nits
Response Time	4 ms
Contrast Ratio (Static)	1000:1 (typical); 700:1 (minimum)
Dynamic Contrast Ratio	Mega
Viewing Angle	178 degrees horizontal and vertical
Input Signal	Analog: VGA Digital: DVI
Dimensions with HAS	14.8 in. H x 21.6 in. W x 8.8 in. D (375.92 mm x 548.64 mm x 223.52 mm)
Dimensions without HAS	12.6 in. H x 21.6 in. W x 1.6 in. D (320.04 mm x 548.64 mm x 40.64 mm)
Wall-mount	100 mm x 100 mm
Weight with HAS	8.8 lb (4 kg)
Weight without HAS	5.5 lb (2.5 kg)
Temperature	50°F to 104°F (10°C to 40°C)
Humidity	10% to 80% non-condensing

Ordering Information

Part Number	Description
192-048-01	Monitor, 23.5 in. IPS, flat screen, black, VGA/DVI, 100 to 240 VAC

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

Monitor, 55 in. LED

192-055-10

Description

This display offers a high image resolution in a lightweight, space-saving design.

Features

- Quad Core Processor
- RJ45, RS-232, SD and HDMI connections
- LED backlight
- Embedded Wi-Fi
- Kit includes: display monitor, wall-mount and uninteruptible power supply (UPS)

Specifications

AC Power	100 to 240 VAC, 50/60 Hz
Power Consumption	60 watts/hour (typical)
Display	55 in. LED Monitor Resolution: 1920 x 1080 (FHD) Active Display Area: 47.6 in. horizontal x 26.7 in. vertical (121 cm horizontal x 68 cm vertical) Aspect Ratio: 16:9 Color Support: 16.7 M Brightness: 350nit (typical) Response Time: 6 ms Contrast Ratio: 5000:1 Dynamic Contrast Ratio: 50:000:1
Viewing Angle	178 degrees horizontal / 178 degrees vertical
Sound	Built-in Speaker (10 W + 10 W)
Uninterruptible Power Supply (UPS)	750 VA, 120 VAC
Dimensions	27.8 in. H x 48.4 in. W x 1.9 in. D (706.9 mm x 1230.6 mm x 49.9 mm)
VESA Mount	400 mm x 400 mm
Weight	33.9 lb (15.4 kg)
Temperature	32°F to 104°F (0°C to 40°C)
Humidity	10% to 80% non-condensing
Standards Compliance:	
UL	UL60590-1
FCC	Part 15 subpart B class A
Energy Star	6.0

Ordering Information

Remote Display Kit

Part Number	Description
192-055-10	Monitor, 55 in., LED, black, wall-mount, includes 110 VAC, 50/60 Hz UPS

Associated Parts

Part Number	Description
192-854-02	Tilt wall-mount for 37-63 in. displays
404-127-01	Uninterruptible Power Supply (UPS), 120 VAC, wall-mount
NOTE: P/N 192-854-02 and P/N 404-127-01 are included in the Remote Display Kit (P/N 192-055-10). This information is for reorder only.	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

KVM Rack-mount Extender Tray

200-477-00

FRONT VIEW

REAR VIEW

Features

- No power KVM extender tray
- 2U rack space
- Holds up to 16 local or remote extenders
- Mounts to standard 19 in. rack or cabinet
- Includes brackets and mounting screws

Ordering Information

Power Supply

Part Number	Description
200-477-00	Rack-mount Extender Tray, 2U, no power, 16 extender capacity

Associated Parts

Part Number	Description
085-214-02	Rack Blank Panel, 19 in., 2U, 3.50 in. H

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

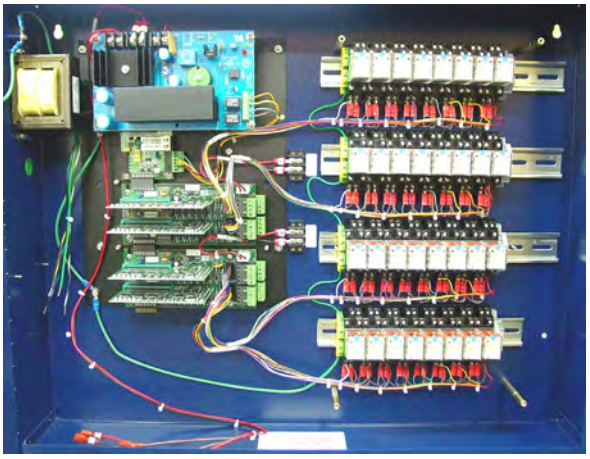
Central Receiving Systems

General Purpose Input/Output (GPIO) for D-21

227-045-01, 227-056-00

Description

The General Purpose Input/Output (GPIO) 32 panel provides 16 NFPA Class B fire zone inputs or 32 single-ended monitoring zone inputs to gather information from the field.



The GPIO 32 can control various devices such as bay doors, lights, and gates, using 32 DPDT 10A relays, which can be configured for momentary or maintained operation in the D-21 Admin Client.

The GPIO connects to the D-21 through an Ethernet network connection. When an incident occurs, the D-21 dispatcher can activate or deactivate devices through GPIO relays to help manage the response.

Features

- 16 Class B zone inputs or 32 single-ended zone inputs
- 32 DPDT 10A relay outputs
- Controlled through the D-21 network
- Operates using 120/240 VAC, 50/60 Hz power
- 24V internal operation
- Two 12V/12 Ah batteries are included and provide a minimum of 4-hour battery backup
- Includes an integrated battery charger
- Power is supervised, and AC fail/low battery conditions are reported to the D-21
- LED shows status when relay is energized
- The test switch allows each relay to be test-operated manually

Specifications

Power Output	120/240 VAC, 50/60 Hz
Enclosure Color	Blue
Enclosure Size	20 in. H x 25 in. W x 4 in. D (50.8 cm x 63.5 cm x 10.16 cm)
Batteries (included)	Two 12V/12 Ah rechargeable batteries
Battery Backup	4 hours

Ordering Information

Part Number	Description
227-045-01	GPIO, 32 DPDT, 10A outputs, 120/240 VAC, 50/60 Hz, 24V control voltage
227-056-00	GPIO, 16 input, 16 relay output, 120 VAC **NOTE** P/N 227-056-00 is not pictured. Please contact Monaco for more information regarding this item.

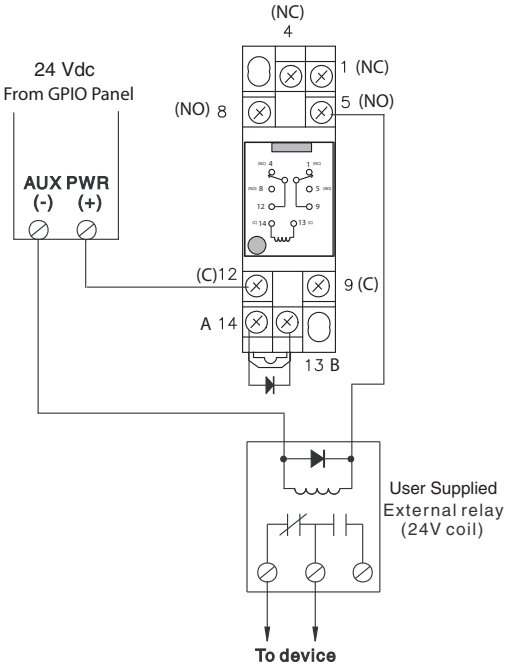
Associated Parts

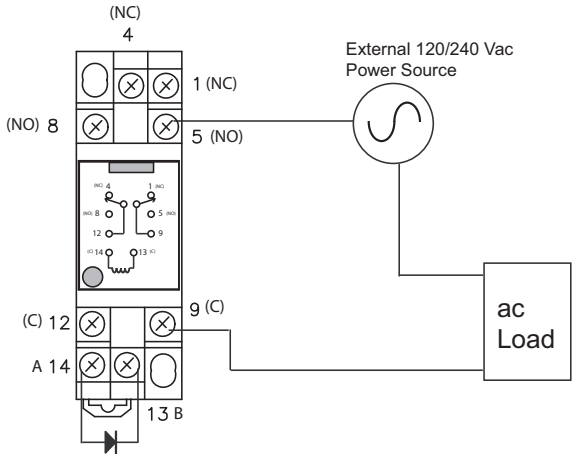
Part Number	Description
400-713-00	Battery, SLA, rechargeable, 12V/12 Ah, quick connect, 5.94 in. L x 3.86 in. W x 3.86 in. H, 7.92 lb
513-411-00	M-2 Tamper Switch Kit

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Typical Output Wiring Diagrams





Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Central Receiving Systems

D-21 View Generator

227-062-30

Description

The D-21 View Generator allows remote locations to receive information about an incident that is displayed on a large screen LCD monitor.

All monitors are attached to the D-21 network through a secure, unattended connection at the remote station.

Features

- Secure, unattended connection to the D-21 network
- Real-time incident updates
- Map view
- Fire roster, notes of the day
- Graphics based on the incident

Ordering Information

Part Number	Description
227-062-30	D-21 View Generator, WIN 10

Associated Parts

Part Number	Description
192-055-10	Monitor, 55 in. LED, black, wall-mount. Includes 110VAC 50/60 Hz UPS
209-057-00	Rack side rail mounting kit, 26 in. slide rail with brackets (used to mount D-21 View Generator in rack)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

Remote Display Controller (for use with View Generator)
227-063-01

Description

The Remote Display Controller is a computer connected to the D-21 network. It relays images and real-time messages from the D-21 View Generator across the D-21 network to remote locations.

The compact design makes this controller ideal for space-critical applications.

Features

- Onboard Intel Atom® processor E3826 dual core, 1.46 GHz
- Aluminum and metal chassis with fanless construction
- Supports:
  - two RS232
  - two RS232/422/485
  - two Intel I210IT GbE LAN Ports
  - three USB ports
  - Dual Independent display - HDMI and DVI-D, or HDMI and VGA (with converter)
- Shock and vibration protection
- Status LEDs

Specifications

Power Input	2-pin DC input 9 VDC to 30 VDC (nominal DC input: 24V)
Dimensions	2.13 in. H x 7.29 in. W x 5.18 in. D (54 mm x 185 mm x 131 mm)
Operating Temperature	Ambient with airflow –4°F to 158°F (–20°C to 70°C)
Relative Humidity	10% to 93% non-condensing

Ordering Information

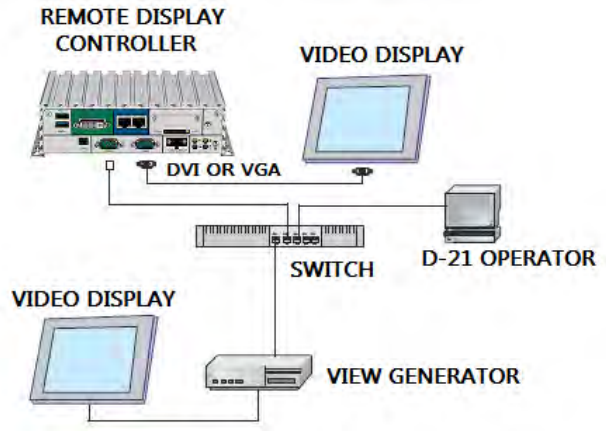
Remote Display Controller

Part Number	Description
227-063-01	D-21 Remote Display Controller System (for use with D-21 View Generator P/N 227-062-30)

Associated Parts

Part Number	Description
227-062-30	D-21 View Generator
192-055-10	Monitor, 55 in., LED, black, wall-mount, includes 110 VAC, 50/60 Hz UPS

Product Overview Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

D-21 Solid-State Weather Station Kit

299-016-01

Description

The D-21 Solid-State Weather System is a fixed network weather station suited for emergency management applications.

The Weather Station automatically measures wind speed, wind direction and temperature every second; it then computes a 5-minute running average of the accumulated data and transmits the information to the D-21.

Integrated temperature/humidity sensors, built-in GPS and electronic compass are sealed inside an aluminum housing that provides protection against the weather and corrosion.

With no moving parts, the wind sensor is extremely accurate, even at very low wind speeds and needs no periodic calibration.

Features

- White, solid-state weather station, constructed of Marine grade aluminum
- Top mounted Wind Sensor is an ultrasonic style anemometer
- Electronics hermetically sealed and grounded at a single point
- Power over Ethernet (PoE) – one cable to provide power to the system and retrieve data
- GPS and electronic compass automatically align to True North
- Can be used with D-21 plume modeling software
- Designed to meet MIL-STD-461E (EMI) and MIL-STD-810F (extreme environments)
- Easy to install and operate
- Accurate and reliable

Specifications

Power	100 to 240 VAC 50/60 Hz
Converter	PoE Injector
Communications	Ethernet
Data Logger	CPU: 32 bit with hardware FPU, running at 100 MHz Internal memory: 128 MB flash and 4 MB battery backed SRAM
Temperature Sensor	Sealed inside Weather Station Probe Output Voltage: 0 to 1 VDC Radiation Shield protection
Wind Sensor	Four equally spaced transducers measure horizontal wind speed and direction
Wind Speed	0 to 6 m/s (117 kts, 135 mph) 360 degree Direction ±2% Accuracy
Compass	1° RMS
GPS	Accuracy: < 5 m 90% (autonomous), < 4 m 90% (SBAS) PPS: < ±25 ns 50%
Material	6061-T6 aluminum, non-corrosive and non-sparking alloy
Mounting Options	Building, Utility Pole, or other permanent structure
Operating Temperature	–31°F to 158°F (–35°C to 70°C)
Relative Humidity	0% to 100%
Weight	9.5 lb (4.31 kg) base unit without wind monitor

Ordering Information

Part Number	Description
299-016-01	D-21 Weather Station Kit

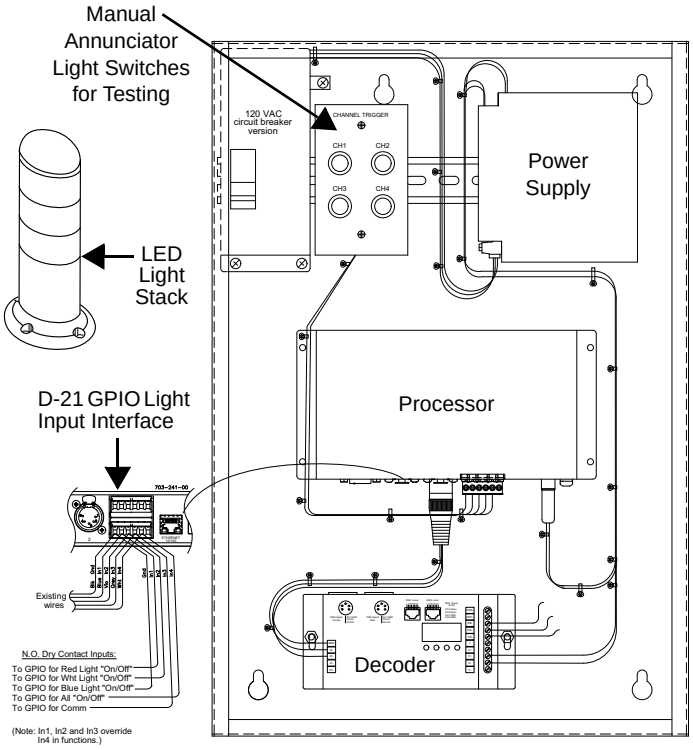
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

D-21 Station Alerting System Color Annunciator

710-073-00, 710-073-01, 369-035-00, 369-035-01



Description

The D-21 Station Alerting System Color Annunciator improves alarm response time by using low impact light alerting technology to alert responders to specific emergency situations.

Features

- Visible alarm LEDs indicate relevant incident response needs
- LED ramp up interval minimizes stress levels
- Improves response time
- First indicator of upcoming emergency situation

Color Annunciator Controller

Manual Annunciator Light Switches for Testing

This control keypad allows manual control of LED lights at the control panel. Four easy-to-use buttons control the annunciator lighting: Red, White, Blue, All On/Off.

Power Supply

A 10A power supply provides input and output power to all of the systems in the enclosure.

Processor

Monitors discrete inputs for control signals (triggers) from the light input interface and sends instructions to the light output decoder.

Light Output Decoder

The five channel light output decoder (8A per channel) controls lighting on the light stack from instructions received from the processor.

D-21 GPIO Light Input Interface

An input and output interface that can be independently programmed or programmed through the D-21 with the GPIO. This interface provides 32 inputs and 32 dry contact closure outputs with both normally open and normally closed contacts.

NOTE The light input interface is optional and is not part of the enclosure.

Color Light Stack

Each light stack has a solid end cap, red, white and blue LED lights, a wiring module, and a base. The LEDs slowly ramp up to full brightness over a three second interval.

Light stacks can be daisy chained together as necessary for a maximum of 125 light stacks.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

Specifications

Color Annunciator Controller

Voltage	**P/N 710-073-01:** 120 VAC **P/N 710-073-00:** 240 VAC
Power Supply	24V, 10A
Processor	**Input:** 12 to 24 VDC **Power Draw:** 8W maximum
Light Output Decoder	**Input:** 12 to 24 VDC **Output:** 8A maximum per channel (five channels)
GPIO Light Input Interface	100 VDC 100 mA
Operating Temperature	32°F to 104°F (0°C to 40°C)
Operating Humidity	0% to 90%, non-condensing
Enclosure Dimensions	21 in. H x 14.375 in. W x 4 in. D (533 mm x 365 mm x 104 mm)

Color Light Stack

Operating Current	24 VDC, 70 mA maximum per light stack
Light Source	LED
Lens Colors	Red, White, Blue
Lens Type	Fresnel, steady light module
Lamp Life	50,000 hours
Wiring Module Enclosure	Grey, 4X IP65 (when installed with both gaskets)
Light Stack Base Dimensions	**Rack-mount Base:** 1.2 in. H x 3.15 in. W x 3.94 in. L (31 mm x 80 mm x 100 mm) **Wall-mount Base:** 2.36 in H x 2.05 in. W x 2.44 in. L (60 mm x 52 mm x 62 mm)
Light Stack Base Weight	**Rack-mount Base:** 1.76 oz (0.05 kg) **Wall-mount Base:** 2.12 oz (0.06 kg)
End Cap Dimensions	1.2 in. H x 1.97 in. W x 2.75 in. L (31 mm x 50mm x 70 mm)
Wiring Module Dimensions (without end cap)	3.07 in. H x 1.97 in. W x 2.75 in. L (78 mm x 50 mm x 70 mm)
Wiring Module Weight	5.64 oz (0.16 kg)
LED Light Dimensions	1.69 in. H x 1.97 in. W x 2.75 in. L (43 mm x 50.0 mm x 70 mm)
LED Light Weight	1.41 oz (0.04 kg)
Operating Temperature	–22°F to 122°F (–30°C to 50°C)

Ordering Information

Part Number	Description
710-073-00	Color Annunciator Controller, 240 VAC
710-073-01	Color Annunciator Controller, 120 VAC
369-035-00	Color Light Stack, Steady LED Notification, indoor/outdoor, Red, White, Blue, 24 VDC, NEMA 4X, IP65 enclosure, grey wiring module, end cap, flat base
369-035-01	Color Light Stack, Steady LED Notification, indoor/outdoor, Red, White, Blue, 24 VDC, NEMA 4X, IP65 enclosure, grey wiring module, end cap, wall-mount base

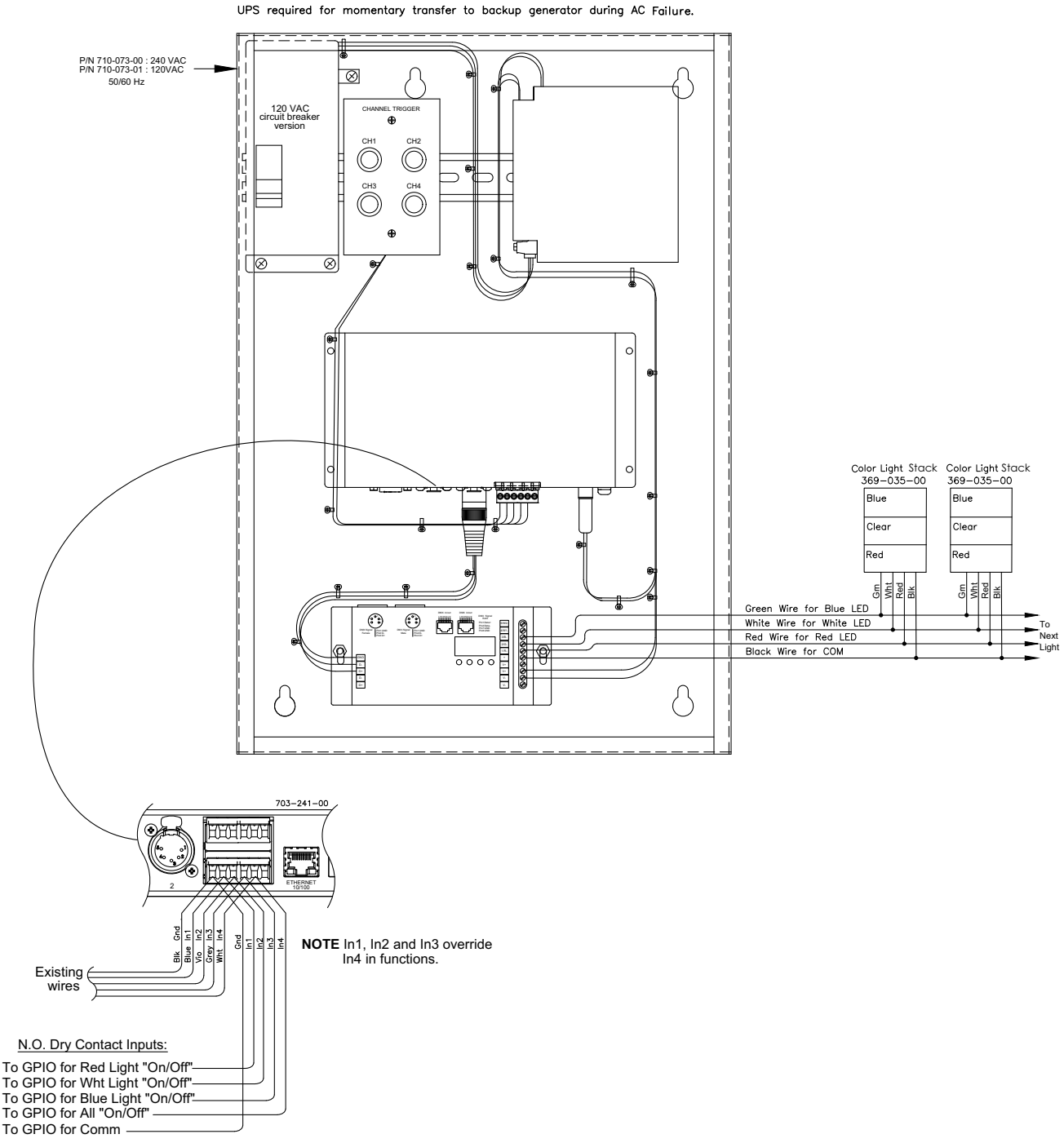
Associated Parts

Part Number	Description
207-973-20	D-21 Support Kit, D-21 EM Notification Communicator
207-973-25	D-21 Support Kit, D-21 EM Unified Notification Sequence Activation Screen
227-045-01	GPIO, 32 DPDT, 10A outputs, 120/240 VAC, 50/60 Hz, 24V control voltage
207-884-00	GPIO Interface Communicator Kit
665-535-00	LED Light Stack Junction Box, Ceiling-mount
369-034-05	Wall-mount Base for Light Stack
621-085-00	Wire, plenum, unshielded, 1,000 ft.
404-173-01	Uninterruptible Power Supply Kit: enclosure with UPS 120 VAC, 60 Hz, 700 VA, 400 W **NOTE** UPS required for momentary transfer to backup generator during AC Failure.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Color Annunciator Data Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

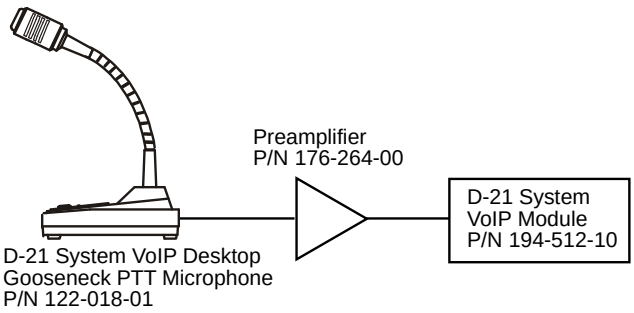
Central Receiving Systems

D-21 System VoIP Link Assembly with Desktop Microphone
122-018-04

Description

The Voice over Internet Protocol (VoIP) component is part of Monaco's D-21 Mass Notification Communication System. VoIP communication is controlled by the D-21, but implemented through ACU-1000 voice switches and Network Expansion Units (NXU-2B). VoIP communication is used for communication across the D-21 network for applications such as live voice mass notification through a Push-to-Talk (PTT) microphone.

NOTE This kit is used for expanding or replacing a desktop microphone configuration including radio switch P/N 194-512-00.



Features

- PTT Microphone
- Provides VoIP live voice, MNS source for Monaco's D-21 site-wide MNS system option

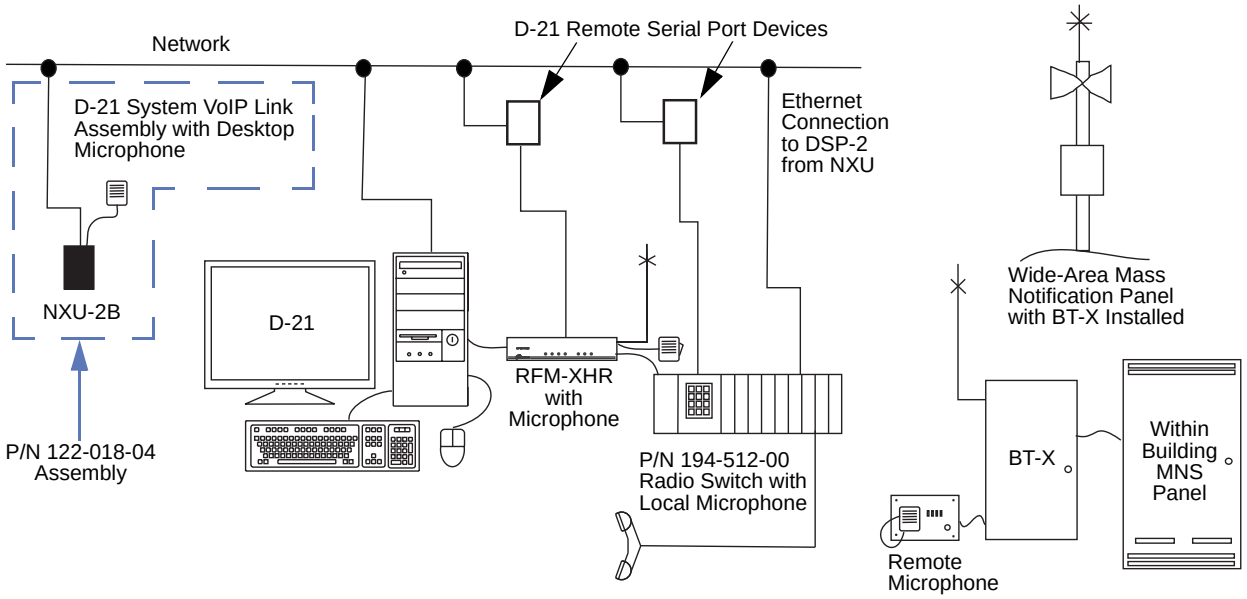
Ordering Information

Part Number	Description
122-018-04	D-21 System VoIP Desktop Microphone Link Assembly, kit includes gooseneck desktop microphone, microphone preamplifier, network expansion unit, and the DSP-2 card for the radio switch **NOTE** For use with radio switch P/N 194-512-00.

Associated Parts

Part Number	Description
122-018-01	Replacement PTT Microphone
194-512-10	VoIP Module Assembly

System Drawing



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

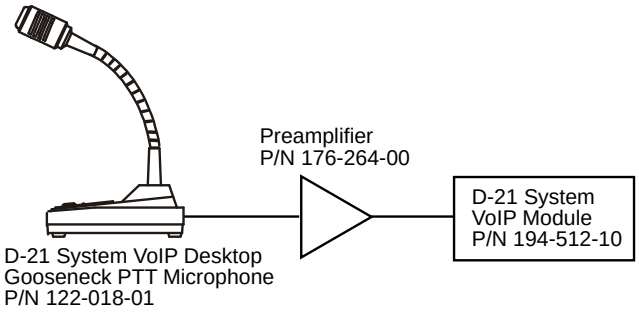
Central Receiving Systems

D-21 System VoIP Link Assembly with Desktop Microphone
122-018-05

Description

The Voice over Internet Protocol (VoIP) component is part of Monaco's D-21 Mass Notification Communication System. VoIP communication is controlled by the D-21, but implemented through a Live Voice Input Radio Switch and Network Expansion Units (NXU-2B). VoIP communication is used for communication across the D-21 network for applications such as live voice mass notification through a Push-to-Talk (PTT) microphone.

NOTE This kit is for use with a configuration including radio switch P/N 194-541-01.



Features

- PTT Microphone
- Provides VoIP live voice, MNS source for Monaco's D-21 site-wide MNS system option

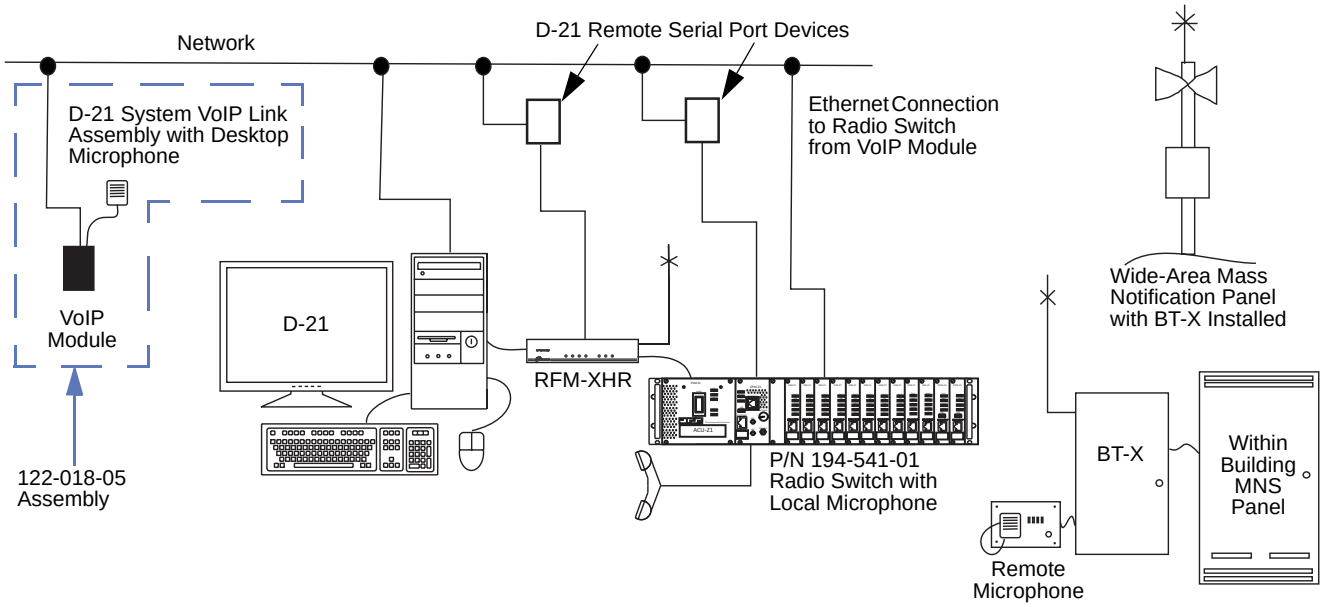
Ordering Information

Part Number	Description
122-018-05	D-21 System VoIP Desktop Microphone Link Assembly, kit includes gooseneck desktop microphone, microphone preamplifier, and network expansion unit **NOTE** For use with radio switch P/N 194-541-01.

Associated Parts

Part Number	Description
122-018-01	Replacement PTT Microphone
194-512-10	D-21 System VoIP Desktop Module Assembly

System Drawing



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Central Receiving Systems

D-21 System UPS Network Monitoring For Workstation Desks

404-167-00

Description

The Device Server encapsulates serial data into packets and transports them over the Ethernet allowing the D-21 UPS Monitoring RIB (Remote Interface Driver) to connect to and monitor the status of a UPS (Uninterruptible Power Supply) located at any desk location.

Features

- Connect remote Monaco Devices
- Compact size
- Supports RS-232, RS-422, RS-485 serial connections
- LED Status indicators
- Power Supply included

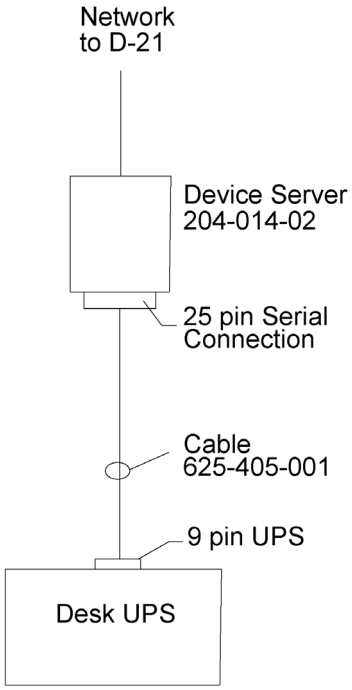
Specifications

Network Interface	RJ-45 10BASE-T/100BASE-TX Ethernet Port
Input Power	9 to 30 VDC
Serial Interface	DM25F DCE Serial Port
Power Consumption	1.8 watts maximum
Baud Rate	300 bps to 230 Kbps
Memory	256 KB SRAM, 2 MB Flash
Operating Temperature	32°F to 140°F (0°C to 60°C)
Operating Humidity	10% to 90% non-condensing
Enclosure	Metal with integrated wall mounts
IP Rating	30
Dimensions	0.9 in. H x 2.8 in. W x 3.7 in. D (23 mm x 72 mm x 95 mm)
Weight	0.09 lb (0.04 kg)
Standards Compliance:	
UL	Listed 864 E128144, S24286

Ordering Information

Part Number	Description
404-167-00	D-21 System UPS Network Monitoring for D-21 workstation Desks

Drawings



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

D-21 System UPS Network Monitoring For Racks

404-168-00

Description

This device server encapsulates serial data into packets and transports them over the Ethernet allowing the D-21 UPS Monitoring RID (remote interface driver) to connect to and monitor the status of a UPS (uninterruptible power supply) located at any rack location that is connected by network.

Features

- Remotely Monitor UPS status through Monaco D-21 Software
- Compact size
- Supports RS-232, RS-422, RS-485 serial connections

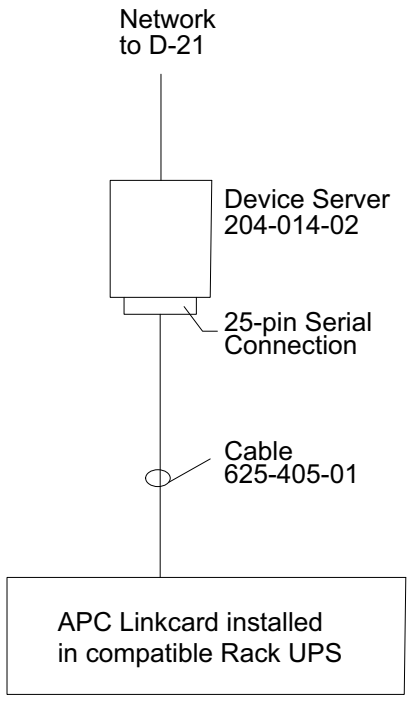
Specifications

Network Interface	RJ-45 10Base-T/100Base-TX Ethernet Port
Input Power	9 to 30 VDC (center +) or 9 to 24 VAC (1.5W max power required)
Serial Interface	DB25F DCE Serial Port
Power Consumption	1.8 watts maximum
Baud Rate	300 bps to 230 Kbps
Memory	256 KB SRAM, 2 MB Flash
Operating Temperature	–40°F to 158°F (–40°C to 70°C)
Operating Humidity	10% to 90% non-condensing, 40% to 60% recommended
Enclosure	Metal with integrated wall mounts
IP Rating	30
Dimensions	0.9 in. H x 2.5 in. W x 3.5 in. D (23 mm x 64 mm x 90 mm)
Weight	0.45 lb (0.2 kg)
Standards Compliance:	
UL Listed	Device Server: UL864, Files E128144, S24286

Ordering Information

Part Number	Description
404-168-00	D-21 System UPS Network Monitoring for Racks; kit includes device server, connecting cable, and APC Linkcard for rack UPS

Drawing



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Central Receiving Systems

Color Laserjet Printer with Ethernet Adaptor

205-064-01

Description

Easily create high-impact color documents in your office with the color laserjet. It is designed to quickly produce consistent color documents and boosts productivity through fast print speeds. The printer can print up to 28 pages per minute, supports duplex printing to help save paper, and saves energy with an ENERGY STAR® qualified design.

Features

- Built-in Ethernet adaptor
- Fast printing (28 ppm Letter size)
- Duplex printing
- ENERGY STAR® qualified

Ordering Information

Part Number	Description
205-064-01	Color Laserjet with Ethernet Adaptor

Specifications

Printing Specifications

Print Speed, Letter, Black or Color (A4)	Up to 28 ppm (Up to 27 ppm)
First Page Out, Black	As fast as 9.3 seconds
Print Resolution, Black	Up to 600 x 600 dpi
First Page Out, Color	As fast as 11.1 seconds
Print Resolution, Color	Up to 600 x 600 dpi
Print Technology	Laser
Monthly Duty Cycle	Up to 50,000 pages
Recommended Monthly Print Volume	750 to 4,000 pages
Memory, Standard	256 MB NAND Flash, 512 MB DRAM
Memory, Maximum	256 MB NAND Flash, 512 MB DRAM
Processor Speed	1,200 MHz
Print Languages, Standard	HP PCL 6, HP PCL 5c, HP postscript level 3 emulation, PDF, URF, PWG Raster

Paper Handling

Paper Tray(s), Standard	2
Paper Tray(s), Maximum	3
Input, Standard	50-sheet multipurpose tray, 250-sheet input tray
Input, Optional	Optional third 550-sheet input tray
Output, Standard	150-sheet output bin
Output, Optional	None
Duplex Printing (printing on both sides of paper)	Automatic (standard)
Media Sizes, Standard	Tray 1, Tray 2: Letter, legal, executive, Oficio (8.5 x 13 in.), 4 x 6 in., 5 x8 in., envelopes (No 10, Monarch); Optional Tray 3: Letter, legal, executive, Oficio (8.5 x 13 in.), 4 x 6 in., 5 x8 in.; Automatic Duplexer: Legal, letter, executive, Oficio (8.5 x 13 in.)
Media Sizes, Custom	Tray 1: 3 x 5 to 8.5 x 14 in.; Tray 2, Optional Tray 3: 3.94 x 5.83 to 8.5 x 14 in.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

Media Types	Paper (bond, brochure, colored, glossy, letterhead, photo, plain, preprinted, prepunched, recycled, rough), postcards, labels, envelopes
Media Weight	Tray 1: 16 to 47 lb (up to 52 lb with HP laser glossy photo papers); Tray 2: 16 to 43 lb (up to 47 lb with post-cards, up to 52 lb with HP laser glossy photo papers); Optional Tray 3: 16 to 43 lb (Up to 47 lb with postcards, up to 40 lb with HP laser glossy photo papers); Automatic Duplexer: 16 to 43 lb
Document Finishing	Sheetfed

Connectivity

Connectivity, Standard	1 Hi-Speed USB 2.0; 1 host USB at rear side; built-in Gigabit 10/100/1000Base-TX network; 802.3a2 (EEE)

Dimensions and Weight

Dimensions	16.2 in W x 18.5 in. D x 11.6 in. H (41.1 cm x 47 cm x 29.5 cm)
Dimensions, maximum	16.2 in W x 25.6 in. D x 11.6 in. H (41.1 cm x 65 cm x 29.5 cm)
Weight	41.7 lb (18.9 kg)

Power and Operating Requirements

Minimum System Requirements	PC: 2 GB available hard disk space, Internet connection, USB port, Internet browser. For additional OS hardware requirements see microsoft.com; Mac: 2 GB available hard drive space, Internet connection or USB port, OS hardware requirements see apple.com
Compatible Operating Systems	Windows Client OS (32/64 bit), Win10, Win8.1, Win 8 Basic, Win8 Pro, Win8 Enterprise, Win8 Enterprise N, Win7 Starter Edition SP1, UPD Win7 Ultimate, Mobile OS, iOS, Android, Mac, Apple® macOS Sierra v10.12, Apple® macOS High Sierra v10.13, Apple® macOS Mojave v10.14, Discrete PCL6 Printer Driver, For more information on the supported operating systems go to http://support.hp.com, Enter your product name and search, Click on User Guides and enter your product name and search for User Guide, Search for your (Product Name) User Guide, Search for the Supported Operating Systems section, UPD PCL6 / PS Printer Drivers, Supported Operating systems, For more information on the supported operating systems see http://www.hp.com/go/upd
Macintosh Compatible	Yes
Power Supply Required	110 to 127 VAC (±10%), 60 Hz (± 3 Hz); 220 to 240 VAC (±10%), 50/60Hz (± 3 Hz)
Power Consumption	550 watts (printing); 17 watts (ready); 0.9 watts (sleep); 0.9 watts (auto-off/auto-on); 0.07 wattts (auto-off/manual-on); 0.07 watts (off)
Power Consumption (Active)	550 watts
Power Consumption (Standby)	17 watts
Power Consumption (Off)	0.07 to 0.9 watts (see above)
ENERGY STAR® Qualified	Yes

Operating Environment

Temperature Range	Operating: 59°F to 86°F (15°C to 30°C) Recommended: 59°F to 80.6°F (15°C to 27°C) Storage: –4°F to 104°F (–20°C to 40°C)
Relative Humidity	Operating: 10% to 80% non-condensing Recommended: 20% to 70% non-condensing

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

D-21 System Point Reporting Upgrade Kit
207-946-00

Description

The D-21 Point Reporting feature provides specific information about the exact location of an alarm received. Alarms received are displayed on the relevant floor plan showing dispatchers exactly where the alarm was initiated. This allows better location tracking of an incident as additional alarms are received. For example, as a fire spreads across a floor, the floor plan map will show the location and time of the alarms received, giving responders information on the exact location and direction of the fire's movement through the building. When every second counts, knowing the exact location of triggered alarms saves valuable time for responders in determining the emergency's location.

In addition, having facility information available gives responders valuable insight into the situation. For instance, if a building contains any hazardous materials, knowing where the materials are stored and if a fire is encroaching on the stored materials can help responders better prepare for what they will be encountering.

The D-21 Point Reporting feature also provides valuable maintenance insight into building systems. Point Reporting individually reports every addressable sensor or addressable monitor module to the D-21 system providing real-time status information which can be displayed graphically for users. Troubles and faults are quickly and easily identified for maintenance.

Features

- Visually share information on the map with all D-21 users
- Icons on floor plans will identify the exact location of an initiated alarm
- Additional alarms received will allow tracking of the incident
- Troubles and faults are quickly identified for maintenance of building systems
- Requires RFM-X firmware Revision G.02 or higher
- This kit provides the items necessary to allow a MAAP(+) or MAAP-X system to be configured for the Point Reporting Option

NOTE This kit requires a visit from a Monaco Technician to install and set-up the Point Reporting option. It also assumes an appropriate RFM-X is already on-site or will be purchased. Please speak to Monaco Customer Service for a quote.

Specifications

RFM-X Firmware Rev G.02 or higher

Ordering Information

Part Number	Description
207-946-00	D-21 System Point Reporting Upgrade Kit; includes the D-21 Software Licensing Upgrade Key, up to four RFM firmware chips and the MAAP(+) Planner Kit **NOTE** Requires on-site visit from a Monaco technician, quoted separately.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

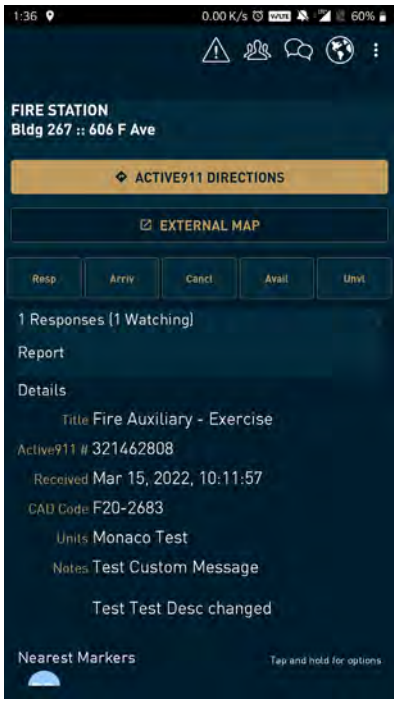
Central Receiving Systems

D-21 Active911 Notification Interface

207-973-22

Description

The Active911 Notification Interface provides the capability to send incident notification messages to the Active911 application server using one of two protocols: email or Simple Network Paging Protocol (SNPP). Incident notification messages are then forwarded to Active911 applications on approved mobile devices.



Active911 Notification on Mobile Device

Features

- Notification triggers include incident creation, location change, and termination
- Manual incident notifications resynchronize and update incident information
- Incident messages include time, ID, class, priority, topic, and location data

Specifications

Communication	Email, SNPP
Incident Data	Date, designator, class, priority, topic, location, notes
Life-cycle Updates	Incident creation, location modification, manual updates, incident closure

Ordering Information

Part Number	Description
207-973-22	D-21 Active911 Notification Interface, email or SNPP messages

Associated Parts

Part Number	Description
227-010-10	D-21 Central Receiving Station Communicator, WIN 10, Tower
207-973-20	D-21 Support Kit, D-21 EM Notification Communicator
200-442-11	Ethernet firewall, 8-Port, 10/100 VPN

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

D-21 Emergency Management

Central Receiving Systems Catalog Section 01

D-21 Emergency Management

D-21 Incident and Emergency Management Systems 227-010-xx, 227-011-xx, 227-012-xx, 227-020-10, 227-020-13
Repair by Replacement/Technology Upgrade 227-020-xx
D-21® EM Mobile Client Laptop 227-098-30
D-21® EM Mobile Client Tablet 227-099-30

Click to go back to "Table of Contents - Index by Product Name"

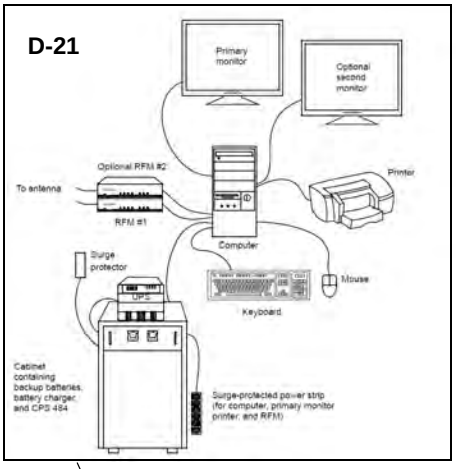
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-com.com

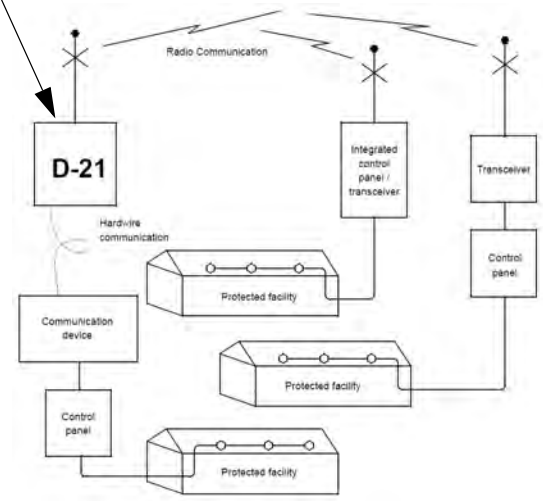
Detect Manage Record

Central Receiving Systems

D-21 Incident and Emergency Management Systems

227-010-xx, 227-011-xx, 227-012-xx, 227-020-10, 227-020-13





Description

D-21 Systems

The D-21 is a Windows®10-based central receiving system consisting of a primary central receiving station and client workstations and is available in two types: the **D-21 Incident Management System** and the **D-21 Emergency Management System**.

D-21 Incident Management System

The D-21 Incident Management System consists primarily of a receiving station interfacing with multiple remote units such as building transceivers (BT) and fire alarm control panels (FACP). A narrowband radio frequency modem (RFM) or hardwire communication allows it to monitor those systems for any alarm, trouble, or alert conditions. Client workstations communicate with the primary station over a LAN or WAN Ethernet network. The D-21 Incident Management System is flexible due to its modular design. Options can be added to extend and enhance its capabilities which allow it to interface with and manage incidents from fire protection, security, mass notification, and other systems.

When an event (alarm, trouble, alert, etc.) occurs, the D-21 Incident Management System creates an incident which is sent to the client workstation(s). Each workstation is manned by an operator who manages the incoming incidents and the response to each incident. Client workstation operators use the D-21 to gather and record information and coordinate the response to the incident by dispatching and managing incident responders. The D-21 records and logs the incident response. Advanced configurations of the D-21 integrate floor plans and maps to create a visual context for the D-21 Operator to manage an incident.

D-21 Emergency Management System

The D-21 Emergency Management suite of applications extends the functionality of a standard D-21 network. These programs communicate over the same computer network that connects multiple D-21 standard workstations sharing incident data and common information about the installation site with the standard D-21 applications. However, they also utilize an enterprise-class database server providing improved processing power, data storage and management, and system reliability and extensibility. The D-21 Emergency Management server connects to the standard D-21 primary server and performs the

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

communication and data transfer functions necessary to create a seamless D-21 network consisting of emergency management workstations.

D-21 System Options

Both D-21 system options offer the flexibility to integrate all the incident management tools necessary for the preservation of life and the protection of property. Each system is available in three configurations: Basic, Graphics, and Map.

- Basic D-21 central receiving system
- **D-21G**: Basic D-21 plus graphics; graphics entered into the database are displayed upon receipt of an alarm or trouble condition; dispatch personnel can identify the exact position of an emergency situation via on-site drawings and view digital photographs or scanned images of rooms and buildings; AutoCAD® Lt is included.
- **D-21M**: Basic D-21 plus maps; Geographical Information System ESRI maps and the types of graphics and images listed previously are displayed automatically highlighting the alarm location on the ESRI map display; the operator has immediate access to cross streets, hydrant locations, and other information associated with the alarmed facility

D-21 Client Workstations

D-21 clients are used by an operator to acknowledge alerts, process incidents, dispatch resources, and notify personnel. More than one client can run on the D-21 at once due to its modular design. The system can also be integrated with external systems such as mass notification, E-911, automatic vehicle locating (AVL), voice recording, and fire station alerting systems. Each of the D-21 Systems work exclusively with specific client workstations, but they are both capable of utilizing the Fire Management client.

D-21 Fire Management This offers the flexibility to integrate all the fire management tools necessary for the preservation of life and property protection. The system is available in three configurations: Basic, Graphics, and Map. Each of the configurations can be integrated with other life, safety, and property protection products such as mass notification, security, network video monitoring, and readiness assurance. The system can also be integrated with computer aided dispatch, E-911, paging, and automatic vehicle locating (AVL) functionality.

- Relational database allows custom report generation and database queries
- Multi-user capable; unique access rights by user
- Redundant server option
- Event-based system activity
- Fire incident processing
- First Responders HazMat database

NOTE While most client workstations are designed to work specifically with one of the D-21 systems, the data generated by the systems during incident or emergency situations can be made available to all client workstations.

D-21 Incident Management System Client Workstations

The following client workstations are for use with the D-21 Incident Management System.

D-21 Incident Client This is used to monitor remote security and fire protection hardware, create and manage incidents, track resource dispatching, and communicate with E-911 and other supplementary systems.

D-21 Security Management This offers a reliable maximum uptime intrusion reporting system that assures the integrity of all protected sites. By using redundant modes of communication over dual, separate pathways, the system assures area intrusion detection and logging, alarm reporting and display, remote alarm assessment, and the generation of alerts to security personnel.

- Constantly senses the resistance of circuits connected to its security inputs, and reports alarm or secure conditions for the following inputs:
  - Central Initiate - The access/secure condition of an area is determined by the system operator
  - Two Man Access/Secure - The access/secure condition of an area is determined by field personnel, and the system operator is aware of the area's condition

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

  - Entry/Exit Delay - A delay allowing personnel a certain amount of time to enter/leave an area without causing an alarm
  - Constant Secure - An area that cannot be placed in an access condition
  - Automatic - Changes to an access or secure condition are determined by the input's Master Control Zone
- Capable of transmitting over dedicated radio, fiber, or copper
- Integrates with other D-21 clients (e.g. Fire, MNS, etc.)
- Features a display of alarms on a geographic map indicating security arrangements and their proximity to roads, perimeters, facilities, and other locations
- The database can also include response plans, floor plans, and building or facility photographs
- "Listen-in" capability is available for selected locations with capable devices
- Communication status is displayed on the D-21
- Real-time alerting from a variety of sources including:
  - E-911 call systems
  - Fire and security alarm systems
  - Remote sensors and BT units
- Flexible integration and interfacing with many different response systems including:
  - Tone alerting systems
  - D-21 Remote Station Alerting System
  - D-21 Mobile Clients and Mobile Data Displays
  - D-21 Mobile Patrol and Mobile Patrol Command
  - D-21 Incident Alerting System
  - Mass Notification Systems (MNS)
  - Voice and video systems
- Access to response plans, contact lists, floor plans, graphics, and additional pertinent response data
- Emergency response databases
  - Aircraft including emergency shut-down and evacuation procedures for more than 300 models
  - Hazardous materials with evacuation, first aid, and protective action guidelines for more than 3,000 substances
- Access to law enforcement databases including prior history for persons, locations, vehicles, and weapons
- Site map displaying buildings, streets, and hydrants automatically updated to show incident locations

D-21 Mass Notification This is designed to communicate announcements to personnel in specific locations. The MNS delivers wide area and in-building, pre-recorded, and live voice messages and is integrated to the Monaco D-21 utilizing all the features of the system. The D-21 MNS utilizes existing D-21 Fire or Force Protection systems by encompassing the D-21 central equipment, building transceivers, and communication methods.

- Identified by the U.S. Army Corps of Engineers as "fully compliant with UFC 4-021-01 for individual mass notification" per Engineering and Construction Bulletin, No. 2003-22
- Messages can be initiated from both primary and multiple secondary locations
- Pre-recorded messages can be set up to play automatically or they can be operator initiated
- Live voice messages can originate via microphone, telephone, or from the radio of authorized emergency response personnel
- Messages can be directed to selected facilities or wide-area towers, the locations can be selected individually or grouped together
- Once activated, the selected messages will play until they are stopped by an operator or until they time out
- Local live voice and pre-recorded messages can be initiated within a specific building

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

- Areas to be notified are selected from a list for the D-21 and D-21G and from the D-21M's ESRI map
- Provides scheduler with daily log, notes, reminders, and an activity roster
- Report generator for custom reporting; system activity report indicates status, history, and extended poll information

D-21 View Generator/Tone Alerting This is an unattended workstation with tone out capabilities displaying the site map and basic incident data on a large-screen display installed in the home location of incident responders.

D-21 Central Point Reporting

- **MAAP(+) Point Reporting Addressable Fire Alarm Control Panel**: The MAAP(+) Panel provides detailed, real-time information to aid dispatchers, first responders, and incident commanders. This allows them to make informed decisions quickly and accurately thereby reducing incident response time and protecting lives and assets. Pairing the MAAP(+) Panel with a D-21 Central System, with the D-21 Mobile Client installed, will provide on-site incident commanders with up-to-date information on the location(s) of alarm activity inside the facility.

D-21 Network Video Monitoring This incorporates a network attached video server and remote networked cameras into the D-21 network allowing personnel the ability to monitor multiple locations at a single time using cutting edge video surveillance. Contact Monaco's Customer Service Department for more information on this client.

D-21 Emergency Management System Client Workstations

The following client workstations are for use with the D-21 Incident Management System.

D-21 Incident Alerting System (IAS) This provides a large-screen system for monitoring incident response activity in an emergency oversight center.

D-21 Mobile Fire This provides a special version of the D-21 Fire Management Client that can be run on a laptop installed in a response vehicle to support the activities of responders in the field.

D-21 Mobile Patrol (MP) This provides a version of the D-21 Law Enforcement client that can be run on a laptop installed in a patrol vehicle with additional features to support the activities of law enforcement resources in the field.

D-21 MEI Chat This is an instant messaging application providing a secure private channel for communication between mobile and non-mobile workstations.

D-21 Historical Recall This provides incident playback functionality for training, review, and performance assessment purposes.

Features

- Fire Alarm and Reporting Dispatch System
- Radio and/or hardwire reporting capability
- Factory Mutual approved
- Event-based system activity
- System activity reports: status, history, and extended poll
- Complete incident history
  - Logs and time stamps all incidents and events
- Relational database allows custom report generation and database queries
- Multi-user capable; unique access rights by user
- Incident management and processing
- High-Definition LCD monitors
  - Dual Monitor option available
- Microsoft Windows® operating system
- Radio Frequency Modem
- Uninterruptable Power Supply
- Color Laserjet® Printer
- First Responders HazMat database
- Remote access for troubleshooting
- Tower and Rack mount configurations available
- Redundant server options
- Primary and D-21 Clients can be added for additional dispatch workstations

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

Ordering Information

D-21 Central Receiving Station Tower

Part Number	Description
227-010-10	D-21 Central Receiving Station Communicator, Windows® 10, tower
227-011-10	D-21G (Graphics) Central Receiving Station Communicator, Windows® 10, tower
227-012-10	D-21M (Maps) Central Receiving Station Communicator, Windows® 10, tower

D-21 Central Receiving Station Rack-mount

Part Number	Description
227-010-12	D-21 Central Receiving Station Communicator, Windows® 10, rack-mount (4U)
227-011-12	D-21G (Graphics) Central Receiving Station Communicator, Windows® 10, rack-mount (4U)
227-012-12	D-21M (Maps) Central Receiving Station Communicator, Windows® 10, rack-mount (4U)
227-010-14	D-21 Central Receiving Station Communicator, Windows® 10, rack-mount (14U), server, f client, LCD/KVM, 20 min UPS, 120V/1500VA

D-21 Client Workstations

Part Number	Description
227-020-10	D-21 Client Alarm and Dispatch Station Communicator, Windows® 10, tower
227-020-13	D-21 Client Alarm and Displatch Station Communicator, Windows® 10, rack-mount (4U)

Associated Parts

D-21 License Options

Part Number	Description
207-843-00	D-21 Mass Notification System License
207-849-00	D-21 MNS Mass Notification System (Maps) License
207-860-01	D-21 Automatic Vehicle Locating License
207-882-00	D-21 E911 Interface Communicator
207-830-00	D-21 Fire Client
207-833-00	D-21 Fire Client with Maps
207-832-00	D-21 Fire and Security Client
207-835-00	D-21 Fire and Security Client with Maps
207-831-00	D-21 Security Client
207-834-00	D-21 Security Management Client with Maps
207-842-00	D-21 Mass Notification Client
207-880-00	D-21 Mobile Data Display
207-862-00	D-21 Mobile Client
207-878-00	D-21 Shortest Route Server, shortest route calculation, requires option key
207-878-01	D-21 Shortest Route Client Option Key
207-940-00	D-21 Command Decision Display Tools, traffic control and facility evacuation information sharing
207-940-01	D-21 EM interactive map tools

D-21 Mobile Laptop

*To add the D-21 Mobile laptop to your existing system, contact your Customer Service Representative to have your D-21 system configuration evaluated so a site specific engineered solution can be provided including any additional hardware and software necessary.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

Upgrade Options

Part Number	Description
207-863-00	D-21 Fire Client Upgrade from Graphics to Maps
207-864-00	D-21 Security Client Upgrade from Graphics to Maps

RFM-X Modem

Part Number	Description
227-323-00	RFM-XH Hardwire Modem, black
227-317-xx	RFM-XHR Radio Frequency Modem with hard-wire option, black enclosure, specify frequency when ordering

Optional Monitors

Part Number	Description
192-048-01	Monitor, 21.5 in., LED flat screen, black, VGA/DVI, 100 to 240V, 50–60 Hz
192-060-10	Monitor, 49 in., LED flat screen, black, HDMI, VGA/DVI, 110 VAC

D-21 Weather Station

Part Number	Description
299-016-01	D-21 Weather Station Kit
624-015-00	Cable for Weather Station with mil-spec connector, 5 pair, PVC, UV resistant, 300 ft max, priced per foot (required with P/N 299-016-01)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Central Receiving Systems

Repair by Replacement/Technology Upgrade
227-020-xx

Description

In order to ensure minimal downtime and avoid failures caused by aging equipment, Monaco recommends that important system components be regularly updated through a technology upgrade for existing D-21 computer equipment.

This upgrade offers the latest FM Approved technology and software updates to ensure the D-21 system runs at optimal performance levels and allow dispatchers to take full advantage of the system's feature set.

The current industry standard life for a desktop computer is four to five years, while that of a laptop computer is two to three years. The expectancy of a computer is based on the Mean Time Between Failures (MTBF) stated in hours and is based on the average use of a computer, i.e., eight hours a day, Monday through Friday for 40 hours per week, or just over 2,000 hours per year.

Typical MTBF

Equipment	Hours per year*
Personal Computer	1,000 - 5,000
Hard Disk	10,000 - 20,000
Work Station	2,000 - 5,000
*Statistics by System Reliability Center	

Specifications

Repair by Replacement/Technology Upgrade

The following systems have FM Approved printed circuit boards that are specific to the Monaco D-21 equipment listed.

Standard D-21 Systems

Monaco Part Number:	Product:
227-020-81	Server/Client Rack-mount
227-020-82	Client Rack-mount
227-020-83	Server Rack-mount
227-020-84	Client Tower
227-020-85	Server Tower
227-020-86	Server/Client Tower
227-020-94	View Generator

Emergency Management Systems

Monaco Part Number:	Product:
227-020-89	MMS Client Rack-mount
227-020-88	MMS Client Tower
227-020-62	MMS Server Rack-mount
227-020-63	MMS NAS Drive Rack-mount
227-020-97	Mobile Fire - Laptop
227-020-98	Mobile Cops - Laptop
227-020-99	Mobile Fire - Tablet
227-020-71	EM View Generator

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Central Receiving Systems

Ordering Information

Standard D-21 Systems

Part Number	Description
227-020-81	Kit, D-21, Repair by Replace, WIN10, Server/Client, Rack-mount
227-020-82	Kit, D-21, Repair by Replace, WIN10, Client, Rack-mount
227-020-83	Kit, D-21, Repair by Replace, WIN10, Server, Rack-mount
227-020-84	Kit, D-21, Repair by Replace, WIN10, Client, Tower
227-020-85	Kit, D-21, Repair by Replace, WIN10, Server, Tower
227-020-86	Kit, D-21, Repair by Replace, WIN10, Server/Client Tower
227-020-94	Kit, D-21 CPU, Repair by Replace, View Generator, WIN10

Emergency Management Systems

Part Number	Description
227-020-89	Kit, MMS Class CPU, Repair by Replace, WIN10, Client, 2U Rack-mount
227-020-88	Kit, MMS Class CPU, Repair by Replace, WIN10, Client, Tower
227-020-62	Kit, EM CPU, Repair by Replace, Server, Rack-mount
227-020-63	Kit, D-21, Repair by Replace, NAS Drive, Rack-mount
227-020-97	Kit, D-21 EM, Repair by Replace, Mobile Fire, WIN10, Laptop
227-020-98	Kit, D-21 EM, Repair by Replace, Mobile Cops, WIN10, Laptop
227-020-99	Kit, D-21 EM, Repair by Replace, Mobile Fire, WIN10, Tablet
227-020-71	D-21 EM, Repair by Replace, View Generator, WIN10

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Central Receiving Systems

D-21® EM Mobile Client Laptop

227-098-30

Description

Incident commanders must quickly assess information and establish situational awareness concerning all aspects of an incident. The D-21® EM Mobile Fire client accomplishes this goal with the availability of essential real-time and pre-planned data.

The D-21 EM Mobile Fire provides a live, real-time wireless connection to the D-21 EM database giving responders a common operating picture. Utilizing a rugged laptop mounted in the responding vehicle, the D-21 EM Mobile Fire client provides responders with access to the D-21 EM features such as the ability to view actions being taken or update information such as perimeters, roadblocks or control points. Responders can add information, like special markers or annotations, directly on the map view which will instantly be shared with all D-21 EM users.

In addition, access to features from the EM Fire Management component is available to users in the field allowing data entry to forms, checklists and logs which is immediately updated to all networked D-21 EM computers. The D-21 EM Mobile Fire workspace is customizable by the user to enhance their operation of the system. Other D-21 EM features are also available such as the chat functionality allowing responders to send and receive messages relevant to the specific incident at hand.

When equipped with options such as Automatic Vehicle Locating (AVL), dispatchers and other networked D-21 EM users can see AVL vehicles on the map and status updates are made automatically such as en-route, on-scene, etc. The Hazmat Plume option provides a “footprint” on the map display of the estimated projection path of a cloud caused by a chemical fire or hazardous material spill. When used with Shortest Route, the map will calculate the shortest distance between the two locations and will automatically route around warning areas such as perimeters, hazmat plumes, etc.

Features

- Utilizes the modern SQL database structure of the D-21 EM providing faster system operation
- Data Communication between the dispatcher and the response vehicle over a secure, private radio network or an encrypted cellular radio network
  - The D-21 EM Mobile Fire Map is synchronized with the dispatch center and provides features such as: Ability to add perimeters, roadblocks, traffic control information, control points, annotations, and special markers
  - Ability to view hydrant information close to the incident or in a specific area
- Access to emergency response databases, relevant graphics and media, including floor plans and response plans
- Data entry in the field is immediately available to all networked D-21 computers
- Access to D-21 EM features such as chat and customizable workspaces

Options

- Automatic Vehicle Locating (AVL) via GPS
- Hazmat Plume
- Shortest Route

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

Laptop Features

- Rugged Laptop, Dockable
- 13.1 in. XGA touch display
- Windows 10 Pro
- Intel Core i7-5600U 2.6 GHz, vPro Processor
- 16GB RAM
- Anti-shock hard drive, anti-vibration, shock-resistant, drop-resistant, dust-resistant, explosion proof, weather proof

Laptop Specifications

Software	Windows® 10 Pro
CPU	Intel® Core™ i7-5600U
Memory	16GB RAM
Display	13.1 XGA 1024 x 768 LED backlight, touchscreen, anti-glare, anti-reflective, sunlight readable
Input type	Keyboard, touchpad, stylus Emissive backlight
Material	Magnesium alloy
AC Adaptor	Input AC 120/230V (50/60Hz)
Dimensions	11.5 in.H x 2.9 in. D x 11.9 in. W
Weight	8.2 lb
Audio	High Definition Speaker
Interfaces	HDMI USB 3.0 3x USB 2.0 Serial, Dock, Headphone Output, Microphone Input, VGA, LAN
Communication	Bluetooth Intel Dual Band Wireless - AC 7265
Battery	Lithium ion: Capacity: 8550 mAH Operation: 18 hours est.
Security Features	Kensington security slot Theft/Intrusion Security lock slot Trusted Platform Module (TPM 2.0) security chip
Standards Compliant	ISO 9001, ISO 14001, IEC 60529 IP65, AES, RoHS, MIL-STD-810G, section 508, MIL-STD-461F Display: EnergyStar Certified Networking: IEE 802.1X

Ordering Information

Part Number	Description
227-098-30*	D-21 EM Mobile Client, WIN 10, rugged laptop computer, WIFI, Bluetooth, Memory Card Reader
207-981-10	EM Fire Software kit. 1 kit required per P/N 227-098-30 and P/N 227-099-30

*To add D-21 Mobile laptop to your existing system, contact your Customer Service Representative to have your D-21 system configuration evaluated so a site specific engineered solution can be provided including any additional hardware and software necessary.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

D-21® EM Mobile Client Tablet

227-099-30

Description

Incident commanders must quickly assess information and establish situational awareness concerning all aspects of an incident. The D-21® EM Mobile Fire or Law Enforcement client accomplishes this goal with the availability of essential real-time data.

The D-21 EM Mobile provides a live, real-time wireless connection to the D-21 EM database giving responders a common operating picture. Utilizing a rugged tablet mounted in the responding vehicle, the D-21 EM Mobile client provides responders with access to the D-21 EM features such as the ability to view actions being taken or update information such as perimeters, roadblocks or control points. Responders can add information, like special markers or annotations, directly on the map view which will be shared with all D-21 EM users.

In addition, access to features from the EM component is available to users in the field allowing data entry to forms, checklists and logs which is updated to all networked D-21 EM computers. The D-21 EM Mobile workspace is customizable by the user to enhance their operation of the system. Other D-21 EM features are also available such as the chat functionality allowing responders to send and receive messages relevant to the specific incident at hand.

When equipped with options such as Automatic Vehicle Locating (AVL), dispatchers and other networked D-21 EM users can see AVL vehicles on the map and status updates are made automatically such as en-route, on-scene, etc. The Hazmat Plume option provides a “footprint” on the map display of the estimated projection path of a cloud caused by a chemical fire or hazardous material spill. When used with Shortest Route, the map will calculate the shortest distance between the two locations and will automatically route around warning areas such as perimeters, hazmat plumes, etc.

Features

- Utilizes the modern SQL database structure of the D-21 EM providing faster system operation
- Data Communication between the dispatcher and the response vehicle over a secure, private radio network or an encrypted cellular radio network
- The D-21 EM Mobile Map is synchronized with the dispatch center and provides features such as:
  - Ability to add perimeters, roadblocks, traffic control information, control points, annotations, and special markers
  - Ability to view hydrant information close to the incident or in a specific area
- Access to emergency response databases, relevant graphics and media, including floor plans and response plans
- Data entry in the field is immediately available to all networked D-21 computers
- Access to D-21 EM features such as chat and customizable workspaces

Options

- Automatic Vehicle Locating (AVL) via GPS
- Hazmat Plume
- Shortest Route
- Mobile

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

Tablet Features

- Rugged Tablet, Dockable
- 10.1 inch WUXGA touchscreen
- Windows 10 Pro 64-bit
- Intel Core i5-6300U 2.4 GHz, vPro Processor
- 8GB RAM
- 10 point touch screen supports glove mode
- Anti-vibration, shock-resistant, drop-resistant, dust-resistant, explosion proof, weather proof

Tablet Specifications

Software	Windows® 10 Pro 64 bit Edition
CPU	Intel® Core™ i5-6300U
Memory	8GB RAM
Display	10.1 WUXGA 1920 x 1200 10-point multi-touch, LED backlight, anti-glare, auto-rotation, direct bonding, glove touch mode, sunlight readable
Material	Magnesium alloy
Dimensions	7.4 in.H x 0.8 in. D x 10.6 in. W
Weight	2.4 lb
Audio	Microphone - High Definition Speaker
Cameras	Autofocus LED flash 720p front 8MP rear
Interface	1 HDMI Port 1 USB 3.0 Port Dock, Headphone Out, LAN
Communication	Sierra Wireless EM7355 LTE, 4G
Battery	Lithium ion: Capacity: 4800mAH Operation: 14 hours est.
Security Features	Kensington security slot Theft/Intrusion Security lock slot Trusted Platform Module (TPM 2.0) security chip
Standards Compliant	AES, IP65, MIL-STD-810G standard Display: EnergyStar Certified Networking: IEE 802.1X

Ordering Information

Part Number	Description
227-099-30	D-21 EM Mobile Client, WIN 10, rugged tablet computer, WIFI, Bluetooth, Smartcard reader, handstrap
207-913-00	Mobile Law Enforcement Client Kit
207-981-10	EM Fire Software kit. 1 kit required per P/N 227-098-30 and P/N 227-099-30.

*To add D-21 Mobile tablets to your existing system, contact your Customer Service Representative to have your D-21 system configuration evaluated so a site specific engineered solution can be provided including any additional hardware and software necessary.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

D-21 Fire – Reserved

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-com.com

D-21 MNS – Reserved

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-com.com

Central Receiving Systems Catalog Section 01

D-21 Security – Reserved

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-com.com

Detect Manage Record

D-21 Tone Alerting Panel

Central Receiving Systems Catalog Section 01

D-21 Tone Alerting Panel

D-21 Tone Alerting Panel 227-095-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-com.com

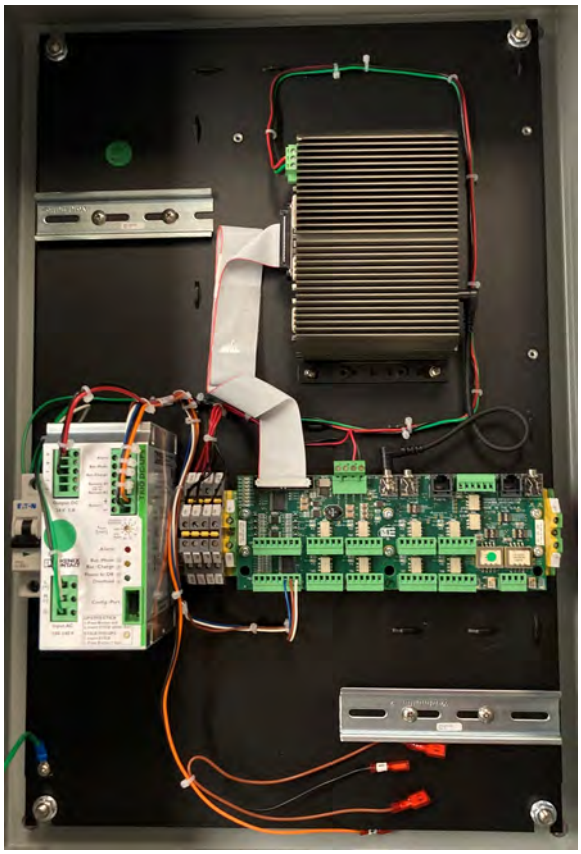
Detect Manage Record

Central Receiving Systems

D-21 Tone Alerting Panel
227-095-00

Description

The D-21 Tone Alerting Panel provides building-wide transmission of prerecorded messages and/or unique tones for different emergencies.



Specific messages and tones are used to alert emergency crews. The panel also allows the connection of external strobes to be used in tandem with the tone and prerecorded messages.

The D-21 Tone Alerting Panel paging interface allows integration with an existing paging system to give the D-21 Tone Alerting Panel priority to send out a tone or prerecorded messages over the paging system speaker network. For additional information contact Monaco Enterprises.

Prerecorded voice messages can be stored and played by the D-21 Tone Alerting Panel. Messages are downloaded and are resident in the panel. The D-21 Tone Alerting Panel also provides the option to generate synthesized text-to-speech output from text information sent to it from the D-21 Central.

The D-21 Tone Alerting Panel has automatic failover to battery backup power and has an integrated battery charger to ensure the batteries are ready to operate when needed. The power supply supervises the power system by detecting and reporting battery faults, AC failures, and low battery conditions.

A Redundant D-21 Tone Alerting Panel can be added to a system to provide real-time automatic failover in case of Primary Tone Panel failure. If the Primary D-21 Tone Alerting Panel fails to respond to a tone command, the command will be sent to the Redundant Tone Panel automatically. For additional information contact Monaco Enterprises.

Features

- Flexible deployment of tone and prerecorded voice messages activated by the D-21 Central
- Text-to-speech from D-21 dispatch preplans
- Line-level audio output with ramped audio option for connection to building intercom systems
- Eight Double Pole Double Throw (DPDT) relays for activation of a public address amplifier, external strobe or other device
- Eight trigger inputs allow the D-21 Tone Alerting Panel to monitor a power supply, batteries or other devices

Specifications

Enclosure	Surface-mount, Grey, NEMA 4
Dimensions	24 in. H × 16 in. W × 8 in. D
Input Power	115 to 230 VAC at 50/60 Hz

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Ordering Information

Part Number	Description
227-095-00	D-21 Tone Alerting Panel, includes text-to-speech license for a single building and two 12 VDC/8 Ah batteries **NOTE** Requires: • D-21 Tone Alerting Panel requires a Tone Alert Panel Remote Interface Driver (RID) License P/N 207-886-00 • Use of text-to-speech requires a D-21 Server Text-to-Speech Support Kit, P/N 207-905-00

Associated Parts

Part Number	Description
227-095-10	D-21 Tone Alert Panel Upgrade; complete upgrade for previously installed D-21 Tone Alert Panel; upgrade is installed into the existing tone alert panel enclosure; requires two 12 VDC/8 Ah batteries, P/N 400-704-00 (purchased separately)
207-886-00	Tone Alert Panel Remote Interface Driver (RID) License; enables the Tone Alert Panel RID on the D-21 (one required per D-21 server) **NOTE** Requires: • D-21 Tone Alert Panel, P/N 227-095-00
207-905-00*	D-21 Server Text-to-Speech Support Kit; enables text-to-speech on the D-21 server; required for text-to-speech (one required per D-21 server) **NOTE** Requires: • D-21 Tone Alert Panel, P/N 227-095-00 • Tone Alert Panel RID License, P/N 207-886-00
207-546-25*	Text-to-Speech Broadcast Site License; required if the D-21 Tone Alert Panel is to be connected to additional buildings or connected to a radio network (one required per site) **NOTE** Requires: • D-21 Tone Alert Panel, P/N 227-095-00 • Tone Alert Panel RID License, P/N 207-886-00 • D-21 Server Text-to-Speech Support Kit P/N 207-905-00
400-704-00	Battery, SLA, rechargeable, 12V/8 Ah, quick connect, 5.95 in. L x 2.56 in. W x 3.90 in. H, 3.50 lb
***NOTE** The D-21 Server Text-to-Speech Support Kit (P/N 207-905-00) is for use within a single building; however, the D-21 Tone Alert Panel can be connected to additional buildings or radio networks when a Text-to-Speech Broadcast Site License (P/N 207-546-25) has also been purchased	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Rack-mount Cabinets

Central Receiving Systems Catalog Section 01

Rack-mount Cabinets

Rack Cabinets 104-011-00, 104-012-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-com.com

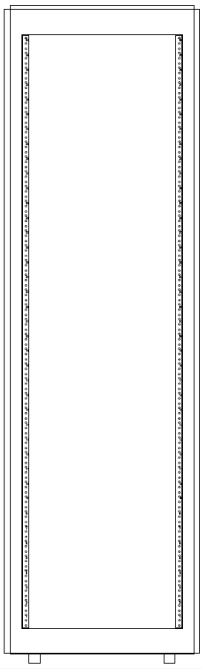
Detect
Manage
Record

Central Receiving Systems

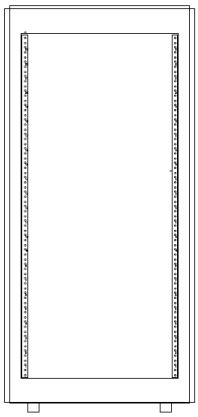
Rack Cabinets
104-011-00, 104-012-00

Description

24U and 40U 19 in. Rack Cabinets are available in different heights and depths for use with Monaco's Central Receiving System. Cabinets include power strips and adaptor patch panel.



Front View
P/N 104-011-00



Front View
P/N 104-012-00

The CAT 5e Patch Panel mounts on a 19 in. equipment rack. Connector modules are in groups of six and include rear cable-management bars. Cabinets are durable 16-gauge steel with internal braces, a black-textured powder-coat finish and top ventilation with removable side panels. PCB and plastic components are rated UL94V-0.

Specifications

40U Cabinet Dimensions	22 in. W x 76.125 in. H x 31.4 in. D
24U Cabinet Dimensions	22 in. W x 48.125 in. H x 31.4 in. D
Weight Capacity	10,000 lb
6-Outlet Power Strip	120 VAC, 60 Hz, 15A Horizontal, Rack-mount
8-Outlet Power Strip	120 VAC, 60 Hz, 15A Includes surge, spike protection and EMI filtering Horizontal Rack-mount
10-Outlet Power Strip	120 VAC,60 Hz, 15A Low Profile Power, Vertical Rack-mount
Structural Elements	Top and bottom rails: 14 gauge steel Horizontal braces: 16 gauge steel Removable side panels Locking latch, rear door Top vented
Finish	Black, powder coat
Patch Panel	Cat 5e Universal Patch panel, 24-port, 1RU

Ordering Information

Rack Cabinet

Part Number	Description
104-011-00	Rack Cabinet, 40 U, 22 in. W x 76.125 in. H x 31.4 in. D, Black, 6-outlet power strip, 10-outlet power strip low profile
104-012-00	Rack Cabinet, 24 U, 22 in. W x 48.125 in. H x 31.4 in. D, Black, 6 outlet power strip, 8-outlet power strip with surge protection

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems Catalog Section 01

Rack-mount Shelves

Rack Shelf 081-214-02
Rack Shelf 081-215-01

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-com.com

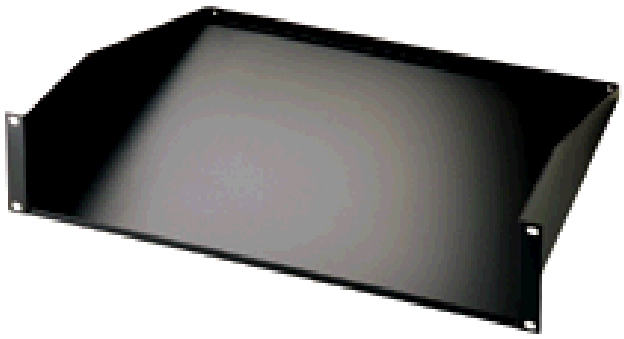
Detect Manage Record

Central Receiving Systems

Rack Shelf
081-214-02

Description

19 in. black equipment shelf for use on the Monaco Central Receiving Rack-mounted System.



Specifications

Materials	16-gauge steel
Dimensions	Useable shelf area 17.44 in. W x 14.50 in. D Racking height 3.5 in. Rack width 19 in.
Weight Capacity	Up to 50 lb

Ordering Information

Part Number	Description
081-214-02	Rack shelf, black, 2U

Features

- Durable black powder-coat finish
- Solid one-piece construction

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

Rack Shelf
081-215-01

Description

19 in. black equipment shelf for use on the Monaco Central Receiving Rack-mounted System.

Ordering Information

Part Number	Description
081-215-01	Rack shelf, black, 19 in., 1U

Features

- 19 in. black, heavy duty, 1U, rack shelf, adjustable depth of 27 in. to 44 in.
- Fully vented shelf allowing for airflow beneath the equipment
- Four-point mounting system with a weight capacity of 500 lb

Specifications

Dimensions Useable depth range: 27 in. to 44 in.
Racking height: 1.5 in.
Rack width: 19 in.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems Catalog Section 01

Rack Blank Panels

Rack Blank Panel 085-214-0x

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-com.com

Detect Manage Record

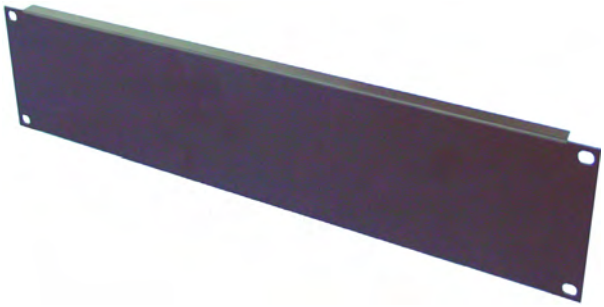
Central Receiving Systems

Rack Blank Panel

085-214-0x

Description

19 in. black blank panel for use on the Monaco Central Receiving Rack-mounted Systems.



Features

- Available in six space sizes
- Durable black powder-coat finish

Specifications

Materials 14-gauge or 16-gauge steel

Dimensions All units are 19 in. W; height based on order number (see "Ordering Information")

Ordering Information

Part Number	Description
085-214-01	Rack blank panel, black, 19 in., 1U 1.75 in. H
085-214-02	Rack blank panel, black, 19 in., 2U 3.5 in. H
085-214-03	Rack blank panel, black, 19 in., 3U 5.25 in. H
085-214-04	Rack blank panel, black, 19 in., 4U 7 in. H
085-214-05	Rack blank panel, black, 19 in., 5U 8.25 in. H
085-214-06	Rack blank panel, black, 19 in., 6U 10.5 in. H
P/Ns ending in -01, -02, -03, -04 are made with 14-gauge steel. P/Ns ending in -05 and -06 are made with 16-gauge steel.	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems Catalog Section 01

Network Switching

Switch, Industrial, 5 Port Ethernet 200-438-00
Fiber Module, Transceiver Hot Plug for DODIN Switch 200-444-02
Fiber Module, 1000BASE-LX, Hot Plug, SFP 200-444-06
Fiber Module, Optical Transceiver Hot Plug, SFP 200-457-00
KVM Switch 200-461-00
Ethernet Switch Assembly with 24-Port SFP, Managed Layer 3 200-471-11
Switch Assembly, 24 Port, 4SFP, Managed, Layer 2, POE, 1U 200-481-01
Switch Assembly, 48 Port, 2 SFP+, Managed, Layer 2, 1U 200-482-01
Switch Assembly, 12 Port, SFP, Managed, Layer 3, 1U, DODIN 200-484-01
Switch Assembly, 12 Port, SFP, Managed, Layer 3, 1U 200-485-01
Switch Assembly, 24 Port, 8SFP+, Managed, Layer 2/3, DoDIN. 200-491-01
Switch Assembly, 24 Port, 4 SFP+, Managed, Layer 2/3, DoDIN 200-498-01
Switch Assembly, 48 Port, 4 SFP+, Managed, Layer 2/3 200-501-01

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-com.com

Detect Manage Record

Central Receiving Systems

Switch, Industrial, 5 Port Ethernet

200-438-00

Features

- Industrial Ethernet Switch
- 5 RJ-45 Ports
- Automatic Detection of Data Transmission Speed of 10 or 100 Mbps
- Autocrossing Function
- EMC Class A Product

Specifications

Supply Voltage	24 VDC
Supply Voltage	12 to 48 VDC
Current Consumption	185 mA (typical)
Transmission	Ethernet in RJ45 Twisted Pair Speed: 10/100 Mbps Length: 100 m (per segment)
Signal LEDs	Data Receive Link Status
Functions	Auto Negotiation Unmanaged Switch
Mounting	DIN Rail
Material	Aluminum
Dimensions	4.3 in. H x 1.1 in. W x 2.7 in. D (110 mm x 28 mm x 70 mm)
Weight	0.6 lb (263.4 g)
Temperature	Operating: 14°F to 140°F (–10°C to 60°) Storage: –4°F to 185°F (–20°C to 85°C)
Humidity	5% to 95% non-condensing
Standards Compliance:	
IEEE	802.3, store and forward switch mode
EMC	Directive 2004/108/EC
UL	Class I, Div. 2, Groups A, B, C, D

Ordering Information

Part Number	Description
200-438-00	Switch, Industrial, 5 Port Ethernet, 10/100 Mbps, 10–48 VDC

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

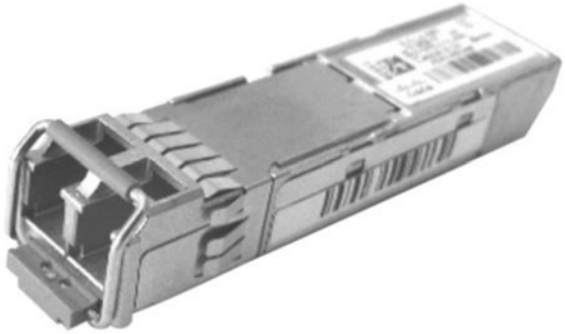
Detect Manage Record

Central Receiving Systems

Fiber Module, Transceiver Hot Plug for DODIN Switch
200-444-02

Description

The Fiber Module Transceiver Hot Plug for DODIN Switch is a Small Form-Factor Pluggable (SFP) Gigabit Ethernet interface converter that links switches and routers to the network.



Features

- Hot swappable input/output that plugs into Gigabit SFP Ethernet port
- Connections for 1000BASE LX/LH networks
- Supports Digital Optical Monitoring (DOM)
- Robust design for enhanced reliability

Specifications

Fiber Type	Single Mode Fiber (SMF)
Switch Type	Small Form-Factor Pluggable
Port Connection	Gigabit Ethernet: 100BASE LX/LH Long-Wavelength with DOM
Connectors	Dual LC/PC
Power Consumption	1 watt per port
Wavelength	1310 nm

SFP Port Cabling:

Core size (µ)	ITU-T G.652µ SMF (as specified by IEEE 802.3z standard)
Minimum Cable Distance	6.5 ft. (2 m)
Operating Distance	32,821 ft. (10,000 m) single-mode

Optical:

Transmit Power Range	–3 to – 9.5 (dBm)
Receive Power Range	–3 to –20 (dBm)
*Maximum Channel Insertion Loss**	6 (G.652 SMF) in dB
Transmit and Receive Wavelength Range	1270 to 1355 nm

*****Maximum channel insertion loss is defined for maximum distance; when links are deployed over shorter distances, additional channel insertion loss may be allowed.

Other:

Dimensions	0.33 in. H x 0.53 in. W x 2.22 in. L (8.5 mm x 13.4 mm x 56.5 mm)
Weight	0.16 lb (75 g) (typical)
Operating Temperature	23°F to 185°F (–5°C to 85°C)
Storage Temperature	–40°F to 185°F (–40°C to 85°C)

Standards Compliance:

Laser Class I	21CFR1040 LN#50 7/2001
Laser Class I	IEC 60825-1
IEEE	802.3Ah, 802.3z
GR-3276-CORE	Generic Requirements for Single-Mode Optical Connectors and Jumper Assemblies
Trade Agreements Act	TAA compliant

Ordering Information

Part Number	Description
200-444-02	Fiber Module, Transceiver Hot Plug for DODIN Switch - SFP Single Mode, 1310 nm, 1000BASE LX/LH Longwave with DOM

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

Fiber Module, 1000BASE-LX, Hot Plug, SFP

200-444-06

Specifications

Power	3.3V
Port Connection	1000BASE-LX
Switch Type	Small Form-Factor Pluggable (SFP)
Wavelength	1310 nm
Cable Distance	10 km maximum
Data Transfer Rate	1.25 Gbps
Standards Compliance:	
TAA	Approved

Ordering Information

Part Number	Description
200-444-06	Fiber Module, 1000BASE-LX, Hot Plug, SFP, 3.3V, 10 km

Features

- Hot plug connector interface
- Built in diagnostics
- 10 km with 9/125 µm SMF
- SFP footprint duplex
- Operating data rate up to 1.25 Gbps
- 3.3V power supply
- TTL logic interface

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Central Receiving Systems

Fiber Module, Optical Transceiver Hot Plug, SFP

200-457-00

Description

This Fiber Module is a high performance solution for serial optical data communication applications and offers low jitter performance for extended optical links support without performance degradation.

Features

- Optical Transceiver Hot Plug
- LC Duplex connectors
  - provide up to 100 Mbps (in half duplex mode) or 200 Mbps (in full duplex mode)
- Allows 100BASE-FX SFP fiber optic connectivity on select Gigabit combo SFP ports
- Multi-Source Agreement (MSA) Compliant
- FDA, CDRH, TUV Laser Eye Safety Certified

Specifications

Power	3.3V
Port Connection	100BASE-FX
Switch Type	Small Form-Factor Pluggable (SFP)
Fiber Type	50/125µm Multi Mode (MM) 62.5/125µm Multi Mode (MM)
Wavelength	1310nm
Cable Distance	2km (max.)
Optical Power	–19 dBm min. output –14 dBm max. output
Power Budget	13 dB
Dimensions	0.3 in. H x 2.28 in. W x 0.5 in. L (7.6 mm x 57.9 mm x 12.7 mm)
Weight	0.03 lb (0.014 kg)
Temperature	Operating: 32°F to 158°F (0°C to 70°C) Storage: –40°F to 185°F (–40°C to 85°C)
Relative Humidity	Operating: 0% to 90% non-condensing Storage: 5% to 90% non-condensing
Standards Compliance:	
IEEE	802.3u 100BASE-FX
RoHS	Compliant

Ordering Information

Part Number	Description
200-457-00	Fiber Transceiver Module, 1310nm, Multi Mode, SFP, LC, 10/100, 2 km distance, hot plug

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

KVM Switch
200-461-00

Description

The KVM Switch is designed to allow a user to control multiple USB-enabled computers with one USB keyboard, USB mouse, and monitor.

Features

- Fully compliant with USB standards (1.0, 1.1)
- Compatible with USB-enabled PC, SUN, and MAC computers with VGA video
- Supports international keyboard layouts in auto-detection mode

Specifications

Dimensions	13.3 in. W x 5.9 in. D x 1.75 in. H
AC Power	110/220 VAC, 50/60 Hz via IEC connector
Operating Temperature	32°F to 100° F (0°C to 38°C)
Relative Humidity	17% to 90% non-condensing

Ordering Information

Part Number	Description
200-461-00	KVM Switch, USB, 8-port, multi-monitor, desktop

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

Ethernet Switch Assembly with 24-Port SFP, Managed Layer 3
200-471-11

Description

This intelligent, high-performance Ethernet switch provides high availability and network flexibility with 20 SFP ports and four combination (10/10/1000BASE-T or SFP) ports. The switch provides a complete set of security features, including Access Control Lists (ACL) and Safeguard Engine™ functions, BPDU and DOS attack prevention features, duplicate address detection, L3 control packet filtering, and traffic segmentation.

Features

- Four 10 GbE SFP+ uplink ports
- Two smart fans that reduce heat and noise
- 4k VLAN
- Up to nine switches in a stack
- 6 kV surge protection on RJ45 access ports
- Redundant Power Supply (RPS) support
- IEEE 802.1D/802.1w/802.1s Spanning Tree
- Loopback detection (LBD)
- IP-MAC-port binding
- SSH/SSL
- Microsoft® NAP (supports IPv4/v6)
- Supports long-distance stacking over fiber
- Easy-to-use web-based GUI
- Industry standard CLI
- Green technology which includes a power-saving mode, smart fan feature, reduced heat dissipation, and cable length detection
  - – Ports that have no link are automatically powered down
  - – Built-in fans automatically turn on only at a certain temperature

Specifications

Power Input	100 to 240 VAC, 50/60 Hz
Power Consumption	• Maximum: 63.6 watts • Standby: 30. 1 watts
Physical Stacking	• Up to 80 Gbps stacking bandwidth • Up to nine switches in a stack • Ring/chain topology suppport
Switch Capacity	128 Gbps
Packet Forwarding Rate	95.24 Mpps
MAC Address Table	68K entries maximum
Jumbo Frame	12 KB
Interfaces	• 20 SFP ports • Four combination 10/100/1000BASE-T or SFP ports • Four 10 GbE SFP+ ports
Console Ports	RJ45 and Mini USB ports for out-of-band CLI management
Management Port	10/100/1000BASE-T RJ45 Ethernet for out-of-band IP management (Telnet, CLI, SNMP v1/v2c/v3, SSH, SSL, Radius, and TACACS+ Authentication)
Alarm Port	RJ45 (8-pin)
USB Port	USB 2.0 Type A
Temperature Range	• Operating: 23°F to 122°F (–5°C to 50°C) • Storage: –40°F to 158°F (–40°C to 70°C)
Relative Humidity	• Operating: 10% to 95% • Storage: 5% to 95%
Dimensions	17.4 in. L x 10.2 in. W x 1.73 in. H (441 mm x 260 mm x 44 mm)
Weight	8.36 lb (3.79 kg)

Ordering Information

Part Number	Description
200-471-11	Assembly for Ethernet Switch, 24-port (20 SFP ports + four combo 10/100/1000BASE-T or SFP ports), managed layer 3, 1U, rack-mount, 100 to 240 VAC, 50/60 Hz, includes enhanced software (EI) license

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

Switch Assembly, 24 Port, 4SFP, Managed, Layer 2, POE, 1U
200-481-01

Description

This Switch Assembly is a fixed configuration, stackable, one rackmount black unit with 24 Port Gigabit Ethernet ports and four fixed Small Form-Factor Pluggable (SFP) uplinks. The fully managed Switch Assembly operates on LAN Base, Layer 2 IOS software and supports simple device management as well as network management.

Features

- Access Switch Assembly
- 10/100/1000Base Ethernet Ports
- Power over Ethernet (POE)
- Switch Hibernation Mode
- On-Device Management features include Web UI, Bluetooth, Network Management, and Stacking
- Application Visibility and Control (AVC) with Domain Name System as an Authoritative Source (DNS-AS) controls identification and classification of trusted network traffic
- Security features to limit access to the network and mitigate threats

Specifications

Internal Power Supply	Fixed (auto ranging unit)
Voltage	100 to 240 VAC
Current	2A to 5A current, 50/60Hz
Switch Power Rating	0.05 kVA, 12V: 3A, 53V: 8A (maximum consumption values)
CPU	600 MHz dual core
Memory	Flash: 128 MB DRAM: 512 MB
Available PoE Power	370 W (single PS source)
Max. number PoE+ ports	12 ports up to 30 W
Max. number PoE ports	24 ports up to 15.4 W
Console Ports	USB (Type B), Ethernet (RJ-45)
Storage Interface	USB (Type A) for external flash
Ethernet Interfaces:	
10BASE-T	RJ-45, 2 pair CAT3, 4, or 5 UTP cabling
100BASE-TX	RJ-45, 2 pair CAT5 UTP cabling
1000BASE-T	RJ-45, 4 pair CAT5 UTP cabling
1000BASE-T SFP based	RJ-45, 4 pair CAT5 UTP cabling
Network Management Interface	10/100 Mbps Ethernet (RJ-45)
Bandwidth Forwarding	108 Gbps
Bandwidth Switching	216 Gbps full duplex capacity
Bandwidth Stacking	FlexStack-Plus: 80 Gbps FlexStack-Extended: 40 Gbps
Stack Members	8
Dimensions	1.75 in. H x 17.5 in. W x 14.5 in. D (4.5 cm x 44.5 cm x 36.8 cm)
Weight	12.8 lb (5.8 kg)
Operating Temperature	Up to 5,000 ft, (1,500 m): 23°F to 113°F (–5°C to 45°C) Up to 10,000 ft. (3,000 m): 23°F to 104°F (–5°C to 40°C)
Storage Temperature	Up to 15,000 ft. (4,573 m): –13°F to 158°F (–25°C to 70°C)
Relative Humidity	10% to 95% non-condensing
Standards Compliance:	
UL Listed	60950-1 Second Edition
IEEE Standards	802.1D, 802.1p, 802.1Q, 802.1s, 802.1w, 802.1X, 802.1ax, 802.1ab (LLDP), 802.3ad, 802.3af and 802.3at, 802.3az, 802.3x full duplex on (10BASE-T, 100BASE-TX, and 1000BASE-T ports)
DODIN	Approved
TAA and RoHS	Compliant

Ordering Information

Part Number	Description
200-481-01	Ethernet Switch Assembly, 24-port 10/100/1000 Gigabit Ethernet, 4 fixed 1-Gigabit Interface Converter (GBIC) Small Form Factor Pluggable (SFP) uplinks, Managed, 1U, LAN Base, Layer 2, POE, DODIN APL, TAA, RoHS

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

Switch Assembly, 48 Port, 2 SFP+, Managed, Layer 2, 1U
200-482-01

Description

The Switch Assembly is a fixed configuration, stackable, one rackmount unit designed for operational simplicity to lower total cost of ownership. Switches deliver enhanced application visibility, network reliability, and network resiliency.

Features

- Access Switch Assembly
- 48 port - 10/100/1000 Ethernet Interfaces
- Two Fixed 10-Gigabit Ethernet SFP+ uplinks
- LAN Base, Layer 2 IOS Software
- On-Device Management features include Web UI, Bluetooth, Network Management, and Stacking
- Security features to limit access to the network and mitigate threats

Specifications

Internal Power Supply	Fixed (auto ranging unit)
Voltage	100 to 240 VAC
Current	1A to 0.5A current, 50/60Hz
Switch Power Rating	0.049 kVA, 12V: 4A, 53V: N/A (maximum consumption values)
CPU	600 MHz dual core
Memory	Flash: 128 MB DRAM: 512 MB
Console Ports	USB (Type B), Ethernet (RJ-45)
Storage Interface	USB (Type A) for external flash
Ethernet Interfaces:	
10BASE-T	RJ-45, 2 pair CAT3, 4, or 5 UTP cabling
100BASE-TX	RJ-45, 2 pair CAT5 UTP cabling
1000BASE-T	RJ-45, 4 pair CAT5 UTP cabling
1000BASE-T SFP based	RJ-45, 4 pair CAT5 UTP cabling
Network Management Interface	10/100 Mbps Ethernet (RJ-45)
Bandwidth Forwarding	108 Gbps
Bandwidth Switching	216 Gbps full duplex capacity
Bandwidth Stacking	FlexStack-Plus: 80 Gbps
Stack Members	8
Dimensions	1.75 in. H x 17.5 in. W x 11 in. D (4.5 cm x 44.5 cm x 27.9 cm)
Weight	9.6 lb (4.3 kg)
Operating Temperature	Up to 5,000 ft. (1,500 m): 23°F to 113°F (-5°C to 45°C) Up to 10,000 ft. (3,000 m): 23°F to 104°F (-5°C to 40°C)
Storage Temperature	Up to 15,000 ft. (4,573 m): –13°F to 158°F (–25°C to 70°C)
Relative Humidity	10% to 95% non-condensing
Standards Compliance:	
UL Listed	60950-1 Second Edition
IEEE Standards	802.1D, 802.1p, 802.1Q, 802.1s, 802.1w, 802.1X, 802.1ax, 802.1ab (LLDP), 802.3ad, 802.3af and 802.3at, 802.3az, 802.3x full duplex on (10BASE-T, 100BASE-TX, and 1000BASE-T ports), 802.3ae
DODIN	Approved
TAA and RoHS	Compliant

Ordering Information

Part Number	Description
200-482-01	Ethernet Switch Assembly, 48-port 10/100/1000 Gigabit Ethernet, 2 fixed 10-Gigabit Ethernet Small Form-Factor Pluggable Plus (SFP+) uplinks, Managed, 1U, LAN Base, Layer 2, DoDIN APL, TAA, RoHS

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving System

Switch Assembly, 12 Port, SFP, Managed, Layer 3, 1U, DODIN 200-484-01

Description

This 12 Port 1-Gigabit Ethernet SFP Switch Assembly is a Managed, Layer 3, 1 Rackmount Unit that provides capabilities ideally suited to support wired and wireless access and enables uniform wired-wireless policy enforcement, application visibility, flexibility, and application optimization.

Features

- Access Switch Assembly
- Advanced security features enable protection against attackers, user authentication, and device access to include Secure Shell (SSH) protocol, Kerberos, and Simple Network Management Protocol Version 3 (SNMPv3)
- Supports optional network module for 4 x Gigabit Ethernet with SFP receptacle uplink ports

Specifications

Internal Power Supply	Auto ranging unit 350W
Input Voltage	100 to 240 VAC
Input Current	2A to 4A, 50/60 Hz
Total Output BTU	1207 BTU/hr (1000 BTU/hr = 293W)
Power Supply Input	IEC 320-C16 (IEC 60320-C16)
Platform	Cisco IOS XE software
Connectors and Cabling	Ethernet: RJ-45 connectors, 4 pair Cat-5 UTP cabling Management console port: RJ-45-to-DB9 cable for PC connections
Ethernet Interfaces:	
1000BASE-T	RJ-45, 4 pair CAT5 UTP cabling
1000BASE-T SFP based	RJ-45, 4 pair CAT5 UTP cabling
Network Management Interface	10/100 Mbps Ethernet (RJ-45)
Switching	Layer 3
Switching Capacity	68 Gbps
Stacking Bandwidth	480 Gbps
Stacking Capacity	4 switches (max.)
Stacking Ports	Copper based
MAC Addresses	32,000 (total number)
IPv4 Routes (ARP plus learned routes)	24,000 (total number)
Flash	2 GB
DRAM	4 GB
Wireless Access Points	100 (per switch)
Wireless Clients	2000 (per switch)
Forwarding Rate	50.5 Mpps
Dimensions	1.75 in. H x 17.5 in. W x 17.7 in. D (4.45 cm x 44.5 cm x 45.0 cm)
Weight	15.48 lb (7.02 kg)
Normal Operating Temperature	Up to 5,000 ft. (1,500 m): 23°F to 113°F (–5°C to 45°C) Up to 10,000 ft. (3,000 m): 23°F to 104°F (–5°C to 40°C)
Storage Temperature	Up to 15,000 ft. (4,572 m): –40°F to 158°F (–40°C to 70°C)
Relative Humidity	10% to 95% non-condensing
Standards Compliance:	
UL Listed	60950-1 Second Edition
IEEE Standards	802.1as, 802.1s, 802.1w, 802.11, 802.1x, 802.3ad, 802.3af, 802.1D, 082.1p, 802.1Q, 802.3, 802.3u, 802.3ab, 802.3z
DODIN	Approved
RoHS	Compliant

Ordering Information

Part Number	Description
200-484-01	Ethernet Switch Assembly, 12-port 1-Gigabit Ethernet SFP, Managed, 1U, Layer 3, DODIN APL, RoHS

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

Switch Assembly, 12 Port, SFP, Managed, Layer 3, 1U
200-485-01

Description

This Switch Assembly is a compact managed option for consistency across a LAN switching network and provides advanced networking features for flexibility, security and scale. Its compact size and fanless operation is ideal for placement where multiple cable runs would be difficult. The assembly can be mounted on a wall, under a desk, rack or DIN rail and can be located where equipment noise cannot be tolerated.

Features

- Gigabit Ethernet ports with line rate forwarding performance
- Advanced Layer 3 (IP Base) support
- Cisco VLAN Trunking Protocol (VTP)
- Secure Shell (SSH) that encrypts administrator traffic
- Managed for consistency across a LAN switching network
- Hibernate Mode
- Energy-Efficient Ethernet

Specifications

AC/DC Input	IP Voltage: 100–240 VAC IP Current: 0.5–0.2A
Power Rating	30 watts, 0.05 KVA, 170.6 BTU
Switch throughput *Power Consumption*	100%: 20.8 watts 10%: 20.6 watts 0% (with EEE): 15.6 watts
Ethernet Ports	12 10/100/1000 Gigabit Ethernet
Uplinks	Two 1 Gigabit Copper Two 1 Gigabit SFP
Console Port	RJ45 and Mini Type B USB
Alarm Port	Alarm Port: RJ45
USB Port	USB Port: USB 2.0 Type A

Connectors

10BASE-T	RJ-45, 2 pair CAT3,4, or 5 UTP cabling
100BASE-TX	RJ-45, 2 pair CAT5 UTP cabling
1000BASE-T	RJ-45, 4 pair CAT5 UTP cabling
1000BASE-T SFP based	RJ-45, 4 pair CAT5 UTP cabling
Memory	Flash 128 MB, DRAM 512 MB
VLAN	Maximum 1023, IDs 4000
Maximum Transmission Unit (MTU)	Up to 9000 bytes
Jumbo Frames	9198 bytes
Forwarding Rate 64 Byte	23.8 mpps
MTFB	755,270

Indicators

Per Port Status	Link integrity, Disabled, Activity, Speed, Full-Duplex
System Status	System, Link Status, Link Duplex, Link Speed
Dimensions	1.75 in. H x 10.6 in. W x 8.4 in. D (44.4 mm x 269 mm x 213 mm)
Weight	3.9 lb (1.77 kg)

Temperature

Operating	23°F to 113°F (–5°C to 45°C)
Storage	–13°F to 158°F (–25°C to 70°C)
Relative Humidity	5% to 95% non-condensing

Standards Compliance

UL	60950-1, CAN/CSA 22.2 No. 60950-1
GB	4943
IEC	60825
IEEE	802.1D, 802.1p, 802.1Q, 802.1s, 802.1w, 802.1x, 802.1AB, 802.3ad, 802.3af, 802.3ah, 802.3x, 802.3, 802.3u, 802.3ab, 802.3z
DODIN APL	Approved

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco.com **Web** www.monaco.com

Detect Manage Record

Ordering Information

Part Number	Description
200-485-01	Compact Ethernet Switch Assembly, 12-port 10/100/1000 Gigabit Ethernet, two 1G SPF and two 1G copper uplinks, IP Base, Managed, Layer 3, 1U, DODIN APL

Associated Parts

Part Number	Description
200-444-02	Fiber Module, Transceiver Hot Plug for DODIN Switch - SFP Single Mode, 1310 nm, 1000BASE LX/LH Longwave with DOM

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco.com **Web** www.monaco.com

Detect Manage Record

Central Receiving Systems

Switch Assembly, 24 Port, 8SFP+, Managed, Layer 2/3, DoDIN 200-491-01

Description

This is a fixed configuration, stackable, one rack-mount Switch Assembly with 24 Port Gigabit Ethernet switches and eight fixed Small Form-Factor Pluggable (SFP+) uplinks. The Switch Assembly is fully managed and operates on LAN Base, Layer 2/3 IOS software that supports simple device and network management.

Features

- Access Switch Assembly
- 10/100/1000 Ethernet Interfaces
- FlexStack-Plus with up to 80 GB of stack bandwidth and up to 12 members in a stack
- Switch Hibernation Mode
- On-Device Management features include Web UI, Network Management, and Stacking
- Application Visibility and Control (AVC) with Domain Name System as an Authoritative Source (DNS-AS) controls identification and classification of trusted network traffic
- Security features to limit access to the network and mitigate threats

Specifications

Internal Power Supply	Fixed (auto ranging unit)
Voltage	100 to 240 VAC
Current	1.69A current, 50/60Hz
Switch Power Rating	PS Max Rating 135 W 0% Traffic 42.6 W 10% Traffic 51.6 W 100% Traffic 57.6 W
Console Ports	USB (Type B), Ethernet (RJ-45)
Storage Interface	USB (Type A) for external flash
Network Management Interface	10/100/1000 Mbps Ethernet (RJ-45)
Bandwidth Forwarding	154 Mbps
Bandwidth Switching	208 Gbps full duplex capacity
Ethernet Interfaces:	
10BASE-T	RJ-45, 2 pair CAT3, 4, or 5 UTP cabling
100BASE-TX	RJ-45, 2 pair CAT5 UTP cabling
1000BASE-T	RJ-45, 4 pair CAT5 UTP cabling
1000BASE-T SFP+ based	RJ-45, 4 pair CAT5 UTP cabling
Dimensions	1.72 in. H x 17.32 in. W x 11 in. D (4.37 cm x 44 cm x 28 cm)
Weight	8.2 lb (3.76 kg)
Temperature	Operating: 23°F to 122°F (–5°C to 50°C) Storage: –13°F to 158°F (–25°C to 70°C)
Relative Humidity (non-condensing)	Operating: 5% to 95% at 122°F (50°C) Storage: 0% to 95% at 158°F (70°C)
Altitude	Operating: 0 to 10,000 ft. (3,000 m) Storage: 0 to 39,000 ft. (12,000 m)
Standards Compliance:	
UL Listed	60950-1 Second Edition
IEEE Standards	802.1AB (LLDP/LLDP-MED), 802.1D, 802.1p, 802.1Q, 802.1s, 802.1w, 802.1X, 802.3ad, 802.3ae, 802.3af, 802.3at, 802.3az, 802.3x, 802.3 MAU MIB (RFC 2239), 1000BASE-SX/LX, full duplex on 10BASE-T, 100BASE-TX, 1000BASE-T
DoDIN	Approved
TAA and RoHS	Compliant

Ordering Information

Part Number	Description
200-491-01	Ethernet Switch Assembly, 24-port 10/100/1000 Gigabit Ethernet, 8 fixed 1-Gigabit Interface Converter (GBIC) Small Form Factor Pluggable (SFP+) uplinks, Managed, 1U, LAN Base, Layer 2/3, on the DoDIN APL, TAA, RoHS

Associated Parts

Part Number	Description
200-444-06	Fiber Module, Transceiver Hot Plug for DoDIN approved Switch - SFP Single Mode, LC connector, 1310 nm, 1000BASE LX/LH Longwave with DOM. On the DoDIN APL, TAA, RoHS

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

Switch Assembly, 24 Port, 4 SFP+, Managed, Layer 2/3, DoDIN
200-498-01

Description

This Switch Assembly with 24 10/100/1000 Mbps ports, two 1 GbE uplink ports, and four 10 GbE SFP+ stacking/uplink ports. The assembly includes a rubber foot kit, power cord clip, rack-mount kit, RJ-45 console cable, and a US AC power cord.

The Switch Assembly has only a single IP address that simplifies management and offers transparent forwarding. When new switches join the stack, they automatically inherit the stack's existing configuration file, enabling a plug-and-play network expansion.

Features

- Integrated power supply
- 10/100/1000 Mbps Ethernet ports
- Flexible stacking adds capacity throughout the network without increasing the management load
- Auto-configuration ensures error free configuration and accelerates deployment
- Hot-insertion and removal of stack members simplifies operations

Specifications

Input Voltage	100 to 240 VAC @ 50 to 60 Hz
Power Supply	36W maximum
Power Consumption	**Idle:** 14W **10% Traffic:** 24W **100% Traffic:** 24W
Heat Dissipation	**Idle:** 47 BTU/hr **10% Traffic:** 81 BTU/hr **100% Traffic:** 82 BTU/hr
Switching Capacity	132 Gbps
Forwarding Capacity	98 Mpps
Aggregated Stacking Bandwidth	480 Gbps
Stacking Density	12 switches maximum per stack
Stacking Distance	10 km maximum
Console Ports	USB Type-C port and RJ45 serial port
Storage Interface	USB Type-A for file transfer
Out-of-band Network Management Interface	10/100/1000 Mbps Ethernet (RJ-45)
VLANs	4,095 maximum
Operating Temperature	32°F to 113°F (0°C to 45°C)
Relative Humidity	5% to 95% at 113°F non-condensing
Operating Altitude	10,000 ft. maximum (3,000 m)
Dimensions	17.32 in. W x 14.57 in. D x 1.72 in. H (440 mm x 370 mm x 43.65 mm)
Weight	8.4 lb (3.8 kg)
Standards Compliance:	
UL Listed	UL 60950-1 Second Edition
IEEE	802.1AB, 802.1D, 802.1p, 802.1s, 802.1w, 802.1x, 802.3, 802.3ab, 802.3, 802.3ad, 802.1, 802.3ae, 802.3bz, 802.3u, 802.3x, 802.3z, 802.3, 802.1Q, 802.1BR, 802.3az
DoDIN	Approved
TAA and RoHS	Compliant

Ordering Information

Part Number	Description
200-498-01	Ethernet Switch Assembly, 24 10/100/1000 Mbps Ethernet ports, two 1 GbE uplink ports, four 10 GbE SFP+ stacking/uplink ports, Managed, 1U, LAN Base, Layer 2/3, on the DoDIN APL, TAA, RoHS

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Systems

Switch Assembly, 48 Port, 4 SFP+, Managed, Layer 2/3
200-501-01

Description

This Switch Assembly has 48 10/100/1000 Mbps ports, two 1 GbE uplink ports, and four 10 GbE SFP+ stacking/uplink ports. The assembly includes a rubber foot kit, power cord clip, rack-mount kit, RJ-45 console cable, and a US AC power cord.

The Switch Assembly has only a single IP address that simplifies management and offers transparent forwarding. When new switches join the stack, they automatically inherit the stack's existing configuration file, enabling a plug-and-play network expansion.

Features

- Integrated power supply
- 10/100/1000 Mbps Ethernet ports
- Flexible stacking adds capacity throughout the network without increasing the management load
- Auto-configuration ensures error free configuration and accelerates deployment
- Hot-insertion and removal of stack members simplifies operations

Specifications

Input Voltage	100 to 240 VAC @ 50 to 60 Hz
Power Supply	65 watts maximum
Power Consumption	**Idle:** 24W **10% Traffic:** 38W **100% Traffic:** 39W
Heat Dissipation	**Idle:** 83 BTU/hr **10% Traffic:** 131 BTU/hr **100% Traffic:** 132 BTU/hr
Switching Capacity	180 Gbps
Forwarding Capacity	134 Mpps
Aggregated Stacking Bandwidth	480 Gbps
Stacking Density	12
Stacking Distance	6.21 miles (10 km) maximum
Console Ports	USB Type-C port and RJ45 serial port
Storage Interface	USB Type-A for file transfer
Out-of-band Network Management Interface	10/100/1000 Mbps Ethernet (RJ-45)
VLANs	4,095 maximum
Operating Temperature	32°F to 113°F (0°C to 45°C)
Relative Humidity	5% to 95% at 113°F non-condensing
Operating Altitude	10,000 ft. maximum (3,000 m)
Dimensions	17.32 in. W x 14.57 in. D x 1.72 in. H (440 mm x 370 mm x 43.65 mm)
Weight	10.63 lb (4.82 kg)
Standards Compliance:	
UL Listed	UL 60950-1 Second Edition
IEEE	802.1AB, 802.1D, 802.1p, 802.1s, 802.1w, 802.1x, 802.3, 802.3ab, 802.3, 802.3ad, 802.1, 802.3ae, 802.3bz, 802.3u, 802.3x, 802.3z, 802.3, 802.1Q, 802.1BR, 802.3az
DoDIN	Approved
TAA and RoHS	Compliant

Ordering Information

Part Number	Description
200-501-01	Ethernet Switch Assembly, 48 x 10/100/1000 Mbps Ethernet ports, two 1 GbE uplink ports, four 10 GbE SFP+ stacking/uplink ports, Managed, 1U, LAN Base, Layer 2/3, on the DoDIN APL, TAA, RoHS

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Supplemental Equipment Catalog Section 02

Section 2. Central Receiving Supplemental Equipment

Indoor/Outdoor PA Speaker, White, Curved Design. 124-077-00
Outdoor PA Speaker Horn, Surface-mount, Bidirectional Bells 124-087-01
Indoor PA Speaker, 2 ft. Square, White, Ceiling Tile 124-089-00
Indoor PA Speaker, 8 in. Round, White, Ceiling-mount 124-090-00
Radio Interface, Digital Signal Processor, 4-wire 194-509-01
Network Time Protocol (NTP) Time Server 194-518-01, 194-518-11
VoIP Module for Live Voice MNS 194-523-01
Ethernet Firewall, 8-Port, 10/100/1000, VPN 200-442-21
Digital Voice Recorder 203-033-01
Digital Voice Recorder 203-058-08, 203-058-16
Switch, Service Bypass Panel 392-100-00
UPS External Battery Pack 403-020-00
UPS, Network Devices, 2000VA, 120V, 2U. 404-099-10
UPS, 1500VA, 120V, Rack Tower, LCD 404-105-00
UPS Battery Backup, 1500VA, 230V 404-112-01

Live Voice Radio Switch

Live Voice Input Radio Switch 194-541-01

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Supplemental Equipment

Indoor/Outdoor PA Speaker, White, Curved Design

124-077-00

Front

Back

Back, Top

Features

- Outdoor rated to IP-34 (per IEC 529)
- Built-in 70V/100V multi-tap transformer for distributed loudspeaker lines, plus 4 ohm direct capability
- Curved design with versatile mounting configurations
  - Including wall-mounted aimed straight out from the wall, angled down at a 45 degree aiming axis, mounted spanning the junction of a wall and ceiling, or spanning the junction of a wall and another wall
  - Curved shape couples with both boundary surfaces forming a dual ground plane configuration
  - Using the optional PMB pole-mount bracket, four speakers can be joined together and suspended by a ceiling fan pole to form a cluster module with 360 degree horizontal coverage
- Superb sound quality
- Professional-quality input terminals
- Dual 100 mm (4 in.) woofers and 19 mm (0.75 in.) titanium-laminate tweeter
- Transformer input for non-supervised PA systems

NOTE For use on PA systems that do not require speaker supervision (transformer coupled speakers); not compatible with MNS panels which require speaker supervision (capacitively coupled speakers)

Specifications

Nominal Voltage	70V/100V
Nominal Sensitivity	89dB
Maximum SPL @ 1 m	108dB continuous average long-term (peaks of 114dB)
Frequency Range (–10dB)	80 Hz to 20 kHz (half-space, on-wall) 60 Hz to 20 kHz (quarter space, at two-wall junction)
Mounting	Multiple Mounting Options; Includes Corner/Wall-mount bracket with cap, screws and trim covers
Nominal Coverage Angle	105 degree horizontal x 80 degree vertical (2 kHz to 16 kHz, speaker in vertical orientation)
Input Wiring	Transformer Coupled, 3.5 in., Color-coded, Pre-tinned Leads
Minimum Impedance	4 ohms at 320 Hz
Nominal Impedance	4 ohms
Transformer Taps	30 W, 15 W, 7.5 W at both 70V and 100V (plus 3.8 W at 70V only), Thru position is 4 ohms
Dimensions	See Dimension Drawings
Weight	7 lb (3.2 kg)
Grille	Zinc-plated Steel
Standards Compliance:	IP-34 per IEC 529, RoHS Compliant
UL Listed	UL 1876

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Compliance Cont.:

MilSpec 810	Exceeds for humidity, salt spray, temperature and UV
Mil-Std-202F	Passes for salt spray

Power Handling

75W	Continuous Pink Noise, 2 hours
60W	Continuous Pink Noise, 100 hours
150W	Continuous Program Power
300W	Continuous Peak Power

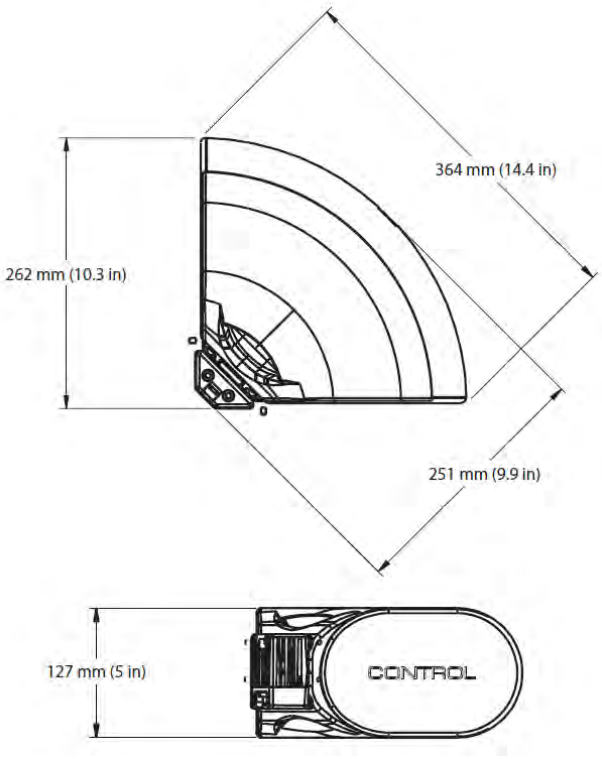
Ordering Information

Part Number	Description
124-077-00	D-21 Alerting Station Outdoor PA Speaker, Transformer Coupled, Non-Supervised, white, multi-surface-mount, RoHS Compliant; includes Corner/Wall-mount bracket with cap, screws and trim covers

Associated Parts

Part Number	Description
086-244-00	Optional Pole-mount Bracket (white) for 4-speaker 360 degree hanging pendant cluster

Dimensions



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Supplemental Equipment

Outdoor PA Speaker Horn, Surface-mount, Bidirectional Bells

124-087-01

Features

- Twin Reflex Projectors provide high efficiency bidirectional sound dispersion
- Includes 30 W single compression, high efficiency driver
- Element Resistant Construction for Indoor or Outdoor environments
- Built-in 25V, 70.7V, or 100V Transformer with seven-position, impedance switch for versatile applications
- Transformer input for non-supervised PA systems
- Seven-position watts/impedance switch (screwdriver adjustable) with a 45 ohm tap
- Paging, Talkback, security and tone signals
- 100 degree Sound Dispersion in each direction
- Omni-purpose mounting bracket for vertical or horizontal planes; also includes provisions for strap-mounting to I-beams or pillars

NOTE For use on PA systems that do not require speaker supervision (transformer coupled speakers); not compatible with MNS panels which require speaker supervision (capacitively coupled speakers).

Driver Protection

The horn speaker should not be operated at frequencies outside the horn cut-off. It is suggested that any program material be high-passed at 300 Hz with a 6dB per octave filter. This can be done with a low level filter at the amplifier input or by a series capacitor at each speaker. Electrolytic capacitors can be used but they must be non-polarized (See "Typical Capacitor Values Chart").

Specifications

Nominal Voltage	25V, 70.7V, 100V
Full Range Power Rating	30 W
Average Sensitivity	101dB, 1W/1M
Frequency Range	450 Hz to 12.5 kHz (±5dB)
Mounting	24 in. wide suspended ceiling tile grid, mounted parallel to floor plane
Dispersion Angle	175 degrees (–6dB, 2,000 Hz octave band)
Input Wiring	Transformer Coupled, 3.5 in., Color-coded, Pre-tinned Leads
Dimensions	16.5 in. L (419 mm) between bells 9.75 in. Bell OD (248 mm Bell OD) See "Dimensions"
Weight	9 lb (4.1 kg)
Finish	Grey baked epoxy

Power Taps

25V	0.9, 1.8, 3.7, 7.5, 15
70.7V	2.0, 3.8, 7.5, 15, 30
100V	4, 7.7, 15, 30

Typical Capacitor Values Chart

8 ohm Driver	25V Line	70V Line	100V Line
70 mfd	30 mfd	4 mfd	2 mfd

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

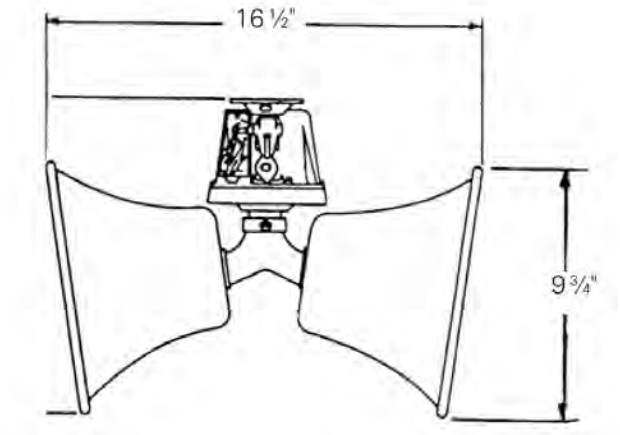
Central Receiving Supplemental Equipment

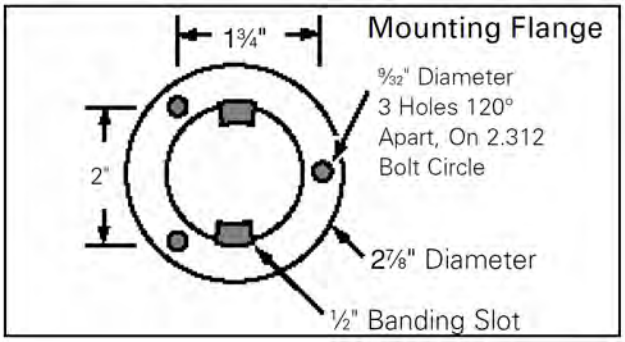
Ordering Information

Part Number	Description
124-087-01	D-21 Alerting Station Outdoor PA Speaker Horn, Bidirectional Bells, Transformer Coupled, Non-Supervised, multi-surface-mount, grey epoxy, Mounting Bracket (conduit cable adaptor) included

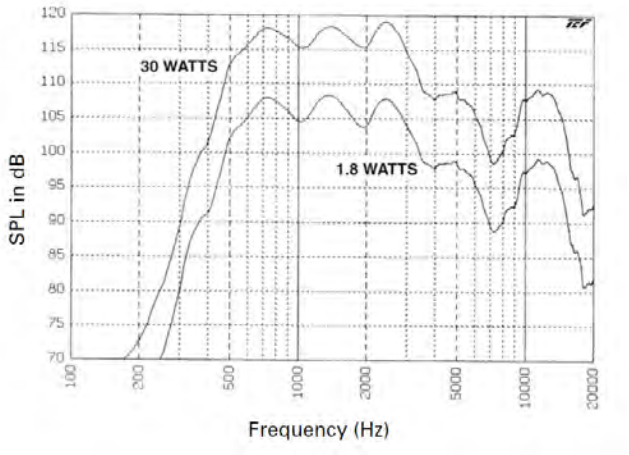
Drawings

Dimensions

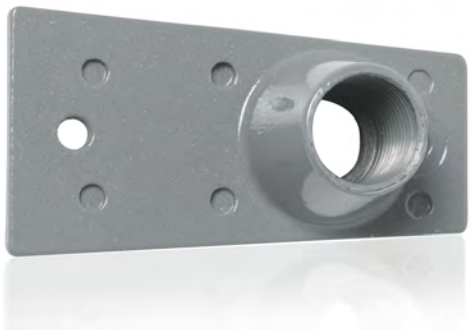




Frequency Response



Conduit Cable Adaptor (Mounting-Bracket), 1/2 in. pipe thread, cast aluminum



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Supplemental Equipment

Indoor PA Speaker, 2 ft. Square, White, Ceiling Tile

124-089-00

Features

- Shallow depth, lightweight 2 ft. by 2 ft. ceiling tile speaker
- Indoor environment
- 8 in. OD dual cone loudspeaker with a 5 oz. magnet
- 5 W, 25/70V transformer with five taps (0.13 W, 0.63 W, 1.25 W, 2.5 W, 5 W)
  – Transformer input for non-supervised PA systems
- 1,283 CID molded fiber integral enclosure
- Conveys signal tones, voice and music
- Standard perforated steel grille with four seismic tie-off points

NOTE For use on PA systems that do not require speaker supervision (transformer coupled speakers); not compatible with MNS panels which require speaker supervision (capacitively coupled speakers).

Specifications

Nominal Voltage	25/70V
Average Sensitivity	92dB SPL, 1 W/1 m
Calculated Output	99dB SPL, 5 W/1 m
Frequency Range	65 Hz to 17 kHz, EIA 426A Standard
Loudspeaker Power	12W RMS, EIA 426A Standard
Mounting	24 in. wide suspended ceiling tile grid, mounted parallel to floor plane
Nominal Coverage Angle	100 Degree Included Angle, –6dB/2 kHz, Half Space
Input Wiring	Transformer Coupled, 3.5 in., Color-coded, Pre-tinned Leads
Dimensions incl. Back Box	3.5 in. H x 23.813 in. W x 23.813 in. D (89 mm x 605 mm x 605 mm)
Weight	6.15 lb (2.79 kg)
Finish	White powder coat finish
Standards Compliance:	
TAA and RoHS	Compliant
UL Listed	UL 1480 and UL 2043

Ordering Information

Part Number	Description
124-089-00	D-21 Alerting Station Indoor PA Speaker, 2 ft. x 2 ft. Square, Transformer Coupled, Non-Supervised, Ceiling Tile replacement, white, no lettering, powder coated steel baffle with standard perforation, cable clamp included, TAA and RoHS compliant

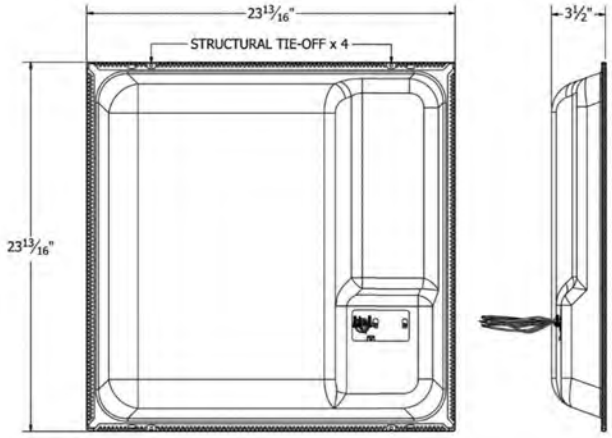
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

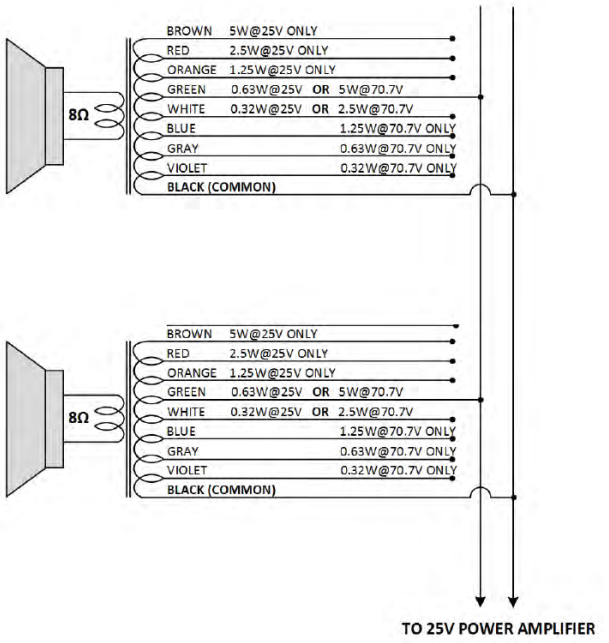
Central Receiving Supplemental Equipment

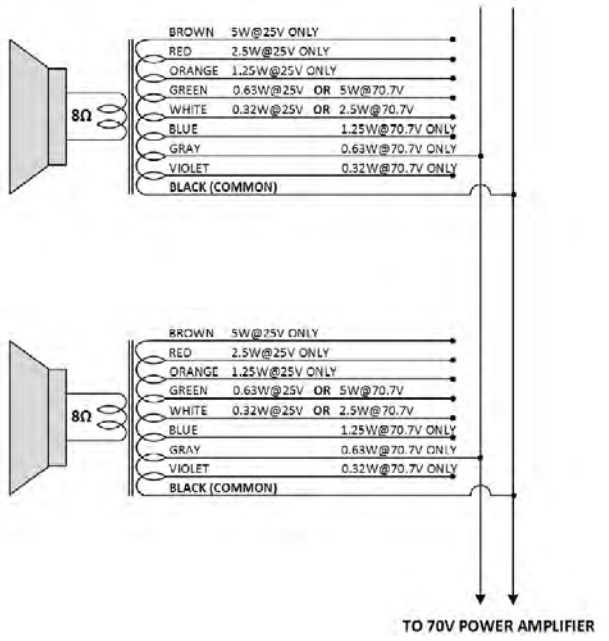
Drawings

Dimensions



Wiring Diagram





Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Central Receiving Supplemental Equipment

Indoor PA Speaker, 8 in. Round, White, Ceiling-mount

124-090-00

Features

- Complete, recess-mounted loudspeaker for hard ceiling applications
- Indoor environment
- 8 in. OD dual cone loudspeaker with a 10 oz. magnet and a 5 W, 25/70V transformer
  - Transformer input for non-supervised PA systems
- 275 CID, round, steel back box
- Hard ceiling, recessed mount
- Conveys signal tones, voice and music
- Round metal 12.875 in. grille

NOTE For use on PA systems that do not require speaker supervision (transformer coupled speakers); not compatible with MNS panels which require speaker supervision (capacitively coupled speakers)

Specifications

Nominal Voltage	25/70V
Average Sensitivity	95dB SPL, 1 W/1 m
Calculated Output	102dB SPL, 5 W/1 m
Frequency Range	80 Hz to 8 kHz, EIA 426A Standard
Loudspeaker Power	20W RMS, EIA 426A Standard
Mounting	Hard ceiling, recessed mount
Nominal Coverage Angle	100 degree included angle, –6dB/2 kHz, half space
Input Wiring	Transformer coupled, 7 in., color-coded, Pre-tinned Leads
Dimensions	See Dimension Drawings
Weight	7 lb (3.18 kg)
Finish	White powder coat finish on baffle and back box
Standards Compliance	TAA and RoHS Compliant

Ordering Information

Part Number	Description
124-090-00	D-21 Alerting Station Indoor PA Speaker, 8 in. Round, Transformer Coupled, Non-Supervised, white, recessed, Ceiling-mount, no lettering, TAA and RoHS compliant

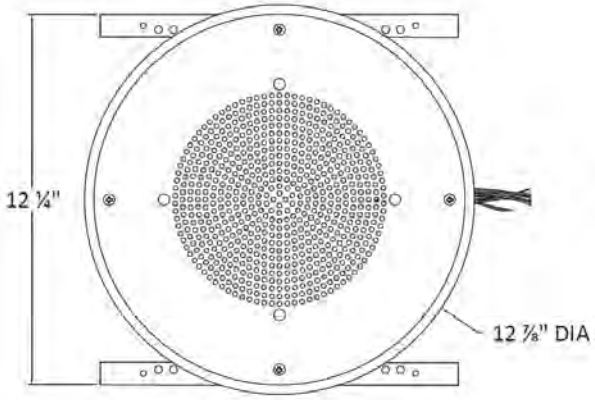
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

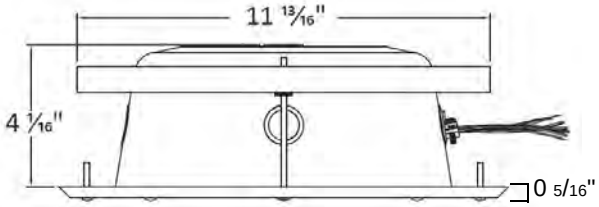
Central Receiving Supplemental Equipment

Drawings

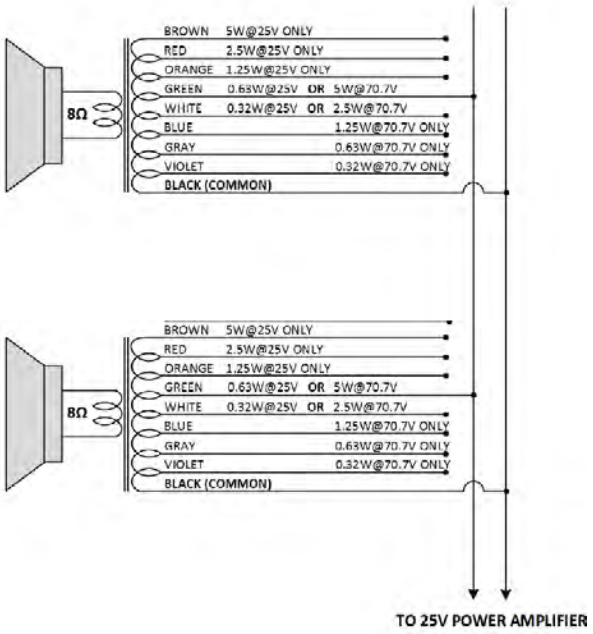
Dimensions

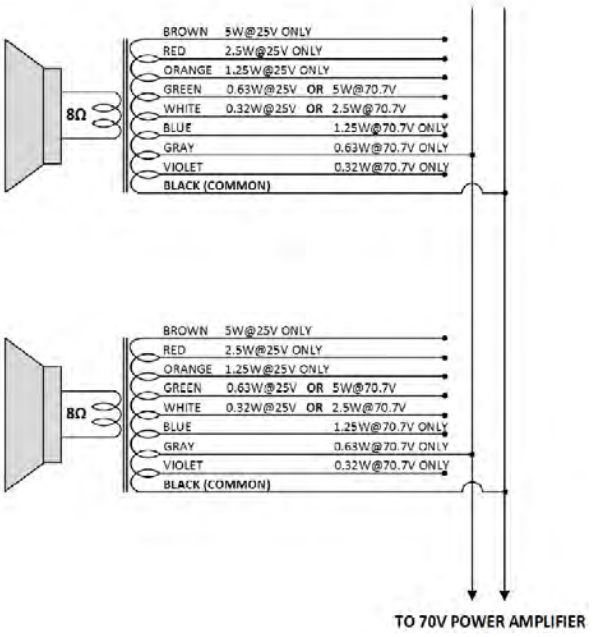


Back Box



Wiring Diagrams





Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Central Receiving Supplemental Equipment

Radio Interface, Digital Signal Processor, 4-wire

194-509-01

Description

This 4-wire digital signal processing radio interface module is used to interface radios and other 4-wire devices. It contains three types of carrier operated relays (COR): hardwired signal, voice modulation recognition (VMR), and voice operated transfer (VOX). It offers a DSP noise reduction mode and the VMR and Noise Reduction capability make it ideal as a high frequency (HF) radio interface.

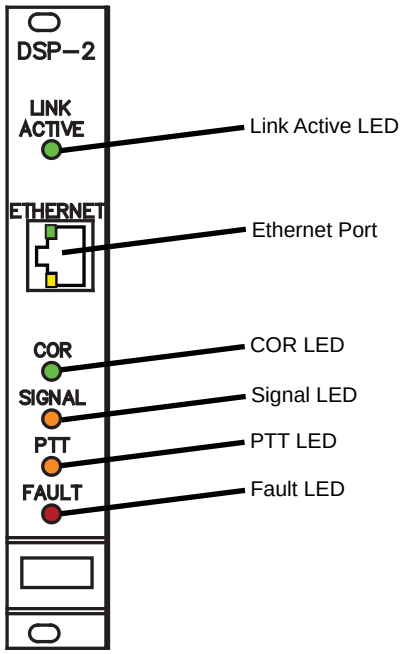
Specifications

Front Panel	RJ-45 Ethernet port, LEDs for Link Active, COR, Signal, Push-to-Talk (PTT), and Fault
Rear Panel	60-pin PC edge connector for backplane
Input Power	12V +bus voltage supplied by the backplane
Frequency Response	100 Hz—3,200 Hz ±2dB
Input/Output Level	–26dBm to 12dBm, programmable
Distortion	<0.5%
Dimensions	5 in. H x 0.8 in. W x 9 in. D (127 mm x 20.32 mm x 228.6 mm)
Weight	1 lb (0.5 kg)

Ordering Information

Part Number	Description
194-509-01	Radio Interface Module, Digital Signal Processor, 4-wire

Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Supplemental Equipment

Network Time Protocol (NTP) Time Server

194-518-01, 194-518-11

Description

The NTP Time Server provides a simple method of providing accurate and synchronized time throughout a network (LAN, WAN, etc.). The unit is connected to the network and configured allowing any client to request "highly accurate" time.

The NTP Time Server uses an internal global positioning system (GPS) receiver as its time reference, which provides a source of Universal Coordinated Time (UTC) from an NTP Primary (Stratum 1) Time Server.

The NTP Time Server outputs a time code signal via the 10/100BaseT network connection (RJ-45).

Features

- Create NTP from most any "Non-NTP" master clock
- NTP Primary Server
- 10/100BaseT-NTP data port
- Rugged enclosure
- Platform independent operation
- Time code output
- Rack-mountable option

Specifications

General

I/O Connection	Network: 10/100BaseT Ethernet, RJ-45
Outputs	ESE Time-Code™ TC89 or TC90, Drives 100 slaves @ 4,000 ft., BNC
GPS Receiver	Internal 12-channel
Antenna	Indoor/outdoor with 16 ft cable (extendable)
Antenna Input	L1, 1.57542 GHz, TNC
Drift	33ms/Day (if no GPS signal)
Configuration	HTTP or Telnet

Physical and Environmental

Enclosure	Desktop, black anodized aluminum
Dimensions	1.6 in. H x 7 in. W x 5 in. D
Electrical	117 VAC, 50/60 Hz
Power	5 W maximum

Ordering Information

Part Number	Description
194-518-01	Network Time Protocol (NTP) Stratum 1 Time Server, desktop, with antenna
194-518-11	Network Time Protocol (NTP) Stratum 1 Time Server, rack-mount 1U, with antenna

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Supplemental Equipment

VoIP Module for Live Voice MNS

194-523-01

Description

This versatile audio over IP device is designed to serve as a gateway between IP paging, VoIP and intercom systems, and traditional microphone/speakers or amplifiers. This module communicates over a standard network connection (10/100 Mbit/s) and supports TCP/I P-Protocol.

Features

- Factory programmed for live voice MNS
- Contact closure inputs and relay output
- 2 watt amplifier
- VHF radio controller and interface to IP
- RS-232/RS-485 serial port
- Generic, bidirectional full-duplex VoIP
- Microphone encoder for IP audio surveillance

Specifications

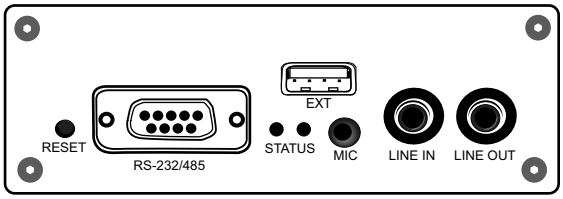
Supply Voltage	9 to 30 VDC, 12 to 24 VAC
Ethernet	• 10/100Mbps auto • RJ-45 connector with integrated Link/Activity LED • TCP/IP, UDP, RTP, SIP, DHCP, Multicast Capable
RS-232/RS-485 Interface	9-pin male; baud rates 300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 56700, and 115200
Line Level Input	2 kohm input impedance on RCA 2.2 Vpp max. (adjustible sensitivity)
Line Level Output	40 to 60 ohm output impedance on RCA
Material	Aluminum
Dimensions	4.25 in. W x 1.5 in. H x 4.92 in. D (108 mm x 38 mm x 125 mm)
Weight	10.9 oz (309 g)
Operating Temperature	32°F to 122°F (0°C to 50°C)
Relative Humidity	0% to 70% non-condensing
Standards Compliance:	
FCC	Class B, Part 14
RoHS	Compliant
CE	Compliant

Ordering Information

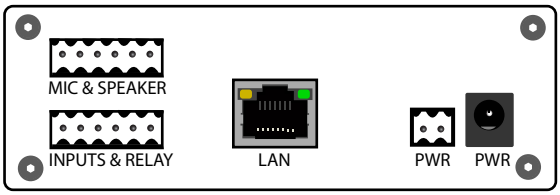
Part Number	Description
194-523-01	VoIP Module, Audio Signal

Drawings

Front View



Rear View



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Supplemental Equipment

Ethernet Firewall, 8-Port, 10/100/1000, VPN
200-442-21

Description

This Ethernet Firewall unit is a next-generation, threat focused, firewall security platform that provides comprehensive protection from known and advanced threats, including protection against targeted and persistent malware attacks.

Features

- 10/100/1000BASE-T VPN Ethernet Firewall
- Multibus architecture
- Granular Application Visibility and Control (AVC) supports 4,000 plus controls that can launch Intrusion Prevention System (IPS) threat detection
- Application-layer and Risked-based Controls
- Provides Cisco AnyConnect Plus/Apex VPN for up to 300 simultaneous connections
- Triple Data Encryption Standard and Advanced Encryption Standard (3DES/AES) VPN
- ASDM V7.3x On-Device Management

Specifications

Power Input	92 to 240 VAC, 50/60 Hz
Power Output	Steady state: 12V at 3A Max. peak: 12V at 5A
Form Factor	1 Rack Unit, 19 in. rack-mount
Integrated I/O	8 x 1 Gigabit Ethernet
USB 2.0 Ports	Port Type A, High Speed 2.0
Serial Ports	1 RJ-45 and Mini-USB Console
Memory	8 GB
System Flash	8 GB
Solid State Drive	100 GB mSATA (usable space dependent on system software)
Application Control (AVC) Throughput	850 Mbps
Application Control (AVC and IPS) Throughput	450 Mbps
Concurrent Sessions	250,000 (maximum)
New Connections	20,000 (per second maximum)
3DES/AES VPN Throughput	Up to 250 Mbps
IPsec Site-to-Site VPN Peers	300
Virtual Interfaces (VLANS)	100
High Availability	Active/Active and Active/Standby
Acoustic Noise	41.6 dBA type 67.2 dBA maximum
Temperature	Operating: 32°F to 104°F (0°C to 40°C) Storage: –13°F to 158°F (–25°C to 70°C)
Relative Humidity	10% to 90% non-condensing
Altitude	Operating: 0 ft. to 10,000 ft. (3,048 m) Storage: 0 ft. to 15,000 ft. (4,572 m)
Dimensions	1.72 in. H x 17.20 in. W x 11.29 in. D (4.37 cm x 43.69 cm x 28.67 cm)
Weight	8 lb (3.62 kg) includes AC Power Supply
Standards Compliance:	
Safety	UL 60950-1
CE Marking	per directives 2004/108/EC and 2006/108/EC

Ordering Information

Part Number	Description
200-442-21	Ethernet Firewall, 8-port, 10/100/1000, VPN, 2/250 AnyConnect, 3DES/AES

Associated Parts

Part Number	Description
207-572-00	D-21 50 user AnyConnect SSL Licenses for CISCO ASA 5500 Series, W/(SWSS)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Supplemental Equipment

Digital Voice Recorder
203-033-01

Description

This voice recorder stores the media and data from E911 calls responded to by emergency management personnel. 8 to 96 analog, digital, and VoIP channels can be recorded simultaneously allowing for the capture of all audio from emergency response situations. While the information is logged, it can also be played for personnel to hear. The media is then stored on 1 to 6 TB singular or dual hard drives while also capable of being archived onto DVD-RAM, NAS, central archive, USB, or removable hard disk drives (HDDs). The data stored for each call includes date, time, phone number, channel descriptor, and channel number.

The voice recorder has an embedded Linux operating system with a PostgreSQL relational database allowing for higher level security and efficiency. Certain measures of hardware resilience are also a part of the recorder, including redundancy of power supplies, HDDs, and archives. An optional LCD touch screen can also be included with the system. The MediaWorks software allows for incident replay functions such as flexible search, multi-call replay, and instant recall. These recording management features can then be archived for evidentiary and other uses.

Features

- Reliable logging system with embedded Linux operating system and a PostgreSQL relational database
- NG9-1-1 i3 recording and logging support
- Redundancy for HDDs and power supplies
- Multi-tier security
- 8 to 96 analog, digital, and VoIP channels
- 1 to 6 TB singular or dual hard drive storage for up to 1 million hours of recorded media
- Multiple archiving options including DVD-RAM, HDD, and USB
- Web-based configuration management
- Optional LCD Touch Screen

Specifications

Channel Capacities	Mitel Superset, ROLM phone, 4-wire digital: 4 to 48 channels VoIP phones, SIP trunks, NG9-1-1 SIP, Analog 2-wire, Digital 2-wire: 8 to 96 channels T1/PRI: 24 to 192 channels E1/ISDN30: 30 to 240 channels ISDN-BRI: 4 to 48 circuits
Hard Disk Drive Array Options	1 TB RAID-1 (2 x 1 TB) 2 TB RAID-1 (2 x 2 TB) 3 TB RAID-5 (4 x 1 TB) 6 TB RAID-5 (4 x 2 TB) RAID 1+0 options SAN option via FC-interface
Archive Options	Network archive to NAS, USB Flash drive, USB HDD(s), Central archive, Single/dual DVD-RAM, Removable 500 GB HDD
Compression (Analog/Digital)	13 kbps GSM, 16 kbps ADPCM, 32 kbps ADPCM, 64 kbps PCM
Audio Characteristics	Frequency response 200–3400 Hz signal/noise > 50 dB, crosstalk –60 dB, AGC programmable
Time Synchronization	Network Time Protocol (NTP), RS-232, Optional IRIG-B card
Network	Ethernet 10/100/1000Mbps, TCP/IP, Dual NIC binding supported

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Supplemental Equipment

Power supplies	Dual hot-swap supplies 100 to 240 VAC, 50–60 Hz 350 W
Operating Temperature	41°F to 104°F (5°C to 40°C)
Operating Humidity	10% to 80% relative humidity, non-condensing
Size	3U rack-mountable
Weight	50 lb to 80 lb (23 kg to 34 kg)
Dimensions	5.25 in. H x 19 in. W x 24 in. D (13.4 cm x 48.2 cm x 61 cm)

Ordering Information

Part Number	Description
203-033-01	Digital Voice Recorder, 3U, 120/240 VAC, DVD

Associated Parts

Part Number	Description
203-030-01	Touch Screen Control Panel Option for 3U Digital Voice Recorder (P/N 203-033-01)
203-025-00	Analog Input Card, 8 channel
203-026-00	Analog Input Card, 16 channel
203-027-00	Analog Input Card, 24 channel
203-022-00*	Digital Input Card, 8 channel
203-023-00*	Digital Input Card, 16 channel
203-024-00*	Digital Input Card, 24 channel
209-054-00	3U Voice Recorder Chassis Rack-mount Kit
205-046-00	Smart Label Printer
209-050-00	Label Refills for P/N 205-046-00
203-021-00	Extended Warranty
203-036-00	Single T1/E1/ISDN Input Card
203-035-00	Dual T1/E1/ISDN Input Card
203-031-00	Quick Install Kit, 23 ft. cable and punch block
205-065-00	DVD-RAM Drive for Digital Voice Recorder (P/N 203-033-01)
205-052-01	Hard Drive Upgrade for Digital Voice Recorder (P/N 203-033-01)
205-053-01	500 GB Hard Drive, removable, (in lieu of DVD-RAM drive) for Digital Voice Recorder (P/N 203-033-01)
208-008-01	DVD-RAM 9.4 GB Cartridge
207-574-00	License: VoIP, internal IP recorder with first 8 G.7 11 channel
207-574-01	License: VoIP, internal IP recorder additional 8 G.7 11 channel pack
***NOTE** Specify PBX make and model and phone set to be used.	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Supplemental Equipment

Digital Voice Recorder

203-058-08, 203-058-16

Description

This voice recorder provides reliable capture and storage of E911 call media for use by emergency management personnel. Recordings are stored in a PostgreSQL relational database on an integrated Linux operating system allowing for secure exchange of information across the desired network infrastructure. Data is stored on a 1 TB hard disk drive (HDD) and archived to an internal DVD-RAM drive. Date, time, duration, phone number, channel descriptor, and channel number are logged with each recorded E911 call. Analog and digital communication is recorded on either 8 or 16 channel voice recorders.

The logged media can be played while simultaneously recorded. Each call is then stored chronologically allowing for easy navigation. Calls can be sorted, searched for, played, and edited by the operator to recreate events, compile records, and find specific users. A front panel screen on the voice recorder is used to display the statuses of the communication channels. Calls can be heard from the panel speaker, external speaker, headphones, or on a remotely connected PC. Front panel control allows the call list to be viewed, tagged, played, and searched for by time/date, next message, channel number, or saved message. Remote control allows searching the call records by time/date, channel number, duration, telephone number, optional code, between two points in time, and between specific dates. Multiple users can simultaneously recall, monitor, and playback calls from any network workstation running Windows®.

Features

- 8 or 16 channel digital PBX station
- 8 or 16 channel analog station
- Multi-tier security system
- 1 TB RAID-1 HDD for 166,000 hours of storage
- Various capabilities in recording management through MediaWorks DX software
- Instant recall abilities including variable speed replay, record on demand, text annotation, and export to .WAV file
- Configuration manager software for setting system parameters, password policies, and access permissions
- Tabular and graphical report running
- NENA i3 standard conformation for NG9-1-1 media recording
- Blu-ray multidrive for Blu-ray and DVD-RAM archiving
- Multiple measures of redundancy for power supplies, HDDs, network capability, and archive storage
- Support for integration of metadata sources
- LCD multi-touch screen

Specifications

Standard Local Control	Touch screen, volume control with built-in speaker, drive status LEDs, headset jacks, key lock for power on/off
Screen	7 in. LCD Touch Screen
Channel Capacity	8 or 16 channel options
Recording Storage	1 TB RAID-1 HDD yields 166,000 channel hours @ 13 kbps compression
Operating System	Integrated Linux
Archive	• 9.4 GB DVD-RAM; 1,540 hours per cartridge @ 13 kbps • USB drive for back up • Remote network connection
Call Record Database	PostgreSQL relational database

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Supplemental Equipment

Incident Replay
- Flexible search: channel name and number, time/date, call duration and direction, dialed number, caller ID
- Multiple-call replay
- Graphical timeline with pan/zoom
- Incident management tabs
- Audio redaction
- Voice annotation
- Audio waveforms
- Talking time/date
- Call protection
- Burning of calls or incidents to CD/DVD/Blu-ray
- Export or email incident
- Live monitor
- Instant recall: variable speed, record on demand, text annotation, export to .WAV

Security
- User access based on role and channel assignments
- Strong password encouragement
- Password policy manipulation
- Multi-factor authentication

Analog Interface Analog telephones

Digital Interface Digital PBX

Redundancy
- Power supplies
- HDDs
- Network capability
- Archive storage

Power 120 to 240 VAC, 50–60 Hz

Dimensions 19 in. W × 5.2 in. H × 24 in. D (48.26 cm × 13.2 cm × 55.19 cm)

Weight 55 lb (24.95 kg)

Part Number	Description
203-026-00	Analog Input Card, 16 channel
203-027-00	Analog Input Card, 24 channel
203-022-00*	Digital Input Card, 8 channel
203-023-00*	Digital Input Card, 16 channel
203-024-00*	Digital Input Card, 24 channel
209-054-00	3U Voice Recorder Chassis Rack-mount Kit
205-046-00	Smart Label Printer
209-050-00	Label Refills for P/N 205-046-00
203-021-00	Extended Warranty
203-036-00	Single T1/E1/ISDN Input Card
203-035-00	Dual T1/E1/ISDN Input Card
203-031-00	T1/E1/ISDN Quick Install Kit (per line)
205-065-00	DVD-RAM Drive for 3U Voice Recorder
205-052-01	RAID Hard Drive Upgrade for 3U and 4U Voice Recorders
205-053-01	250 GB Hard Drive, removable, (in lieu of DVD-RAM drive) for 3U and 4U Voice Recorders
207-574-00	License: VoIP, Internal IP Recorder with first 8 G.7 11 channel pack
207-574-01	License: VoIP, Internal IP Recorder, additional 8 G.7 11 channel pack
***NOTE** Please contact Monaco Enterprises, Inc. for application and configuration assistance.	

Ordering Information

Part Number	Description
203-058-08	Digital Voice Recorder, 3U, 8 analog, 8 digital
203-058-16	Digital Voice Recorder, 3U, 16 analog, 16 digital

Associated Parts

Part Number	Description
203-033-01	Voice Recorder Chassis, 3U, 4 Slots, 1 DVD
203-030-01	Touch Screen Control Panel Option for 3U Voice Recorder
203-025-00	Analog Input Card, 8 channel

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Supplemental Equipment

Switch, Service Bypass Panel
392-100-00

Description

This service bypass panel allows for the completion of UPS maintenance by distributing utility power. It comes with six NEMA 5-15R and two NEMA 5-20R power socket outlets with circuit breaker protection. Included is an 8 ft. AC cable as well as a 4 ft. UPS output cord which are both attached to the switch. The switch is wall- and rack-mountable, allowing for various installation options.

Features

- Quick transfer rate
- Wrap-around system bypass
- Circuit breaker protection
- TÜV certification
- Attached 8 ft. AC cable
- Attached 4 ft. UPS output cord
- Rack- and wall-mountable

Specifications

Input Voltage	120 VAC
Load Capacity	2200 VA
Input Connection	NEMA 5-20P
Load Connections	Six NEMA 5-15R, two NEMA 5-20R
Input Frequency	50–60 Hz
Input/Output Current	20A maximum
Operating Temperature	32°F to 104°F (0°C to 40°C)
Relative Humidity	95% maximum
AC Cable Length	8 ft. (2.44 m)
UPS Output Cord Length	4 ft. (1.22 m)
Dimensions	3.5 in. H x 17.01 in. W x 2.99 in. D (8.9 cm x 43.2 cm x 7.6 cm)
Color	Black
Weight	6.5 lb (2.95 kg)
Mounting	Wall- or rack-mountable

Ordering Information

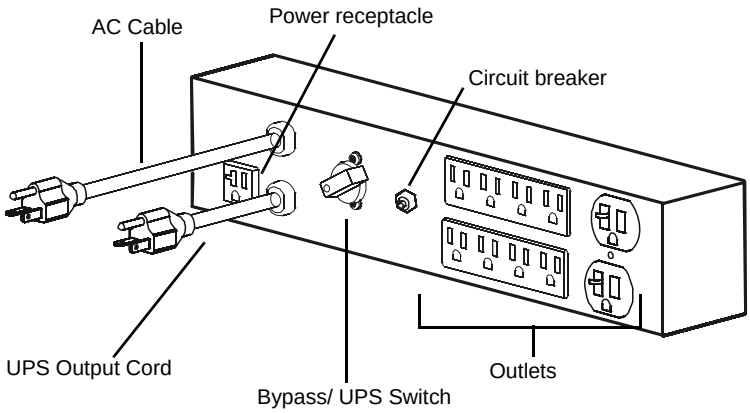
Part Number	Description
392-100-00	Switch, Service Bypass Panel, 120 VAC, 20A, 50–60 Hz, 8 ft. AC Cable, 4 ft. UPS Output Cord

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

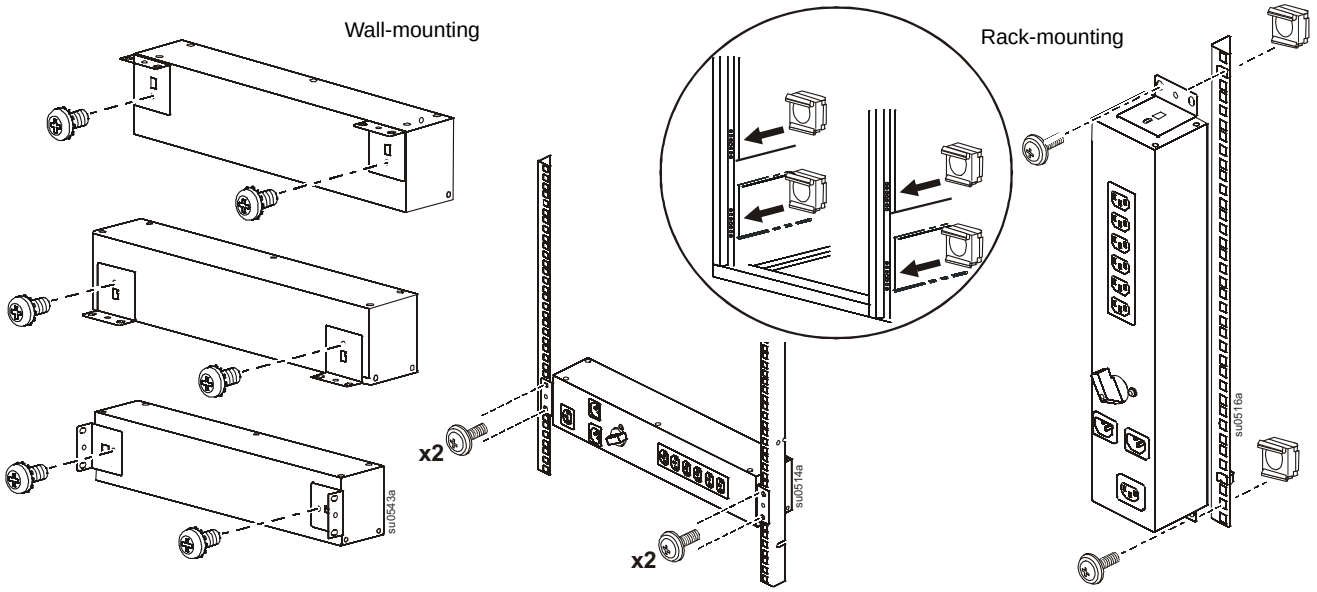
Detect
Manage
Record

Central Receiving Supplemental Equipment

Panel Components



Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Central Receiving Supplemental Equipment

UPS External Battery Pack

403-020-00

Description

This Uninterruptible Power Supply (UPS) External Battery Pack is a standalone battery stack that supplies additional battery power to dramatically extend the runtime for the UPS Battery Backup (P/N 404-112-00).

Specifications

Battery	Type: 9 Ah SLA, maintenance free, leak-proof Input/Output voltage: 12 VDC Life expectancy: 4–6 years Volt-Amp-Hour capacity: 372 Recharge time: 24 hours (typical)
Color	Black
Housing	Vented, high strength, flame retardant
Dimensions	12 in. H x 4.4 in. W x 15 in. D (30 cm x 11 cm x 38 cm)
Weight	29.5 lb (13.4 kg)
Operating Temperature	32°F to 104°F (0°C to 40°C)
Storage Temperature	23°F to 113°F (–5°C to 45°C)
Relative Humidity	0% to 95% non-condensing
Standards Compliance:	
RoHS	Compliant

Ordering Information

Part Number	Description
403-020-00	UPS External Battery Pack, for use with P/N 404-112-01

Features

- UPS External Battery Pack
- Vertical or horizontal orientation
- Status continually monitored through UPS Battery Backup
- Automatic recharge through UPS Battery Backup

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Central Receiving Supplemental Equipment

UPS, Network Devices, 2000VA, 120V, 2U

404-099-10

Description

This Uninterruptible Power Supply (UPS) is a rack-mountable tower that is noise filtering with automatic voltage regulation and surge protection. It is ideal for servers, point-of-sale, routers, switches, hubs, and other network devices.

Features

- UPS for network devices
- Serial, USB, and accessory card communication ports
- Alphanumeric LCD status display with LED icons
- Audible alarms
- External battery connector
- Automatic shutdown software
- Emergency Power Off (EPO)

Specifications

Power Capacity	2000 VA / 1800 watt
Voltage	120V (nominal)
Frequency	50/60 Hz
Output Connections	3 NEMA 5-15R (Battery Backup) 1 NEMA L5-20R (Battery Backup) 3 NEMA 5-20R (Battery Backup)
Input Connection	NEMA 5-20P
Transfer Time	2 to 4 ms
Battery	Type: maintenance free SLA with suspended electrolyte, leak-proof Life expectancy: 3 to 5 years Volt-Amp-Hour capacity: 690 Recharge time: 3 hours (typical)
Surge Energy Rating	540 Joules
Color	Black
Rack Height	2U
Dimensions	3.36 in. H x 17.0 in. W x 26.26 in. D (8.5 cm x 43.2 cm x 66.7 cm)
Weight	84.6 lb (38.45 kg)
Operating Temperature	32°F to 104°F (0°C to 40°C)
Relative Humidity	0% to 95%
Standards Compliance	
UL	YEDU.E95463 Investigated to ANSI/UL1778 5th Ed.
RoHS	Compliant

Ordering Information

Part Number	Description
404-099-10	UPS for network devices, 2000 VA, 1800 watts, 120V, 50/60 Hz, tower, rack-mount

Associated Parts

Part Number	Description
403-018-10	UPS External Battery Pack, 1200 VA; for use with P/N 404-099-10
403-099-20	Cartridge Replacement Battery, SLA; for use with P/N 404-099-10

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Supplemental Equipment

UPS, 1500VA, 120V, Rack Tower, LCD

404-105-00

Description

This Uninterruptible Power Supply (UPS) Rack Tower provides battery power to monitor and safeguard your equipment from harmful power conditions, spikes, and surges, and keeps your electronic equipment protected in the event of a power outage.

Features

- UPS Rack Tower
- Converts between tower and rack-mount for convenient installation
- Automatic voltage regulation
- Three switchable outlet groups
- Multi-function LCD status and control console
- Audible alarms for battery conditions
- Emergency Power-off
- Safe system shutdown software
- Compatible with external battery pack

Specifications

Output Power	1200 W, 1440 VA
Voltage	120V (nominal)
Frequency	50/60 Hz
Output Connections	8 NEMA 5-15R (Battery Backup)
Input Connections	NEMA 5-15P
Waveform Type	Sine wave
Battery Type	SLA with suspended electrolyte, leak-proof
Battery Recharge Time	3 hours (typical)
Surge Energy Rating	645 Joules
Interface Ports	SmartSlot, USB
Color	Black
Rack Height	2 U
Dimensions	3.5 in. H x 17.0 in. W x 19.3 in. D (89 mm x 432 mm x 490 mm)
Weight	55 lb (24.82 kg)
Operating Temperature	32°F to 104°F (0°C to 40°C)
Relative Humidity	0% to 95%
Standards Compliance:	
UL	E95463 Investigated to ANSI/UL 1778 5th Ed.
RoHS	Compliant

Ordering Information

Part Number	Description
404-105-00	UPS 1500 VA 120VAC 50/60Hz Rack Tower, 2U, LCD

Associated Parts

Part Number	Description
403-022-00	External Battery Pack, 48V, for use with P/N 404-105-00

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Supplemental Equipment

UPS Battery Backup, 1500VA, 230V

404-112-01

Description

This Uninterruptible Power Supply (UPS) Battery Backup Tower provides premium battery backup with surge protection for electronics and computers safeguarding your equipment against damaging surges and spikes that travel along utility and data lines.

Features

- UPS Battery Backup
- High efficiency charging system
- Automatic voltage regulation
- Visual and audible alarms for utility and battery conditions
- Power saving outlets automatically turn off idle peripherals
- Automatic shutdown software
- Automatic diagnostic testing
- Push button circuit breaker
- Compatible with external battery pack

Specifications

Output Power	1500 VA / 865 watts
Voltage	230V (nominal), 50/60 Hz
Output Transfer Time	10 ms (typical): 12 ms (maximum)
Output Connections	5 IEC 320 C13 (Battery Backup) 2 IEC Jumpers (Battery Backup) 5 IEC 320 C13 (selector_surgetitle)
Input Connections	IEC-320 C14
Battery	Type: maintenance free SLA with suspended electrolyte, leak-proof Life expectancy: 3–5 years Volt-Amp-Hour capacity: 187 Recharge time: 8 hours (typical)
Surge Energy Rating	441 Joules
Data Line Protection	Analog phone line for phone/ fax/ modem/DSL (RJ-11 connector); Network to 10/100/1000BASE-T Ethernet (RJ-45 connector)
Color	Black
Dimensions	11.9 in. H x 4.4 in. W x 15 in. D (30.2 x 11.2 x 38.1 cm)
Unit Weight	29.5 lb (13.4 kg)
Operating Temperature	32°F to 104°F (0°C to 40°C)
Relative Humidity	0% to 95%
Standards Compliance:	
RoHS	Compliant

Ordering Information

Part Number	Description
404-112-01	UPS Battery Backup Kit with power cords, 1500 VA, 230 VAC, 865 watt

Associated Parts

Part Number	Description
403-020-00	UPS External Battery Pack. For use with P/N 404-112-00

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Live Voice Radio Switch

Central Receiving Supplemental Equipment Catalog Section 02

Live Voice Radio Switch

Live Voice Input Radio Switch 194-541-01

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Central Receiving Supplemental Equipment

Live Voice Input Radio Switch

194-541-01

Description

The Live Voice Radio Switch is a part of the Monaco Mass Notification System (MNS) that provides the ability to send and receive live voice input for mass notification from a variety of sources.

The Live Voice Radio Switch also contains a handset for locally broadcasting live voice from the radio switch. The unit can remotely support input from a radio (e.g., a roving guard), telephone, (e.g., an alternate command center), or a computer network (e.g., system operator).

Features

- Provides the ability to receive live voice input for mass notification from a variety of sources, such as radio, telephone, or a computer network
- Requires less rack space for ventilation
- Supports up to 12 local sources for live voice input
- Supports up to 24 remote virtual channels for live voice input
- Each live voice source communicates on its own channel
- Each live voice source requires an interface module
- Includes local handset for broadcasting live voice from the radio switch
- After initial setup, the unit is operated from the D-21
- Communicates with the D-21 through direct connection to an RFM-X modem or though a VoIP Module

Specifications

RS-232 Serial Port	DP-9 female DCE connector, baud rates 300, 1200, 2400, 4800, 9600, 19200, 38400, 56700, and 115200 **NOTE** D-21 network requires 9600 baud setting.
PSM-Z1 Front Panel	Power On/Off, LEDs for AC, DC, +12VDC, –12VDC, and +5VDC
CPM-Z1 Front Panel	Speaker, volume control, 1/8 in. handset jack, 1/8 in. speaker jack, speaker switch, LEDs for Fault, Master, and EXP, Ethernet port, and USB port
VIM-Z1 Front Panel	RJ-45 Ethernet port, LEDs for Fault, Link, COR, Signal, and PPT
PSTN-Z1 Front Panel	RJ-45 Ethernet port, USB connector, LEDs for Fault, Ring, Connect, and VOX
Rear Panel	DC fuse holder, DC input terminal strip, DB-15 connectors to 12 interface modules, DB-9 serial remote connector, RCA audio out connector, ground connector, HDMI connector, and four RJ-11 connectors
AC Input Power	115 or 230 VAC ±15% at 47 Hz to 63 Hz, 60 VA typical, 90 VA maximum
DC Input Power	11 to 15 VDC at 4A nominal, 7A maximum
Dimensions	3.5 in. H x 19 in. W x 10 in. D (8.89 cm x 48.26 cm x 25.4 cm)
Operating Temperature	–4°F to 140°F (–20°C to 60°C)
Storage Temperature	–40°F to 185°F (–40°C to 85°C)

Ordering Information

Part Number	Description
194-541-01	Live Voice Input Radio Switch for MNS, inlcudes two VIM-Z1 Modules (P/N 194-539-00)
194-539-00	VIM-Z1 Module PCB Assembly
194-540-00	PTSN Telephone Interface Module
194-512-10	D-21 System VoIP Desktop Module Assembly
122-018-05	D-21 System VoIP Desktop Microphone Link Assembly, kit includes gooseneck desktop microphone, microphone preamplifier, and network expansion unit **NOTE** For use with radio switch P/N 194-541-01.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Central Receiving Supplemental Equipment

Associated Parts

RFM-X

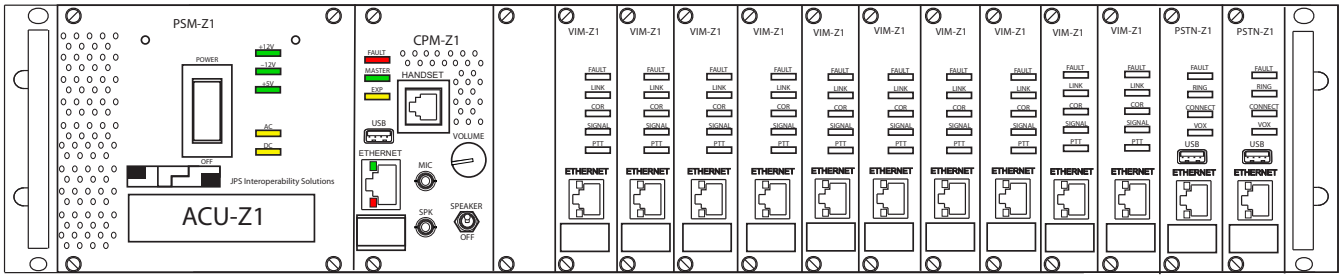
Part Number	Description
625-178-00	Live Voice Radio Switch to VoIP Module Audio Input Cable
194-523-01	VoIP Module, Audio Signal
625-179-00	VoIP Module Audio to RFM-X Modem J2 Audio Converter Cable

Broadcast MNS

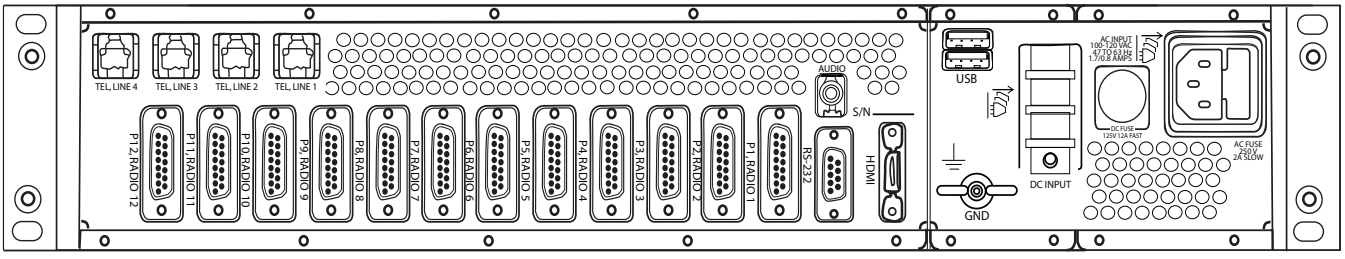
Part Number	Description
625-179-01	VoIP Module Audio to Radio Switch (VIM-Z1) Audio Converter Cable
625-178-01	VoIP Module to Sound Card Cable
203-055-01	D-21 MNS Message Broadcast System
626-277-00	USB Cable Sound Card to USB Hub
200-467-00	USB Hub for Server

Drawings

Front Panel



Rear Panel



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Building Transceivers Catalog Section 03

Section 3. Building Transceivers

BT2-3 to BT-X Conversion Kit, Large or Small Enclosure 227-646-xx
BT2 to BT-X Conversion Kit, Standard Enclosure 227-647-xx

BT-XF (Fire Only)

BT-XF, BT-XFH, BT-XFH EN 227-600-xx, 227-601-xx, 227-603-xx, 227-605-xx, 227-606-xx, 227-607-00
BT-XF Outdoor Pull Station, AC Powered 227-665-xx
BT-XF Outdoor Pull Station, Solar Power 227-668-xx

BT-X MNS (In-Building Mass Notification)

BT-XF to BT-XM Upgrade Kit 227-422-99
BT-XM In-Building Mass Notification Communicator 227-621-xx, 227-622-xx, 227-623-xx

BT-XM2 (In-Building Mass Notification with Monaco FACP Interface)

BT-XM2 Interface Conversion Kits 227-371-02, 227-372-0x, 227-623-MN, 227-811-MN

BT-X Access Control

BT-XS Security Communicator 227-61x-xx, 227-630-xx, 227-648-xx, 227-649-xx

BT-X Intrusion Detection – Reserved

BT-X Wide Area Controller (WAC) (Outdoor Giant Voice Mass Notification)

Wide Area Mass Notification Speaker Station, 1600 W 227-671-xx, 227-634-xx, 227-634-CE, 227-661-xx, 124-080-00

BT-8 (Fire Only)

BT2-8 Building Transceivers 227-245-xx, 227-246-xx, 227-247-xx, 227-271-xx

BT-X Accessories

BT-X Planner 207-607-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Building Transceivers

BT2-3 to BT-X Conversion Kit, Large or Small Enclosure

227-646-xx

Description

The BT2-3 to BT-X Conversion Kit is designed to upgrade a large NEMA 1 or a small NEMA 12 BT2-3 enclosure with a BT-X electronics package while still utilizing the existing BT2-3 enclosure.

The conversion kit allows a smooth migration from wideband Dual Tone Multi Frequency (DTMF) radio technology to Narrowband FSK. The BT-X electronics package is mounted on a removable panel and provides four fire zones standard. Space is provided for either an Expansion Backplane or Relay Board. Available space dictates only one of these option can be chosen. With one expansion backplane (P/N 176-212-00), the BT-X is expandable for up to eight more zones using fire zone cards (P/N 176-206-00) or security zone cards (P/N 176-206-01). Alternately, an audio board (P/N 176-208-00) and relay board (P/N 176-214-00) can be added to the unit to interface with Mass Notification System (MNS) panels. Please note, regardless of the expansion option chosen above (relay board or expansion backplane), an audio board can be installed.

NOTE If changing transceiver radio frequencies, the antenna whip may have to be changed to match the new frequency. If going up in frequency, the antenna whip can be cut to the appropriate length to match the frequency. However, if going down in frequency a new antenna whip will be required.

Features

- Allows use of existing Monaco enclosures
- Reduces upgrade installation time
- Compatible with existing wiring circuits
- Allows conversion from wideband DTMF to narrowband FSK
- Four fire zones are standard, expandable to 12 zones
- 72 hour standby with 12V/12 Ah battery (provided)
- 115/230 VAC 50/60 Hz operation

Ordering Information

Part Number	Description
227-646-xx	BT2-3 to BT-X Conversion Kit, large or small enclosure **NOTE** Specify frequency (-xx) when ordering.

Associated Parts

Part Number	Description
176-212-00	BT-X Zone Expansion Backplane, supports two zone cards (fire or security)
176-206-00	BT-XF Fire Zone Card, provides four zone inputs and eight relay driver outputs
176-206-01	BT-XS Security Zone Card, provides four zone inputs and eight relay driver outputs
176-214-00	BT-X Relay Board with eight on-board Form C relays
176-208-00	BT-X Audio Board
190-400-00	BSA-1 VHF antenna, omnidirectional, 3 dBd gain, 136–174 MHz, PL-259 female, mounting hardware, ground clamp, coaxial cable seal **NOTE** Must be cut to frequency. Optional Monaco trimming service available, P/N 199-910-00.
199-001-00	Spare 54 in. Antenna Whip for P/N 190-400-00; customer must cut antenna whip to frequency

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Building Transceivers

Part Number	Description
176-422-99	BT-XM Factory MNS Upgrade for P/N 227-646-00 and P/N 227-647-00
207-607-00	BT-X Planner Support Kit, contains BT-X planner software and programming cable
225-163-00	Planner Suite/ Programmer with interface cables for use with: Monaco FACP/MNS (M-2, MAAP-2, MAAP(+), MAAP-X) BT-X building transceiver, and D-21 compatible repeaters
227-625-00	BT-X Low-loss Cable Kit, Type N female

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Building Transceivers

BT2 to BT-X Conversion Kit, Standard Enclosure
227-647-xx

Description

The BT2 to BT-X Conversion Kit is designed to upgrade a BT2-4,7,8, and 8S to a BT-X electronics package while still utilizing the existing standard NEMA 1 enclosure.

The conversion kit allows a smooth migration from wideband Dual Tone Multi Frequency (DTMF) and early Frequency Shift Key (FSK) radio technologies to Narrowband FSK. The BT-X electronics package is mounted on a removable panel and provides four fire zones standard. Two expansion spaces are available for an Expansion Backplane and a Relay Board, or two Expansion Backplanes.

When configured with two Expansion Backplanes (P/N 176-212-00) the BT-X can be expanded to 20 zones using Fire zone cards (P/N 176-206-00) or Security zone cards (P/N 176-206-01).

Alternately, when configured with an Audio Board (P/N 176-208-00), a Relay Board (P/N 176-214-00), and one Expansion Backplane the BT-X may be interfaced with a Mass Notification System (MNS) panel with four monitoring zones and still have up to eight more zones. Please note, regardless of the expansion options chosen above, an audio board can be installed.

NOTE If changing transceiver radio frequencies, the antenna whip may have to be changed to match the new frequency. If going up in frequency, the antenna whip can be cut to the appropriate length to match the frequency. However, if going down in frequency a new antenna whip will be required.

Features

- Allows use of existing Monaco enclosures
- Reduces upgrade installation time
- Compatible with existing wiring circuits
- Allows conversion from wideband DTMF to narrowband FSK
- Four fire zones are standard, expandable to 20 zones
- 72 hour standby with 12V/12 Ah battery (provided)
- 115/230 VAC 50/60 Hz operation

Ordering Information

Part Number	Description
227-647-xx	BT-X Conversion Kit for standard sized enclosures **NOTE** Specify frequency (-xx) when ordering.

Associated Parts

Part Number	Description
176-212-00	BT-X Zone Expansion Backplane, supports two zone cards (fire or security)
176-206-00	BT-XF Fire Zone Card, provides four zone inputs and eight relay driver outputs
176-206-01	BT-XS Security Zone Card, provides four zone inputs and eight relay driver outputs
176-214-00	BT-X Relay Board with eight on-board Form C relays
176-208-00	BT-X Audio Board
190-400-00	BSA-1 VHF antenna, omnidirectional, 3 dBd gain, 136–174 MHz, PL-259 female, mounting hardware, ground clamp, coaxial cable seal **NOTE** Must be cut to frequency. Optional Monaco trimming service available, P/N 199-910-00.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Building Transceivers

Part Number	Description
199-001-00	Spare 54 in. Antenna Whip for P/N 190-400-00; customer must cut to frequency
176-422-99	BT-XM Factory MNS Upgrade for P/N 227-646-00 and 227-647-00
207-607-00	BT-X Planner Support Kit, contains BT-X planner software and programming cable
225-163-00	Planner Suite/ Programmer with interface cables for use with: Monaco FACP/MNS (M-2, MAAP-2, MAAP(+), MAAP-X) BT-X building transceiver, and D-21 compatible repeaters
227-625-00	BT-X Low-loss Cable Kit, Type N female
086-210-01	Adaptor Plate for double-wide enclosure
626-266-00	BT-X 24 in. Cable for double-wide enclosure

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Building Transceivers Catalog Section 03

BT-XF (Fire Only)

BT-XF, BT-XFH, BT-XFH EN 227-600-xx, 227-601-xx, 227-603-xx, 227-605-xx, 227-606-xx, 227-607-00
BT-XF Outdoor Pull Station, AC Powered 227-665-xx
BT-XF Outdoor Pull Station; Solar Power 227-668-xx

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Building Transceivers

BT-XF, BT-XFH, BT-XFH EN

227-600-xx, 227-601-xx, 227-603-xx, 227-605-xx, 227-606-xx, 227-607-00

Description

Monaco's BT-XF is a fire management transmitter that links a fire alarm control panel (FACP) to the D-21 Central Receiving System (Central) through integrated transceiver or hard-wire communication. The BT-XF receives commands from Central and reports its own status and the status of its zone inputs by unit address.

Basic Features

- Field Assembly:
  - Master processor
  - RS-422/485, RS-232, and radio ports
  - Switches for Battery Start, Acknowledge, Test, and Master Reset
  - Four Class B zone inputs
  - Eight relay outputs
  - LEDs for power, BT-X status, zone status, and heartbeat
- Narrowband Radio: For units communicating with the D-21 by radio
  - FCC certified for narrowband operation
  - Complies with the National Telecommunications and Information Administration (NTIA) Manual of Regulations and Procedures
- Power Supply: Converts AC input to DC
- One 12V/12 Ah battery
- Audio Board: Addition to the field assembly for BT-XF units that use hard-wire communication
- Two Fire Zone Cards per expansion backplane: each card provides four Class B zone inputs
- Relay Board: Optional driver for the eight Form C relay outputs
- Local audible alert
- Real-time clock and calendar
- 0.5 Mb of program memory
- 0.5 Mb of nonvolatile data storage

D-21 Interface

D-21 Central is used to supervise and monitor the BT-XF, which reports alarm and trouble conditions on its zones to the D-21. The BT-XF zone inputs can be connected to FACPs (or supervisory devices with isolated dry contacts that provide either a short for an alarm condition or an open for a trouble condition).

The BT-X communicates with the D-21 via:

- Narrowband FSK radio
- FSK hard-wire
- Digital RS-422 multidrop
- Digital RS-485 multidrop
- Digital RS-422 point-to-point
- Digital RS-232 point-to-point

All hard-wire communication requires the audio board.

Fire Inputs

The BT-XF provides four supervised Class B zone inputs that can be connected to an FACP. The zone inputs are supervised for open, short, and ground fault conditions. Each zone expansion backplane can support two fire zone cards; each fire zone card provides four additional Class B zone inputs.

Note *A single-wide BT-XF supports up to three zone expansion backplanes, and a double-wide model supports up to seven. Additional backplanes and zone cards must be ordered separately.*

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Building Transceivers

Fire Outputs

The BT-XF includes eight relay driver outputs that are controlled by the D-21 operator. Relay driver outputs can be connected to an optional BT-X relay board, which allows the BT-X to activate remote device controls such as:

- Opening or closing gates
- Turning lights on or off
- Starting or stopping motors and pumps
- Activating remote annunciator LEDs

The relay board can connect to the main panel or expansion backplanes.

Power Operation

The BT-XF power supply accepts 115 to 230V 50/60 Hz AC power. Backup power is provided by one or two 12V/12 Ah SLA batteries.

If AC power fails, the BT-XF automatically switches to battery power; after 60 seconds of AC power loss, an AC Fail message transmits to Central. When AC power is restored, the battery will automatically reconnect and begin charging. The 12V/12 Ah battery will typically provide 72 standby hours.

NOTE *Battery specification is based on a BT-XF base unit only. If additional cards or devices are added, battery calculations will be necessary to determine accurate battery requirements.*

The BT-XF monitors and supervises its battery and charger. The BT-XF transmits a battery fault message when the battery voltage falls below 85% of the rated capacity. Battery disconnection and battery charger failure will also cause a battery fault message transmission to Central.

Configuration Programming

The user connects a laptop computer to the BT-XF RS-232 port and runs a Windows terminal emulation program or the BT-X Planner software. The user transfers the completed configuration to the BT-XF.

BT-XFH EN: Hardwired with Ethernet

The BT-XFH EN combines an Ethernet Reporting Module and a Monaco BT-X in one modular, compact unit. One or two 12V backup batteries can be installed in each panel, depending on the power requirements of the BT-XFH EN configuration.

The BT-XFH EN reports the status of its zones through the RFM-XH and to D-21 Central using hard-wired Ethernet connections (e.g., CAT5).

The BT-XFH EN panels also have an add-on option to convert the CAT5 Ethernet cable to fiber-optic connections. An Ethernet-to-fiber-optic media converter installs inside the BT-XFH EN enclosure and is powered by the BT-XFH EN.

At full capacity, the single-wide BT-XH EN (P/N 227-605-EN) can support 28 zones; the double-wide model (P/N 227-606-EN) can support up to 60 zones. The BTX-XFH EN onboard zone inputs can be connected to local control panels (or supervisory devices that have isolated dry contacts and provide either a short for an alarm condition or an open for a trouble condition).

Although BT-XFH EN panels do not support live voice MNS, they do support the same zone and relay expansion hardware as the standard BT-XF.

Specifications

Power Input	115/230 VAC, 50/60 Hz
Internal Outputs	Power Supply: 16 VDC, non-adjustable Battery: 13.8 VDC float; 14.5 VDC boost
Nominal Current	125 mA; 1.5A transmit (six zone cards)
Battery	• Rating: 12V/12 Ah • Low Battery Signal: 11.5 VDC • Low Battery Disconnect: 9.75 VDC
Radio Type	Synthesized, narrowband, FM
Radio Duty Cycle	50%, 30 second maximum transmit
RF Impedance	50 ohms nominal (input/output)
Radio Modulation	Frequency Shift Keying (FSK)
Antennas and Coaxial Cables	Varies by site and system configuration; contact Monaco for assistance
Operating Temperature	–22°F to 140°F (–30°C to 60°C)
Relative Humidity	0% to 90%, non-condensing

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Building Transceivers

Standards Compliance:

FM Approved P7825a

IEEE Standards C62.41

CENELEC Standards
- EN 55011:2007+A2:2007
- EN 61000-3-2:2006; EN 61000-3-3:1995
- EN 50130-4:1995 +A1:1998 +A2:2003

Ordering Information

Radio Communication

Part Number	Description
227-600-xx*	BT-XF, 4–28 zones, narrowband radio, single-wide, 20 in. H x 12 in. W x 4 in. D, red, one 12V/12 Ah battery
227-601-xx*	BT-XF, 4–28 zones, narrowband radio, single-wide, 20 in. H x 16 in. W x 6 in. D, red, NEMA 3R, one 12V/12 Ah battery
227-603-xx*	BT-XF, 4–60 zones, narrowband radio, double-wide, 20 in. H x 25 in. W x 4 in. D, red, two 12V/12 Ah batteries
*Specify frequency (-xx) when ordering.	

Hard-wire Communication

Part Number	Description
227-605-00	BT-XFH, 4–28 zones, no radio, single-wide, 20 in. H x 12 in. W x 4 in. D, red, audio board for hard-wire communication, one 12V/12 Ah battery
227-606-00	BT-XFH, 4–60 zones, no radio, double-wide, 20 in. H x 25 in. W x 4 in. D, red, audio board for hard-wire communication, two 12V/12 Ah batteries
227-607-00	BT-XFH, 4–28 zones, no radio, single-wide, 20 in. H x 16 in. W x 6 in. D, red, NEMA 3R, audio board for hard-wire communication, one 12V/12 Ah battery

Ethernet Communication

Part Number	Description
227-605-EN	BT-XFH EN, 4–28 zones, no radio, single-wide, 20 in. H x 12 in. W x 4 in. D, red, audio board for Ethernet communication, one 12V/12 Ah battery
227-606-EN	BT-XFH EN, 4–60 zones, no radio, double-wide, 20 in. H x 25 in. W x 4 in. D, red, audio board for Ethernet communication, one 12V/12 Ah battery

Associated Parts

Part Number	Description
227-630-xx*	BT-X Electronics Package (no audio board)
176-208-00	BT-X Audio Board
176-206-00	BT-XF Fire Zone Card, provides four zone inputs and eight relay driver outputs
176-212-00	BT-X Zone Expansion Backplane, supports two zone cards (fire or security)
176-214-00	BT-X Relay Board with eight onboard Form C relays
194-527-08	BT-XFH EN Fiber-Optic-to-Ethernet Converter Kit, single mode 1 Gb with mounting hardware (one required per Ethernet BT-XFH EN to convert it to Fiber Optic)
194-527-01	Fiber-Optic-to-Ethernet Converter, single mode 1 Gb (Spare part for P/N 194-527-08)
207-607-00	BT-X Planner Support Kit, contains BT-X planner software and programming cable
225-163-00	Planner Suite/Programmer with interface cables for use with Monaco FACP/MNS, BT-X building transceiver, and D-21 compatible repeaters
227-574-00	MAAP Serial Interface Kit, includes programming cable and adaptor
400-713-00	Battery, SLA, rechargeable, 12V/12 Ah, quick connect, 5.94 in. L x 3.86 in. W x 3.86 in. H, 7.92 lb
404-090-00	Power Supply for BT-X, 15 VDC, 2.8A
513-412-00	BT-X Enclosure Tamper Switch Kit
*Specify frequency (-xx) when ordering	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Building Transceivers

BT-XF Outdoor Pull Station, AC Powered

227-665-xx

Description

This BT-XF enclosure provides a stand-alone, publicly accessible outdoor pull station (pole- or wall-mounted) that transmits the alert and lights an LED upon acknowledgment from Central.

Locator Light Option

The system is a suitable solution for remote locations such as campgrounds, docks, or piers that need a stand-alone fire alarm system that is easy to access and use.

Narrowband radio is FCC certified for narrowband operation and meets the requirements of the NTIA (National Telecommunications and Information Administration) Manual of Regulations and Procedures for Federal Frequency Management.

Features

- Rugged composite (fiberglass) enclosure is NEMA 4X rated
- Integrated, narrowband radio (VHF or UHF)
- Tilt and tamper-alarm switches
- Pull station activator reset requires key, preventing unauthorized personnel from silencing an alarm
- RS-232 port for connection to laptop computer for programming BT-XF functions
- Backup battery
- Locator light option pinpoints the BT-XF pull station location at night

Specifications

AC Power	Input: 120/240 VAC, 50/60 Hz Current: 0.4A, 120 VAC; 0.2A, 240 VAC Power: 45 W Circuit Breaker: 2-pole
DC Power	16 VDC nominals
Enclosure Dimensions	20 in. H x 16 in. W x 9.4 in. D

Ordering Information

BT-X with Pull Station

Part Number	Description
227-665-xx*	Outdoor AC Power BT-XF Pull Station with Central acknowledgment LED indicator. • BT-XF mounted in a NEMA 4X Gray Composite enclosure with key lock, tamper switch, tilt switch and one 12V/12 Ah battery • Single action Pull station mounted in a NEMA 4X red Composite enclosure with window and Thumb latch attached to the front of the BT-XF enclosure. *Specify frequency when ordering.

Associated Parts

Part Number	Description
089-010-00	Pole-mount Kit
199-061-00	Antenna Kit, 10 ft. pipe-mount
709-047-00	Locator Light Kit
400-713-00	Battery, SLA, rechargeable, 12V/12 Ah, quick connect, 5.94 in.L x 3.86 in.W x 3.86 in.H, 7.92 lb

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Building Transceivers

BT-XF Outdoor Pull Station, Solar Power

227-668-xx

Description

Monaco's Solar Powered BT-XF Pull Station provides a stand-alone, publicly accessible, outdoor pull station compatible with the D-21 Central Receiving System (Central). Upon activation of the pull station, the BT-XF transmits the alarm to the central. Upon receipt of the alarm at the central, an alarm receipt verification LED lights next to the pull station providing visual feedback to the user.

The BT-XF is mounted in a NEMA 4X composite enclosure that can be pole or wall-mounted. Mounted to the front of the BT-XF enclosure is a pull station enclosure marked Fire Alarm with directions on how to activate the pull station which is visible through a clear window. The single action pull station enclosure door is secured with a snap latch for easy accessibility. The BT-XF NEMA 4X enclosure is secured with a key lock.

NOTE Solar power source must be ordered separately.

The basic panel includes:

- Field assembly (the core electronics package)
- FM narrowband radio (for radio-communication units)
- One 12V/12 Ah battery
- One RS-422/485 port for communication with peripheral equipment (optional audio board adds another RS-422/485)
- One full-duplex RS-232 port used to program the BT-XF via connection to a laptop computer

Other features:

- Self test, stuck transmitter disconnect, reset, acknowledge, and battery reconnect switches
- Local audible alert
- Real-time clock and calendar

D-21 Interface

The D-21 Central Receiving System is used to supervise and monitor the BT-XF.

The BT-XF reports alarm and trouble conditions on its zones to the D-21. Supervisory devices that have isolated dry contacts and provide a short for an alarm condition or an open for a trouble condition can be connected to the BT-XF zone inputs.

Primary communication is by narrowband radio or hard-wire:

- FSK radio
- FSK hard-wire
- Digital RS-422 or RS-485 multidrop
- Digital RS-422 point-to-point

Hard-wire communication, whether primary or fallback to secondary, requires the audio board.

Power Operation

The BT-XF battery provides sufficient power to operate a base unit in normal standby status, polling, and transmitting alarm and status changes for up to 72 hours.

NOTE Battery specification is based on a BT-XF base unit only. If additional cards or devices are added, the battery calculations must be done to determine the correct battery size.

BT-XF monitors and supervises its own battery and charger. BT-XF transmits a battery fault message when the battery voltage falls below 85% of the rated capacity.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Building Transceivers

Configuration Programming

The user connects a laptop computer to the BT-XF RS-232 port and runs a Windows terminal emulation program or the BT-X Planner software. The user transfers the completed configuration to the BT-XF.

Hardware

- Field Assembly electronics package, including:
  - Master processor, ports, switches
  - Four Class B zone inputs
- Audio Board—Addition to the field assembly for BT-XF units that use hard-wire communication (must be purchased separately)
- Narrowband Radio for units communicating with the D-21 by radio
- Status LEDs
  - General alarm, general trouble, system fault
  - In-communication
  - Carrier detect
  - Transmit
  - Primary power
  - Battery boost and float charge
- Zone LEDs
  - Trouble, alarm, normal
- Tamper Switch

Specifications

Power
- DC Power input: 16 to 30 VDC
- Battery charger output: 13.8 VDC float; 14.5 VDC boost
- BT-XF nominal current 125 mA 1.5A transmit (no expansion cards or BT-X audio board)

Battery
- 12V/12 Ah
- Low battery signal: 11.5 VDC
- Low battery disconnect: 9.75 VDC

Radio For units using radio communication:
- FM narrowband
- FSK modulation
- Duty cycle 50%, 30 sec. max. transmit
- Output impedance: 50 ohms

Antennas and Coaxial Cables Varies by site and system configuration. Contact Monaco for assistance.

Operating Temperature –22°F to 140°F (–30°C to 60°C)

Relative Humidity 0% to 90%, non-condensing

Compliance In a standard configuration, BT-XF complies with emissions standards:
- EN 55011:2007+A2:2007
- EN 61000-3-2:2006
- EN 61000-3-3:1995
- Product Family Immunity Standard EN 50130-4:1995 +A1:1998 +A2:2003

Enclosure Specifications

BT-X
- NEMA 4X composite
- Grey
- 20 in. H x 16 in. W x 9 in. D
- Key lock

Pull Station
- NEMA 4X composite
- Red
- 7.5 in. H x 6 in. W x 5 in. D
- Window enclosure door with snap latch

Ordering Information

Part Number	Description
227-668-xx*	Outdoor Solar Power BT-XF Pull Station with Central acknowledgment LED indicator • BT-XF mounted in a NEMA 4X grey composite enclosure with key lock, tamper switch, tilt switch and one 12V/12 Ah battery • Single action pull station mounted in a NEMA 4X red composite enclosure with window and snap latch attached to the front of the BT-XF enclosure **NOTE** *Solar power source must be ordered separately.* ***Specify frequency (-xx) when ordering

Associated Parts

Part Number	Description
176-208-00	BT-X Audio Board

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

BT-X MNS (In-Building Mass Notification)

Building Transceivers Catalog Section
03

BT-X MNS (In-Building Mass Notification)

BT-XF to BT-XM Upgrade Kit 227-422-99
BT-XM In-Building Mass Notification Communicator 227-621-xx, 227-622-xx, 227-623-xx

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Building Transceivers

BT-XF to BT-XM Upgrade Kit
227-422-99

Description

Monaco's BT-XF to BT-XM Upgrade Kit transforms a BT-XF transceiver into a BT-XM mass notification transceiver by adding audio board, relay board, and current BT-XM firmware to perform secure live voice messages and trigger prerecorded messages or tones resident on a connected mass notification panel.

BT-XM

FM APPROVED

Radio is FCC certified for narrowband operation and meets the requirements of the NTIA (National Telecommunications and Information Administration) Manual of regulations and Procedures for Federal Frequency Management

The BT-XF (building transceiver "-XF" for fire management) is a fire management transmitter that links a Fire Alarm Control Panel (FACP) to the D-21 Central Receiving System (Central). The BT-XF receives commands from Central and reports status from its zone inputs and its self using unit addresses.

The BT-XM ("-XM" for mass notification) is a mass notification transmitter than links a FACP and Mass Notification System (MNS) panel to D-21 Central. The BT-XM transmits live voice received from a radio, telephone, or microphone and prerecorded messages from the D-21 MNS to within-building mass notification panels or PA speaker systems.

The BT-XM communicates with a D-21 MNS via narrowband radio with fallback to hard-wire connection, if so wired. The connection between the BT-XM and the multi-circuit mass notification panel is supervised.

The BT-XM provides four supervised Class B zone inputs and eight relay driver outputs. The four fire inputs can be used for standard fire zone monitoring or to monitor auxiliary zones, such as trouble contacts on the mass notification panel.

When using the BT-X Relay Board for prerecorded messages, the BT-XM can be expanded to monitor 20 fire zones or 16 security zones in a single-wide enclosure, and 52 fire zones and 48 security zones in a double-wide enclosure. Relay driver outputs are controlled via command from D-21 Central.

The BT-XM continuously monitors its operation through self diagnostics and reports off-normal conditions to D-21 Central. If a BT-XM does not receive a signal for 200 seconds, it transmits unacknowledged alarms at programmed intervals without waiting for a Central command.

The BT-XF to BT-XM upgrade kit's primary source of power is 115 or 230 VAC (50/60) Hz. Its secondary power is one or two 12V/12 Ah SLA batteries. If a primary AC power loss occurs, the unit automatically switches to battery power. Loss of AC power exceeding 60 seconds causes the transmission of an AC Fail message to D-21 Central. Transfer back to normal AC power is automatic and activates the internal battery charger.

The battery provides sufficient power to operate a base unit with an audio board and a relay board in normal standby status, polling, and transmitting alarm and status changes for up to 72-hours.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Building Transceivers

NOTE Battery specification is based on a BT-XM with an audio board and relay board only. If additional cards or devices are added, the battery calculations must be done to determine the correct battery size.

Features

- Upgrades BT-XF to BT-XM by adding audio board, relay board, and current BT-XM firmware
- Transmits live voice and prerecorded messages from the D-21 MNS to within-building mass notification panels
- Receives and transmits live voice from the D-21 through radio, telephone, or microphone input
- Prerecorded messages can be triggered via relay contact closure
- Includes four onboard fire zone inputs that can also be used to report mass notification panel status
- Supports fire intrusion detection and access control applications with the addition of optional equipment
- Status LEDs reflect the status of the BT-XM: general trouble, system fault, in communication, carrier detect, transmit, primary power, battery boost charge, and battery float charge

Specifications

AC Input 115/230 VAC, 50/60 Hz

DC Output Power supply output: 16 VDC non-adjustable
Battery charger output: 13.8 VDC float: 14.5 VDC boost
Nominal Current, BT-X with audio board: 220 mA, 1.5A transmit

Battery Two 12V/12 Ah
Low battery signal: 11.5 VDC
Low battery disconnect: 9.75 VDC

Radio For units using radio communication:
- FSK narrowband
- FSK modulation
- Duty cycle 50%, 30-second max. transmit
- RF Antenna output impedance: 50 ohm

Operating Temperature –22°F to 140°F (–30°C to 60°C)

Relative Humidity 0% to 90% non-condensing

Compliance In a standard configuration: BT-XM
- EN 55011:2007+A2:2007
- EN 61000-3-2:2006
- EN 61000-3-3:1995
Product Family Immunity Standard
EN 50130-4:1995 +A1:1998 +A2:2003

The BT-XM power supply contains surge protection meeting the requirements of IEEE C62.41

Ordering Information

Part Number	Description
227-422-99	BT-XF to BT-XM Upgrade Kit, contains one audio board, one relay board, one BT-XM firmware IC, two ea 12V/12 Ah SLA battery, dual battery cable

Associated Parts

Part Number	Description
207-607-00	BT-X Planner Support Kit, contains BT-X planner software and programming cable **NOTE** An antenna is required for radio communication.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Building Transceivers

BT-XM In-Building Mass Notification Communicator

227-621-xx, 227-622-xx, 227-623-xx

Description

Monaco's BT-XM (building transceiver "-XM" for mass notification) is a mass notification transmitter that links a Fire Alarm Control Panel (FACP) and Mass Notification System (MNS) panel to the D-21 Central Receiving System (Central).

FM APPROVED

Radio is FCC certified for narrowband operation and meets the requirements of the NTIA (National Telecommunications and Information Administration) Manual of Regulations and Procedures for Federal Frequency Management

The BT-XM can transmit live voice received from a radio, telephone, or microphone to within-building mass notification panels.

The BT-XM also triggers prerecorded messages or tones resident on a connected mass notification panel.

The basic panel includes:

- Field assembly (the core electronics package)
- Audio Board for live voice MNS
- FM narrowband radio for units communicating with the D-21 by radio
- Power supply unit
- Two 12V/12 Ah batteries
- One RS-422/RS-485 port for communication with peripheral equipment.
- One full-duplex RS-232 port used to program the BT-XM via connection to a laptop computer.

Other features:

- Self test, stuck transmitter disconnect, reset, acknowledge, and battery reconnect switches
- Local audible alert
- Real-time clock and calendar
- 1/2 Mb of program memory
- 1/2 Mb of nonvolatile data storage
- Security features prevent unauthorized take-over of live voice transmissions
- Status and communication LEDs

D-21 Interface

The D-21 MNS is used to select the notification messages and direct the message to be broadcast to in-building mass notification panels or PA speaker systems.

The BT-XM is in communication with the D-21, responding to commands and sending status changes. BT-XM continuously monitors its operation through self-diagnostics and reports off-normal conditions to the D-21.

If a BT-XM does not receive a signal for 200 seconds it transmits unacknowledged alarms at programmed intervals without waiting for a Central command.

The BT-XM communicates within a D-21 MNS via narrowband radio capable of fallback to hard-wire communication. (The user must wire for fallback.) The connection between the BT-XM and the mass notification panel is supervised.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Building Transceivers

Primary communication by narrowband radio or hard-wire:

- FSK radio
- FSK hard-wire
- Digital RS-422 multidrop
- Digital RS-485 multidrop
- Digital RS-422 point-to-point

Communication LEDs indicate the type of communication: radio or hard-wire, and whether or not a live voice MNS message is being sent. Status LEDs reflect the status of the BT-XM: general trouble, system fault, in-communication, carrier detect, transmit, primary power, battery boost charge, and battery float charge.

Fire Inputs

Each BT-XM provides four supervised Class B zone inputs that can also be used to report mass notification panel status. The zone inputs are supervised for open, short, and ground fault conditions.

When using the BT-X Relay Board for pre-recorded messages, the BT-XM can be expanded to monitor 20 fire zones or 16 security zones in a single-wide enclosure, and 52 fire zones and 48 security zones in a double-wide enclosure.

NOTE A single-wide BT-XM has space for up to 3 zone expansion backplanes. A double-wide enclosure has space for up to 7. These maximum capacities leave no room for a relay board option. Additional back planes, zone cards, and relay board must be ordered separately.

MNS

The BT-XM with MNS panel activates:

- Secure live voice messages from the D-21
- Prerecorded messages or tones activated from the D-21

BT-XM provides eight relay driver outputs. The onboard relay drivers can be connected to the optional BT-X Relay Board to trigger prerecorded messages on a connected MNS panel. Relay driver outputs are controlled via command from the D-21.

NOTE Relay Boards must be purchased separately; see P/N 176-214-00 in “Associated Parts”.

Power Operation

The BT-XM’s primary source of power is 115 or 230 VAC (50/60 Hz). Its secondary power is one or two 12 VDC/12 Ah gel-type batteries. If a primary AC power loss occurs, the BT-XM automatically switches to battery power. Loss of AC power exceeding 60 seconds causes the transmission of an AC Fail message to the D-21. Transfer back to normal AC power is automatic and activates the internal battery charger.

The BT-XM battery provides sufficient power to operate a base unit with an audio board and a Relay Board in normal standby status, polling, and transmitting alarm and status changes for up to 72-hours.

NOTE Battery specification is based on a BT-XM with an audio board and relay board only. If additional cards or devices are added, the battery calculations must be done to determine the correct battery size.

The BT-XM constantly monitors and supervises its own battery and charger. BT-XM transmits a battery fault message when the battery voltage falls below 85% of the rated capacity. Other battery fault messages transmitted to the D-21 include battery disconnect and battery charger failure.

Configuration Programming

The user connects a laptop computer to the BT-XM RS-232 port and run a Windows terminal emulation program or the BT-X Planner Software. The user transfers the completed configuration to the BT-XM.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Building Transceivers

Hardware

- Field Assembly—The electronics package includes:
  - Master processor
  - Ports
  - Switches
  - Four Class B zone inputs
  - Eight relay driver outputs
- Audio Board—Addition to the field assembly for MNS and hard-wire communication
- Power Supply—Converts AC input to DC
- FM Narrowband Radio for units communicating with the D-21 by radio
- Expansion Backplane Option
  - Single-wide enclosure supports up to three
  - Double-wide enclosure supports up to seven
- Fire Zone Cards—Two per expansion backplane, each card provides four Class B zone inputs
- Relay Board—Eight Form C relay outputs for MNS
- Status LEDs
  - General alarm
  - General trouble
  - System fault
  - In-communication
  - Carrier detect
  - Transmit
  - Primary power
  - Battery boost charge
  - Battery float charge
- Communication LEDs to indicate the method of communication used: radio or hard-wire and whether a live voice message is being sent
- Zone LEDs
  - Trouble
  - Alarm
  - Normal
  - Power supplied to fire zone cards
- Optional Tamper Switch Kit P/N 513-412-00 (Purchase separately; see “Associated Parts”

Specifications

AC Input	115/230 VAC, 50/60 Hz
DC Output	• Power supply output: 16 VDC, nonadjustable • Battery charger output: 13.8 VDC float; 14.5 VDC boost • Nominal Current, BT-X with audio board: 220 mA, 1.5A transmit
Battery	• Two 12V/12 Ah • Low battery signal: 11.5 VDC • Low battery disconnect: 9.75 VDC
Radio	For units using radio communication: • FM narrowband • FSK modulation • Duty cycle 50%, 30-second max. transmit • RF Antenna output impedance: 50 ohm
Antennas and Coaxial Cables	Varies by site and system configuration; Contact Monaco for assistance
Operating Temperature	–22°F to 140°F (–30°C to 60°C)
Relative Humidity	0% to 90% non-condensing
Compliance	In a standard configuration, BT-XM complies with emissions standards: • EN 55011:2007+A2:2007 • EN 61000-3-2:2006 • EN 61000-3-3:1995 • Product Family Immunity Standard EN 50130-4:1995 +A1:1998 +A2:2003. The BT-XM power supply contains surge protection meeting the requirements of IEEE C62.41.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Building Transceivers

Ordering Information

BT-XM

Part Number	Description
227-621-xx*	BT-XM Mass Notification Communicator, narrowband radio, capability for fallback to hard-wire communication, 20 in. × 25 in. × 4 in. double-wide NEMA 1, audio board, two 12V/12 Ah batteries, relay board ordered separately
227-622-xx*	BT-XM Mass Notification Communicator, narrowband radio, capability for fallback to hard-wire communication, 20 in. × 16 in. × 6 in. NEMA 3R, audio board, two 12V/12 Ah batteries, relay board ordered separately
227-623-xx*	BT-XM Mass Notification Communicator, narrowband radio, capability for fallback to hard-wire communication, 20 in. × 12 in. × 4 in. single-wide NEMA 1, audio board, two 12V/12 Ah batteries, relay board ordered separately
***Specify frequency (-xx) when ordering.**	

Associated Parts

Part Number	Description
227-630-xx	BT-X Electronics Package (no audio board)
176-206-00	BT-X Fire Zone Card, provides four zone inputs and eight relay driver outputs
176-208-00	BT-X Audio Board
176-212-00	BT-X Zone Expansion Backplane, supports two zone cards (fire or security)
176-214-00	BT-X Relay Board with eight on-board Form C relays
207-607-00	BT-X Planner Support Kit, contains BT-X planner software and programming cable
225-163-00	Planner Suite/Programmer with interface cables for use with: Monaco FACP/MNS (M-2, MAAP-2, MAAP(+), MAAP-X) BT-X building transceiver, and D-21 compatible repeaters
513-412-00	BT-X Enclosure Tamper Switch Kit
400-713-00	Battery, SLA, rechargeable, 12V/12 Ah, quick connect, 5.94 in. x 3.86 in. x 3.86 in., 7.92 lb
649-118-00	USB to Serial Port Adaptor (needed for laptops with USB only in order to program the panel)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

BT-XM2 (In-Building Mass Notification with Monaco FACP Interface)

Building Transceivers Catalog Section
03

BT-XM2 (In-Building Mass Notification with Monaco FACP Interface)

BT-XM2 Interface Conversion Kits 227-371-02, 227-372-0x, 227-623-MN, 227-811-MN

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Building Transceivers

BT-XM2 Interface Conversion Kits

227-371-02, 227-372-0x, 227-623-MN, 227-811-MN

Description

The BT-XM2 can be connected to up to two M-Type (conventional or addressable) fire alarm control panels (FACPs) and two mass notification system panels (MNS panels) using a single antenna for radio communication with a D-21 Central. Once converted, the BT-XM2 controls the in-building MNS system and reports the status of any connected M-Type FACP and MNS panel to central.

The connected M-Panels must be converted for MNS operation by installation of an MNS conversion kit. Converting an M-2 conventional requires changing the configuration (transceiver address needs to be modified)—all field wiring can remain as is. However, an audio board and programming work are required for upgrading to a new MAAP(+) addressable for MNS or from DTMF (M-1) to MNS operation (M-2).

The system created by the interconnected panels allows audible fire alarms on the M-Panels to be automatically silenced when the connected MNS panels are being used to alert personnel of an emergency situation, as required per UFC 4-021-01. Onboard zones of the BT-XM2 allow connection of two override switches (one for each M-Panel) that reverse the silencing of the M-Panels if needed, thus allowing both the MNS panel messages and the audible alarms on the M-Panels to sound at the same time.

The BT-XM2 provides four onboard zones and eight relay driver outputs that are connected to the installed BT-X Relay Board, which is used to trigger up to eight prerecorded MNS messages. Expansion zones are not needed.

NOTE *The BT-XM2* ***cannot*** *be configured via the BT-X Planner software; the BT-XM2* ***must*** *be configured via a terminal emulation program (e.g., HyperTerminal or ProComm).*

Features

BT-XM2 (227-623-MN)

- Supervised connection to M-Panels and MNS panels
- Fallback communication to hard-wire connection
- Transmits live voice and activates prerecorded messages from the D-21 MNS to in-building MNS panels
- Receives and transmits live voice through radio from MNS sources such as telephone and microphone
- Prerecorded messages can be triggered via relay contact closure
- Security features prevent unauthorized take over of live voice transmissions
- BT-XM2 status LEDs for general trouble, system fault, in-communication, carrier detect, transmit, primary power, battery boost charge, and battery float charge
- Communication LEDs indicate when a live voice message is being sent and whether radio or hard-wire communication is being used
- Full-duplex RS-232 port used for programming the BT-XM2 via laptop computer
- 115 or 230 VAC power is monitored with automatic switchover to backup battery power
- Self-test, stuck transmitter disconnect, reset, acknowledge, and battery reconnect switches
- Local audible alert
- Real-time clock and calendar
- 1/2 Mb of program memory
- 1/2 Mb of nonvolatile data storage
- RS-422 port connects to M-2s
- Narrowband radio communication with the D-21 is FCC certified for narrowband operation and meets the requirements of the National Telecommunications and Information Administration (NTIA) Manual of Regulations and Procedures for Federal Frequency Management

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Building Transceivers

M-Panel (227-371-02, 227-372-0x, 227-811-MN)

- Reports both fire and MNS status to the D-21 through the BT-XM2 and controls the in-building MNS system
- Allows the audible notification appliances (bells) connected to the M-Panels to be silenced while the MNS panels are in use
- Allows reversal of bell silencing on M-Panels via an override switch for each M-Panel
- Converted M-2 configuration is retained
- Allows M-Panel and MNS panel visual notification appliances (strobes) to operate independently from each other

Ordering Information

Part Number	Description
227-623-MN	BT-XM to BT-XM2 Conversion Kit: consists of a programming chip to convert BT-XM to BT-XM2 and operating manuals **(the BT-XM being converted must have an audio board attached to function correctly)**
Order one of the following conversion kits based on the type of M-series FACP being converted to interface with the BT-XM2.	
227-371-02	M-2 to M-2 Conventional FACP Conversion Kit for MNS Operation, includes RFM-XM2, interconnection cable, and EPROM
227-372-02	MAAP-2 to MAAP-2 FACP Conversion Kit for MNS Operation, includes RFM-XM2, interconnection cable, and EPROM
227-372-03	MAAP(+) Conversion Kit for MNS Operation, includes RFM-XM2, interconnection cable, and flash program chip
227-811-MN	MAAP(+) electronics package, MNS upgrade for existing MAAP-1, MAAP-2 (legacy addressable), and M-2 conventional panels (except 19 in.), replaces M CPU, power supply, AAC, ADC, and display (existing ADCs may still be used with the upgrade); includes BT-XM2 MNS interface **NOTE 1** Specify frequency (-MN) when ordering. **NOTE 2** Required Ah capacity depends on system; other battery options available. Contact Monaco for help in determining battery requirements. **NOTE 3** Antenna system required for radio versions; contact Monaco.

Associated Parts

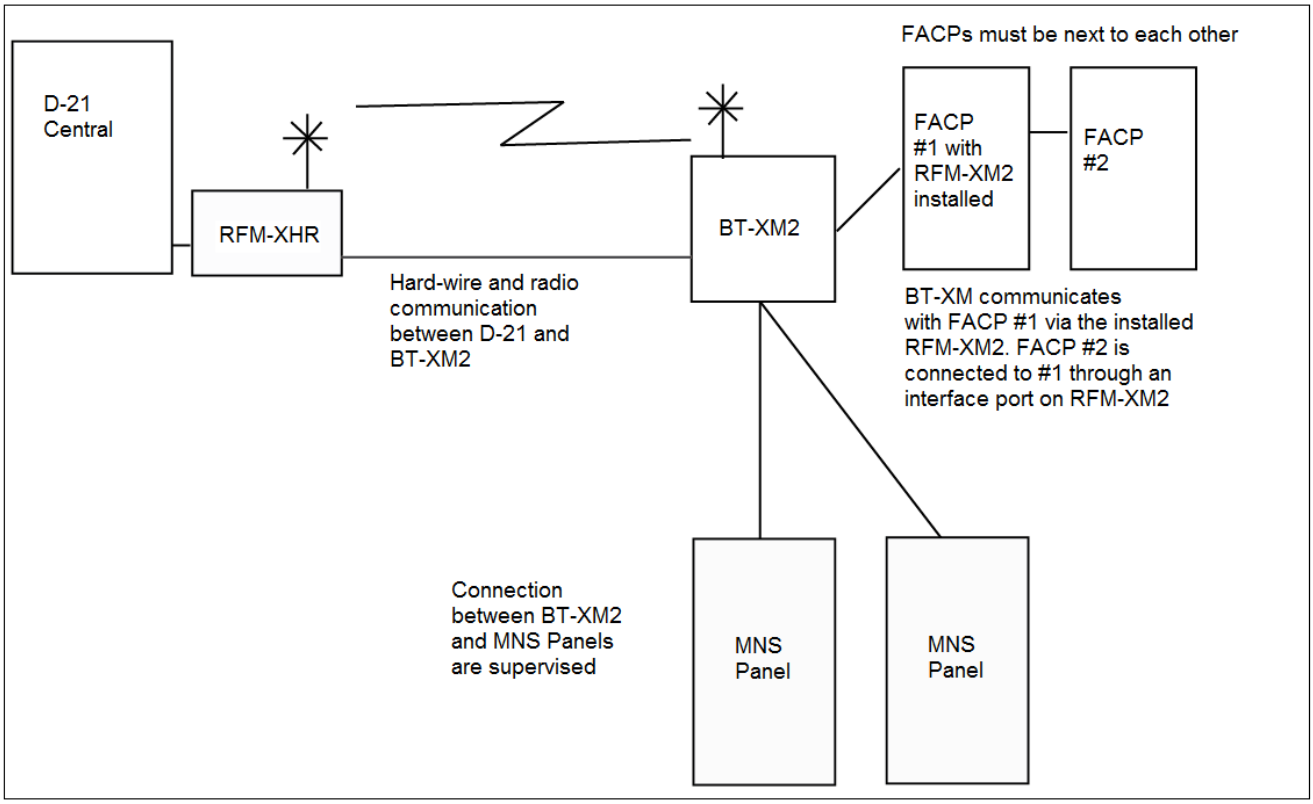
Part Number	Description
176-208-00	BT-X Audio Board
176-214-00	BT-X Relay Board with eight on-board Form C relays
227-574-00	MAAP Serial Interface Kit, includes programming cable and adaptor

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

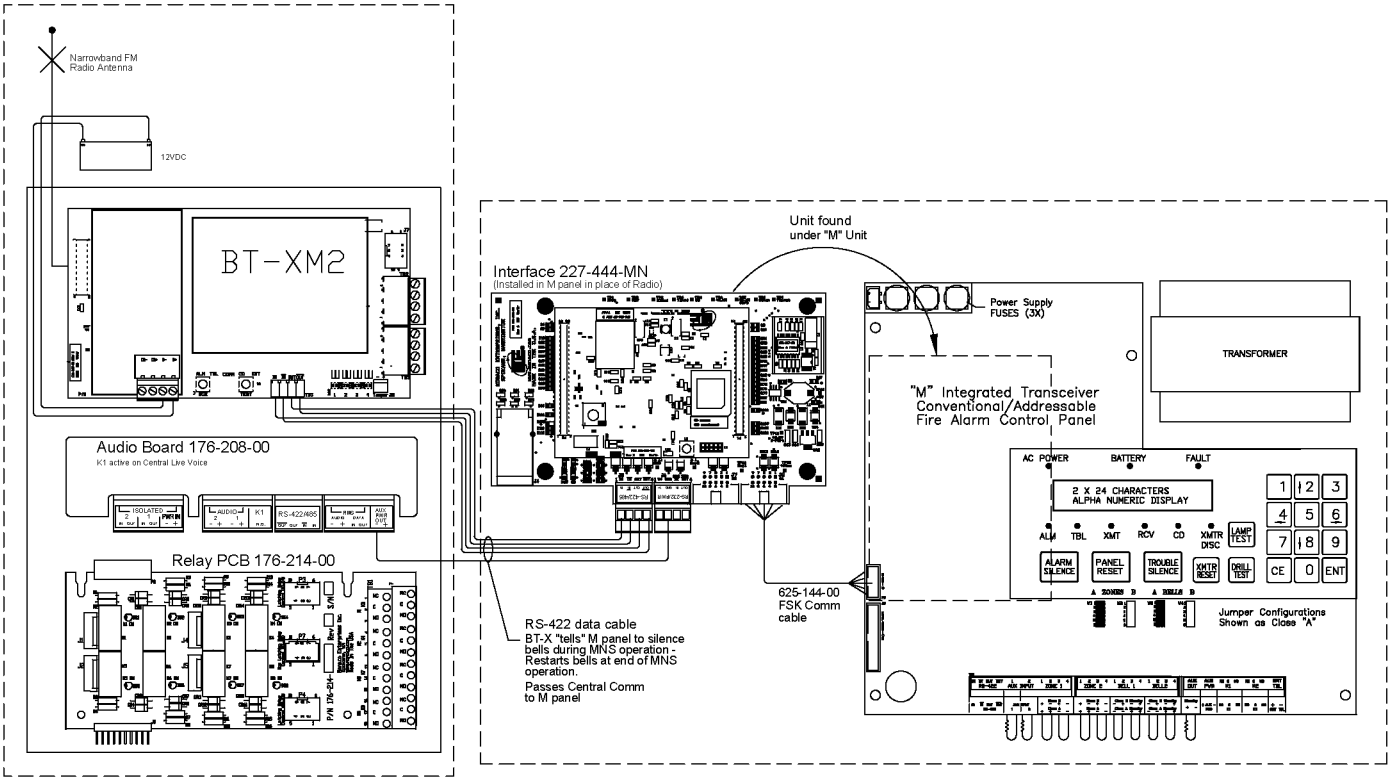
Diagrams

System Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Building Transceivers



Monaco Enterprises, Inc.

P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149

Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

BT-X Access Control

Building Transceivers Catalog Section 03

BT-X Access Control

BT-XS Security Communicator. 227-61x-xx, 227-630-xx, 227-648-xx, 227-649-xx

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Building Transceivers

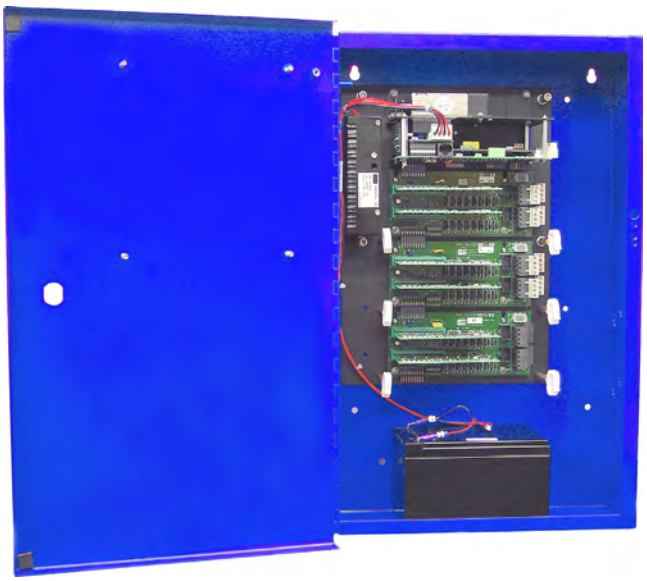
BT-XS Security Communicator

227-61x-xx, 227-630-xx, 227-648-xx, 227-649-xx

Description

BT-XS Multi-Application Security Transceivers have four onboard Fire Only zone inputs and eight relay driver outputs as well as the capability to support zone inputs added through expansion backplanes and zone cards. The BT-XS is available in enclosures that support up to 24 zones in a single-wide enclosure and up to 56 zones in a double-wide enclosure.

The BT-XS communicates with a D-21 via radio and the BT-XHS communicates with a D-21 via hardwire connection to respond to commands and to keep Central up-to-date on the operational status of the BT-XS. A versatile product, the BT-XS can be programmed for intrusion detection, access control, mass notification, and fire management. For intrusion detection applications, the use of a BT-X iButton keypad, BT-X keypad, or key-switch provide a method of arming and disarming areas. Security zones are programmed with a zone type at Central; these zone types are downloaded to the BT-XS. Special zone behavior can be defined while programming the BT-XS.



Radio is FCC certified for narrowband operation and meets the requirements of the NTIA (National Telecommunications and Information Administration) Manual of Regulations and Procedures for Federal Frequency Management.

The BT-XS continuously monitors its zone inputs for alarm, trouble, status change, and ground-fault conditions. When an alarm or trouble occurs, the BT-XS encodes a message indicating the zone input condition, which zone input was activated, and sends the message to the Central. When a zone input is restored to normal condition, the BT-XS transmits a message indicating the restoration. All transmissions are repeated by the BT-XS until acknowledged by Central. In addition, the BT-XS acknowledges all Central initiated commands.

Each BT-XS provides unit status LEDs and zone LEDs. The BT-XS status LEDs indicate the BT-XS state. LEDs on each security card indicate power is being supplied to the cards, and can indicate the physical condition of the zones and/or the logical condition of the zones.

The onboard audible alert provides auditory notification when any of the zone inputs are in an alarm or trouble condition. The audible alert sounds on and off in a beeping fashion for alarms; it sounds continuous for a trouble condition.

Central D-21

The D-21 logs access-and-secure operations performed by authorized users via connected keypad(s), iButton(s), or key switch(es).

BT-XS reports alarm and trouble conditions on its zones to the D-21.

Primary communication can be by narrowband radio or hard-wire:

- FSK radio
- FSK hard-wire
- Digital RS-422 multidrop
- Digital RS-485 multidrop
- Digital RS-422 point-to-point

Hard-wire communication, whether primary or fallback to secondary, requires an audio board.

One RS-232 and one RS-422/485 port are included in the BT-XS (optional audio board adds another RS-422/ 485). The RS-232 port connects to a laptop computer for BT-XS programming. The included RS-422/485 port is used for communication with peripheral equipment such as keypads.

Either manually or automatically, the D-21 controls BT-XS relay outputs (though some outputs can be programmed to initiate from the BT-XS).

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Building Transceivers

Inputs and Outputs

Each BT-XS provides four on-board supervised Class B Fire Only zone inputs (automatic zones) that can be connected to an FACP. The zone inputs are supervised for:

- Open
- Short
- Single and double ground faults

A single-wide BT-XS has space for up to three zone expansion backplanes; the double-wide has space for up to seven. Two security zone cards can be plugged into each zone expansion backplane. Each zone card provides an additional four Class B zone inputs. The EOLs for expansion backplanes are:

- Access resistance (10k EOL)
- Secure resistance (22k EOL)

BT-XS has eight relay outputs for remote control of security equipment initiated from timed/programmed events, FACP alarm signals, or manually by the D-21 operator.

Wiring the outputs can come directly from the main electronics package ("field assembly") or through optional relay boards and expansion backplanes/security zone cards.

Zone Types

A master zone is one of 12 that comprise the IDS master unit. Zone types—applicable to master and automatic zones—are configured at Central and downloaded to the BT-XS:

- Two-man access/secure
- Constant secure
- Central initiate
- Preauthorized
- Entry/exit delay
- Automatic
- Key switch

Notification Types

- General alarm
- General trouble
- Enclosure tamper
- AC fail
- Battery fault; low battery
- Duress or diddle

Power Operation

Primary power is 115 or 230 VAC; secondary power is one or two 12V/12 Ah batteries. If primary AC power fails, the BT-XS automatically switches to battery operation. Loss of AC power exceeding 60 seconds causes the transmission of an AC Fail message to the D-21. Transfer to normal AC power is automatic and activates the internal battery charger.

The BT-XS battery supply provides sufficient power to operate a base unit (four zones) in normal standby status, polling, and transmitting alarm and status changes for up to 72 hours.

NOTE Battery specification is based on a BT-XS with no additional current draw. If devices will draw current, battery calculations must determine the correct battery size.

BT-XS monitors and supervises its own battery and charger. BT-XS transmits a battery fault message when the battery voltage falls below 85% of the rated capacity. Other battery fault messages transmitted to the D-21 include battery disconnect and battery charger failure.

Auxiliary power output is provided for sensors.

Configuration Programming

The user connects a laptop computer to the BT-XS RS-232 port and runs a Windows® terminal emulation program and the BT-X Planner software. Assigning security cards in the planner results in the creation of the IDS master unit, the next sequential address after the BT-XS.

The user transfers the completed configuration to the BT-XS.

Hardware

- Field Assembly—The electronics package that includes master processor, ports, switches, four Class B Fire Only zone inputs, and eight relay outputs
- FM Narrowband Radio—For units communicating to the D-21 by radio; tuned at the factory to the site specific frequency
- Audio Board—Addition to the field assembly for BT-XS units that use a hard-wire fallback for secondary communication
- Power Supply—Converts AC input to DC
- Expansion Backplane Option—Single-wide enclosure supports up to three; double-wide enclosure supports up to seven
- Security Zone Cards—Two per expansion backplane, each card provides four Class B zone inputs
- Relay Board—Optional driver for the eight Form C relay outputs

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Building Transceivers

- Status LEDs—General alarm, general trouble, system fault, in-communication, carrier detect, transmit, primary power, battery boost charge, and battery float charge
- Zone LEDs—Trouble, alarm, normal, power supplied to security zone cards
- Optional Tamper Switch Kit (separate purchase)

Features

- Supports Intrusion Detection, Access Control, Mass Notification, and Fire applications
- Hardwire or narrowband radio communication with the D-21 systems
  - Radio is FCC certified for narrowband operation and meets the requirements of the NTIA (National Telecommunications and Information Administration) Manual of Regulations and Procedures for Federal Frequency Management
- Connects to up to 8 remote BT-X iButton keypads or BT-X keypads for arming and disarming areas to a single BT-X
- Areas can be disarmed and armed by key switches, BT-X keypads, BT-X iButton keypads, or by scheduled time/day
- D-21 logs access/secure operations performed by authorized users via the connected BT-X iButton Keypads, BT-X keypads, or keyswitches
- Duress and diddled capability at keypads
- Connects to a wide variety of devices including motion detectors, magnetic door contacts, duress switches, vault/safe sensors, CCTV cameras
- Electronic zone masking
- Communication and line security comply with DCID 1/21 Annex B (Class II) and UL1076 Class AA
- BT-X status LEDs and zone status LEDs
- Zone types are set up at Central and downloaded to the BT-X. Zone types define the specific way the zone is to operate:
  - Two-Man Access/Secure
  - Constant Secure
  - Central Initiate
  - Pre-Authorized
  - Entry/Exit Delay
  - Automatic
  - Keyswitch
- Local programming and central programming
- Master zones can be associated with automatic zones so the automatic zones follow the operation of the master zone. Master zones are assigned a zone type
- Alarm types include: general alarm, general trouble, enclosure tamper, battery fault, AC failure, low battery, duress, diddled
- Auxiliary power output for operating sensors
- Self test, stuck transmitter disconnect, reset, acknowledge, and battery reconnect switches
- Local audible alert
- Enclosure tamper switch
- Real-time clock and calendar
- One selectable RS-422/RS-485 port for communication with peripheral equipment, LCD keypad, or hardwire connection to the D-21
- Expansion zones supervised for open, short, single ground fault, double ground fault, access resistance (10k EOL), and secure resistance (22k EOL)

Specifications

AC Input	115/230 VAC, 50/60 Hz
DC Output	• From power supply: 16 VDC, nonadjustable • From battery charger: 13.8 VDC float; 14.5 VDC boost • Nominal amps, 6 zone cards: 175 mA, 1.5A transmit
Radio	For units using radio communication: • FM narrowband • FSK modulation • Duty cycle 50%, 30-second max. transmit • Output impedance: 50 ohm
End of Line (EOL) Resistor, Expansion Backplane	Access resistance (10k) Secure resistance (22k)
Battery	• 12V/12 Ah • Low battery signal: 11.5 VDC • Low battery disconnect: 9.75 VDC
Antennas and Coaxial Cables	Varies by site and system configuration, contact Monaco for assistance
Operating Temperature	–22°F to 140°F (–30°C to 60°C)
Relative Humidity	0% to 90% non-condensing
Compliance	Communication and line security comply with DCID 1/21 Annex B (Class II) and UL1076 Class AA

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Building Transceivers

Ordering Information

BT-XS

Part Number	Description
227-610-xx*	BT-XS, 0–24 zones, radio, 20 in. × 12 in. × 4 in., blue single-wide, one 12V/12 Ah battery, audio and relay board options ordered separately
227-611-xx*	BT-XS, 0–24 zones, radio, 20 in. × 16 in. × 6 in., blue NEMA 3R, one 12V/12 Ah battery, audio and relay board options ordered separately
227-613-xx*	BT-XS, 0–56 zones, radio, 20 in. × 25 in. × 4 in., blue double-wide, two 12V/12 Ah batteries, audio and relay board options ordered separately
227-615-00	BT-XHS, 0–24 zones, hard-wire, 20 in. × 12 in. × 4 in., blue single-wide, one 12V/12 Ah battery, audio board, relay board option ordered separately
227-616-00	BT-XHS, 0–56 zones, hard-wire, 20 in. × 25 in. × 4 in., blue double-wide, two 12V/12 Ah batteries, audio board, relay board option ordered separately
227-617-00	BT-XS I button (IB) keypad option assembly for use with BT-XS electronics package 227-630-xx
227-617-01	BT-XS Remote I button (IB) remote keypad with relay control option assembly, for use with BT-XS electronics package 227-630-xx
227-630-xx*	BT-X electronics package (no audio board), must order audio board separately for hard wire **NOTE** If BT-X unit has a keypad, must also order 227-617-00 or 227-617-01 with the BT-X unit.
227-648-xx*	BT-XHS, 0–24 zones, radio/hard-wire dual comm, 20 in. × 12 in. × 4 in., blue, single-wide, one 12V/12 Ah battery, audio board, relay board option ordered separately
227-649-xx*	BT-XHS, 0–56 zones, radio/hard-wire dual comm, 20 in. × 25 in. × 4 in., blue double-wide, two 12V/12 Ah batteries, audio board, relay board option ordered separately
***Specify frequency (-xx) when ordering.	

Associated Parts

Part Number	Description
176-212-00	BT-X Zone Expansion Backplane, supports two security zone cards (fire or security)
176-206-01	BT-XS Security Zone Card, provides four zone inputs and eight relay driver output
176-208-00	BT-X Audio Board
176-214-00	BT-X Relay Board with eight on-board Form C relays
227-627-01	BT-X Keypad with 2 x 24 character LCD, PIN entry; requires BT-X keypad harness P/N 630-011-00
630-011-00	BT-XS Keypad Interface Harness
227-574-00	MAAP Serial Interface Kit, includes programming cable and adaptor
207-607-00	BT-X Planner Support Kit, contains BT-X Planner software and programming cable
225-163-00	Planner Suite/Programmer with interface cables for use with: Monaco FACP/MNS (M-2, MAAP(+), MAAP-X) BT-X building transceiver, and D-21 compatible repeaters
400-713-00	Battery, SLA, rechargeable, 12V/12 Ah, quick connect, 5.94 in. x 3.86 in. x 3.86 in., 7.92 lb

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Building Transceivers Catalog Section
03

BT-X Intrusion Detection – Reserved

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

BT-X Wide Area Controller (WAC) (Outdoor Giant Voice Mass Notification)

Wide Area Mass Notification Speaker Station, 1600 W 227-671-xx, 227-634-xx, 227-634-CE, 227-661-xx, 124-080-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Building Transceivers

Wide Area Mass Notification Speaker Station, 1600 W

227-671-xx, 227-634-xx, 227-634-CE, 227-661-xx, 124-080-00

Description

The Wide Area Mass Notification Speaker Station provides 1,600 W of speaker power to a speaker array for prerecorded or live voice messages that can be locally and remotely activated from the D-21 MNS.

The Wide Area Mass Notification Speaker Station is contained in two NEMA 4X steel enclosures with an intrusion tamper switch. It consists of:

- A BT-X WAC (P/N 227-634-xx) with a UHF/ VHF radio tuned to the system frequency and an antenna
- A speaker control station (P/N 124-080-00 with tone generator, automatic gain control for prerecorded and live voice public announcements, and a speaker array

The speaker array includes four speakers with mounting bracket, 50 ft. of cables, and a pole-mounting kit. The customer must provide a pole to mount the Wide Area Mass Notification Speaker Station, antenna and speaker array.

Optionally, the system can be set up to operate with a solar panel. Solar panel and charger must be ordered separately.

Power System

The Wide Area Mass Notification Speaker Station requires primary power of 120 AC, 10A dedicated power. The speaker control station has 24 VDC secondary power battery backup (two 12 VDC/100 Ah batteries).

The BT-X WAC unit primary power is 24 VDC power from the speaker control station with 12 VDC secondary power battery backup (one 12 VDC/12 Ah battery).

E-Class 1,600 Watt Control System

Battery Enclosure

Features

- For use with the Monaco BT-X WAC Communicator and D-21 Central Receiving System with MNS
- Local diagnostics
- Easy access cabinet layout
- Automatic status reporting
- Communication with D-21 via radio through the BT-X WAC
- Enclosure intrusion tamper switch
- Amplifier and speaker supervision

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Building Transceivers

- Fiberglass antenna and antenna support bracket options
- Antenna surge suppression
- Local and remote MNS activations
- Prerecorded message activation from D-21 MNS
- Live voice messaging from D-21 MNS
- 24 VDC and 12 VDC battery chargers
- Internal fault protection
- Short-circuit protection
- Solar panel option

Specifications

Speaker Control Station

AC Input (Primary Power)	120 VAC, 10A
DC Output (Secondary Power)	24 VDC
Battery Backup Power	Two 12 VDC/100 Ah batteries
Battery Backup During AC Fail	Syst. Oper. Voltage: 24 VDC Standby (3 minute full signal reserve): 14 days minimum
Audio Output Power	1,600 W
Speaker Sound Pressure at 100 ft.	121 dB (360 degrees)
Wind Resistance	140 mph (225.3 km/h)
Operating Temperature	–40°F to 140°F (–40°C to 60°C)
Relative Humidity	0% to 100%, non-condensing
Speaker Array Weight	225 lb (all four speakers)
Enclosure Dimensions (Speaker Control Station and Battery)	48 in. H x 24 in. W x 8 in. D

BT-X WAC Unit

DC Input (Primary Power)	24 VDC from speaker control station
Battery Backup (Secondary Power)	One 12 VDC/12 Ah batteries
Battery Backup During AC Fail	Standby: 55 hours
Operating Temperature	–22°F to 140°F (–30°C to 60°C)
Relative Humidity	0% to 90%, non-condensing

NOTE Design your system for environments that meet the less rigorous BT-X WAC temperature and humidity specifications.

Ordering Information

Speaker Station

Part Number	Description
227-671-xx*	BT-X WAC/ASC Mass Notification Speaker Station with integral BT-X Wide Area Controller; 1,600 W, omnidirectional; double NEMA 4X SS enclosure; Amplifier with tone generator and AGC for prerecorded and Live Voice announcements; four speaker array with bracket, 50 ft. speaker cable, and pole mounting kit (pole not included); two 12v/100 Ah batteries for amplifier, one 12v/12 Ah battery included for BT-X WAC. Prerecorded Message Card (P/N 055-SXX-01) sold separately.
227-634-xx*	BT-X WAC/ASC; Wide Area Controller for American Signal Mass Notification Speaker Station; includes mounting bracket, lightning arrestor, and all inter-connection wiring harnesses; 12v/12 Ah battery.
227-634-CE*	BT-X WAC/ASC CE; Wide Area Controller for American Signal Mass Notification Speaker Station; includes mounting bracket, lightning arrestor, and all interconnection wiring harnesses; 12v/12 Ah battery. Europe.
227-661-xx*	Replacement BT-X WAC/ASC electronic package with RF Module and Audio Board for 227-634-xx.
124-080-00	ASC Mass Notification Speaker Station, 1,600 W; double NEMA 4X SS enclosure; Amplifier with tone generator and AGC for prerecorded and Live Voice announcements; four speaker array with bracket, 50 ft. speaker cable, and pole mounting kit (pole not included).
***Specify frequency when ordering. **NOTE** Antenna must be purchased separately. Contact Monaco for ordering information.	

Associated Parts

Part Number	Description
207-610-00	BT-X/WAC Planner Support Kit
400-718-00	Battery, deep cycle, rechargeable, 12V/100 Ah, universal terminal, 65.34 lb, 12.01 in. L x 6.61 in. W x 9.06 in. H (spare) **NOTE** Original purchase comes with voucher for two batteries of this specification.
400-713-00	Battery, SLA, rechargeable, 12V/12 Ah, quick connect, 5.94 in. L x 3.86 in. W x 3.86 in. H, 7.92 lb (spare)
198-016-00	Lightning Arrestor
085-153-00	Speaker Bird Screen, one per speaker, four per array

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

BT-8 (Fire Only)

Building Transceivers Catalog Section 03

BT-8 (Fire Only)

BT2-8 Building Transceivers. 227-245-xx, 227-246-xx, 227-247-xx, 227-271-xx

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

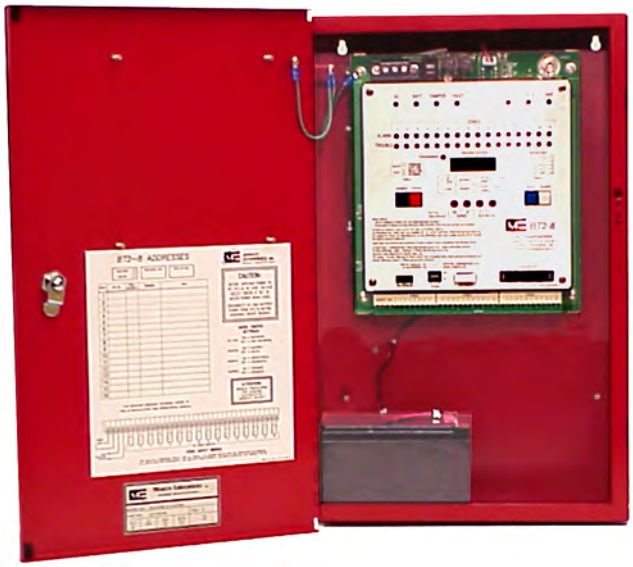
Detect Manage Record

BT2-8 Building Transceivers

227-245-xx, 227-246-xx, 227-247-xx, 227-271-xx

Description

BT2-8 Building Transceivers provide radio signaling of alarm and trouble conditions from local fire alarm systems to Monaco's D-21 Radio Alarm Central Receiving System.



Local control panels or supervisory devices that have isolated dry contacts that provide a short for an alarm condition and an open for a trouble condition may be connected directly to the BT2 zone inputs. Interfacing relays shall be used to connect other types of outputs.

Each BT2-8 can monitor up to 16 zones; a slave module can be connected to a master BT2-8 to report 32 zones using one antenna system. The master and slave are each assigned a BT2 number for communication with the D-21. The master receives and passes on polls and commands to the slave and reports status changes for the slave.

The BT2-8 reports alarms, troubles, and restorations on command from the D-21. Sophisticated software control ensures that alarms have priority processing. Messages are repeated at programmed intervals until the D-21 acknowledges receipt. If the BT2 does not receive a signal from the D-21 for 30 seconds, it will send any alarms that occur without waiting for a D-21 command. If the BT2 does not reply to a D-21 poll or command, a trouble is indicated at the D-21.

Features

- FSK-encoded radio transmission of alarms, troubles, and restorations for 16 or 32 zones
- Communication with the D-21 Central Receiving System is supervised and status changes are reported by automatic and manual poll/reply/acknowledge routines
- The BT2 address is entered by the user on rotary switches; zone identification numbers only need to be entered at the D-21
- Battery Fault (low or disconnected battery or abnormal charger output), AC Fail, and Enclosure Tamper (optional) conditions and restorations are reported with the BT2 number; AC Fail reporting may be inhibited
- An input delay of 1 to 15 seconds may be programmed for each zone to prevent transmission of intermittent conditions
- Automatic transmitter disconnect for "stuck" transmitter
- Zone inputs may be disabled at the D-21
- Selectable 115 or 230 VAC input
- Terminal blocks can be easily removed with the wiring intact when performing maintenance and troubleshooting procedures
- The BT2 address, zone programming, and current status are stored in a nonvolatile, transferable Data Module
- LEDs identify BT2 and zone status; audible alert sounds for alarms and troubles (may be disabled)
- LED digital display shows programming input, stored data, and code for radio transmissions
- Provides a remote test or auxiliary Form "A" relay
- Programmed diagnostic tests
- Microprocessor controlled
- 4 W RF output power (selected frequencies available with 2 W RF output power)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Building Transceivers

- All RF signals on the system frequency are detected and indicated with an LED
- Integral battery backup and charging circuitry for 72 hours continuous operation
- Integral battery disconnect circuitry prevents battery damage due to prolonged discharge
- Enclosure lock and key
- Narrowband radio, which is FCC certified for narrowband operation and meets the requirements of the NTIA (National Telecommunications and Information Administration) Manual of Regulations and Procedures for Federal Frequency Management

Ordering Information

Building Transceivers

Part Number	Description
227-245-xx*	BT2-8 Building Transceiver, narrowband radio, 16 zones, 20 in. x 12 in. x 4 in. red NEMA 1 enclosure
227-246-xx*	BT2-8 Building Transceiver, narrowband radio, 16 zones, 20 in. x 16 in. x 6 in. red NEMA 3R enclosure
227-247-xx*	BT2-8 Building Transceiver, narrowband radio, 32 zones, 20 in. x 25 in. x 4 in. red NEMA 1 enclosure
227-271-xx*	BT2-8 Building Transceiver, narrowband radio, 16 zones, 20 in. x 12 in. x 4 in. red NEMA 1 flush-mount enclosure
***Specify frequency when ordering**	

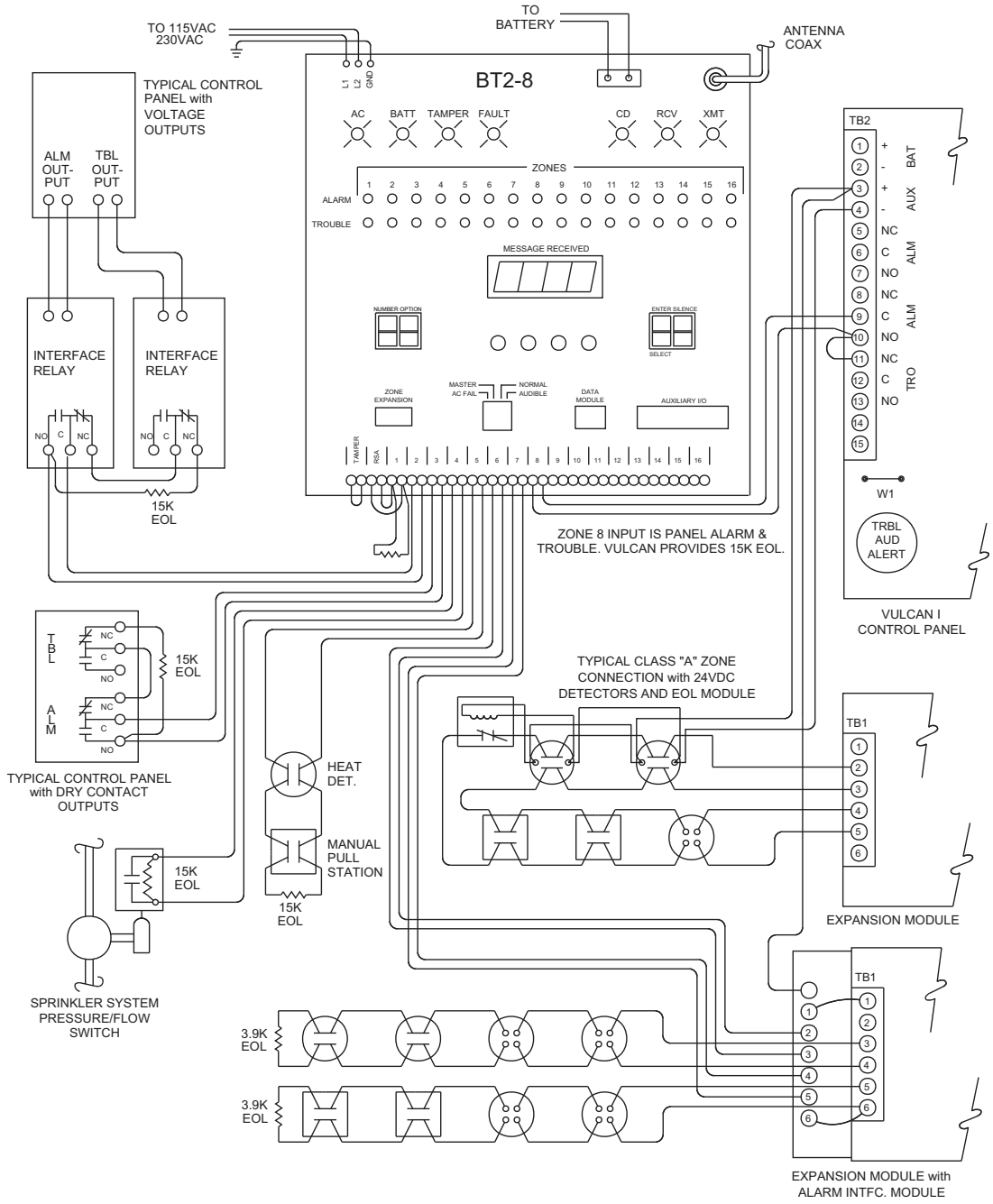
Associated Parts

Part Number	Description
227-259-00	BT2-8 16 zone Expander Assembly, no radio, 20 in. x 12 in. x 4 in. red NEMA 1 enclosure for use with P/N 227-245-xx BT2-8 Building Transceiver
227-255-xx	BT2-8 Building Transceiver electronics package, narrowband radio, 16 zones; specify frequency (-xx) when ordering
400-713-00	Battery, SLA, rechargeable 12v/12 Ah quick connect, 5.94 in. x 3.86 in. x 5.86 in., 7.92 lb
513-410-00	Tamper Switch Kit for use on any BT2-8 Building Transceiver for improved security
517-016-00	Tilt Switch

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

BT2-8 Interconnection Diagram

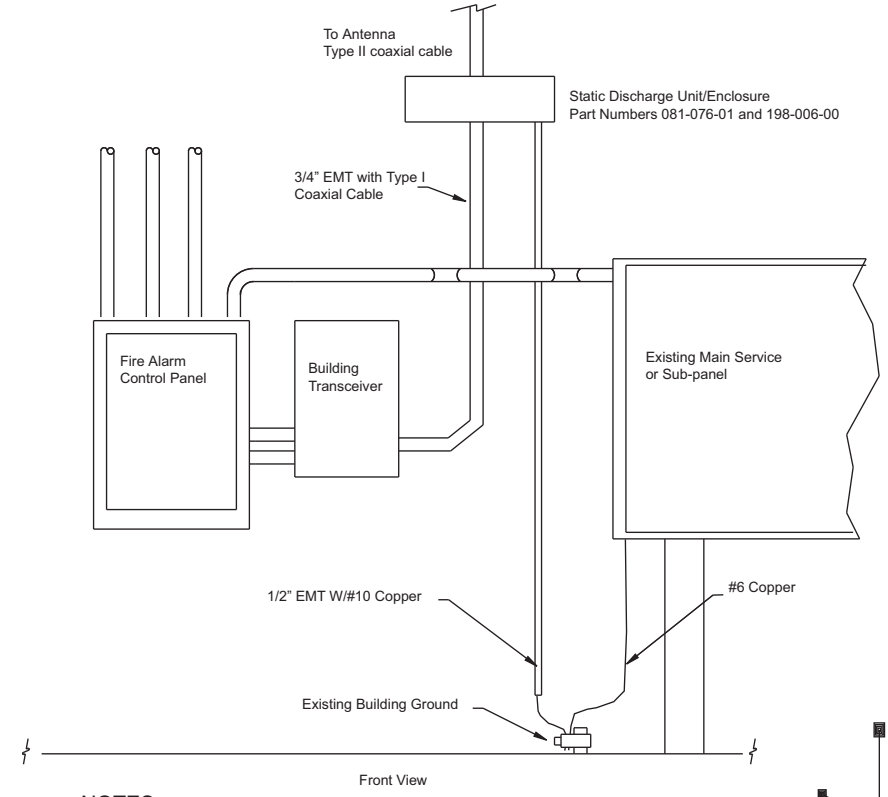


The NEMA 1 enclosure provides two knockouts on each side. For complete installation information, refer to the I-O-M Manual (P/N 001-203-00) and applicable codes and standards.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

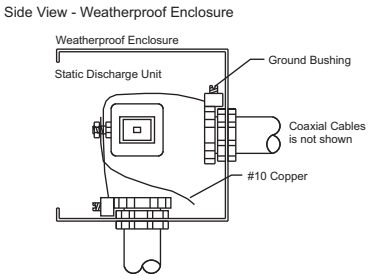
Detect
Manage
Record

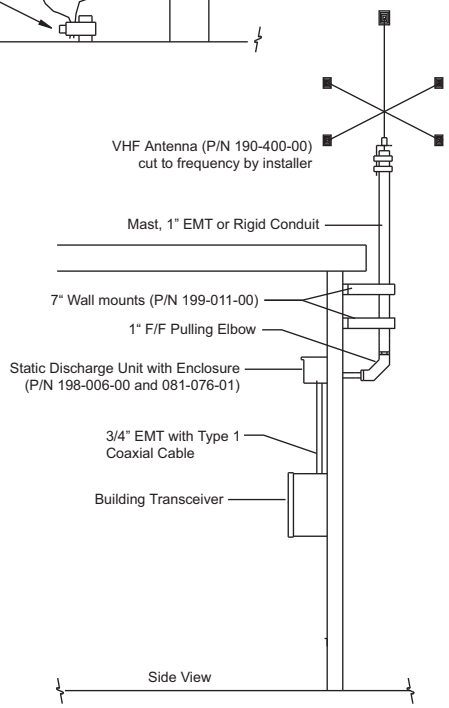
BT2-8 Typical Installation Drawings



NOTES

1. Avoid sharp bends in both the coax cable and ground conductor.
2. For complete installation details, reference the installation manuals and applicable codes and standards.
3. Always do a complete "System" test per NFPA Standards after a new installation or any modifications.





Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Building Transceivers Catalog Section 03

BT-X Accessories

BT-X Planner 207-607-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

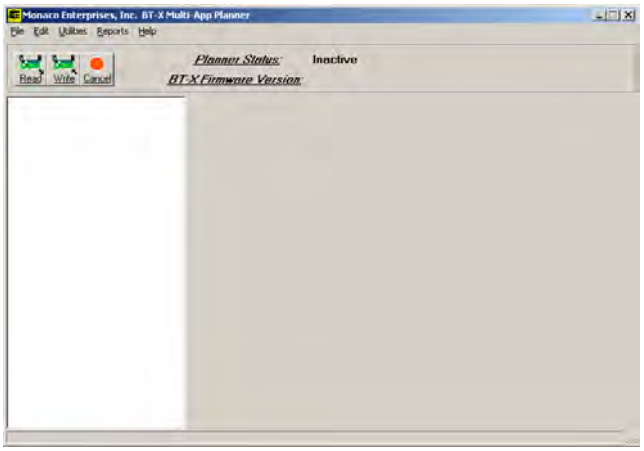
Detect Manage Record

Building Transceivers

BT-X Planner
207-607-00

Description

The Monaco BT-X Multi Application Planner is a Windows® based program that allows a Monaco BT-X Transceiver, with revision B.90 firmware (P/N 326-034-00) or higher, to be programmed using a compatible laptop or PC. The BT-X Application Planner is used to transfer programmed information into the BT-X Transceiver. The Planner also allows the existing configuration in the BT-X to be downloaded to a computer or laptop for modification, printout, or storage.



The BT-X Multi Application Planner Kit (P/N 207-607-00) consists of a thumb drive containing the BT-X Planner program and a programming cable assembly used to connect a BT-X Transceiver to the serial port of the computer running the BT-X Multi Application Planner.

Features

- Ease of programming BT-X
- Intuitive graphical user interface (GUI)
- Fast and consistent programming of large numbers of BT-X units
- Backup of BT-X configuration databases
- Allows easy testing of new configurations with quick fall back to last good configuration

NOTE Newer laptops typically do not have a serial port, so a USB to serial adaptor must be used to program the Monaco panels. The Monaco USB to serial adaptor (P/N 649-118-00) has provided the most reliable communication between various laptops and Monaco panels. Other USB to serial adaptors may not produce a satisfactory customer experience.

Ordering Information

Part Number	Description
207-607-00	BT-X Planner Support Kit, contains BT-X Planner software and programming cable

Associated Parts

Part Number	Description
649-118-00	USB to 9-pin Serial Adaptor
227-574-00	MAAP Serial Interface Kit, includes programming cable and adaptor

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

RFMs and Repeaters Catalog Section
04

Section 4. RFMs and Repeaters

RFMs (Radio Frequency Modem)

RFM-X Radio Frequency Modem (RFM-X), NEMA 4X Enclosure 227-325-xx
RFM-X Ethernet Network Assembly, 4X 227-325-N1
RFM-XHR Radio Frequency Modem 227-317-xx
RFM-X Ethernet Network Assembly, Rack-mount. 227-317-N1
RFM-XH Hardwire Modem. 227-323-00
D-21 RFM King-Fisher Interface 227-333-NR
RFM-XHR-HP High Power Radio Frequency Modem. 227-334-xx
RFM 7000H Harlow Modem. 227-312-00

Repeaters

RFM-XR Repeaters 227-329-xx, 227-358-xx, 227-359-xx

RFM Accessories

RFM Rack-mount Kits. 085-800-01, 085-800-02, 085-800-03, 085-800-04, 227-327-00
Device Server. 204-004-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

RFMs (Radio Frequency Modem)

RFM-X Radio Frequency Modem (RFM-X), NEMA 4X Enclosure 227-325-xx
RFM-X Ethernet Network Assembly, 4X 227-325-N1
RFM-XHR Radio Frequency Modem 227-317-xx
RFM-X Ethernet Network Assembly, Rack-mount. 227-317-N1
RFM-XH Hardwire Modem. 227-323-00
D-21 RFM King-Fisher Interface 227-333-NR
RFM-XHR-HP High Power Radio Frequency Modem. 227-334-xx
RFM 7000H Harlow Modem. 227-312-00

Click to go back to "Table of Contents - Index by Product Name"

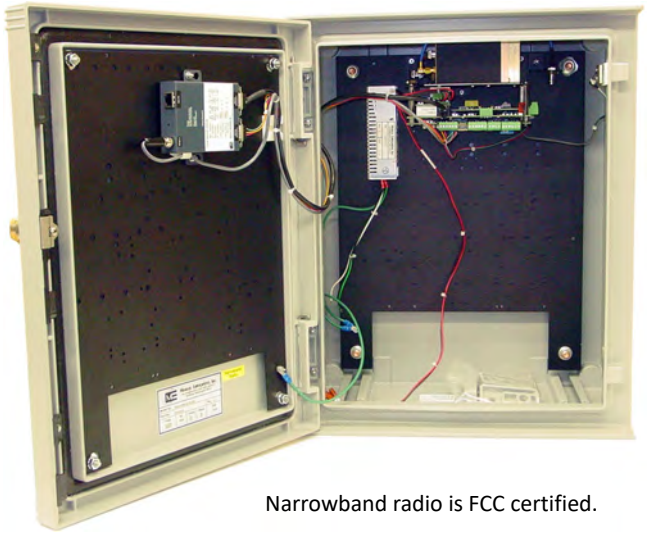
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

RFMs and Repeaters

RFM-X Radio Frequency Modem (RFM-X), NEMA 4X Enclosure 227-325-xx

Description

The RFM-X is a microprocessor-controlled radio frequency modem used to transmit messages between a D-21 and building transceiver (BT) units using FSK- encoded radio frequency (RF) signals. The RFM-XHR receives and decodes radio messages from building transceivers and passes the communication through an Ethernet connection to the D-21.



Narrowband radio is FCC certified.

The RFM-X is mounted in a NEMA 4X enclosure, and is installed with an audio board that supports hard-wired communication and mass notification applications. When used together, the RFM-X and the D-21 Mass Notification Client provide configuration, activation, and deactivation of prerecorded and live voice messages as well as real-time message status through in-building MNS panels or through wide-area speaker stations. The D-21 allows for multiple simultaneous message activations and multiple live voice input sources.

Features

- Supports point reporting Monaco Analog Addressable Plus (MAAP(+)) addressable fire alarm control panel.
- Provides 48 hours of battery backup; monitors battery; recharges battery in 24 hours
- Reports AC power failure, battery fault, or enclosure tamper with the RFM number
- LEDs indicate power status, active/standby mode, microprocessor fault, carrier detection, transmit, and receive
- Provides 4 watts nominal RF output
- Radio frequency modem that supports radio and hard-wire communication with remote units
- Automatic hourly self-testing of the radio, modulator, and demodulator
- Door key common to BT2/RFM-XR/RFM-XR2

Specifications

Power Supply

Input	100 to 240 VAC, 50/60 Hz, 1.75A, 40 W (per RFM-X)
Outputs	13.8 VDC, factory set (further reduced to 5 VDC by the electronic assembly
Battery Backup	12V/18 Ah (48-hour nominal backup capacity)
Standby Current	330 mA normal, 1.5A transmit (per RFM-X)
Fuses	6.3A, 250V Type T fuse (per RFM-X)

Environmental

Temperature	–22°F to 140°F (–30°C to 60°C)
Relative Humidity	0% to 90% non-condensing

Enclosure

Type	Wall-mount
Material	Fiberglass
Color	Grey
Dimensions	20.2 in. H x 16.26 in. W x 9 in. D

Ordering Information

Part Number	Description
227-325-xx*	RFM-X in NEMA 4X enclosure *Specify frequency when ordering

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

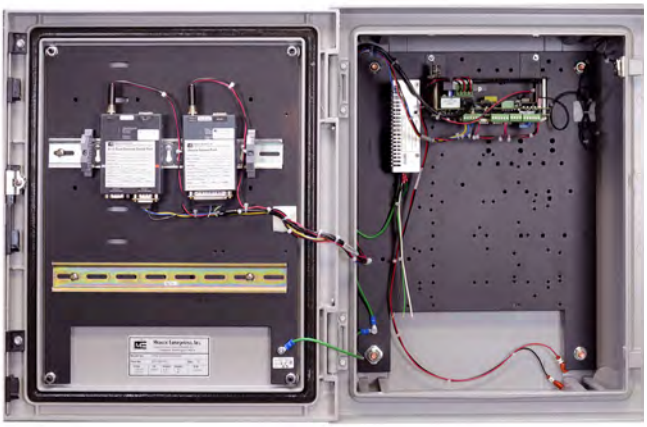
RFMs and Repeaters

RFM-X Ethernet Network Assembly, 4X

227-325-N1

Description

The RFM-X Ethernet modem is a microprocessor controlled modem used to transmit messages between a D-21 and remote building transceiver (BT) units and M Panels using Proprietary FSK Encoded Protocol over an Ethernet port via a virtually private network (VPN). The RFM-X receives and decodes messages from the BTs and M Panels and passes the communication on to the D-21 via a second Ethernet port to the D-21 VPN.



The RFM-X Ethernet modem is mounted in a NEMA 4X enclosure with battery backup and two Ethernet ports to support Ethernet communication to remote units and the D-21. The RFM-X Ethernet modem supports Zone and Point Fire Reporting and Pre-Recorded in-building MNS to the MAAP-X, BT-X MNS and BT-X WAC wide-area speaker stations but does not support Live Voice MNS at this time. The D-21 requires the Mass Notification Client option to support activation and deactivation of pre-recorded messages.

A D-21 system can support a single RFM-X Ethernet Modem for Primary communication only or two RFM-X Ethernet Modems for Primary and Secondary communication for communication to remote units (redundant mode operation). Single mode fiber maximum distance is 10 km. Network switches are required for communication to more than one remote unit.

Features

- Supports point reporting for the MAAP(+) fire alarm control panel
- Supports point reporting and pre-recorded MNS for the MAAP-X Panel
- Provides 48 hours of battery backup; monitors battery; recharges battery in 24 hours
  - Reports AC power failure, battery fault, or enclosure tamper with the RFM number
- LEDs indicate power status, active/standby mode, and heartbeat/microprocessor fault
- Automatic hourly self-testing
- Ethernet single mode fiber maximum distance 10 km (customer provided)
- Door key common to BT2/M panels/RFM-XR/ RFM-XR2

Specifications

Power Supply	
Input (per RFM-X)	100 to 240 VAC, 50/60 Hz, 1.75A, 40W
Outputs	13.8 VDC, factory set (further reduced to 5 VDC by the electronic assembly)
Battery Backup	12V/18 Ah (48 hour nominal backup capacity)
Standby Current (per RFM-X)	330 mA normal, 1.5A transmit
Fuses (per RFM-X)	6.3A, 250V Type T fuse
Ethernet	
Fiber Run	Single mode fiber (customer provided), Maximum fiber distance: 10 km
Environmental	
Operating Temperature	–22°F to 140°F (–30°C to 60°C)
Relative Humidity	0% to 90% non-condensing
Enclosure	
Type	Wall-mount
Material	Fiberglass
Color	Grey
Dimensions	20.2 in. H x 16.26 in. W x 9 in. D (51.31 cm x 41.3 cm x 22.86 cm)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Ordering Information

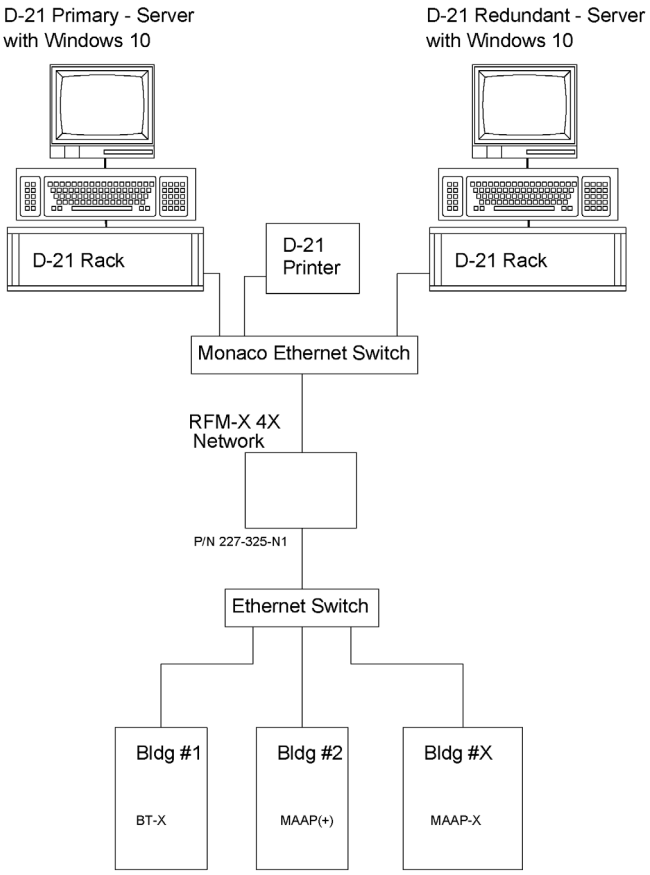
Part Number	Description
227-325-N1	RFM-X Ethernet Network Modem in a Grey NEMA 4X Enclosure with one 12 VDC/18 Ah battery

Associated Parts

Part Number	Description
200-471-11	Assembly for Ethernet Switch, 24-port (20 SFP ports + four combo 10/100/1000BASE-T or SFP ports), managed layer 3, 1U, rack-mount, 100 to 240 VAC, 50/60 Hz, includes enhanced software (EI) license

Diagram

RFM-X Ethernet Network Assembly - 4X



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

RFMs and Repeaters

RFM-XHR Radio Frequency Modem

227-317-xx

Description

The RFM-XHR is a microprocessor-controlled radio-frequency modem that transmits messages between a D-21 Central Receiving System and building transceivers (BTs) using FSK-encoded signals.

FM APPROVED

CE

The RFM-XHR receives and decodes radio messages from BTs and passes the communication over a cable to the D-21. Optionally, if the RFM-XHR is better placed in a remote location, a serial network device server can be used to allow communication between the D-21 and the RFM-XHR over a standard Ethernet computer network.

The RFM-XHR is installed with an audio board that supports radio hard-wired communication with mass notification. When used together, the RFM-XHR and the D-21 Mass Notification Client provide configuration, activation, and deactivation of prerecorded and live voice messages as well as real-time message status through in-building MNS panels or through wide-area speaker stations. The D-21 allows for multiple simultaneous message activations and multiple live voice input sources.

Features

- Radio frequency modem that supports radio and hard-wire communication with remote units
- Automatic hourly self-testing of the radio, modulator, and demodulator
- Automatic self-testing of the CPU, RAM, and LEDs on power-up and every hour thereafter
- FCC certified radio transceiver
- Supports point reporting from the Monaco Analog Addressable Plus (MAAP(+)) addressable fire alarm control panel.

Specifications

Input	120 VAC, 50/60 Hz, 1.75A, 40 W (per RFM-XHR)
Outputs	13.8 VDC, factory set (further reduced to 5 VDC by the electronic assembly)
Fuses	6.3A, 250V Type T fuse (per RFM-XHR)
Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 90%, non-condensing
Dimensions	3 in. H x 12 in. W x 11 in. D

Ordering Information

RFM-XHR

Part Number	Description
227-317-xx*	• RFM-XHR Radio Frequency Modem with hard-wire option • Black enclosure
227-317-CE*	• RFM-XHR Radio Frequency Modem with hard-wire option • Black enclosure • Customer option for Europe
***NOTE** Specify frequency (-xx) when ordering.	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

RFMs and Repeaters

Associated Parts

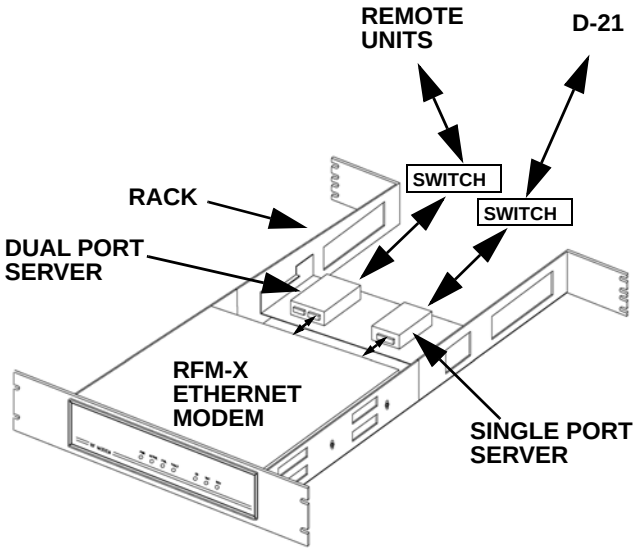
Part Number	Description
085-800-01	Single 2U, RFM rack-mount for 19 in. rack-mount cabinet, black face
085-800-04	Single RFM rack-mount for 19 in. rack-mount cabinet with adjustable rails (22–28 in. extension) shelf, black face
204-004-00	RS-232 to 100BASE-T single port network device server
227-327-00	Single 2U, RFM rack-mount for 19 in. rack-mount cabinet with on/off switch for push-to-talk MNS MIC with holder, provides mounting space for serial to network device server
625-123-01	RFM-X RS-232/power 100BASE-T single port network device server cable with one DB9 pin male, one DB9 pin female, and one DB25 pin connector

RFMs and Repeaters

RFM-X Ethernet Network Assembly, Rack-mount
227-317-N1

Description

The RFM-X Ethernet Network Assembly, Rack-mount is comprised of a microprocessor controlled RFM-X Ethernet modem and Ethernet/Fiber servers and switches. The RFM-X modem uses proprietary FSK Encoded Protocol over an Ethernet port through a virtually private network (VPN). The modem receives and decodes messages as they are transmitted through the servers and switches to and from the D-21 and remote building transceiver (BT) units and M-Series Fire Alarm Control Panels (FACPs).



The RFM-X Ethernet Network Assembly mounts on a 2U rack with Ethernet and Fiber transmissions via modem, dual encrypted device server, and single port device server for communication between the remote units and the D-21. The RFM-X Ethernet modem supports Zone and Point Fire Reporting and prerecorded in-building MNS to the MAAP-X, BT-X MNS, and BT-X WAC wide-area speaker stations. (**NOTE** Does not support live voice MNS at this time.) The D-21 requires the Mass Notification Client option to support activation and deactivation of prerecorded messages.

A D-21 system can support a single RFM-X Ethernet Modem for primary communication only or two RFM-X Ethernet Modems for primary and secondary communication to remote units (redundant mode operation). Network switches are required for communication to more than one remote unit.

Features

- Supports point reporting MAAP(+) addressable FACP
- Supports point reporting and prerecorded MNS for the MAAP-X Addressable MNS Panel
- RFM-X Ethernet modem LEDs indicate power status, active/standby mode and microprocessor fault
- Automatic hourly self-testing

Specifications

Power Supply	
AC Power	100 to 240 VAC, 50/60 Hz, 1.75A, 40 W (per RFM-X)
Power Supply Outputs	13.8 VDC, factory set (further reduced to 5 VDC by the electronic assembly)
Standby Current	330 mA normal, 1.5A transmit (per RFM-X)
Fuses	Slow blow, 1A/250V Slow blow, 2A/250V
Temperature	–22°F to 140°F (–30°F to 60°C)
Relative Humidity	0% to 90% non-condensing
Type	Rack-mount, adjustable
Material	Fiberglass
Color	Grey
Dimensions	3.5 in. H x 19 in. W x 22 to 28 in. D (7.62 cm x 48.26 cm x 55.88 to 71.12 cm)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

RFMs and Repeaters

Ordering Information

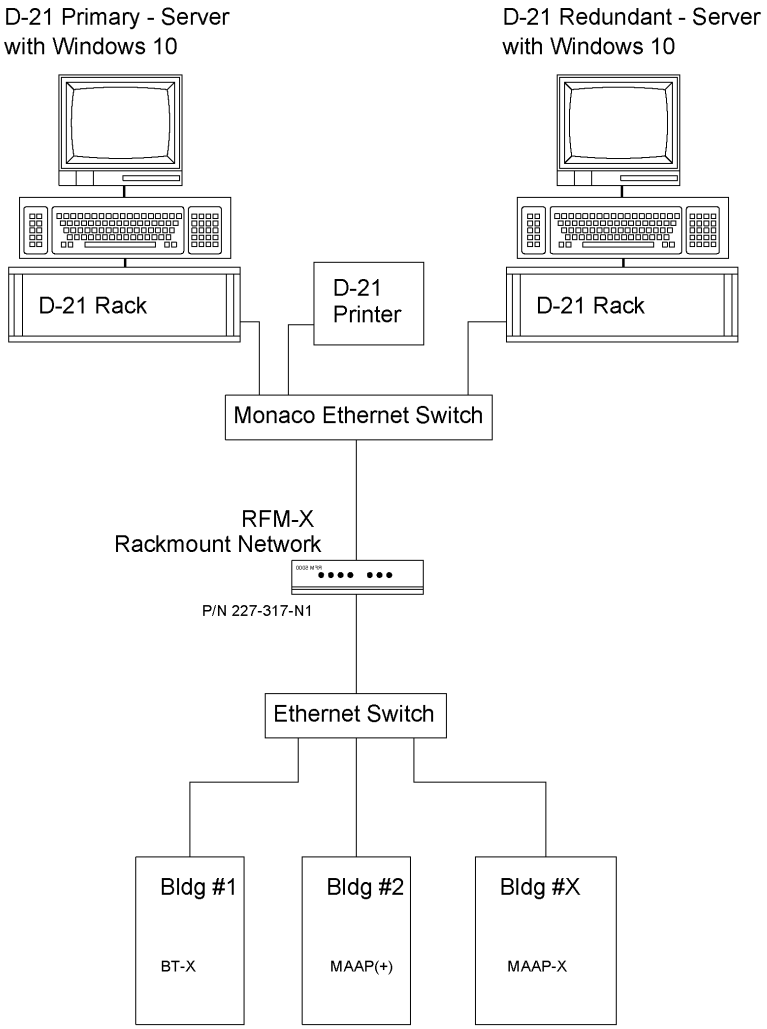
Part Number	Description
227-317-N1	RFM-X Ethernet Network Assembly, 2U Rack-mount, RFM-X Ethernet Modem, 100BASE-T single port device server, dual port encrypted device server

Associated Parts

Part Number	Description
200-491-01	Assembly for Ethernet Switch, 24 RJ-45 PoE+ ports at 10/100/1000 Mbps; 8 SFP+ Ports at 1/10 GbE. Managed Layer 2. Console management: Mini-USB serial port (Mini-B plug). File transfer: USB port (Standard-A plug). Rack-mount, 100 to 240 VAC @ 50 to 60Hz
200-444-06	Fiber Transceiver Module, 1310 nm, Single Mode, SFP, LC, 1 GB, 10 km distance, hot plug, plugs into SFP+ port
200-444-07	Fiber Transceiver Module, 1490 nm, Single Mode, SFP, LC, 1 GB, 80 km distance, hot plug, plugs into SFP+ port

Diagram

RFM-X Ethernet Network Assembly, Rack-mount



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

RFMs and Repeaters

RFM-XH Hardwire Modem

227-323-00

Description

The RFM-XH is a microprocessor-controlled modem that transmits messages over a hardwire connection between a D-21 Central Receiving System and remote units. The modem uses FSK-encoded signals.

The RFM-XH receives and decodes status messages from remote units and passes the communication over a cable to the D-21. A serial network device server is used to allow communication between the D-21 and the RFM-XH over a standard Ethernet computer network.

The RFM-XH supports hardwire communication with capable unit transceivers. When used together over network IP, the RFM-XH and the D-21 Mass Notification Client provide configuration, activation, deactivation of prerecorded messages, and fire reporting.

Full MNS live voice capability requires additional dedicated hardwire copper wire setup.

Features

- Modem that supports hardwire communication with remote units
- Self-testing of the CPU, RAM, and LEDs on power-up and every hour after
- Supports point-reporting from the MAAP(+) Addressable Fire Alarm Control Panel, and MAAP-X

Specifications

Input	120 VAC, 50/60 Hz, 1.75A, 40W
Outputs	13.8 VDC, factory set (further reduced to 5 VDC by the electronic assembly)
Fuses	6.3A, 250V Type T fuse
Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 90% non-condensing
Dimensions	3 in. H x 12 in. W x 11 in. D

Ordering Information

RFM-XH Hardwire Modem

Part Number	Description
227-323-00	RFM-XH Hardwire Modem, black

Associated Parts

Part Number	Description
085-800-01	Single 2U, RFM rack-mount for 19 in. rack-mount cabinet, black finish
085-800-04	Single RFM rack-mount for 19 in. cabinet with adjustable rails (22 in. to 28 in. extension) shelf, black finish
625-123-01	RFM-X RS-232/power 100BASE-T single port network device server cable with one DB9 pin male, one DB9 pin female, and one DB25 pin connector
NOTE Additional cables or modules may be required, depending on the desired communication setup and function. Contact Monaco for details.	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

RFMs and Repeaters

D-21 RFM King-Fisher Interface

227-333-NR

Description

The Monaco King-Fisher Monitoring RFM is designed to monitor and decode the recovered audio from one or two operating King-Fisher Receiving Consoles for redundant operation. This allows an existing King-Fisher system to operate independently, side-by-side, with a Monaco D-21.

The Monaco King-Fisher Monitoring RFM decodes King-Fisher transmitter messages and provides the messages to the Monaco D-21 for display and historical recording. The RFM processes signals from the following King-Fisher transmitters: KF-1, KF-2, KF-3, KF-4, and the KF 20/52.

The D-21 database maintains its own listing of King-Fisher transmitters and their reporting zones. This descriptive information must be entered into the D-21 and verified to match the codes received by the operating King-Fisher consoles.

The King-Fisher Monitoring RFM requires a functional King-Fisher console to operate correctly since it has no radio receiver of its own. Up to two King-Fisher consoles may be alternately monitored by selecting the active console using a toggle switch on the front of the unit. The wiring to the King-Fisher consoles is supervised continuously for connection by the King-Fisher Monitoring RFM.

Features

- Connects the D-21 to an existing King-Fisher radio network
- Receives and processes King-Fisher Consoles
- Processes signals from KF-1, KF-2, KF-3, KF-4 and the KF 20/52
- Built-in self test

Ordering Information

Part Number	Description
227-333-NR	RFM King-Fisher Assembly, no radio, for dual KF consoles, with device server, D-21 Only

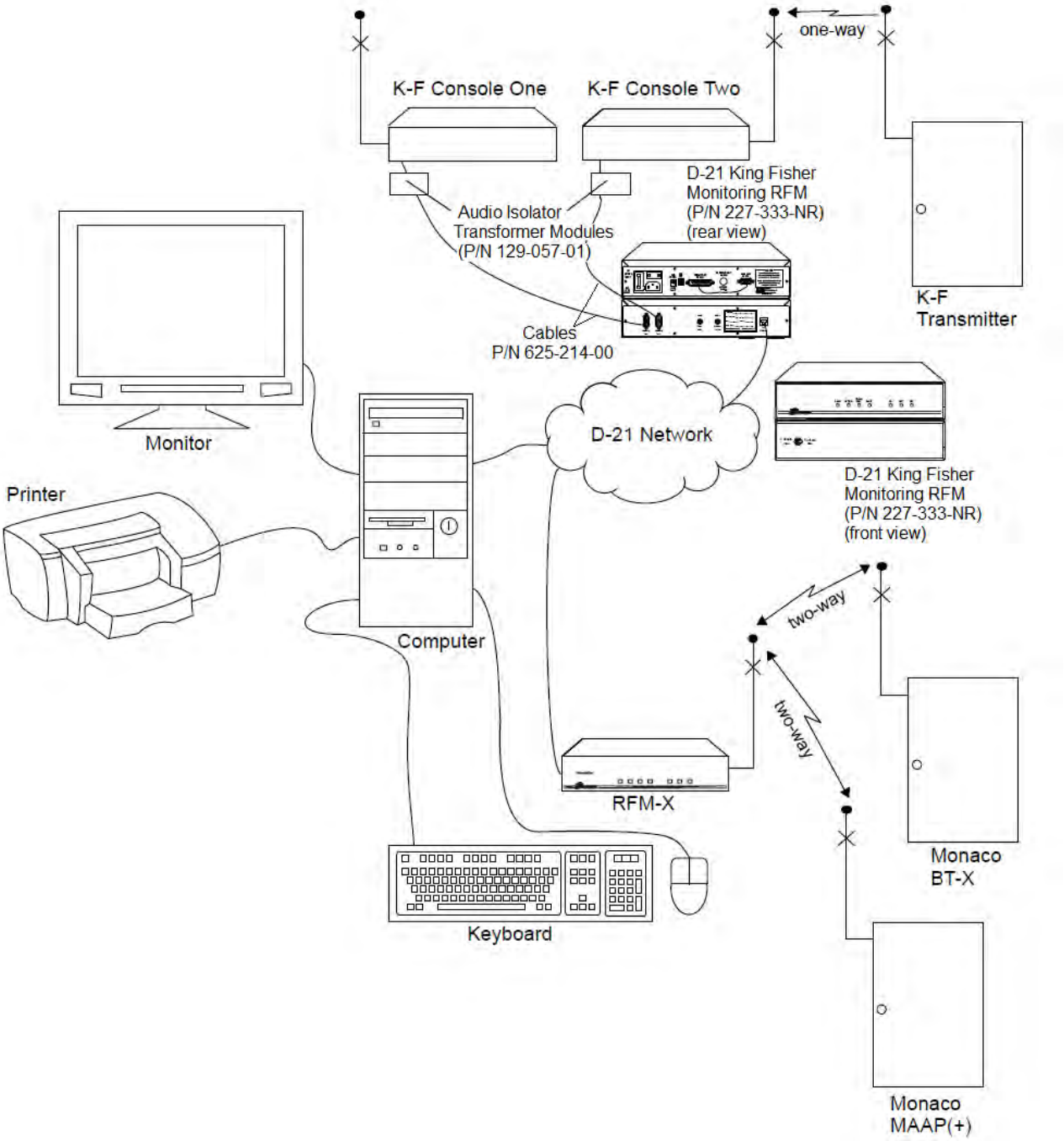
Associated Parts

Part Number	Description
625-214-00	King-Fisher Interface 22 AWG Stranded Cable and Bracket, for use with P/N 227-333-NR; one required for each KF Console
129-057-01	Audio Isolator Transformer Module, for use with P/N 227-333-NR; one required for each KF Console

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Drawing: Typical D-21 System with a D-21 King-Fisher Monitoring RFM



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

RFMs and Repeaters

RFM-XHR-HP High Power Radio Frequency Modem

227-334-xx

Description

The RFM-XHR-HP is a microprocessor-controlled radio-frequency modem that transmits messages between a D-21 Central Receiving System, building transceivers (BTs), and MAAP Fire and MNS Panels using FSK-encoded signals.

The RFM-XHR-HP receives and decodes radio messages from BTs and MAAP Fire and MNS Panels and passes the communication over Ethernet to the D-21. Optionally, the RFM-XHR-HP can be placed in a remote location to allow better communication between the D-21 and the RFM-XHR-HP over a standard Ethernet computer network.

The RFM-XHR-HP is installed with an audio board that supports radio hard-wired communication with mass notification. When used together, the RFM-XHR-HP and the D-21 Mass Notification Client provide configuration, activation, and deactivation of prerecorded and live voice messages as well as real-time message status through in-building MNS panels or through wide-area speaker stations. The D-21 allows for multiple simultaneous message activations and multiple live voice input sources.

Features

- Radio frequency modem that supports radio and hard-wire communication with remote units
- Automatic hourly self-testing of the radio, modulator, and demodulator
- Automatic self-testing of the CPU, RAM, and LEDs on power-up and every hour thereafter
- FCC certified radio transceiver
- Supports point reporting from the Monaco Analog Addressable Plus (MAAP(+)) or MAAP-X addressable fire alarm control panels
- FIPS-140-2 compliant encryption (AES-256)
- Eight single channel zone inputs, 22 kohm EOL resistor

Specifications

Input	100/120/240 VAC, 50/60 Hz (per RFM-XHR-HP)
Power Supply AC Input	80 to 264 VAC at 50/60 Hz 2.3A at 100 VAC 2A at 115 VAC 1A at 240 VAC
Nominal RF Output	10 W
Ethernet Interface	10/100 Mbps
Network Connection	RJ-45 port
Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 90%, non-condensing
Type	Rack-mount, 2U
Enclosure Dimensions	3.5 in. H x 19 in. W x 10 in. D (8.9 cm x 48.3 cm x 25.4 cm)

Ordering Information

RFM-XHR-HP

Part Number	Description
227-317-xx*	• RFM-XHR-HP Radio Frequency Modem with hard- wire option, high power • 10W encrypted radio • RJ-45 Ethernet port at 10/100 Mbps for comm to D-21 • Enclosure: Rack-mount, 2U, Black *Specify frequency when ordering.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

RFM 7000H Harlow Modem
227-312-00

Description

The Harlow RFM 7000H is a radio frequency modem (RFM) that receives transmissions from Harlow (GH) fire alarm transmitters via an existing Harlow radio receiver. Communication with the D-21 Central Receiving System requires the Harlow (GH) remote interface driver (RID), and an RFM 7000H modem that receives communication from fire alarm transmitters.

The RFM 7000H receives signals from the fire alarm transmitters that send a test message to the D-21 once every 24 hours.

D-21 pop-up alert windows display alarms and troubles from GH fire alarm transmitters. The alerts describe the nature and location of the condition based on the information in the D-21 database.

Messages

The D-21 displays one alarm alert, which remains displayed, until acknowledged by an operator who is logged into the D-21 Incident Client.

The D-21 will display a number in parentheses that indicates the number of troubles since the last daily check-in received by the D-21. This number is reset every 24 hours at the unit's check-in time.

Battery faults are sent only when the fire alarm transmitter is sending another message (alarm, trouble, or daily check-in); the fault message is appended to the primary message.

Ports

- **COMM PORT** A 25-pin RS-232C port that connects to the D-21 computer with the computer-to-RFM cable. A device server can also be used to convert the RS-232C port to an IP address.
- **Audio In** Connects to the existing Harlow radio receiver recovered audio output.
- **Head Phones** A plug-in jack for listening to Harlow transmissions.
- **AUX POWER** and **AUX OUT** are not used.

LED Indicators

CD	XMT	ACTIVE	FAULT
RCV	PWR	COMM FAIL	

Specifications

Power	98 to 120 VAC, 50/60 Hz, ≈100 W
Fuses	SB 1A/250V
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	Maximum: 90% at 100°F (38°C)

Ordering Information

Part Number	Description
227-312-00	7000H RFM Kit, includes Central System programming kit, backup disk kit, and computer-to-RFM cable (P/N 625-391-00)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

RFMs and Repeaters
04

Repeaters

RFM-XR Repeaters 227-329-xx, 227-358-xx, 227-359-xx

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

RFMs and Repeaters

RFM-XR Repeaters

227-329-xx, 227-358-xx, 227-359-xx

Description

The RFM-XR and RFM-XR2 (referred to collectively as repeaters) are microprocessor-controlled radio-frequency repeaters used to relay messages to and from D-21 and D-700 Central Receiving Systems.

RFM-XR2 Shown

Narrowband radio is FCC certified.

Repeaters communicate with D-21 and D-700 central systems using FSK-encoded RF signals. The RFM-XR2 is a repeater programmed in a master and slave configuration; the slave takes over if the master fails. Each RFM-XR requires a single antenna. An RFM-XR2 pair requires two antennas, one for each unit.

Repeaters provide a link between a primary D-21 and D-700 Central Receiving Systems and secondary D-700 centrals, distant BT2 or BT-X fire transceivers, MAAP-2 addressable, MAAP(+) non-point reporting, and conventional M-2 Fire Alarm Control Panels.

Features

- Continuously monitors and relays D-21 and D-700 system messages, using a time-sharing protocol to determine transmission periods
- Reports AC power failure, battery fault, or enclosure tamper with the RFM number
- Relays messages to and from D-21 and D-700 Central Receiving Systems, other RFM-XR repeaters, and transceivers, at programmed intervals until they are acknowledged
- Configurable via an external computer (not provided) running the RFM-XR Planner software (provided with each RFM-XR)
- Stores the RFM number and current system setup in nonvolatile RAM (NOVRAM)
- Provides 48 hours of battery backup; monitors battery; recharges battery in 24 hours
- LEDs indicate power status, active/standby mode, microprocessor fault, carrier detection, transmit, and receive
- Provides 4 watts nominal RF output
- Operates on 115 VAC input or 230 VAC 50/60 Hz
- Includes built-in diagnostic capabilities
- Door key common to BT2/RFM-XR/RFM-XR2

Specifications

Power Supply

Input	100 to 240 VAC, 50/60 Hz, 1.75A, 40 W (per RFM-XR)
Outputs	+13.8 VDC, factory set (further reduced to 5 VDC by the electronic assembly)
Battery Backup	12V/18 Ah (48-hour nominal backup capacity)
Standby Current	330 mA normal, 1.5A transmit (per RFM-XR)
Fuses	6.3A, 250V Type T fuse (per RFM-XR)

Environmental

Temperature	–22°F to 140°F (–30°C to 60°C)
Relative Humidity	0% to 90% non-condensing

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

RFMs and Repeaters

Ordering Information

Part Number	Description
227-329-xx*	• RFM-XR single repeater • NEMA 4X enclosure, 20 in. H x 16 in. W x 9 in. D • One 12V/18Ah backup battery included *Specify frequency when ordering.
227-329-CE*	• RFM-XR single repeater • NEMA 4X enclosure, 20 in. H x 16 in. W x 9 in. D • One 12V/18Ah backup battery included • Customer option for Europe *Specify frequency when ordering.
227-358-xx*	• RFM-XR^2 redundant repeater (master/slave) • NEMA 4X enclosure, 20 in. H x 16 in. W x 9 in. D • One 12V/18 Ah backup battery *Specify frequency when ordering **NOTE** The RFM-XR^2 requires separate independent antenna networks, one for each repeater.
227-358-CE*	• RFM-XR^2 redundant repeater (master/slave) • NEMA 4X enclosure, 20 in. H x 16 in. W x 9 in. D • One 12V/18 Ah backup battery • Customer option for Europe *Specify frequency when ordering **NOTE** The RFM-XR^2 requires separate independent antenna networks, one for each repeater.
227-359-xx*	• RFM-XR electronics package • Field replacement assembly for 227-329-xx OR 227-358-xx • Does not include a power supply or cables *Specify frequency when ordering **NOTE** Specify function (single, master, slave) when ordering. **NOTE** Electronics package must be factory configured.
227-359-CE*	• RFM-XR electronics package • Field replacement assembly for 227-329-xx OR 227-358-xx • Does not include a power supply or cables • Customer option for Europe *Specify frequency when ordering **NOTE** Specify function (single, master, slave) when ordering. **NOTE** Electronics package must be factory configured.

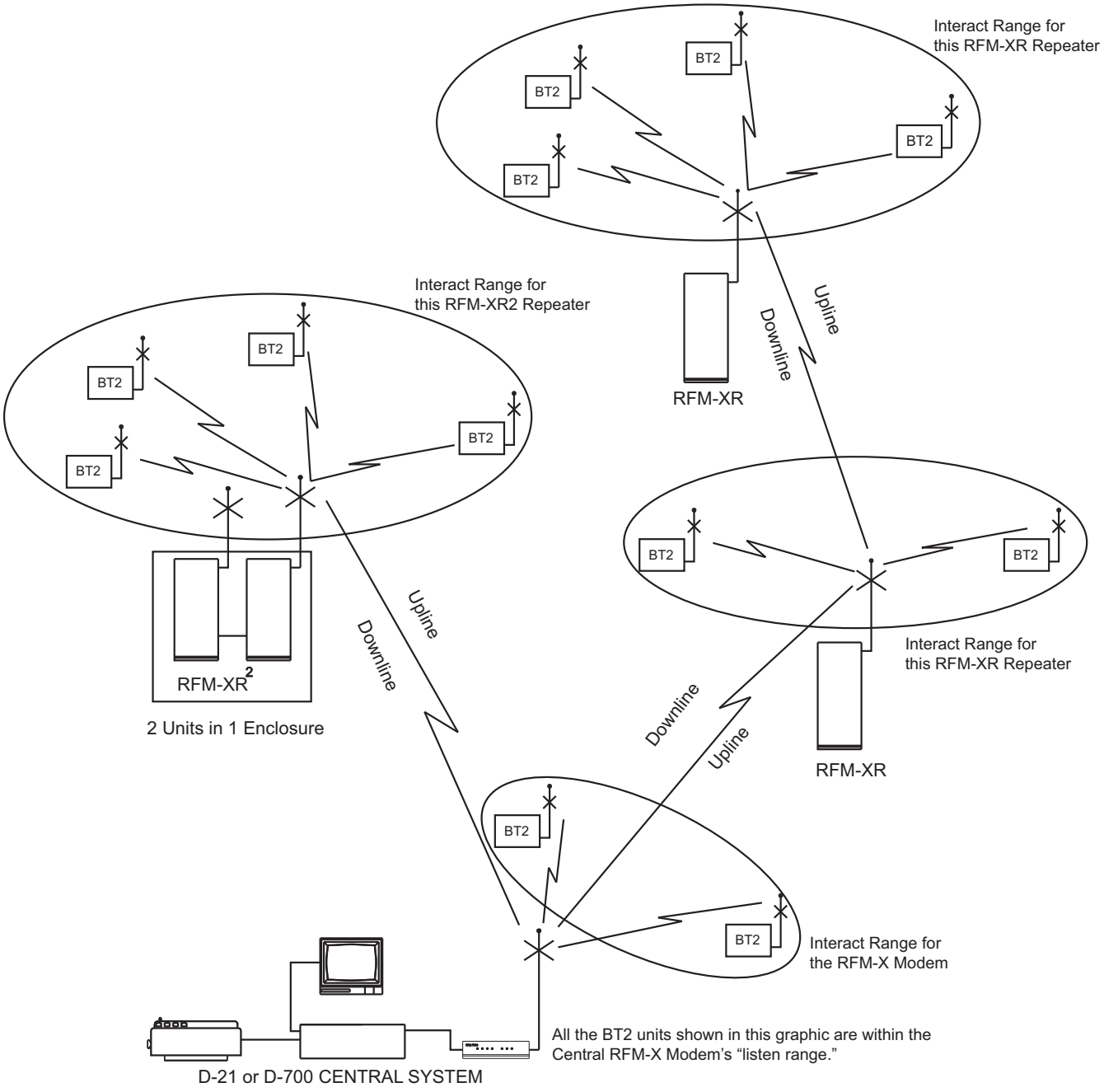
Associated Parts

Part Number	Description
204-016-01	Dual-port RFM-XR repeater device server, 100BASE-T, 256 AES encryption
207-045-00	RFM-XR Program Planner Kit, comes with RFM-XR, RFM-XR^2 Repeater **NOTE** Purchase this kit as a spare or is additional programming kit for RFM-XR, RFM-XR^2 Repeaters.
400-712-00	Battery, SLA, rechargeable, 12V/18 Ah, quick connect, 7.13 in. L x 3.03 in. W x 6.59 in. H, 12.60 lb
404-090-00	Power Supply for BT-X, 15 VDC, 2.8 A

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

RFM-XR and RFM-XR^2 Application



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

RFM Accessories

RFM Rack-mount Kits. 085-800-01, 085-800-02, 085-800-03, 085-800-04, 227-327-00
Device Server. 204-004-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

RFMs and Repeaters

RFM Rack-mount Kits

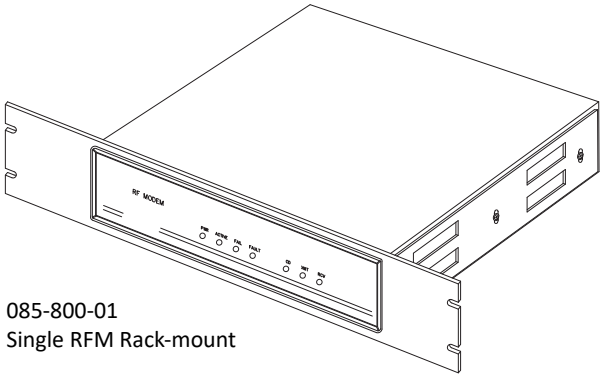
085-800-01, 085-800-02, 085-800-04, 227-327-00

Description

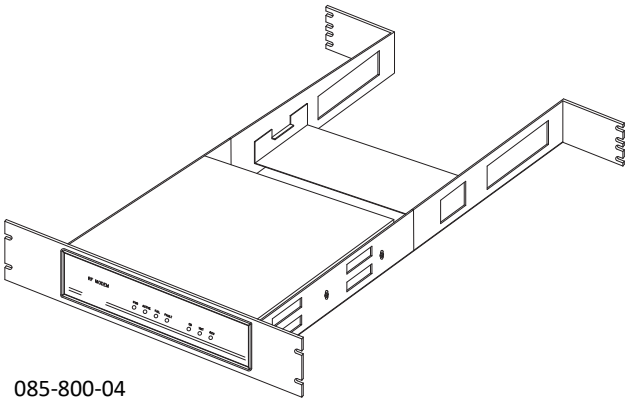
Rack-mounts come in five configurations:

- **Single:** 3.5 in. H x 19 in. W x 11 in. D (7.62 cm x 48.26 cm x 27.94 cm)
- **Double:** 6.97 in. H x 19 in. W x 11 in. D (17.7 cm x 48.26 cm x 27.94 cm)
- **Single:** 3.5 in. H x 19 in. W x 11 in. D (7.62 cm x 48.26 cm x 27.94 cm) with shelf 12 in. W x 5.5 in. D that sits on rails which extend 22 to 28 in.
- **Single:** 3.46 in. H x 19 in. W x 20 in. D (8.79 cm x 48.26 cm x 50.8 cm)

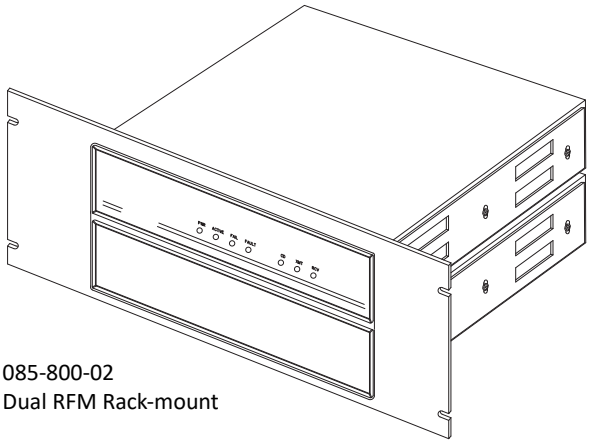
NOTE RFMs are pictured in mounts for clarity only. Rack-mount kits do not come with RFMs.



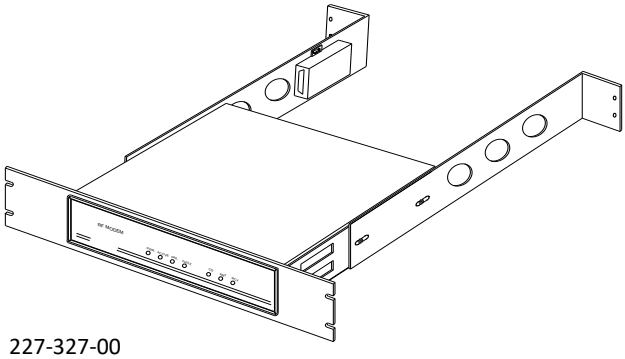
085-800-01
Single RFM Rack-mount



085-800-04
Single RFM Rack-mount with Adjustable Rails and Added Shelf



085-800-02
Dual RFM Rack-mount



227-327-00
Single RFM-X Rack-mount for Mounting in Portable Command Center

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Ordering Information

Part Number	Description
085-800-01	Single 2U, RFM Rack-mount for 19 in. Rack-mount Cabinet, black face
085-800-02	Dual 4U, RFM Rack-mount for 19 in. Rack-mount Cabinet, black face
085-800-04	Single RFM Rack-mount for 19 in. Rack-mount Cabinet with adjustable rails (22 to 28 in. extension) shelf, black face
227-327-00	Single 2U, RFM Rack-mount for 19 in. Rack-mount Cabinet with on/off switch for push-to-talk MNS microphone with holder, provides mounting space for serial to network device server

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

RFMs and Repeaters

Device Server
204-004-00

Description

The Device Server encapsulates serial data into packets and transports them over the Ethernet allowing D-21 Remote Interface Drivers (RIDs) to connect directly to an IP Address. Using two device servers, it is possible to create a virtual serial connection across an Ethernet network.

Features

- Connect remote Monaco Devices
- Compact size
- Supports RS-232, RS-422, RS-485 serial connections
- LED status indicators
- Power Supply included

Specifications

Network Interface	RJ-45 10BASE-T/100BASE-TX Ethernet Port
Input Power	9 to 30 VDC (center +) or 9 to 24 VAC (1.5 watts max. power required)
Serial Interface	DB25F DCE Serial Port
Power Consumption	1.8 watts maximum
Baud Rate	300 bps to 230 Kbps
Memory	256 KB SRAM, 2 MB Flash
Operating Temperature	–40°F to 158°F (–40°C to 70°C)
Operating Humidity	10% to 90% non-condensing 40% to 60% recommended
Enclosure	Metal with integrated wall mounts
IP Rating	30
Dimensions	0.9 in. H x 2.5 in. W x 3.5 in. D (2.3 cm x 6.4 cm x 9 cm)
Weight	0.45 lb (0.2 kg)
Standards Compliance	UL Listed 864
UL	E128144, S24286

Ordering Information

Part Number	Description
204-004-00	RS-232 to 100BASE-T Single Port Network Device Server

Associated Parts

Part Number	Description
625-123-01	RFM-X RS-232/power 100BASE-T single port network device server cable with one DB9 pin male, one DB9 pin female, and one DB25 pin connector **NOTE** Additional cables or modules may be required, depending on the desired communication setup and function; contact Monaco for details.
625-111-00	Cable Assembly, RFM to Device Server Serial Cable; use with RFM-7000

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels Catalog Section 05

Section 5. Addressable Fire Alarm Control Panels

Monaco Addressable+ Planner 207-617-00
MAAP(+) Point Reporting Addressable FACP 227-85x-xx, 227-86x-xx, 227-85x-EN, 227-86x-EN
Remote Display Unit for MAAP(+) and MAAP-2 . . . . . 710-070-01, 710-070-02

Addressable Accessories

Annunciator, Text 710-054-01

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

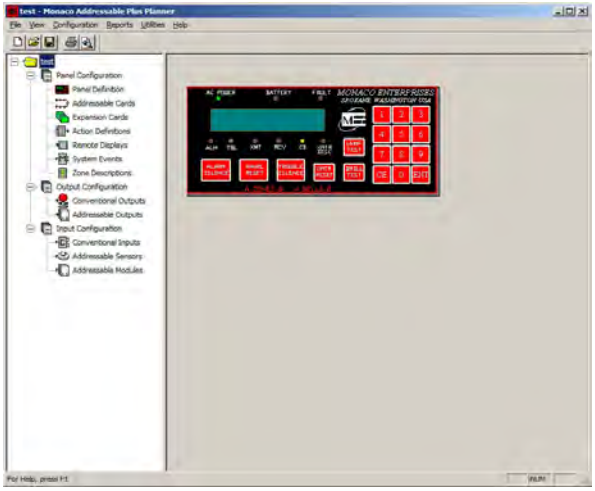
Addressable Fire Alarm Control Panels

Monaco Addressable+ Planner

207-617-00

Description

The Monaco Addressable+ Planner (MAP(+)) is a Microsoft Windows® -based program that creates a configuration file for use by the Monaco Analog Addressable Panel (MAAP(+)).



The MAP(+) discusses the process of defining all of the inputs and outputs connected to the panel and how they and the panel are to operate during alarm and trouble conditions.

Reports allow viewing or printing a snapshot of the configuration file and how to identify any problems in the configuration information so they can be corrected before programming the MAAP(+).

When the configuration file is complete, the MAP(+) Planner allows the file to be saved to disk for future use and allows transfer of the file to the MAAP(+) through the provided communication cable.

If devices ever need to be added or removed, or the panel operation needs to be changed, the saved configuration file can be modified.

Features

- Allows quick and easy definition of the panel operation, all inputs and outputs connected to the MAAP(+), and how the inputs and outputs are to operate during alarm and trouble conditions
- Reports provide a summary of the configuration information and identification of any discrepancies
- Quick set up of initiating device circuits, notification appliance circuits, and signaling line circuits
- Programs the MAAP(+) with the configuration file
- Transfers a MAAP(+) configuration file to the MAP(+) Planner for modification or storage
- Easy to use Windows®-based program
- Extensive field-level and task-related online help
- Runs on pentium-based PC with 32 MB RAM and Windows® XP, Vista, or 7
- Communication cable provided

NOTE Newer laptops typically do not have a serial port, so a USB to serial adaptor must be used to program the Monaco panels. Monaco USB to serial adaptor (P/N 649-118-00) has provided the most reliable communication between various laptops and Monaco panels. Other USB to serial adaptors may not produce a satisfactory customer experience.

System Requirements

Operating System	Microsoft Windows® XP, Vista, or 7
PC	Pentium
RAM	16 MB minimum; 32 MB recommended
Communication Port	RS-232
Monitor	256 color

Ordering Information

Part Number	Description
207-617-00	Monaco Addressable+ Planner Kit (MAP(+)): contains MAP(+) thumb drive, programming cable with adaptor

Associated Parts

Part Number	Description
649-118-00	USB to 9-pin Serial Adaptor
227-574-00	MAAP Serial Interface Kit, includes programming cable and adaptor

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

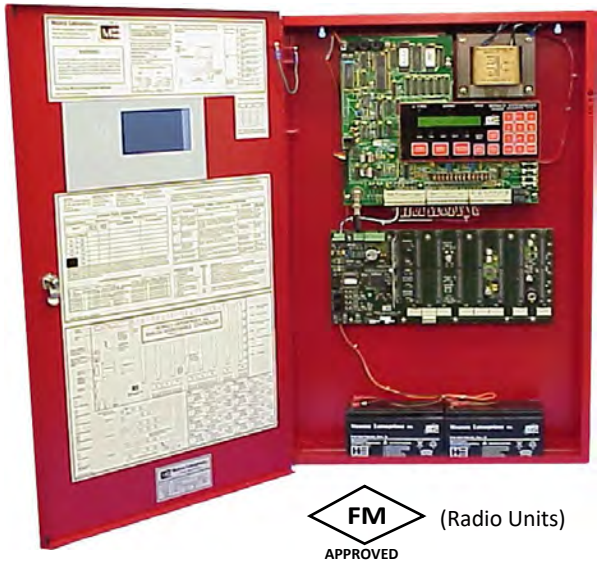
Addressable Fire Alarm Control Panels

MAAP(+) Point Reporting Addressable FACP

227-85x-xx, 227-86x-xx, 227-85x-EN, 227-86x-EN

Description

Monaco's MAAP(+) Point Reporting Addressable Fire Alarm Control Panel (FACP) is a low-voltage, programmable addressable FACP that incorporates Monaco's latest point reporting addressable technology for real-time device-level status at Monaco's D-21 Central Receiving System through integrated transceiver or hard-wire communication. This enables dispatchers to monitor the fire-spread while notifying first responders and keeping them out of harm's way.



FM APPROVED (Radio Units)

Narrowband radio meets requirements of NTIA (National Telecommunications and Information Administration) Manual of Regulations and Procedures for Federal Frequency Management.

Panel monitoring, supervision, signaling, and reporting functions are incorporated into one unit capable of transmitting up to 64 zones in legacy non-point reporting mode or all-points-real-time status for the panel and its addressable sensors and modules in point reporting mode to the D-21.

The panel is also available with a mass notification system (MNS) option that allows it to work with the Monaco BT-XM2 for prerecorded and live voice MNS capabilities from the D-21 through a single antenna system.

Basic Panel Components

- Control unit with local LCD/keypad
- Analog Addressable Controller (AAC) backplane
- One Addressable Driver Card (ADC) that supports a maximum of 198 addressable devices on one Class A or two Class B Signaling Line Circuits (SLC)
- 12V/18 Ah backup batteries

NOTE *MAAP(+) units that support D-21 MNS use a RFM-XM2 interface and a BT-XM2 to communicate to the D-21. See "Ordering Information" on page 3 or contact Monaco for assistance.*

User Interface

The MAAP(+) indicates abnormal conditions with audible alerts, LEDs, and LCD messages identifying the fault, zone input, or specific addressable device with a user-definable description. All status changes can be transmitted to the D-21 through the integrated transceiver. A list of the last 500 alarms and troubles are maintained in panel history which can be outputted to an LCD, printer, or laptop.

The keypad has buttons to activate or deactivate alarm silence, trouble silence, panel reset, drill test, and lamp test functions. User menus allow access to panel functions like walktest, radio key-up test, and transmitter disable for all or individual zones and devices. RS-232 interfaces are available for programming the panel through a Windows® based planner software suite and for connection to a local printer for hard copy, event-status logging.

LCD/Keypad

- Plain English, 48-character LCD display
- Panel status LEDs
- Clearly labeled, easy to use buttons
- Access to user menus through the numeric keypad:
  - Enabling and disabling of devices or zones for maintenance, password-protected
  - Diagnostics
  - History

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

D-21 Communication

MAAP(+) supports both radio (site-specific frequency) and hard-wire communication to Central. Hard-wire options include copper pair, Ethernet, and fiber optic.

Fire Inputs and Outputs

Addressable

One ADC supports one Class A/Class X or two Class B SLCs. With the full addition of seven more ADCs (eight ADCs total), the SLC capacity is eight Class A/Class X or 16 Class B.

An ADC supports 99 addressable smoke or heat sensors and 99 addressable monitor or control modules. With seven additional ADCs, the system can support 792 addressable smoke or heat sensors and 792 addressable monitor or control modules.

NOTE *Options such as sounder bases and fault indicators reduce the number of addressable devices each ADC can support.*

SLC wiring shall be unshielded twisted pair (UTP).

Addressable devices can be arranged in 64 zones (non-point reporting) or 48 zones (point reporting), with transmission of individual device states to D-21.

Sensor Grouping

- Requires point reporting enabled
- Smoke detectors assigned to groups to work together
- First detector in alarm sounds its local base; second detector in alarm causes all notification devices in common areas to signal general evacuation
- For dormitory applications to reduce unnecessary response runs

  NOTE *Nuisance alarms are also reduced by alarm verification, auto drift compensation, or pre-alarm levels*.

Conventional

- Two Class A or four Class B Initiating Device Circuits (IDCs)
- Two Class A or four Class B Notification Appliance Circuits (NACs)
- One auxiliary output Class B NAC
- Non-supervised auxiliary power
- Auxiliary inputs: two Class B non-loop-powered IDCs for standard, supervisory, waterflow, positive alarm sequence, master box operation, or tamper operation circuits
- One non-supervised remote trouble output
- Two programmable Form C relays which can be assigned to common alarms or troubles or can be assigned to specific zones, a group of zones, or specific addressable devices

NACs

- Configurable as silenceable or non-silenceable
- Can be assigned to specific zones, group of zones, or specific addressable devices
- Supervised auxiliary output can be:
  - Assigned to activate for waterflow alarm, positive alarm sequence, or publicly accessible manual pull station alarms
  - Used as another bell circuit and assigned to specific devices or groups of devices

Configuration Programming

The user programs the panel with MAAP(+) Planner software (P/N 207-617-00). The D-21 Central System Admin Client imports the master configuration file for point reporting eliminating the need to manually enter panel configuration, zone, and point information. Panel and Central configurations are compared to ensure changes to the configuration are verified.

D-21 stores a copy of the master configuration file so that the master file cannot be lost or misplaced. D-21 synchronizes MAAP-X clock and calendar with Central.

Hardware

Besides the basic panel components listed on page 1, the MAAP(+) can also include the following:

- Expansion backplane (quantity depends on enclosure size)
- Zone Expansion Cards (ZECs)
- Auxiliary Output Cards (AOCs)
- Universal Input Cards (UICs) respond to voltage reversal or circuits where presence or absence of voltage indicates alarm, trouble, or normal condition

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels

Specifications

AC Input 120 or 240 VAC (85% to 110%) selected by primary winding pigtail, 48–62 Hz

DC Power
- Main Supply: 28 VDC, filtered
- AUX PWR: 24 VDC (2A), filtered, 1A max for AAC
- If AUX power used for external devices, must be externally fused through an in-line 1A fuse

Battery Backup Two rechargeable 12V/18 Ah standard

Integrated Charger: 4A; meets NFPA 72 and UL 864 requirements
- Low Battery Trip: 23 VDC
- Low Battery Disconnect: 19 VDC

Signaling Line Circuits 24 VDC, 0.12A per ADC, eight ADCs max, LED illumination, 20 devices max

Per ADC:
- Two Class B or one Class A/X SLC input(s)
- 99 smoke or heat sensors
- 99 monitor or control modules

Wiring: Unshielded twisted pair

Loop Resistance: 40 ohms

Conventional Circuits

IDCs (Zones):
- Two Class A or four Class B
- 24 VDC
- 3.9 kohm EOL resistor (Class B) Class A ZECs need 3.9 kohms at terminals
- 35 ohms resistance per circuit

NACs (Bells):
- Two Class A or four Class B
- Polarity reversing
- 24 VDC, 1.5A per NAC
- 3.5A max, all NACs; per Class B ≤2A
- 4.7 kohm EOL resistor (Class B)
- 3 ohms resistance per leg

Auxiliary Input:
- Two Class B
- Non-loop powered
- 4.7 kohm EOL resistor
- 35 ohms resistance per circuit

Auxiliary Output:
- One Class B
- Polarity reversing
- 24 VDC, filtered, 1.5A
- 4.7 kohm EOL resistor
- 3 ohms resistance per leg

Remote Trouble:
- 24 VDC, filtered, 150 mA limited
- Unsupervised

Relays Two Form C, rated at 24 VDC, 1.25A max

Radio Output Power 4 W minimum (2 W, some frequencies)

Operating Temperature 32°F to 120°F (0°C to 49°C)

Relative Humidity 0% to 90% non-condensing

Ordering Information

Integrated Radio Units, FM Approved

Part Number	Description
227-855-xx*	MAAP(+) Point Reporting Addressable FACP with integrated radio transceiver: • One AAC backplane for up to eight ADCs • One ADC supporting 198 addressable devices • NEMA 1 surface-mount red enclosure 28 in. H x 18 in. W x 3.6 in. D • Two 12V/18 Ah batteries
227-856-xx*	MAAP(+) Point Reporting Addressable FACP with integrated radio transceiver: • One AAC backplane for up to eight ADCs • Space for one optional expansion backplane • One ADC supporting 198 addressable devices • NEMA 1 surface-mount red enclosure 43 in. H x 18 in. W x 3.6 in. D • Four 12V/18 Ah batteries
227-857-xx*	MAAP(+) Point Reporting Addressable FACP with integrated radio transceiver: • One AAC backplane for up to eight ADCs • Space for three optional expansion backplanes • One ADC supporting 198 addressable devices • NEMA 1 surface-mount red enclosure 60 in. H x 18 in. W x 3.6 in. D • Four 12V/18 Ah batteries
227-865-xx*	MAAP(+) Point Reporting Addressable FACP with integrated radio transceiver: • One AAC backplane for up to eight ADCs • One ADC supporting 198 addressable devices • NEMA 1 flush-mount red enclosure 28 in. H x 18 in. W x 3.6 in. D • Two 12V/18 Ah batteries

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels

Part Number	Description
227-866-xx*	MAAP(+) Point Reporting Addressable FACP with integrated radio transceiver: • One AAC backplane for up to eight ADCs • Space for one optional expansion backplane • One ADC supporting 198 addressable devices • NEMA 1 flush-mount red enclosure 43 in. H x 18 in. W x 3.6 in. D • Four 12V/18 Ah batteries
227-868-xx*	MAAP(+) Point Reporting Addressable FACP with integrated radio transceiver: • One AAC backplane for up to eight ADCs • One ADC supporting 198 addressable devices • NEMA 4X stainless steel enclosure 24 in. H x 24 in. W x 8 in. D • Two 12V/18 Ah batteries
227-869-xx*	MAAP(+) Point Reporting Addressable FACP with integrated radio transceiver: • One AAC backplane for up to eight ADCs • One ADC supporting 198 addressable devices • NEMA 3R red enclosure 24 in. H x 24 in. W x 8 in. D • Two 12V/18 Ah batteries
*Specify frequency (-xx) when ordering.	

Panels

Non-radio Units Supporting D-21 MNS Function

These units have an integrated RFM-XM2 interface module for D-21 MNS control through a BT-XM2

Part Number	Description
227-855-MN*	MAAP(+) Point Reporting Addressable FACP with an integrated RFM-XM2 interface module: • One AAC backplane for up to 8 ADCs • One ADC supporting 198 addressable devices • NEMA 1 surface-mount red enclosure 28 in. H × 18 in. W × 3.6 in. D • Two 12V/18 Ah batteries
227-856-MN*	MAAP(+) Point Reporting Addressable FACP with an integrated RFM-XM2 interface module: • One AAC backplane for up to 8 ADCs • One ADC supporting 198 addressable devices • NEMA 1 surface-mount red enclosure 43 in. H × 18 in. W × 3.6 in. D • Four 12V/18 Ah batteries

Part Number	Description
227-857-MN*	MAAP(+) Point Reporting Addressable FACP with an integrated RFM-XM2 interface module: • One AAC backplane for up to 8 ADCs • One ADC supporting 198 addressable devices • NEMA 1 surface-mount red enclosure 60 in. H × 18 in. W × 3.6 in. D • Four 12V/18 Ah batteries
227-865-MN*	MAAP(+) Point Reporting Addressable FACP with an integrated RFM-XM2 interface module: • One AAC backplane for up to 8 ADCs • One ADC supporting 198 addressable devices • NEMA 1 flush-mount red enclosure 28 in. H × 18 in. W × 3.6 in. D • Two 12V/18 Ah batteries
227-866-MN*	MAAP(+) Point Reporting Addressable FACP with an integrated RFM-XM2 interface module: • One AAC backplane for up to 8 ADCs • One ADC supporting 198 addressable devices • NEMA 1 flush-mount red enclosure 43 in. H × 18 in. W × 3.6 in. D • Four 12V/18 Ah batteries
*Specify frequency (-MN) when ordering.	

Panels

Hard-wire Only (Ethernet) Units

Part Number	Description
227-855-EN*	MAAP(+) Point Reporting Addressable FACP with an integrated Ethernet interface: • One AAC backplane for up to 8 ADCs • One ADC supporting 198 addressable devices • NEMA 1 surface-mount red enclosure 28 in. H × 18 in. W × 3.6 in. D • Two 12V/18 Ah batteries
227-856-EN*	MAAP(+) Point Reporting Addressable FACP with an integrated Ethernet interface: • One AAC backplane for up to 8 ADCs • One ADC supporting 198 addressable devices • NEMA 1 surface-mount red enclosure 43 in. H × 18 in. W × 3.6 in. D • Four 12V/18 Ah batteries
227-865-EN*	MAAP(+) Point Reporting Addressable FACP with an integrated Ethernet interface: • One AAC backplane for up to 8 ADCs • One ADC supporting 198 addressable devices • NEMA 1 flush-mount red enclosure 28 in. H × 18 in. W × 3.6 in. D • Two 12V/18 Ah batteries

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels

Part Number	Description
227-866-EN*	MAAP(+) Point Reporting Addressable FACP with an integrated Ethernet interface: • One AAC backplane for up to 8 ADCs • One ADC supporting 198 addressable devices • NEMA 1 flush-mount red enclosure 43 in. H × 18 in. W × 3.6 in. D • Two 12V/18 Ah batteries

Associated Parts

Part Number	Description
227-811-xx*	MAAP(+) Electronics Package Upgrade for existing MAAP-1, MAAP-2 (legacy addressable), and M-2 conventional panels (except 19 in. high); replaces M CPU, power supply, AAC, ADC, display, and radio (existing ADCs may still be used with the upgrade) See **NOTE 1** and **NOTE 2**.
227-811-MN*	MAAP(+) Electronics Package, MNS upgrade for existing MAAP-1, MAAP-2 (legacy addressable) and M-2 conventional panels (except 19" high). Replaces M CPU, power supply, AAC, ADC, and display (existing ADCs may still be used with the upgrade), includes BT-XM2 MNS interface See **NOTE 1** and **NOTE 2**.
176-185-00	M Conventional FACP Expansion Backplane, capacity for up to seven expansion cards: ZEC, AOC, or UIC
176-186-00	Zone Expansion Card (ZEC), two Class A or four Class B zones
176-187-00	Auxiliary Output Card (AOC), drives eight LEDs per card; expansion backplane required for M FACP
176-193-01	Analog Addressable Controller (AAC), supports up to eight ADCs
176-194-00	Addressable Driver Card (ADC), supports up to 198 addressable devices on a signaling line circuit **NOTE** Supports CLIP addressable devices only.
176-197-00	Universal Input Card (UIC), four pairs of input terminals connecting up to four 2-wire input zones
513-411-00	M Tamper Switch Kit

Part Number	Description
081-156-00	Batteries with enclosure: • NEMA 1 red surface-mount enclosure, 18 in. H x 12 in. W x 6 in. D, with wire harness for use with M-2 conventional, MAAP+, MAAP-X, and Vulcan 1 FACPs • Two 12V/26 Ah batteries
207-617-00	MAAP(+) Planner Support Kit: Planner thumb drive, programming cable with adaptor (required)
225-163-00	Planner Suite/ Programmer with interface cables for use with: Monaco FACP or MNS (M-2, MAAP-2, MAAP(+), MAAP-X), BT-X building transceiver, and D-21 compatible repeaters
400-701-00	Battery, SLA, rechargeable, 12V/26 Ah, quick connect, 6.56 in.L x 6.97 in. W x 4.92 in. H, 17 lb
400-712-00	Battery, SLA, rechargeable, 12V/18 Ah, quick connect, 7.13 in. L x 3.03 in. W x 6.59 in. H, 12.6 lb
649-118-00	USB to Serial Port Adaptor (needed for laptops with USB only in order to program the panel)
***Specify frequency (“-xx”) (“-MN”) when ordering.	
NOTE 1 Ah capacity required depends on system; other battery options available. Contact Monaco for help determining battery requirements.	
NOTE 2 Antenna system required for radio versions; contact Monaco.	

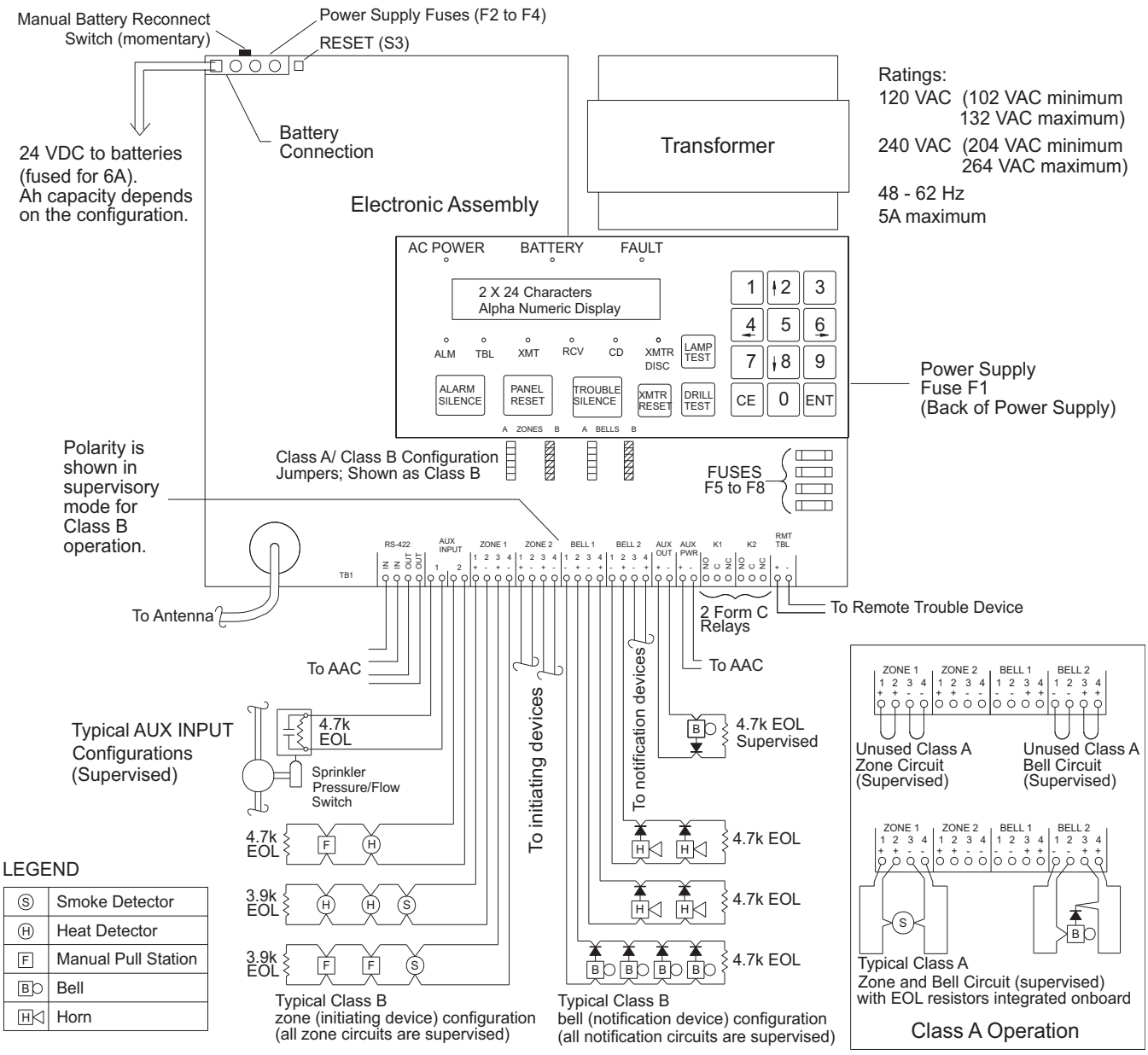
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels

Wiring Diagrams

Electronic Assembly



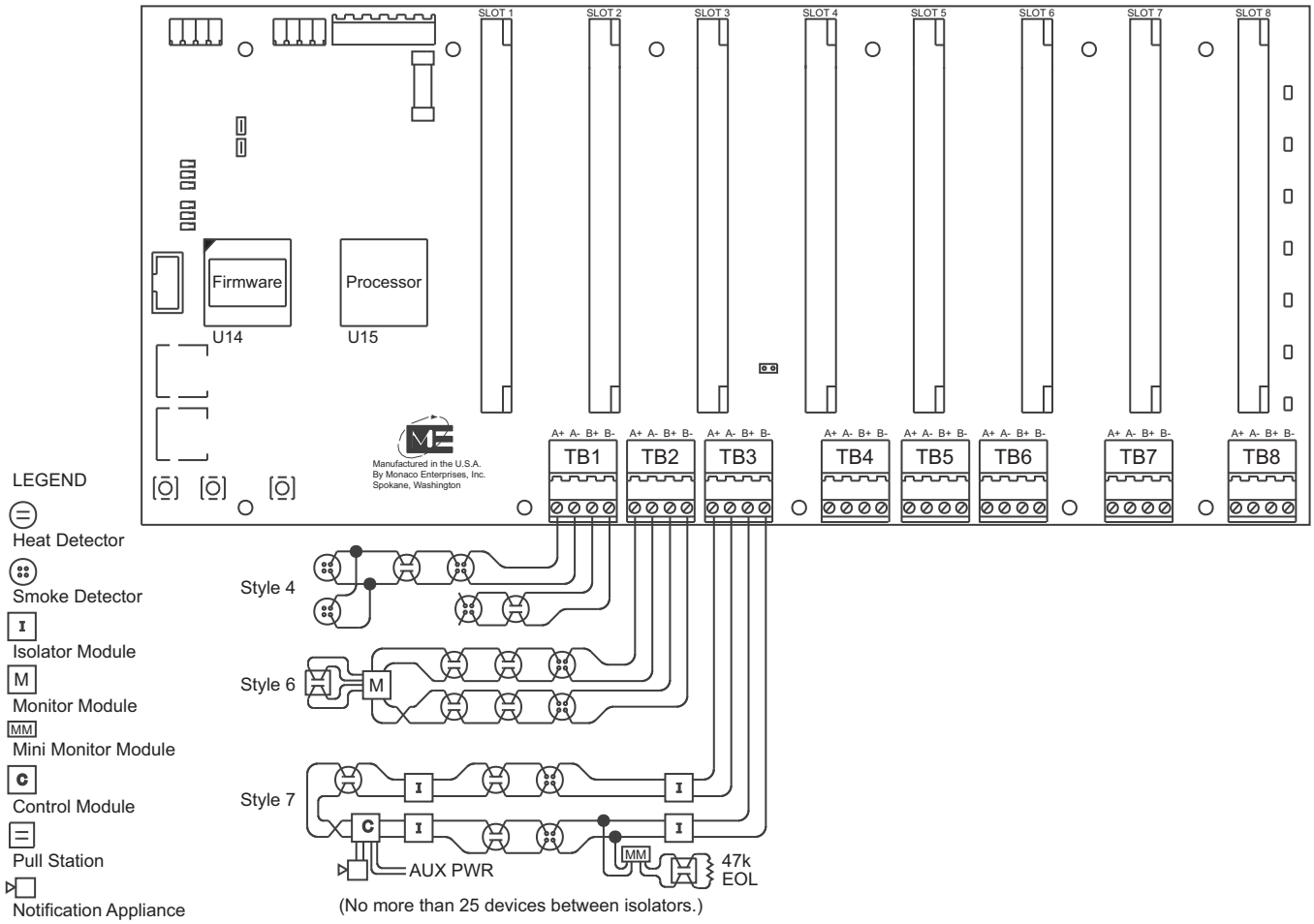
LEGEND

Ⓢ	Smoke Detector
Ⓗ	Heat Detector
F	Manual Pull Station
B	Bell
H	Horn

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

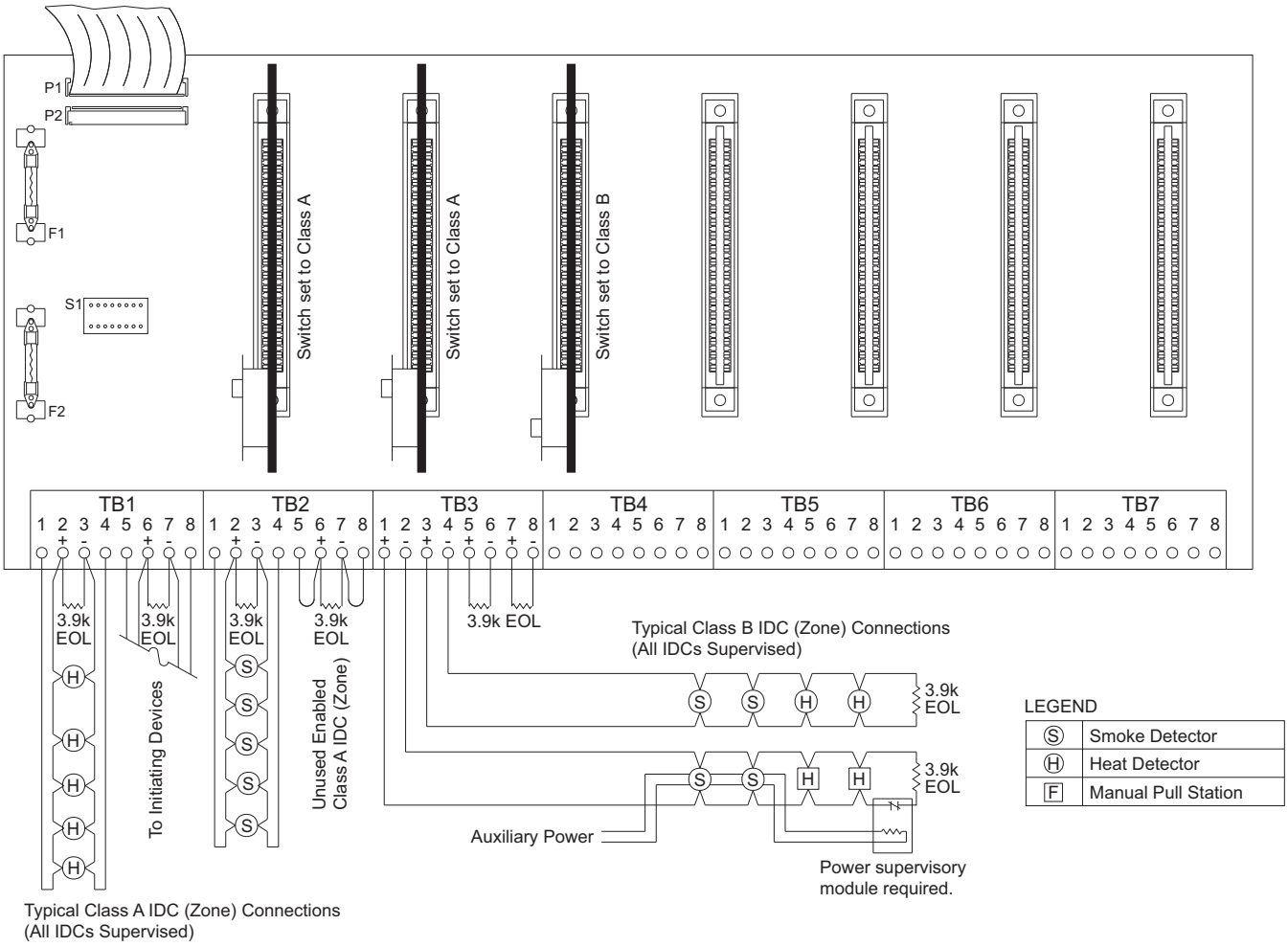
Analog Addressable Controller



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Conventional Expansion Backplane



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels

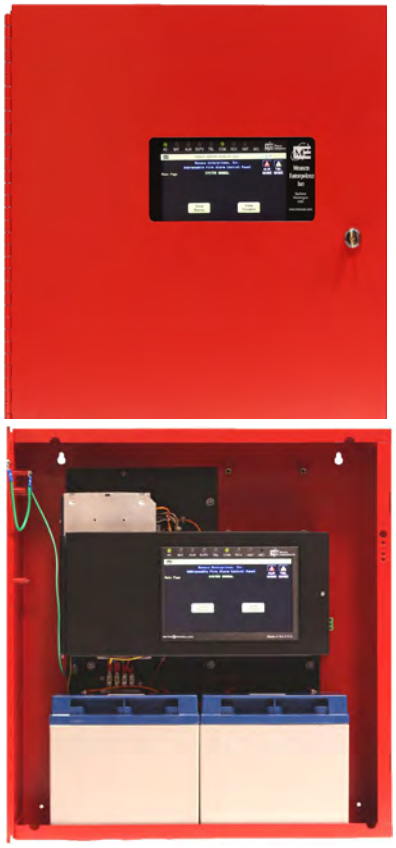
Remote Display Unit for MAAP(+) and MAAP-2

710-070-01, 710-070-02

Description

For use on MAAP(+) and MAAP-2 panels.

The Monaco Remote Display Unit (RDU) is an intelligent touch screen housed inside its own keyed enclosure. It is designed to annunciate and silence alarms and troubles, and to reset the panel in order to clear alarms.



The RDU connects to addressable MAAP(+) panels using a multiplexer with up to 2,000 ft. of 22 AWG 4-conductor wire with drain. A multiplexer is required even if the panel only has a single RDU. (The multiplexer maintains electrical grounding requirements between units.) Each multiplexer can handle up to four RDUs, and each panel can connect to a total of 15 RDUs in a star configuration.

When an alarm or trouble occurs, the RDU can automatically display the alarm or trouble list. Also, it can indicate the arrival of an alarm or trouble, requiring the operator to press a touch key to display the alarm or trouble list.

Features

- Brilliant-color touch-panel LCD—6 in. wide by 3.5 in. high—in NEMA 1 keyed enclosure
- Power—AC, battery, charger—supervised with on-board mini-monitor module using SLC loop (Power supervision requires an SLC loop)
- Pop-up directory-style list of troubles and alarms, with scroll capability and user-enabled touch keys:
- Trouble Silence
- Panel Reset
- Alarm Silence
- Annunciates and silences alarms and troubles
- Local audible (with configurable local silence)
- Can be located up to 2,000 ft. from the panel
- Can remotely reset the MAAP(+) panel
- Up to 15 remote displays can connect to a MAAP(+) panel through multiplexers
- 60-hour backup with two 12V/18 Ah batteries
- 115/230 VAC, 50/60 Hz operation

Specifications

Enclosure	19 in. H x 18 in. W x 3.6 in. D, NEMA 1
AC Power	115/230 VAC; 50/60 Hz
DC Power	24 VDC 265 mA
Battery Backup	Two, 12V/18 Ah, 60 hours.

Battery Calculations for 72-Hour Backup

72-hour backup battery operation requires a separate enclosure with 12 VDC/26 Ah batteries (P/N 081-156-00). Follow the steps to determine enclosure P/N and battery size:

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

- Determine your battery backup needs
- Calculate battery size
- Equation: Hours x 265mA x 1.2 = Ah Battery Size
- 72-hour calculation:
  72 hours x 265mA x 1.2 = 22.9 Ah battery
- Anything larger than two 12V/18 Ah batteries requires a separate enclosure

Ordering Information

RDU

Part Number	Description
710-070-01	Remote display unit, red, 19 in. x 18 in. x 3.6 in., NEMA 1 enclosure, surface mount, two 12V/18 Ah backup batteries; requires multiplexer P/N 176-268-00
710-070-02	Remote display unit, red, 19 in. x 18 in. x 3.6 in., NEMA 1 enclosure, flush-mount, two 12V/18 Ah backup batteries; requires multiplexer P/N 176-268-00

Associated Parts

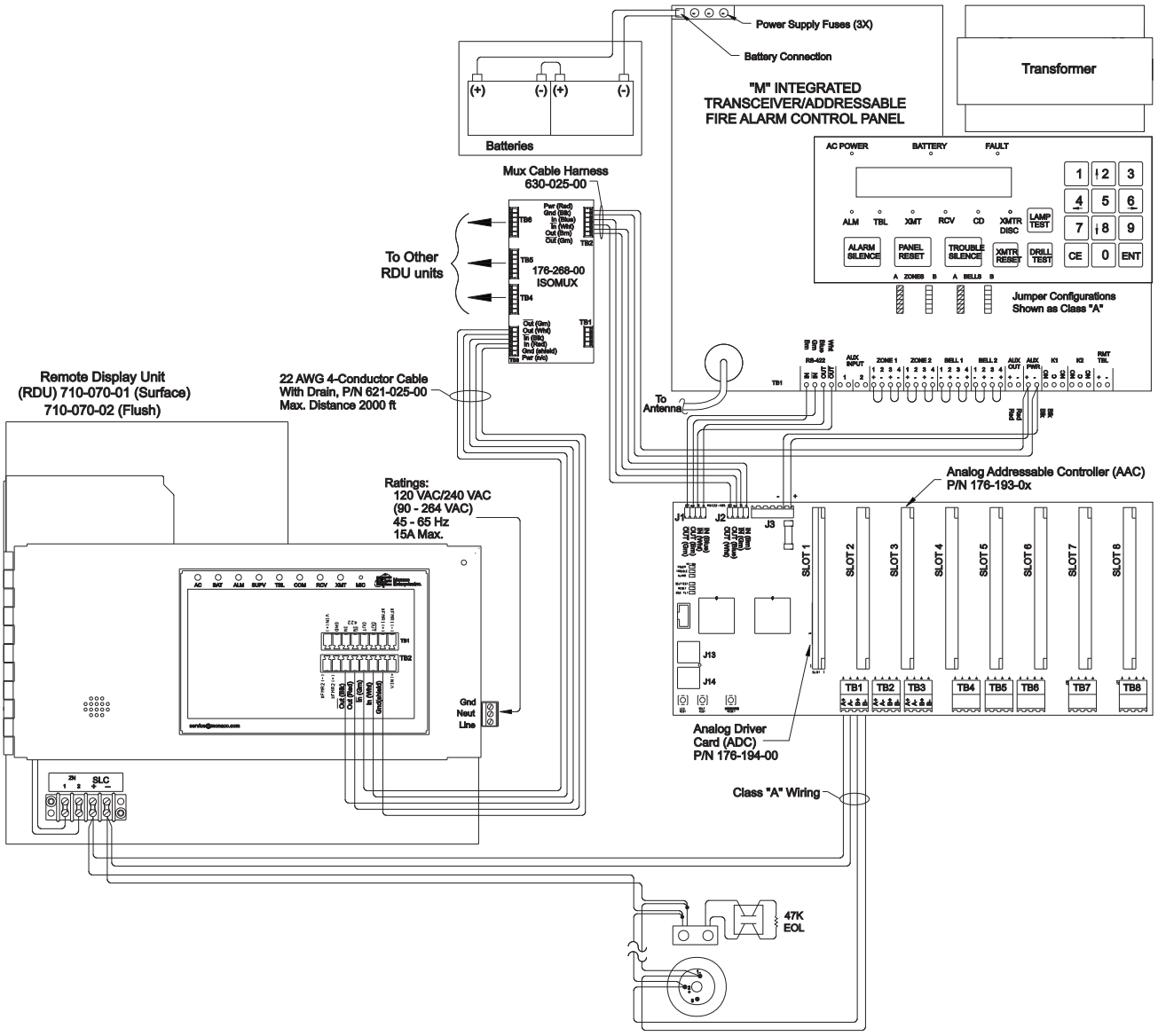
Part Number	Description
081-156-00	Batteries with enclosure: • NEMA 1 Red surface-mount enclosure, 18 in. x 12 in. x 6 in., with wire harness for use with M-2 conventional, MAAP+, MAAP-X and Vulcan 1 FACPs • Two 12 VDC/26 Ah batteries
176-268-00	Isolated Multiplexer assembly: • 422/485 master port • Four 422 or eight 485 slave ports • Mounts in any MAAP enclosure (19 in., 28 in., 43 in., or 60 in.) • One multiplexer **required** for one to four RDUs • More than four RDUs require additional multiplexers in a star configuration***** • Includes multiplexer to addressable panel cable harness, P/N 630-025-00
621-025-00	22 AWG 4-wire cable with drain, RDU to multiplexer; specify length needed
*** For installations requiring more than four RDU's connected to a single MAAP(+), contact Monaco Customer Service.**	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels Catalog Section 05

Addressable Accessories

Annunciator, Text 710-054-01

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels

Annunciator, Text
710-054-01

Description

The Remote Text Annunciator is a backlit liquid crystal display (LCD) designed to display text messages sent from a communications port on an Addressable Fire Alarm Control Panel (FACP) or MAAP-X Addressable Fire MNS panel.

This annunciator is configured to display two lines of 40 text characters at a time, and it has two buttons that allow the user to scroll through the previous six messages. The unit communicates with a Monaco Addressable FACP using RS-232 communication protocol. Communication is one-way, which means the annunciator can only be used to view messages and cannot be used to respond to messages.

The Remote Text Annunciator is typically mounted near an addressable panel in a 4-gang electrical box and is powered using the panel's AUX Power port. Additional standalone power can be used to power annunciators located far away from the panel.

A single annunciator located less than 50 ft. from the panel can be connected directly to the panel's RS-232 port; Multiplexer Kit P/N 194-810-24 is required to connect an annunciator that is more than 50 ft. away from the FACP. It is recommended to place annunciators less than 2,000 ft. from the multiplexer (4,000 ft. absolute maximum).

Multiplexer Kit P/N 194-810-24 is required to connect additional annunciators to the panel's RS-232 port. A single multiplexer can connect to four annunciators or three annunciators and an additional multiplexer. Multiplexers can be daisy-chained in this manner so that all required annunciators can be connected. The last multiplexer in the line can be used to connect up to four annunciators.

Each Multiplexer Kit includes a mounting plate to mount inside a 43 in. or 60 in. addressable FACP or MAAP-X panel with an empty expansion bay. If a multiplexer is required and there is no room in the addressable FACP or MAAP-X enclosure, use the 4-port Multiplexer Kit in a single-wide enclosure (P/N 194-810-01).

Features

- Sonalert option on incoming messages
- Scroll buttons to view previous messages
- Holds up to six messages
- RS-232 communication allows for one annunciator to connect to a panel up to 50 ft. away
  - Multiplexer Kit P/N 194-810-24 allows for additional annunciators and connections from up to 2,000 ft. away (typical)

Specifications

Standby Voltage	12 to 24 VDC
Current	Annunciator: 125 mA Multiplexer: 65mA
Panel RS-232 Communication	50 ft. (15.24 m) **NOTE** *Multiplexer required for distances greater than 50 ft. and for connecting additional annunciators.*
Multiplexer RS-485 Communication	Recommended Max: 2,000 ft. (0.61 km) Absolute Max.: 4,000 ft. (1.22 km)
Operating Temperature	32°F to 100°F (0°C to 37.78 °C)
Humidity	Non-condensing
Baud Rate	9600

Ordering Information

Part Number	Description
710-054-01	Remote Text Annunciator, two lines, 40 characters each

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels

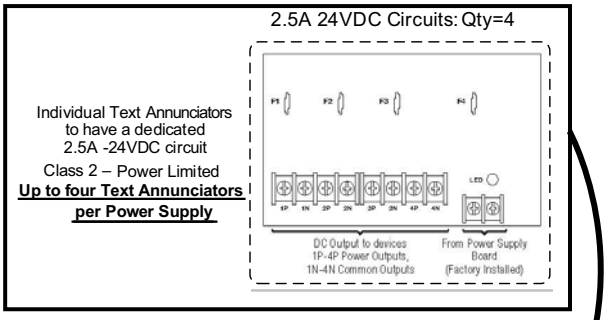
Associated Parts

Part Number	Description
194-810-24	Multiplexer Kit, single RS-232/RS-485 input port to four RS-485 output ports with surge suppression, 24 VDC, mounting accessories included to install in an available bay of a 43 in. or 60 in. addressable panel enclosure; for use with P/N 710-054-01 See **NOTE 1**.
194-810-01	Multiplexer, single RS-232/RS-485 input port to four RS-485 output ports with surge suppression, 24 VDC, single-wide red enclosure, for use with P/N 710-054-01 See **NOTE 1**.
404-093-00	NAC Power Extender, 24 VDC, 6.5A maximum, four Class B or two Class A NACs (2.5A each), 1A AUX power See **NOTE 2**.
404-190-00	Power Supply/Battery Charger, 10/8A, 115 VAC, 60 Hz, with four 2.5A Class 2 power limited outputs
404-194-00	Power Supply/Battery Charger, 10/8A, 220 VAC, 50/60 Hz, with four 2.5A Class 2 power limited outputs

NOTE 1 A multiplexer is required when the Remote Text Annunciator is more than 50 ft. away from the FACP and when connecting more than one annunciator to the panel. One multiplexer can support four annunciators; if more than four Remote Text Annunciators are required, connect three annunciators to the multiplexer and connect a multiplexer to the fourth RS-485 port (instead of an annunciator).

NOTE 2 Order batteries separately.

Power Supply Application



Power Supply/Battery Charger

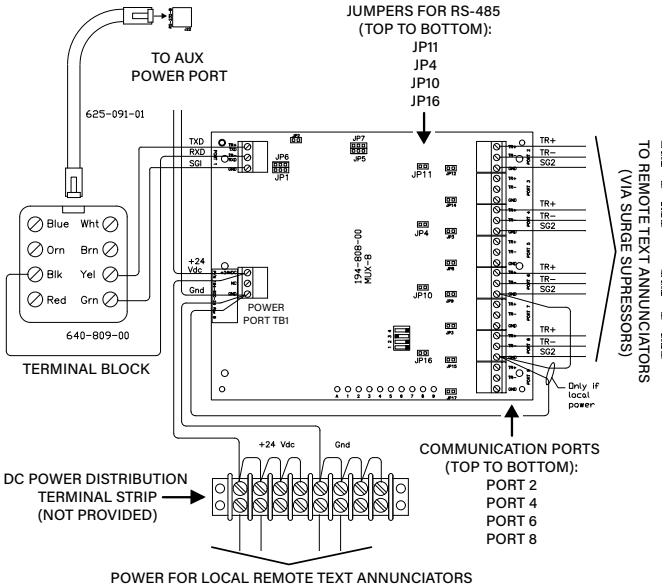
P/N 404-190-00
115 VAC, 60Hz, 10/8A, four 2.5A Class 2 power limited outputs

P/N 404-194-00
220 VAC 50/60 Hz 10/8A, four 2.5A Class 2 power limited outputs

Addressable Monitor (Input Module)

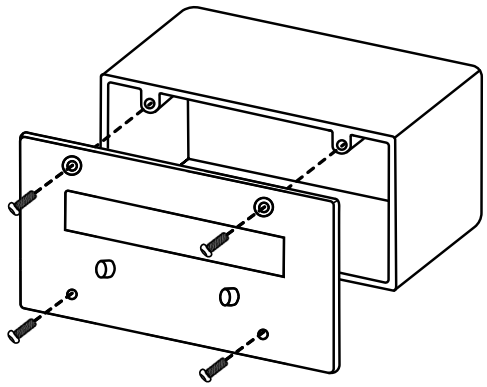
Wiring Diagrams

Multiplexer



Drawings

Mounting the Remote Text Annunciator

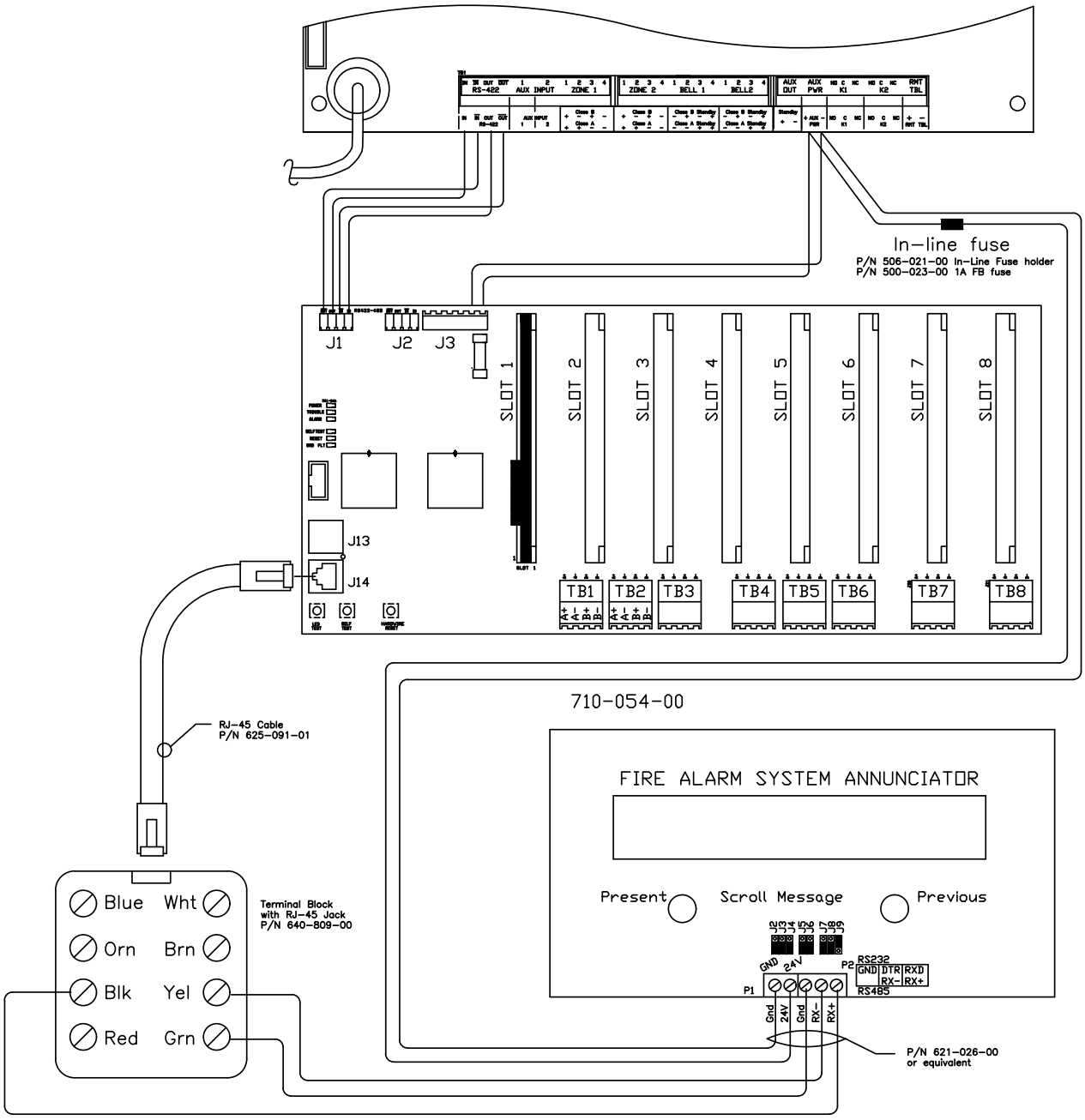


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels

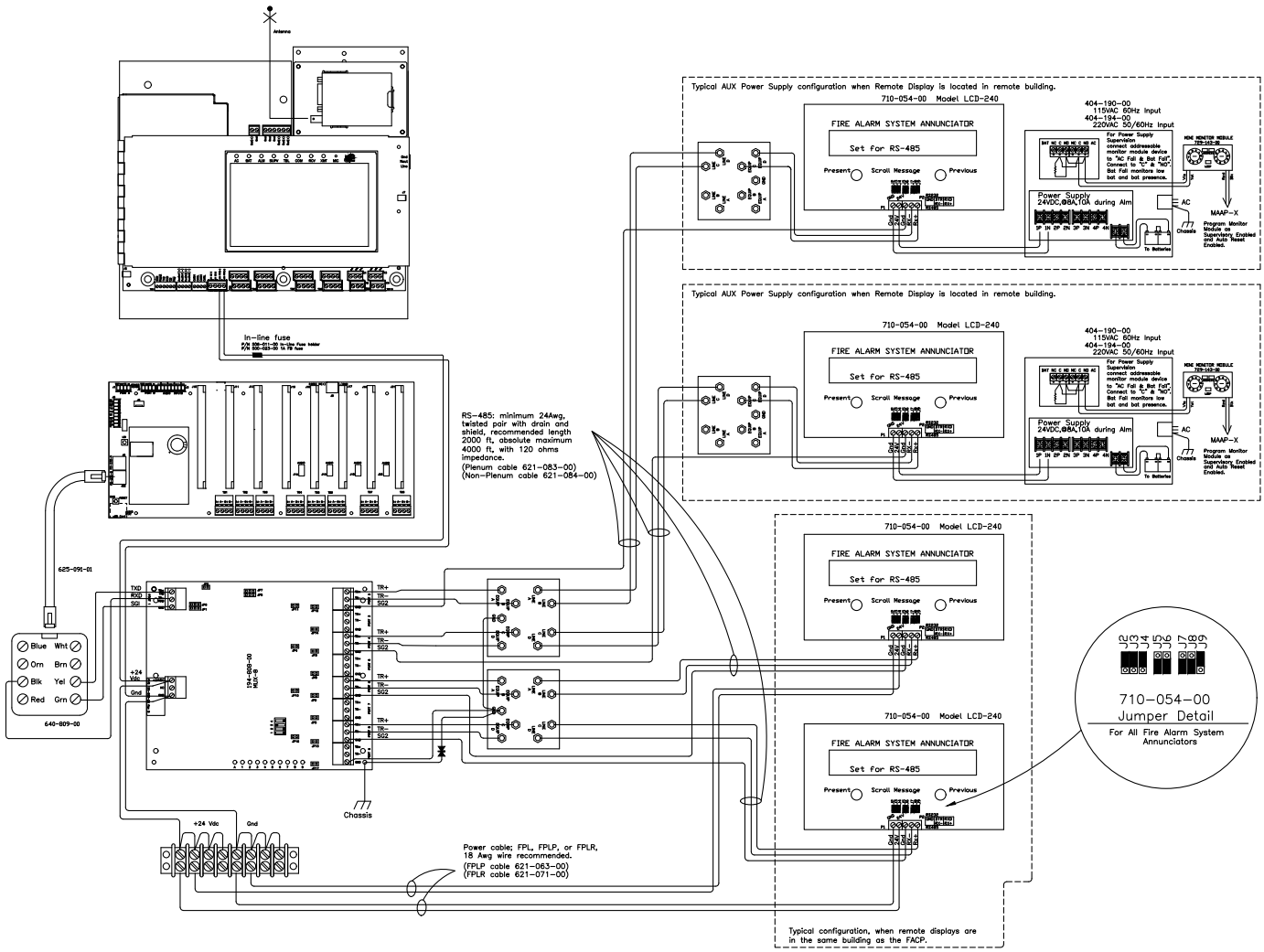
Text Annunciator Connected to Panel's RS-232 Port



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

With One Multiplexer

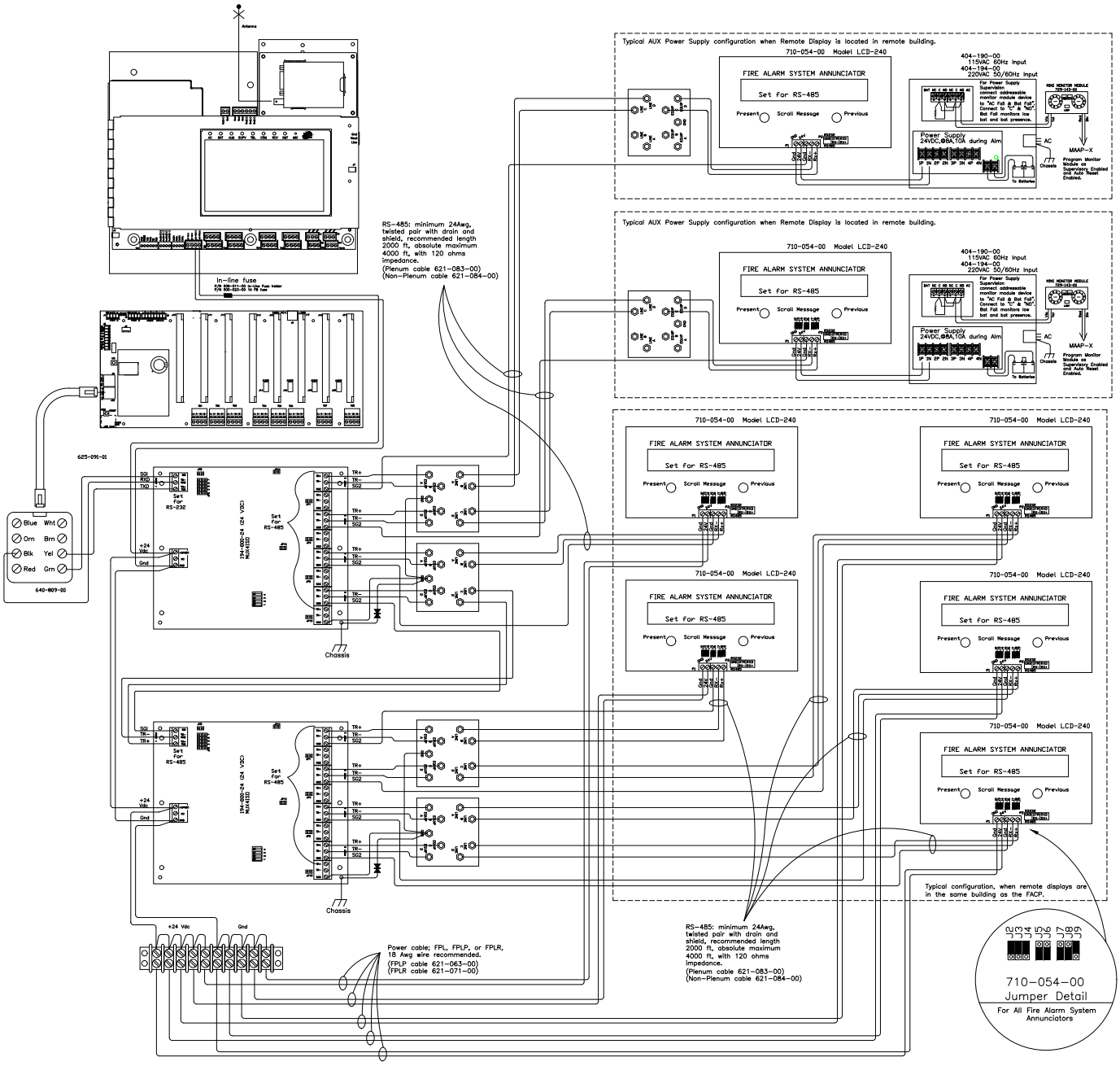


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels

With Multiple Multiplexers



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Section 6. Addressable Fire Alarm Control Panels with MNS

MAAP-X Addressable Fire Alarm MNS Voice Evacuation Panel 227-95x-xx, 227-96x-xx, 227-95x-EN, 227-96x-EN, 227-912-xx
MAAP-X Addressable FACP MNS Voice Evac Panel Upgrade Kit 227-912-xx
MAAP-X Addressable Fire Alarm Expansion Backplane. 176-273-99
MAAP-X Addressable Fire Alarm Sub-Panel 700-101-00
Local Operating Console/Remote Display Unit 710-072-01, 710-072-02
Local Operating Console Keypad 710-072-51, 710-072-52
MAAP-X Planner Kit. 207-625-00
MAAP-X Push-to-Talk MNS Microphone 122-012-00, 122-012-05
MAAP-X Push-to-Talk Paging Microphone 122-012-06
MAAP-X Text Display, 24 VDC, Two Line, Multicolor 710-075-01

MNS Accessories

Audio Booster Panels. 703-16x-00, 703-20x-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Addressable Fire Alarm Control Panels with MNS

MAAP-X Addressable Fire Alarm MNS Voice Evacuation Panel

227-95x-xx, 227-96x-xx, 227-95x-EN, 227-96x-EN, 227-912-xx

Description

MAAP-X is the premier addressable integrated fire and mass notification system (MNS) control panel from Monaco Enterprises, Inc. The MAAP-X comprises a single touch screen enclosure incorporating fire monitoring, addressable point reporting, live voice, and prerecorded MNS functions that are compatible with the D-21 system.

The latest Monaco MAAP-X FACP with the new CORE III processor has the ability to communicate with up to five MAAP-X Sub-Panels, each communicating back to the MAAP-X FACP over fiber. The MAAP-X and every MAAP-X Sub-Panel contains an intelligent Analog Addressable Controller II (AAC II) backplane with eight card slots: all eight card slots support Addressable Driver Cards (ADCs) for addressable devices, but only the last four card slots support Speaker Output Cards (SOCs) for speaker devices. Each ADC can support 99 addressable detectors and 99 addressable modules. Each SOC can support 32 watts of speaker power, with the combined total of the four SOC cards limited to 100 watts.

FM APPROVED

Made in USA

Notification Appliance Circuits (NAC) Strobe Devices are supported and activated by an Addressable NAC module, which is connected to a NAC Booster panel. Text Displays, Local Operating Console (LOC) Keypads for MNS, or LOC Touch Screens for Fire Annunciation/control and MNS can be added to MAAP-X Sub-Panels. If auxiliary power is needed at a MAAP-X Sub-Panel location, an Auxiliary Power Supply will need to be added.

A fully expanded MAAP-X System supports up to six intelligent AAC II backplanes, including the main backplane that will always be in the MAAP-X enclosure. The MAAP-X enclosure can accommodate a maximum of three backplanes: the main backplane and two additional AAC II backplanes. When the two additional AAC II backplanes are installed in the MAAP-X enclosure, they are called **MAAP-X Expansion Backplanes**. AAC II backplanes that are not mounted in the MAAP-X enclosure must be mounted in MAAP-X Sub-Panels.

For additional information regarding the MAAP-X Sub-Panel, refer to cut sheet P/N 700-101-00.

For additional information regarding the MAAP-X Expansion Backplane, refer to cut sheet P/N 176-273-00.

Key Features

- Fully integrated panel combines transceiver, addressable fire panel, and mass notification
- Addressable point reporting
- Touch screen graphical interface with capability to extend to local operating console/remote display units (LOC/RDU)
- Live and prerecorded MNS functions and fire voice evacuation
- Built-in MNS microphone
  - Optional handheld live voice push-to-talk (PTT) MNS microphone in separate enclosure
  - Optional handheld live voice PTT Paging microphone in separate enclosure
- Up to 100W of audio amplification without booster circuits
- Built-in synchronized NAC, up to eight Class B or four Class A
- Compatible with the D-21 Central Receiving System
- Single, seamless upgrade from previous M-series Monaco panels

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels with MNS

- A fully expanded MAAP-X System supports a maximum of:
  - 6 AAC II Backplanes
  - 28 ADCs
  - 24 SOCs
  - 30 LOCs
  - 64 Text Displays

NOTE *Depending on the MAAP-X System configuration, the number of supported ADCs and SOCs may be less.*

NOTE *Expanded MAAP-X Systems may require battery backup; depending on MAAP-X System configuration and MAAP-X enclosure size, a separate enclosure may be required for battery backup. (Battery backup and battery enclosure must be ordered separately.)*

- Flexible configuration achieved with addition of speaker amplifier and addressable cards
- Built in STIPA tone for audio intelligibility testing

Upgrading existing Monaco 28 in. or larger M-series fire only panels to MAAP-X fire and MNS panels is easy using the MAAP-X upgrade kit. The kit provides a cost-effective method to meet current building fire MNS requirements while reusing the existing enclosure, conduits, wiring, and addressable devices.

MAAP-X Base Panel

The base MAAP-X includes:

- A master control unit (MCU) with a color touch screen for fire and MNS operation
- An MNS message card with nine standard prerecorded messages (eight dedicated MNS, one dedicated fire)
- An AAC II backplane
- One ADC II
- One SOC

Onboard circuits:

- Eight Class B or four Class A non-loop-powered Initiating Device Circuits (IDCs)
- Eight Class B or four Class A regulated or synchronized programmable NACs
- Four Form C programmable relays
- Autosensing power supply, 120/240 VAC 50/60 Hz
- Dual-rate 4A 24 VDC battery charger that meets the requirements of NFPA 72 and UL 864
- 24 VDC auxiliary power
- FSK interface for communication to D-21 through the standard integrated transceiver, or optional network or fiber module

Main Panel and LOC/RDU Touch Screen Features

- Fire and MNS operation for first responders
- Simple English messages identify alarm, trouble, and supervisory conditions
- User-defined device and zone descriptions
- Panel reset, alarm/trouble silence
- Displays zone input or addressable device programmable descriptions
- LED status indicators for primary/secondary power, radio communication, general alarm, and trouble
- Panel maintenance functions, such as:
  - Zone and sensor device enable/disable
  - Walktest
  - Radio key-up test
  - Enhanced diagnostic information—identifying panel troubles and loop faults
- Panel history

Message Card

- Standard card has eight MNS, one carbon monoxide (CO), one medical emergency, and one fire, for 11 total prerecorded messages
- User-defined messages available with a customer-option message card with eight user-defined prerecorded MNS messages and one user-defined prerecorded fire evacuation message

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels with MNS

AAC II Backplane

The AAC II supports a combination of up to eight cards. The cards can be either ADCs (up to seven, one included) or SOCs (up to four, one included).

ADC (for addressable devices)

Each ADC supports one Class A/X or two Class B Signaling Line Circuits (SLCs) for addressable device pathways. Each card supports 99 smoke or heat detectors and 99 monitor or control modules.

Options such as sounder or relay bases and fault isolator modules reduce the number of addressable devices (198 device equivalents maximum).

NOTE *The ADC II supports CLIP and AP addressable devices; the ADC I only supports CLIP addressable devices.*

SOC (for speakers)

Each SOC supports one Class A or two Class B speaker circuits for speaker audio pathways. Each card provides 25 VRMS, 32W of speaker audio power.

LOC/RDU Touch Screen

LOC/RDUs are a critical part of every installation, placed at strategic locations throughout the building. With an advanced approach to technology, Monaco's LOC/RDU touch screen combines the prerecorded and live voice message functions of an MNS LOC with the functions of a typically separate Fire Alarm Panel Remote Control Annunciator into one combination LOC/RDU.

Features

- LOC/RDU provides the same functions as the main panel, at key locations within the protected building
- Built in MNS microphone
  - Optional handheld live voice PTT MNS microphone in separate enclosure
  - Optional handheld live voice PTT Paging microphone in separate enclosure
- Three user programmable modes of operation based on LOC/RDU location needs—fire and MNS, fire only, and MNS only
- Each LOC/RDU touch screen provides a visual indication for active prerecorded or live voice MNS; touch screen displays an explanation message if a lower priority MNS request is denied

Additional MAAP-X Features

- Legacy zone-only fire reporting, or point reporting for each addressable device
- Pre-tone and post-tone options for MNS messages
- Messages settable for time-outs of 1 to 60 minutes
- MNS display screen can be customized by user
- MNS prioritized by LOC/RDU locations and message numbers, with live voice override
- Auxiliary Audio Input: Transformer coupled 600 ohm audio input allows user to select any one of five different audio input levels from .30 to .775v RMS (0dBu) for third party audio to be played through the MAAP-X speakers; requires a closed contact trigger to enable Aux Audio Input
- Text display notification using 2010 NFPA 72 compliant textual visual boards for emergency notification programmed to match MAAP-X MNS prerecorded messages
- Local speaker for MNS messages and audible alert for alarm, trouble, and supervisory notification
- Additional battery backup expansion options available for increased operation times during AC power failures
- Transfer between AC primary power and battery secondary power is automatic

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

Sensor Grouping

With point reporting enabled, MAAP-X supports the Monaco sensor-group feature:

- Smoke detectors function together to control local sounder bases and reduce nuisance alarms
- Beneficial in dormitory environments, reducing costly response runs and building evacuations for isolated incidents

MNS and Paging PTT Microphones

- Handheld PTT MNS microphone for use inside LOC/RDU enclosures, includes 2 ft. cable
- Handheld PTT MNS microphone in red 8 in. H x 6 in. W x 3 in. D enclosure, includes 15 ft. cable for connection to MAAP-X
- Handheld PTT Paging microphone in red 8 in. H x 6 in. W x 3 in. D enclosure, includes 15 ft. single cable for connection to MAAP-X and LOC; dual cable also included if connecting MNS **and** Paging microphone to the MAAP-X

MAAP-X Configuration Programming Software

MAAP-X Planner Kit allows the user to program the panel. Planner functions include:

- Uploading/downloading the MAAP-X program file to/from the panel
- Creates a MAAP-X configuration file that can be imported into the D-21 Central; manual information entry to D-21 not needed
- Central reporting modes:
  - Point reporting (addressable device addresses with zone reporting to D-21 and MNS operation)
  - Legacy (zone reporting to D-21 and MNS operation)
  - Stand-alone (in-building fire and MNS operation only)
- Setting D-21 Central communication modes—radio or hard-wire (Ethernet, fiber), single comm or dual comm
- Configuring fire and MNS device circuits
- Configuring MAAP-X and LOC/RDUs for fire and MNS operation
- Provides the ability to keep panel configuration files for backup
- Windows® (XP, 7.0, 8.0, 10) compatible Monaco MAAP-X Planner software
- Define zone and device descriptions

MAAP-X D-21 Configuration Options

Panel Configuration

A configuration-file copy is stored at the D-21 that can be used as a backup.

Mass Notification

- In-building, prerecorded, and live voice MNS from the main panel, LOC/RDUs, and from D-21 Central systems configured for base-wide MNS
- Preconfigured MNS message files streamed from D-21 Central systems configured for broadcast MNS

Fire Zone Reporting

- MAAP-X can be configured for legacy fire non-point-reporting, compatible with D-21 Central systems configured with an FSK interface
- MAAP-X displays the address of the individual device in alarm on its touch screen and reports up to 64 fire zones to the D-21

Fire Point Reporting

- MAAP-X supports Monaco's advanced fire point reporting and is compatible with D-21 Central systems configured for point reporting
- MAAP-X individually reports alarm and trouble status of addressable sensors and monitor modules in real-time to the D-21 Central

D-21 Connectivity

- MAAP-X supports radio (site-specific narrowband frequency) and hard-wire communication
- User selects central communication mode—primary only or primary with fallback to secondary
- Only one antenna system needed for radio communication; hard-wire options include Ethernet and fiber-optic

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Panel Clock Synchronization

- D-21 can be configured to synchronize the MAAP-X internal clock and calendar
- Synchronizing eliminates the need to adjust each panel for daylight-saving time

Software Version

MAAP-X requires D-21 software with MAAP-X support. An RFM-X is required for point reporting and MNS.

Hardware Specifications

Electrical

IDC (Zone Inputs)
Capacity: four Class A or eight Class B
Non-loop-power: 4 VDC with EOL, 12 VDC at 25 mA maximum
EOL: 3.9 kohms 1/4W, Class B only
Maximum loop resistance: 50 ohms per leg
Wiring: Standard fire-alarm-rated cable

NAC Outputs
Capacity: four Class A or eight Class B, polarity reversing
EOL: 3.9 kohms 1/4W, Class B only
NACs programmed as "regulated":
Power: 24 VDC 1A
Maximum loop resistance: 1.5 ohms per leg
NACs programmed as "special application" (synchronized strobes):
Power: 24 VDC 2A
Maximum loop resistance: 1.5 ohms per leg
Wiring: Standard fire-alarm-rated cable

- The total combined current for NAC outputs 1-1, 1-2, 2-1, 2-2 cannot exceed 1A for regulated or 2A for special application
- The total combined current for NAC outputs 3-1, 3-2, 4-1, 4-2 cannot exceed 1A for regulated or 2A for special application

SLC (Addressable)
Per ADC:

- Two Class B or one Class A/X SLC input(s)
- 99 smoke or heat sensors
- 99 monitor or control modules

Power: 0 to 29 VDC polling protocol
Supervision: open, short, ground fault
Maximum loop resistance: 40 ohms per leg
Wiring: Unshielded twisted pair

Line-level Audio Circuits (LOC to Panel)
Minimum 22 AWG twisted pair with drain and shield
Recommended maximum length: 2,000 ft.
Absolute maximum length: 4,000 ft.

RS-485 Communication Circuits (LOC to Panel)
Minimum 24 AWG twisted pair with drain and shield
Recommended max length: 2,000 ft.
Absolute max length: 4,000 ft.
Recommended impedance: 120 ohms

Speaker Circuits
Per SOC: two Class B or one Class A output(s)
Power: 25 VAC RMS (70.7V P-P), 32W max. each, 100W max. per MAAP-X panel (four SOCs max.)
Frequency Response Range: 100–10,000 Hz
Supervision: open, short, ground fault
EOL: 3.9 kohms 1/4W, Class B only
Maximum loop resistance: 1.5 ohms per leg
Minimum load impedance rating: 25 ohms
Wiring: Standard fire-alarm-rated cable

AUX PWR
Power: 24 VDC 2A
Supervision: none
Maximum loop resistance: 1 ohm per leg
Wiring: Standard fire-alarm-rated cable

AUX Audio Input
Transformer coupled 600 ohm audio input
Custom Settings:

- 0.3000 Vrms = 0.85V P-P = –10.46 dBV
- 0.3535 Vrms = 1.00V P-P = –9.03 dBV
- 0.7071 Vrms = 2.00V P-P = –3.01 dBV
- 0.7750 Vrms = 2.19V P-P = –2.21 dBV

Requires closed contact trigger
Contact Monaco for Assistance

Relays, K1–K4
Contact rating: 30 VDC at 2A maximum
Supervision: none

Radio Output Power
4W minimum (2W, some frequencies)

Battery Backup
Standard: 2 rechargeable 12V/18 Ah
Integrated charger: supervised dual-rate, meets NFPA 72 and UL 864 requirements, 27.6 VDC 4A
Low battery alert: 23 VDC
Panel low voltage: 21.5 VDC
Low battery disconnect: 18.5 VDC

AC Power
3-wire autosensing, 120/240 VAC
100 VAC 2.8A (85 to 110 VAC)
120 VAC 2.4A (102 to 132 VAC)
240 VAC 1A (204 to 264 VAC)
50/60 Hz

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Radio Narrowband radio meets requirements of the National Telecommunications and Information Administration Manual of Regulations and Procedures for Federal Frequency Management; FCC certified

Environmental

Operating Temperature 32°F to 120°F (0°C to 49°C)

Relative Humidity 0% to 90%, non-condensing

Standards Compliance

FM Approved Class 3010, Approval 3051356

Ordering Information

Panels

Integrated Radio, Surface- and Flush-mount

Part Number	Description
227-955-xx*	MAAP-X point reporting, addressable, fire alarm control, mass notification, voice evacuation panel, integrated radio transceiver—single comm: • One AAC II backplane for ADCs/SOCs • One ADC II supporting 198 addressable devices • One SOC, 25 VAC RMS, 32W audio output • NEMA 1 **surface-mount** red enclosure 28 in. H x 18 in. W x 3.6 in. D • Two 12V/18 Ah batteries
227-956-xx*	MAAP-X point reporting, addressable, fire alarm control, mass notification, voice evacuation panel, integrated radio transceiver—single comm: • One AAC II backplane for ADCs/SOCs • One ADC II supporting 198 addressable devices • One SOC, 25 VAC RMS, 32W audio output • NEMA 1 **surface-mount** red enclosure 43 in. H x 18 in. W x 3.6 in. D • Four 12V/18 Ah batteries
227-957-xx*	MAAP-X point reporting, addressable, fire alarm control, mass notification, voice evacuation panel, integrated radio transceiver—single comm: • One AAC II backplane for ADCs/SOCs • One ADC II supporting 198 addressable devices • One SOC, 25 VAC RMS, 32W audio output • NEMA 1 **surface-mount** red enclosure 60 in. H x 18 in. W x 3.6 in. D • Four 12V/18 Ah batteries
227-965-xx*	MAAP-X point reporting, addressable, fire alarm control, mass notification, voice evacuation panel, integrated radio transceiver—single comm: • One AAC II backplane for ADCs/SOCs • One ADC II supporting 198 addressable devices • One SOC, 25 VAC RMS, 32W audio output • NEMA 1 **flush-mount** red enclosure 28 in. H x 18 in. W x 3.6 in. D • Two 12V/18 Ah batteries
227-966-xx*	MAAP-X point reporting, addressable, fire alarm control, mass notification, voice evacuation panel, integrated radio transceiver—single comm: • One AAC II backplane for ADCs/SOCs • One ADC II supporting 198 addressable devices • One SOC, 25 VAC RMS, 32W audio output • NEMA 1 **flush-mount** red enclosure 43 in. H x 18 in. W x 3.6 in. D • Four 12V/18 Ah batteries
227-968-xx*	MAAP-X point reporting, addressable, fire alarm control, mass notification, voice evacuation panel, integrated radio transceiver—single comm: • One AAC II backplane for ADCs/SOCs • One ADC II supporting 198 addressable devices • One SOC, 25 VAC RMS, 32W audio output • NEMA 4X **surface-mount** stainless steel enclosure 24 in. H x 24 in. W x 8 in. D • Two 12V/18 Ah batteries
227-969-xx*	MAAP-X point reporting, addressable, fire alarm control, mass notification, voice evacuation panel, integrated radio transceiver—single comm: • One AAC II backplane for ADCs/SOCs • One ADC II supporting 198 addressable devices • One SOC, 25 VAC RMS, 32W audio output • NEMA 3R **surface-mount** red enclosure 24 in. H x 24 in. W x 8 in. D • Two 12V/18 Ah batteries
*Specify frequency (-xx) when ordering.	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels with MNS

Hard-wire Only (Ethernet), Surface- and Flush-mount

Part Number	Description
227-955-EN*	MAAP-X point reporting, addressable, fire alarm control, mass notification, voice evacuation panel, hard-wire—single comm: • One AAC II backplane for ADCs/SOCs • One ADC II supporting 198 addressable devices • One SOC, 25 VAC RMS, 32W audio output • NEMA 1 **surface-mount** red enclosure 28 in. H x 18 in. W x 3.6 in. D • Two 12V/18 Ah batteries
227-956-EN*	MAAP-X point reporting, addressable, fire alarm control, mass notification, voice evacuation panel, hard-wire—single comm: • One AAC II backplane for ADCs/SOCs • One ADC II supporting 198 addressable devices • One SOC, 25 VAC RMS, 32W audio output • NEMA 1 **surface-mount** red enclosure 43 in. H x 18 in. W x 3.6 in. D • Four 12V/18 Ah batteries
227-965-EN*	MAAP-X point reporting, addressable, fire alarm control, mass notification, voice evacuation panel, hard-wire—single comm: • One AAC II backplane for ADCs/SOCs • One ADC II supporting 198 addressable devices • One SOC, 25 VAC RMS, 32W audio output • NEMA 1 **flush-mount** red enclosure 28 in. H x 18 in. W x 3.6 in. D • Two 12V/18 Ah batteries
227-966-EN*	MAAP-X point reporting, addressable, fire alarm control, mass notification, voice evacuation panel, hard-wire—single comm: • One AAC II backplane for ADCs/SOCs • One ADC II supporting 198 addressable devices • One SOC, 25 VAC RMS, 32W audio output • NEMA 1 **flush-mount** red enclosure 43 in. H x 18 in. W x 3.6 in. D • Four 12V/18 Ah batteries
***Does not support D-21 Central live voice; contact Monaco for options.	

Standalone — No Radio, Surface- and Flush-mount

Part Number	Description
227-955-NR	MAAP-X point reporting, addressable, fire alarm control, mass notification, voice evacuation panel, Standalone - No Radio: • One AAC II backplane for ADCs/SOCs • One ADC II supporting 198 addressable devices • One SOC, 25 VAC RMS, 32W audio output • NEMA 1 **surface-mount** red enclosure 28 in. H x 18 in. W x 3.6 in. D • Two 12V/18 Ah batteries
227-956-NR	MAAP-X point reporting, addressable, fire alarm control, mass notification, voice evacuation panel, Standalone - No Radio: • One AAC II backplane for ADCs/SOCs • One ADC II supporting 198 addressable devices • One SOC, 25 VAC RMS, 32W audio output • NEMA 1 **surface-mount** red enclosure 43 in. H x 18 in. W x 3.6 in. D • Four 12V/18 Ah batteries
227-965-NR	MAAP-X point reporting, addressable, fire alarm control, mass notification, voice evacuation panel, Standalone - No Radio: • One AAC II backplane for ADCs/SOCs • One ADC II supporting 198 addressable devices • One SOC, 25 VAC RMS, 32W audio output • NEMA 1 **flush-mount** red enclosure 28 in. H x 18 in. W x 3.6 in. D • Two 12V/18 Ah batteries
227-966-NR	MAAP-X point reporting, addressable, fire alarm control, mass notification, voice evacuation panel, Standalone - No Radio: • One AAC II backplane for ADCs/SOCs • One ADC II supporting 198 addressable devices • One SOC, 25 VAC RMS, 32W audio output • NEMA 1 **flush-mount** red enclosure 43 in. H x 18 in. W x 3.6 in. D • Four 12V/18 Ah batteries

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels with MNS

Associated Parts

Part Number	Description
081-156-00	Batteries with Enclosure: • NEMA 1 Red **surface-mount** enclosure, 18 in. H x 12 in. W x 6 in. D, with wire harness for use with M-2 conventional, MAAP+, MAAP-X and Vulcan I FACPs • Two 12 VDC/26 Ah batteries
122-012-00	Handheld PTT Microphone and holder for use on LOC/ RDU Touch Screen; includes 2 ft. cable for connection to LOC/RDU Touch Screen
122-012-05	Handheld PTT MNS Microphone in red enclosure, 8 in. H x 6 in. W x 3 in. D with window, includes 15 ft. cable for connecting to MAAP-X or LOC/RDU Touch Screen
122-012-06	Handheld Non-Emergency PTT Paging Microphone in red enclosure, 8 in. H x 6 in. W x 3 in. D, includes 15 ft. single cable for connecting to MAAP-X, LOC/RDU Touch Screen, or LOC Keypad; dual cable also included if connecting MNS and Paging microphone to the MAAP-X or LOC/RDU Touch Screen
708-032-01	HVAC Shutdown Kit, includes shutdown button and cover (Mini-Monitor Module P/N 729-218-00 not included)
176-194-00	Addressable Driver Card (ADC I), supports up to 198 addressable devices on a signaling line circuit **NOTE** Supports CLIP addressable devices only.
176-279-00	Addressable Driver Card (ADC II), supports up to 198 addressable devices on a signaling line circuit, RoHS compliant **NOTE** Supports CLIP and AP addressable devices.
176-286-02	MAAP-X LOC Multiplexer Kit, RS-422 to eight RS-485 ports and eight live voice audio ports with surge suppression, to support MAAP-X LOC/RDU Touch Screens and LOC Keypads per output • Required for connecting more than 10 LOCs to Sub-Panels • Always required for connecting LOCs to MAAP-X Panels See **NOTE 1**
176-272-00	Speaker Output Card (SOC), 32 watt Audio Amplifier Card, one Class A or two Class B Supervised Audio outputs for the MAAP-X
194-527-07	MAAP-X EN Fiber Optic to Ethernet Converter, single mode 1 Gb kit with mounting hardware (one required per Ethernet MAAP-X EN to convert it to Fiber Optic)
194-527-01	Fiber Optic to Ethernet Converter, single mode, 1 Gb (Spare part for P/N 194-527-07)

Part Number	Description
207-625-00	MAAP-X Addressable Planner Kit, thumb drive, CAT6 programming cable, 45 DTE-9F DCE adaptor
227-912-xx	MAAP-X Upgrade for M-1, M-2, MAAP(+) Fire only Panels with 28 in. high or larger enclosures; specify frequency (-xx) when ordering **NOTE** Can also use as a spare MAAP-X electronic package.
227-912-NR	MAAP-X Upgrade for M-1, M-2, MAAP(+) Fire only Panels with 28 in. high or larger enclosures, Standalone - No Radio: • One AAC II backplane for ADCs/SOCs • One ADC II supporting 198 addressable devices • One SOC, 25 VAC RMS, 32 watt audio output **NOTE** Can also use as a spare MAAP-X electronic package (no radio).
400-712-00	Battery, SLA, rechargeable, 12V/18 Ah, quick connect, 7.13 in. L x 3.03 in. W x 6.59 in. H, 12.6 lb
513-411-01	MAAP-X Tamper Switch Kit
710-054-01	Remote Text Annunciator, two line, 40 characters each
710-075-01	MAAP-X Text Display, 24 VDC, two line, multicolor, default text display, **requires MAAP-X Panel firmware version A.5.1 or higher**; see **NOTE 2** and **NOTE 3**
710-072-01	LOC/RDU with Touch Screen, fire/MNS, 19 in. H, surface-mount, 115/230 VAC, 50/60 Hz, 72-hour battery backup; see **NOTE 1**
710-072-02	LOC/RDU with Touch Screen, fire/MNS, 19 in. H, flush-mount, 115/230 VAC, 50/60 Hz, 72-hour battery backup; see **NOTE 1**

NOTE 1 The MAAP-X panel can support up to 30 LOCs. Of the 30 LOCs, a maximum of 10 can be LOC/RDU Touch Screens, the rest need to be LOC Keypads. All 30 can be LOC Keypads. Each MAAP-X enclosure can support one LOC MUX (P/N 176-286-02) that can support a total of 30 LOCs. Each LOC MUX has eight RS-485 outputs that LOCs can be connected to. Each RS-485 output can support 30 LOC Keypads maximum or eight LOC/RDU Touch Screens maximum. Contact Monaco if your system requires more LOCs.

NOTE 2 Requires Text Display Interface, Program Utility, and DC Power Supply, see cut sheet P/N 710-075-01 for more information.

NOTE 3 According to NFPA 72, 2010 24.4.2.21 when the two line multicolor text display is mounted more than 10 ft. above the floor with a viewing distance of more than 21 ft., the display is required to be configured with only a single line of text so the font is large enough to view properly.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

MNS Message Card Kit

Part Number	Description
326-M00-01	MAAP-X Standard Message Card—eight MNS, one Carbon Monoxide (CO), one Medical Emergency, and one Fire, for 11 total prerecorded messages These are summaries, not the full message text: • Message 1 Emergency, evacuate to designated area • Message 2 Bomb threat, evacuate at nearest exit • Message 3 Severe weather warning • Message 4 Intruder, follow designated pre-plan • Message 5 Shelter in-place • Message 6 Emergency, use alternate exit • Message 7 Emergency has ended • Message 8 Test of Monaco Mass Notification System • Message 9 CO Detected • Message 10 Medical Emergency (EMS) Dedicated Fire Message
326-M10-01	MAAP-X Customer Option Message Card Field Upgrade Kit—eight MNS, one fire, for nine total prerecorded messages **Message set information must be provided at time of ordering. Contact Monaco for the forms (P/N 001-583-02 for new message sets or P/N 001-583-01 for existing site established message sets). The form is needed to order this upgrade to replace existing messages at your site.**

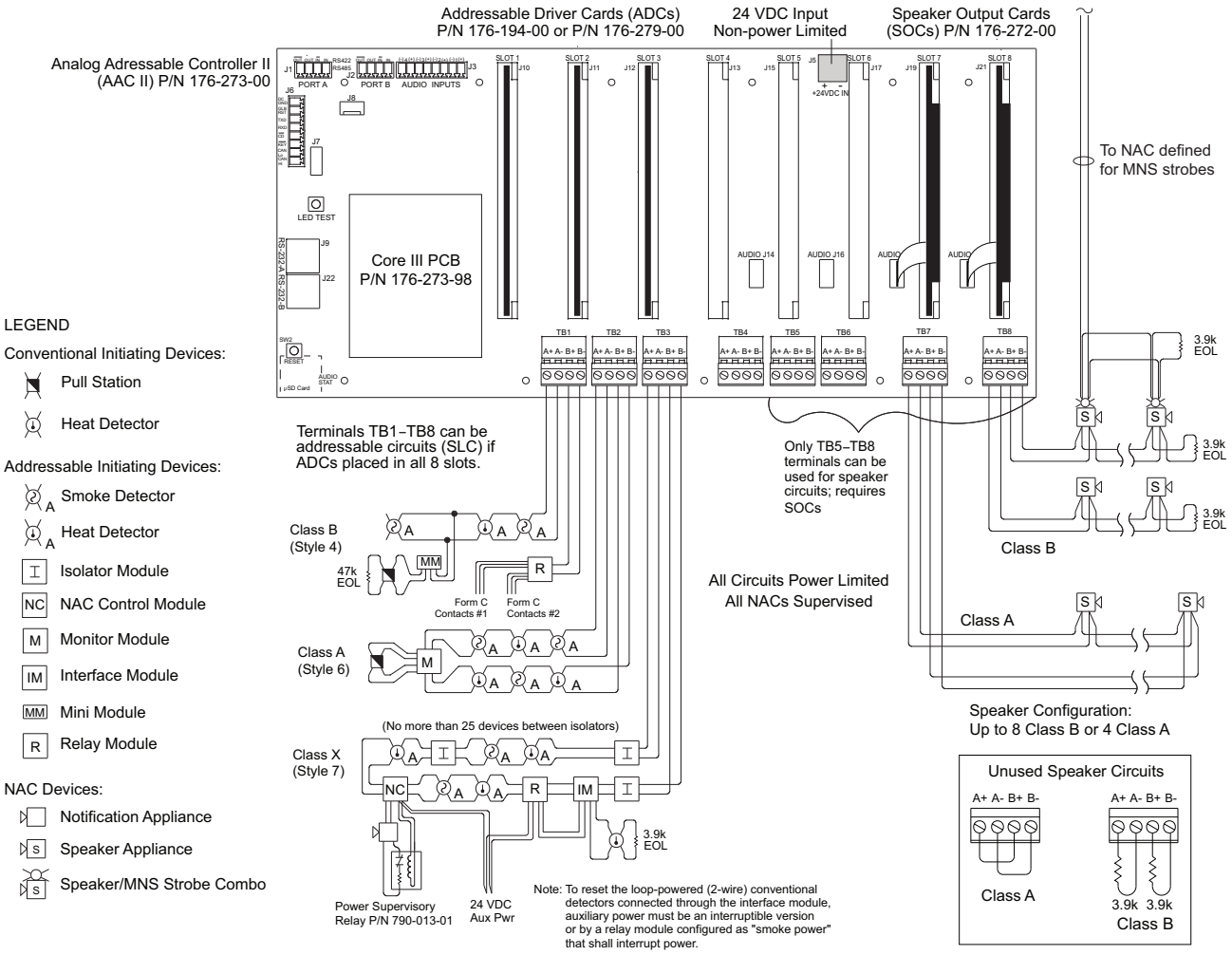
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels with MNS

Wiring Diagram

Addressable Circuits

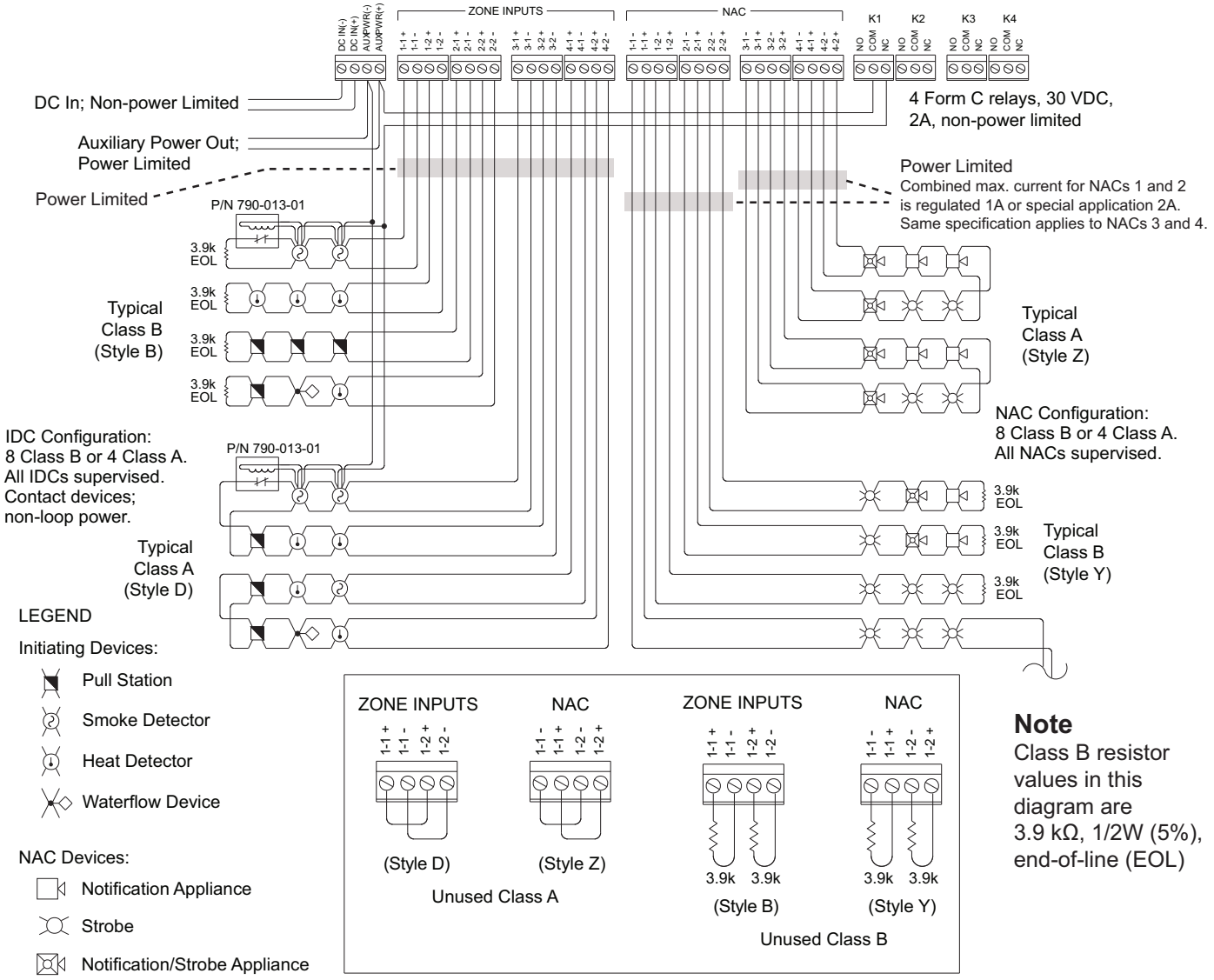


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

Conventional Circuits

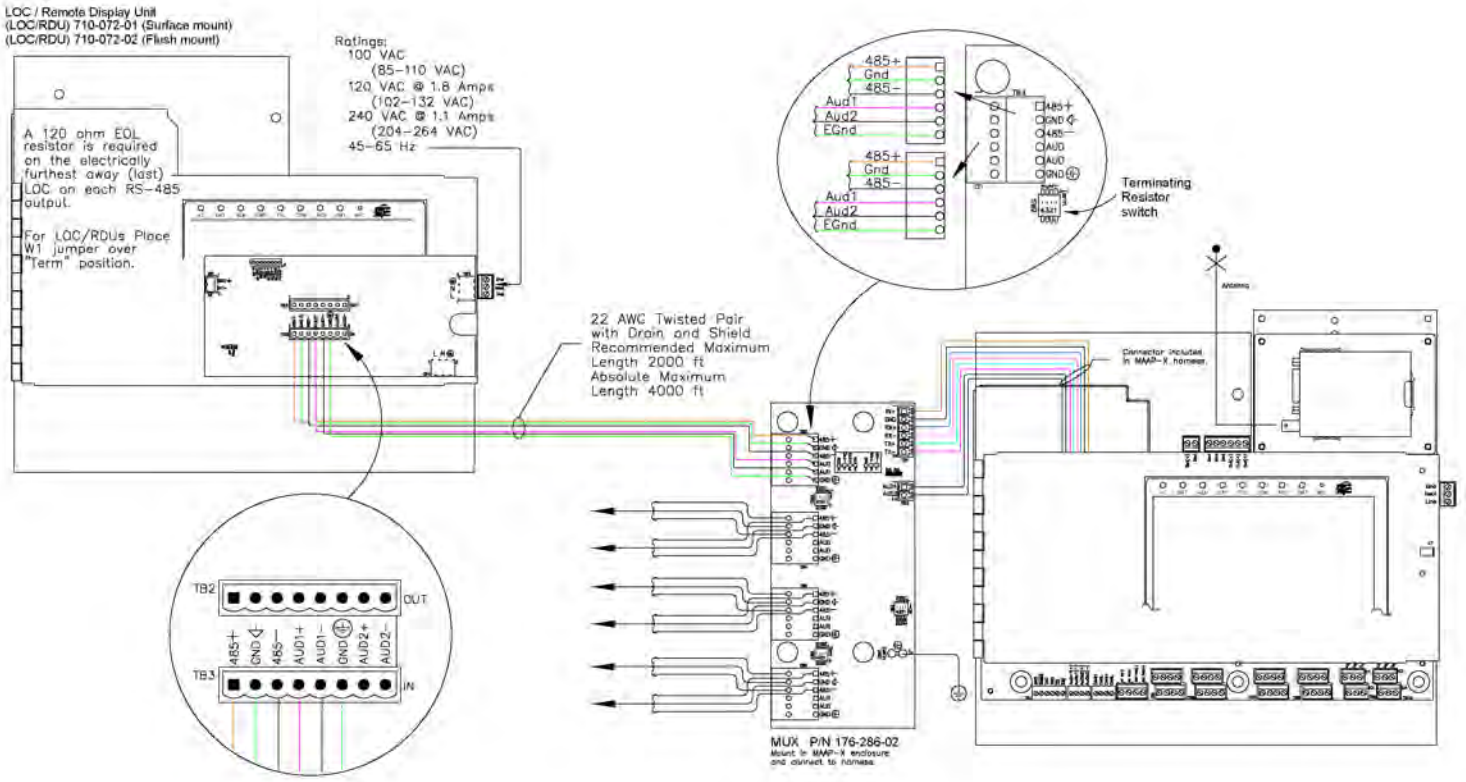


Note
Class B resistor values in this diagram are 3.9 kΩ, 1/2W (5%), end-of-line (EOL)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

MAAP-X to LOC/RDU Wiring



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

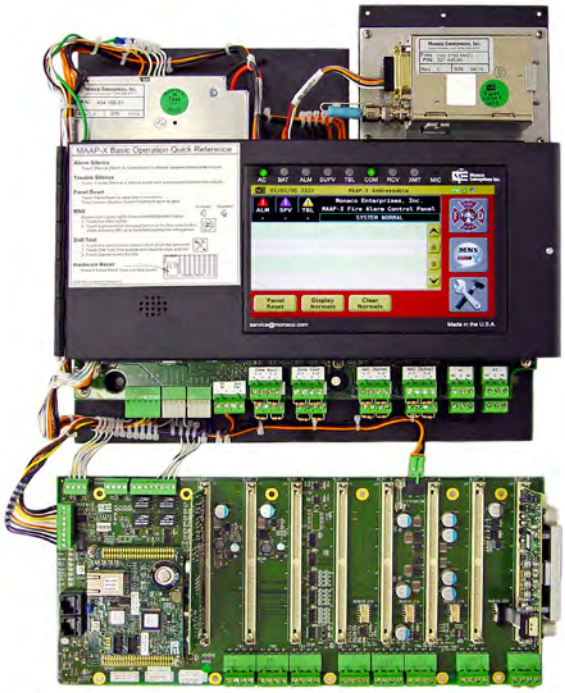
Addressable Fire Alarm Control Panels with MNS

MAAP-X Addressable FACP MNS Voice Evac Panel Upgrade Kit 227-912-xx

Description

MAAP-X is the premier addressable integrated fire and mass notification system (MNS) control panel from Monaco Enterprises, Inc. The MAAP-X comprises a single touch screen enclosure incorporating fire monitoring, addressable point reporting, live voice, and prerecorded MNS functions, which are compatible with the D-21 System.

Upgrading existing Monaco 28 in. or larger M-series fire only panels to MAAP-X fire and MNS panels is easy using the MAAP-X Upgrade Kit. The kit provides a cost-effective method to meet current building fire MNS requirements by adding new MNS devices and reusing the existing enclosure, conduits, wiring, and addressable devices.



Made in USA

Key Features

- Fully integrated panel combines transceiver, addressable fire panel, and mass notification
- Addressable point reporting
- Touch screen graphical interface with capability to extend to Local Operating Console/Remote Display Units (LOC/RDU)
- Live and prerecorded MNS functions and fire voice evacuation
- Up to 100 watts of audio amplification without booster circuits
- Built-in synchronized NAC, up to eight Class B or four Class A
- Compatible with the D-21 Central Receiving System
- Single, seamless upgrade from previous M-series Monaco panels
- Flexible configuration achieved with addition of speaker amplifier and addressable cards
- Built-in STIPA tone for audio intelligibility testing

MAAP-X Upgrade Kit

The base MAAP-X Upgrade Kit includes:

- A Master Control Unit (MCU) with a color touch screen for fire and MNS operation
- An MNS message card with nine standard prerecorded messages (eight dedicated MNS and one dedicated fire)
- An Analog Addressable Controller II (AAC II) Backplane
- One Addressable Driver Card II (ADC II)
- One Speaker Output Card (SOC)

On-board circuits:

- Eight Class B or four Class A non-loop powered initiating device circuits (IDCs)
- Eight Class B or four Class A regulated or synchronized programmable notification appliance circuits (NACs)
- Four Form C programmable relays

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels with MNS

- Autosensing power supply, 120/240 VAC, 50/60 Hz
- Dual rate 4A 24 VDC battery charger that meets the requirements of NFPA 72 and UL 864
- 24 VDC auxiliary power
- FSK interface for communication to D-21 through the standard integrated transceiver, optional network, or fiber module

Main Panel and LOC/RDU Touch Screen Features

- Fire and MNS operation for first responders
- Simple English messages identify alarm, trouble, and supervisory conditions
- Displays zone input or addressable device programmable descriptions
- User-defined device and zone descriptions
- Panel reset, alarm/trouble silence
- LED status indicators for primary/secondary power, radio communication, general alarm, and trouble
- Panel maintenance functions, such as:
  - Zone and sensor device enable/disable
  - Walktest
  - Radio key-up test
  - Enhanced diagnostic information for identifying panel troubles and loop faults
- Panel history
- Built-in microphone or optional push-to-talk (PTT) microphone for live voice

Message Card

- Standard card has eight MNS, one carbon monoxide (CO), one medical emergency, and one fire, for 11 total prerecorded messages
- User-defined messages available with a customer-option message card with eight user-defined prerecorded MNS messages and one user-defined prerecorded fire evacuation message

Analog Addressable Controller II (AAC II) Backplane

The AAC II Backplane has eight available card slots: all eight slots support ADCs, but only the last four slots can support SOCs.

Addressable Driver Card (ADC)

Each ADC supports one Class A/X or two Class B signaling line circuits (SLCs) for addressable device pathways. Each card supports 99 smoke or heat detectors and 99 monitor or control modules.

Options such as sounder or relay bases and fault isolator modules reduce the number of addressable devices (198 device equivalents maximum).

NOTE *The ADC II supports CLIP and AP addressable devices; the ADC I only supports CLIP addressable devices.*

Speaker Output Card (SOC)

Each SOC supports one Class A or two Class B speaker circuits for speaker audio pathways. Each card provides 25 VRMS, 32 watts of speaker audio power.

Additional MAAP-X Features

- Legacy zone-only fire reporting or point reporting for each addressable device
- Pre-tone and post-tone options for MNS messages
- Message time-outs can be set from 1 to 60 minutes
- MNS display screen can be customized by user
- MNS prioritized by LOC/RDU locations and message numbers with live voice override

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

- Text display notification using 2010 NFPA 72 compliant textual visual boards for emergency notification programmed to match MAAP-X MNS prerecorded messages
- Local speaker for MNS messages and audible alert for alarm, trouble, and supervisory notifications
- Additional battery backup expansion options available for increased operation times during AC power failures
- Automatic transfer between AC primary power and battery secondary power

Sensor Grouping

With point reporting enabled, MAAP-X supports the Monaco sensor group feature:

- Smoke detectors function together to control local sounder bases and reduce nuisance alarms
- Beneficial in dormitory environments, reducing costly response runs and building evacuations for isolated incidents

MNS and Paging PTT Microphones

- Handheld PTT MNS Microphone for use inside LOC/RDU enclosures; 2 ft. cable included
- Handheld PTT MNS Microphone in red 8 in. H x 6 in. W x 3 in. D Enclosure; 15 ft. cable for connection to MAAP-X included
- Handheld PTT Paging Microphone in red 8 in. H x 6 in. W x 3 in. Enclosure; 15 ft. single cable included for connection to MAAP-X and LOC
  - Dual cable also included if connecting MNS **and** paging microphone to the MAAP-X

MAAP-X Configuration Programming Software

MAAP-X Planner Kit allows the user to program the panel. Planner functions include:

- Uploading/downloading the MAAP-X program file to/from the panel
- Creating a MAAP-X configuration file that can be imported into the D-21 Central; manual information entry to D-21 not needed
- Central reporting modes:
  - Point reporting (addressable device addresses with zone reporting to D-21 and MNS operation)
  - Legacy (zone reporting to D-21 and MNS operation)
  - Stand-alone (in-building fire and MNS operation only)
- Setting D-21 Central communication modes—radio or hard-wire (Ethernet, fiber), single comm or dual comm
- Configuring fire and MNS device circuits
- Configuring MAAP-X and LOC/RDUs for fire and MNS operation
- Providing the ability to keep panel configuration files for backup
- Windows® (XP, 7.0, 8.0, 10) compatible Monaco MAAP-X Planner software
- Defining zone and device descriptions

MAAP-X D-21 Configuration Options

Panel Configuration

A configuration file copy is stored at the D-21 and can be used as a backup.

Mass Notification

- In-building, prerecorded, and live voice MNS from the main panel, LOC/RDUs, and from D-21 Central systems configured for base-wide MNS
- Preconfigured MNS message files streamed from D-21 Central systems configured for broadcast MNS

Fire Zone Reporting

- MAAP-X can be configured for legacy fire non-point- reporting and is compatible with D-21 Central systems configured with an FSK interface
- MAAP-X displays the address of the individual device in alarm on its touch screen and reports up to 64 fire zones to the D-21

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels with MNS

Fire Point Reporting

- MAAP-X supports Monaco's advanced fire point reporting and is compatible with D-21 Central Systems configured for point reporting
- Individually reports alarm and trouble status of addressable sensors and monitor modules in real-time to the D-21 Central

D-21 Connectivity

- MAAP-X supports radio (site-specific narrowband frequency) and hard-wire communication
- User-selected central communication mode—primary only or primary with fallback to secondary
- Only one antenna system needed for radio communication; hard-wire options include Ethernet and fiber-optic

Panel Clock Synchronization

- D-21 can be configured to synchronize the MAAP-X internal clock and calendar
- Synchronizing eliminates the need to adjust each panel for daylight-savings time

Software Version

MAAP-X requires D-21 software with MAAP-X support. An RFM-X is required for point reporting and MNS.

Hardware Specifications

Electrical

IDC (Zone Inputs)
Capacity: four Class A or eight Class B
Non-loop power: 4 VDC with EOL, 12 VDC at 25 mA maximum
EOL: 3.9 kohms 1/4 watt, Class B only
Maximum loop resistance: 50 ohm per leg

NAC Outputs
Capacity: four Class A or eight Class B, polarity reversing
EOL: 3.9 kohms 1/4 watt, Class B only
NACs programmed as "regulated":
Power: 24 VDC, 1A
Maximum loop resistance: 1.5 ohm per leg
NACs programmed as "special application" (synchronized strobes):
Power: 24 VDC 2A
Maximum loop resistance: 0.75 ohm per leg
Wiring: Standard fire alarm rated cable

SLC (Addressable)
Per ADC:
- Two Class B or one Class A/X SLC input(s)
- 99 smoke or heat sensors
- 99 monitor or control modules

Power: 0 to 29 VDC polling protocol
Supervision: open, short, ground fault
Maximum loop resistance: 40 ohm per leg
Wiring: Unshielded twisted pair

Speaker Circuits
Per SOC: two Class B or one Class A output(s)
Power: 25 VAC RMS, 32 watts maximum each, 100 watts total
Supervision: open, short, ground fault
EOL: 3.9 kohms 1/4 watt, Class B only
Maximum loop resistance: 1.5 ohms per leg
Wiring: Standard fire alarm rated cable

AUX Power
Power: 24 VDC, 2A
Supervision: none
Maximum loop resistance: 1 ohm per leg
Wiring: Standard fire-alarm-rated cable

AUX Audio Input
Transformer coupled 600 ohm audio input
- 0.3000 Vrms = 0.85V; P-P = –10.46 dBV
- 0.3535 Vrms = 1.00V; P-P = –9.03 dBV
- 0.7071 Vrms = 2.00V; P-P = –3.01 dBV
- 0.7750 Vrms = 2.19V; P-P = –2.21 dBV

Requires a closed contact trigger

Relays, K1–K4
Contact rating: 30 VDC at 2A maximum
Supervision: none

Radio Output Power
4 watts minimum (2 watts, some frequencies)

Battery Backup
Standard: 2 rechargeable 12V/18 Ah
Integrated charger: supervised dual rate, meets NFPA 72 and UL864 requirements, 27.6 VDC 4A
Low battery alert: 20.4 VDC
Low battery disconnect: 18.5 VDC

AC Power
3-wire autosensing, 120/240 VAC 50/60 Hz 2.2/1.2A

Radio
Narrowband radio meets requirements of the National Telecommunications and Information Administration Manual of Regulations and Procedures for Federal Frequency Management
FCC certified

Environmental

Operating Temperature 32°F to 120°F (0°C to 49°C)

Relative Humidity 0% to 90%, non-condensing

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

Ordering Information

Part Number	Description
227-912-xx	MAAP-X Upgrade for M-1, M-2, MAAP(+) Fire only Panels with 28 in. high or larger enclosures; specify frequency (-xx) when ordering **NOTE** Can also use as a spare MAAP-X electronic package.

Associated Parts

Part Number	Description
081-156-00	Batteries with Enclosure: • NEMA 1 red surface-mount enclosure, 18 in. H x 12 in. W x 6 in. D, with wire harness for use with M-2 conventional, MAAP+, MAAP-X, and Vulcan I FACPs • Two 12 VDC/26 Ah batteries
122-012-00	Handheld PTT Microphone and Holder for use on LOC/ RDU Touch Screen, includes 2 ft. cable for connection to LOC/RDU Touch Screen
122-012-05	Handheld PTT MNS Microphone in red Enclosure with window, 8 in. H x 6 in. W x 3 in. D, includes 15 ft. cable for connecting to MAAP-X or LOC/RDU Touch Screen
122-012-06	Handheld Non-Emergency PTT Paging Microphone in red enclosure, 8 in. H x 6 in. W x 3 in. D with window, includes 15 ft. single cable for connecting to MAAP-X, LOC/RDU Touch Screen, or LOC Keypad; dual cable also included if connecting MNS and paging microphone to the MAAP-X or LOC/RDU Touch Screen
176-194-00	Addressable Driver Card (ADC I), supports up to 198 addressable devices on a signaling line circuit **NOTE** Supports CLIP addressable devices only.
176-279-00	Addressable Driver Card (ADC II), supports up to 198 addressable devices on a signaling line circuit, RoHS compliant **NOTE** Supports CLIP and AP addressable devices.
176-286-02	MAAP-X LOC Multiplexer Kit, RS-422 to eight RS-485 ports and eight live voice audio ports with surge suppression, to support MAAP-X LOC/RDU Touch Screens and LOC Keypads per output • Required for connecting more than 10 LOCs to Sub-Panels • Always required for connecting LOCs to MAAP-X Panels See **NOTE 1**
176-272-00	Speaker Output Card (SOC), 32 watt audio amplifier card, one Class A or two Class B supervised audio outputs for the MAAP-X
207-625-00	MAAP-X Addressable Planner Kit, thumb drive, CAT6 programming cable, 45 DTE-9F DCE adaptor
400-712-00	Battery, SLA, rechargeable, 12V/18 Ah, quick connect, 7.13 in. L x 3.03 in. W x 6.59 in. H, 12.6 lb
513-411-01	MAAP-X Tamper Switch Kit
710-054-01	Remote Text Annunciator, two line, 40 characters each
710-075-01	MAAP-X Text Display, 24 VDC, two line, multicolor, default text display, **requires MAAP-X Panel firmware version A.5.1 or higher**; see **NOTE 2** and **NOTE 3**
710-072-01	MAAP-X LOC/RDU Touch Screen, Fire/MNS, 19 in. H, surface-mount, 115/230 VAC, 50/60 Hz, 72-hour battery backup; see **NOTE 1**
710-072-02	MAAP-X LOC/RDU Touch Screen, Fire/MNS, 19 in. H, flush-mount, 115/230 VAC, 50/60 Hz, 72-hour battery backup; see **NOTE 1**
NOTE 1 The MAAP-X Panel can support up to 30 LOCs. Of the 30 LOCs, a maximum of 10 can be LOC/RDU Touch Screens— the rest need to be LOC Keypads. All 30 can be LOC Keypads. Each MAAP-X enclosure can support one LOC MUX (P/N 176-286-02) that can support a total of 30 LOCs. Each LOC MUX has eight RS-485 outputs that LOCs can be connected to. Each RS-485 output can support 30 LOC Keypads maximum or eight LOC/RDU Touch Screens maximum. Contact Monaco if your system requires more LOCs.	
NOTE 2 Requires Text Display Interface, Program Utility, and DC Power Supply; see cut sheet P/N 710-075-01 for more information.	
NOTE 3 According to NFPA 72, 2010 24.4.2.21, when the two line, multicolor text display is mounted more than 10 ft. above the floor with a viewing distance of more than 21 ft., the display is required to be configured with only a single line of text so the font is large enough to view properly.	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

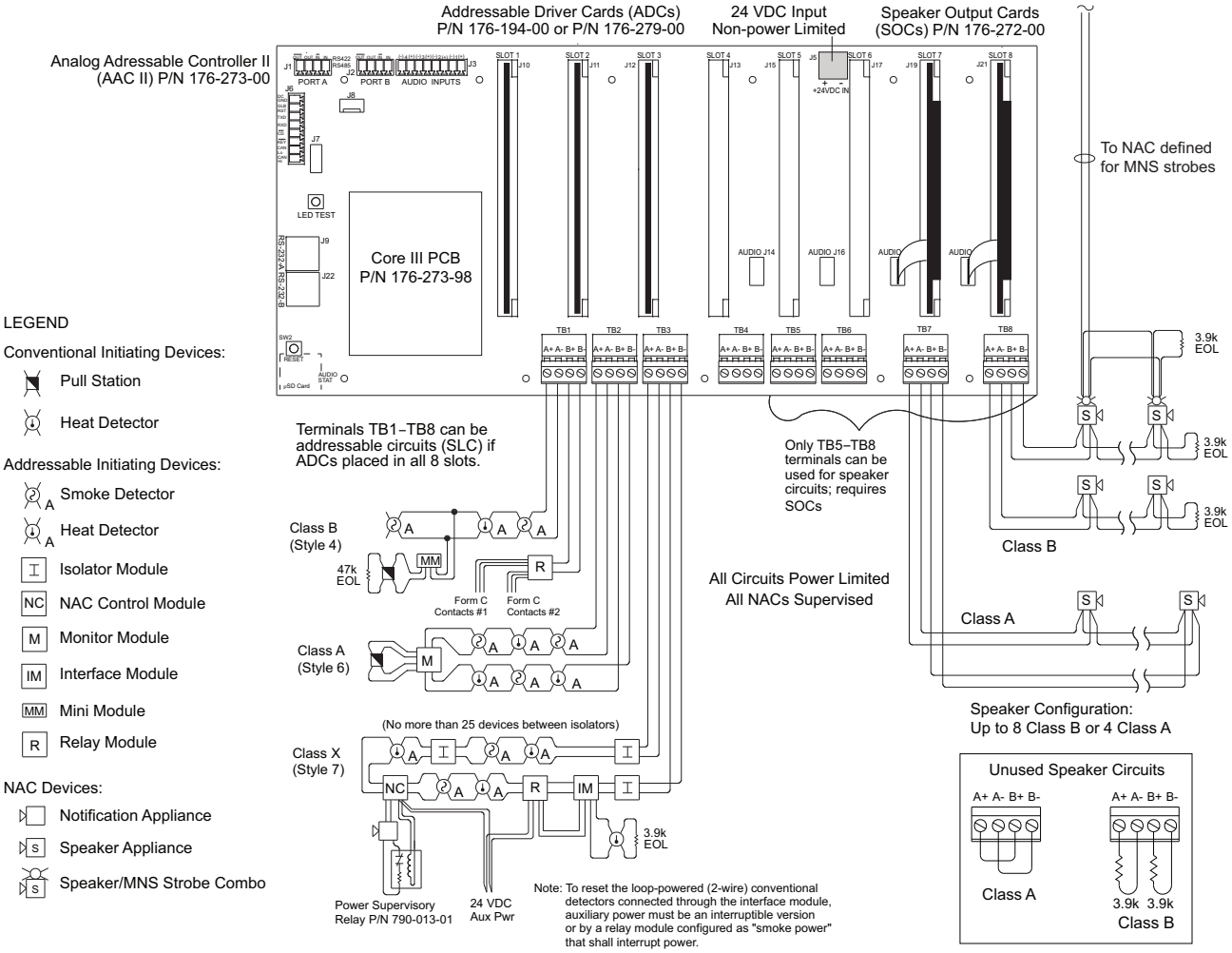
MNS Message Card Kit

Part Number	Description
326-M00-01	MAAP-X Standard Message Card—eight MNS, one Carbon Monoxide (CO), one Medical Emergency, and one Fire, for 11 total prerecorded messages These are summaries, not the full message text: • Message 1 Emergency, evacuate to designated area • Message 2 Bomb threat, evacuate at nearest exit • Message 3 Severe weather warning • Message 4 Intruder, follow designated pre-plan • Message 5 Shelter in-place • Message 6 Emergency, use alternate exit • Message 7 Emergency has ended • Message 8 Test of Monaco Mass Notification System • Message 9 CO Detected • Message 10 Medical Emergency (EMS) Dedicated Fire Message
326-M10-01	MAAP-X Customer Option Message Card Field Upgrade Kit— eight MNS, one fire, for nine total prerecorded messages **Message set information must be provided at time of ordering. Contact Monaco for the forms (P/N 001-583-02 for new message sets or P/N 001-583-01 for existing site established message sets). The form is needed to order this upgrade to replace existing messages at your site.**

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Wiring Diagrams

Addressable Circuits

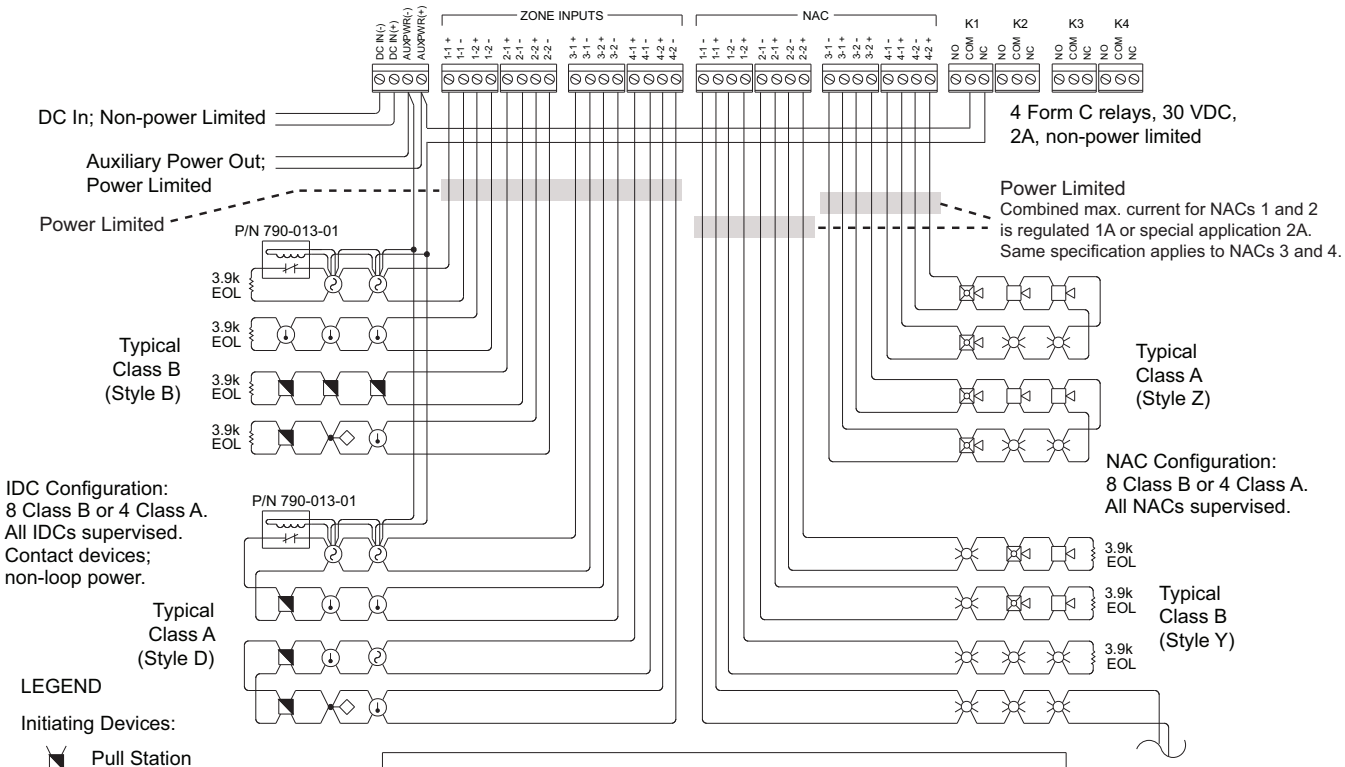


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

Conventional Circuits

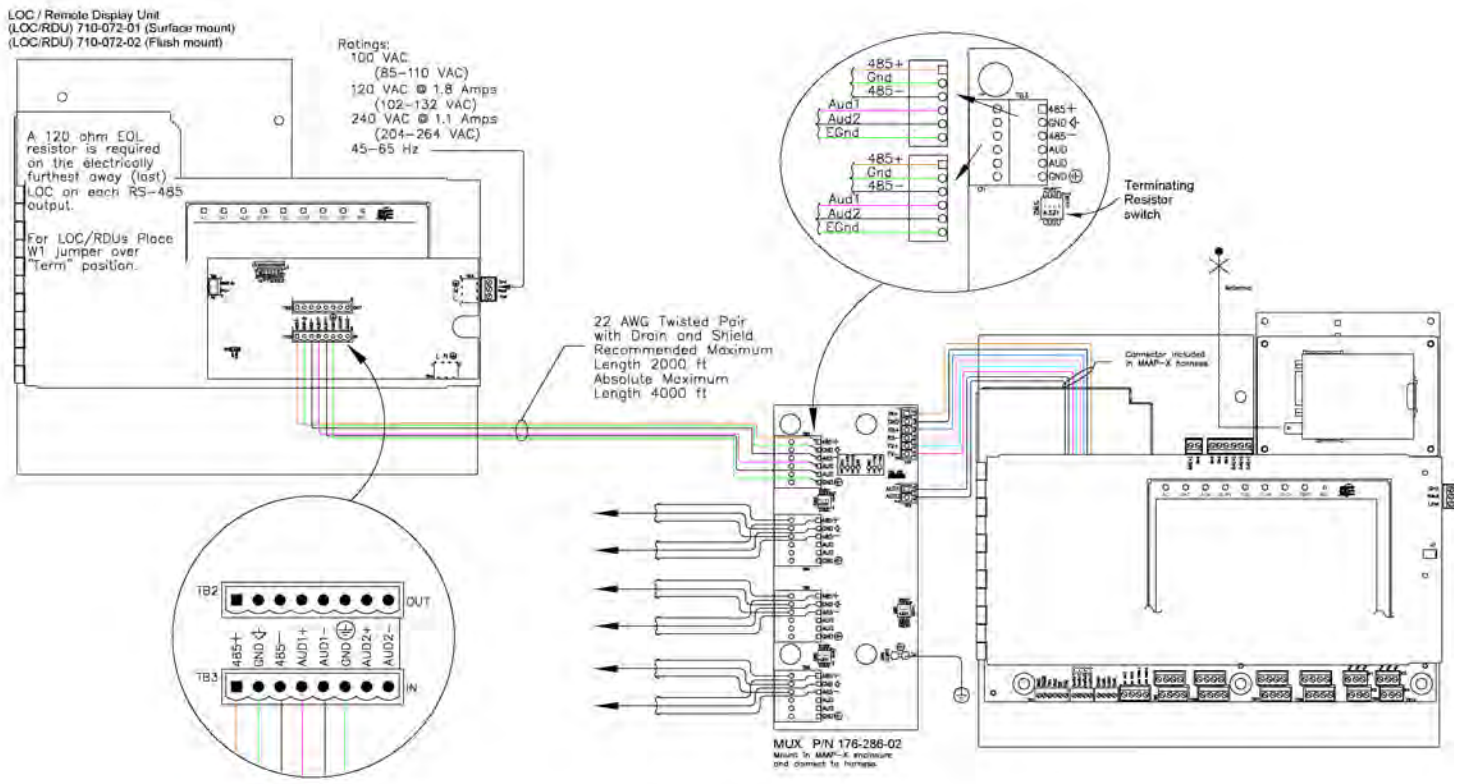


Note
Class B resistor values in this diagram are 3.9 kΩ, 1/2W (5%), end-of-line (EOL)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

MAAP-X to LOC/RDU Wiring



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

MAAP-X Addressable Fire Alarm Expansion Backplane
176-273-99

Description

The latest Monaco MAAP-X FACP with the new CORE III processor has the ability to communicate with up to two MAAP-X Expansion Backplanes within the same enclosure. The MAAP-X Expansion Backplanes are intelligent AAC II (Analog Addressable Controllers II) that support ADCs for addressable devices and SOCs for speaker devices. The AAC II backplane has eight card slots. All eight card slots support ADCs, but only the last four card slots can support SOCs. Each ADC can support 99 addressable detectors and 99 addressable modules. Each SOC can support 32 watts of speaker power, with the combined total of the four SOC cards limited to 100 W. NAC Strobe Devices are supported and activated by an Addressable NAC module connected to a NAC Booster panel. Text Displays, LOC Keypads for MNS or LOC Touch Screens for Fire Annunciation/control and MNS can be added to MAAP-X Sub-Panels. If auxiliary power is needed at a MAAP-X Sub-Panel location, an Auxiliary Power Supply will need to be added.

A fully expanded MAAP-X System supports up to six intelligent AAC II backplanes. There is always one in the MAAP-X enclosure. The remaining five AAC II backplanes can all be in MAAP-X Sub-Panels; or two of the five AAC II backplanes can also be located in the MAAP-X enclosure for a maximum total of three AAC II backplanes in the MAAP-X enclosure with the remaining three AAC II backplanes in MAAP-X Sub-Panels. When the AAC II backplanes are installed in the MAAP-X enclosure they are called **MAAP-X Expansion Backplanes**.

Features

- MAAP-X Systems provide Addressable Fire Detection, prerecorded and live voice MNS compatible with the Monaco D-21 System.
- A MAAP-X panel with the CORE III processor can have up to two MAAP-X Expansion Backplanes. If the MAAP-X system also has more than three MAAP-X Sub-Panels (five maximum), it reduces the number of MAAP-X Expansion Backplanes, one to one.
- Each MAAP-X Expansion Backplane contains an AAC II backplane that supports ADCs for addressable devices and SOCs for speaker devices. There are eight card slots available. All eight slots support ADCs, but only the last four slots can support SOCs.
- MAAP-X Expansion Backplanes can also support LOCs and Text Displays.
  - Additional kits are added to MAAP-X System to support connected Text Displays and LOCs.
- A fully expanded MAAP-X System supports a maximum of:
  - 6 AAC II Backplanes
  - 28 Addressable Driver Cards (ADCs)
  - 24 Speaker Output Cards (SOCs)
  - 30 Local Operating Consoles (LOCs)
  - 64 Text Displays

  NOTE The number of ADCs and SOCs may be less based on the MAAP-X System configuration.
- MAAP-X Systems provide options for both prerecorded and live voice MNS.
- Battery backup must be ordered separately and requires a separate enclosure.
- Contact your Monaco Customer Service Representative for available MAAP-X System configurations to meet your requirements.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels with MNS

Specifications

Electrical

SLC (Addressable) Per ADC:
- 2 Class B or 1 Class A/X SLC input(s)
- 99 smoke or heat sensors
- 99 monitor or control modules

Power: 0 to 29 VDC polling protocol
Supervision: open, short, ground fault
Max. loop resistance: 40 ohms per leg
Wiring: unshielded twisted pair

IDC (Zone Inputs) Requires addressable modules on Signaling Line Circuits, such as:
Monitor Module, P/N 729-142-00
10 Input Monitor Mod, P/N 729-162-00
Mini Monitor Module, P/N 729-143-00
2-Wire Interface Mod, P/N 729-144-00

NAC (Notification Appliance Circuit Outputs) Requires addressable modules on Signaling Line Circuits, such as:
Supervised Module, P/N 729-158-00
NAC Power Boosters:
Extender 120V 8A, P/N 404-126-00
Extender 220V 8A, P/N 404-126-01
Extender 120V 10A, P/N 404-106-00

Relays, Addressable Only Requires addressable modules on Signaling Line Circuits, such as:
Relay Module, P/N 729-159-00
6 Output Relay Mod, P/N 729-165-00

Line-Level Audio Circuits (LOC to MAAP-X Sub-Panel) Minimum 22 AWG twisted pair with drain and shield
Recommended max. length 2,000 ft.
Absolute max. length 4,000 ft.

RS-485 Communication Circuits (LOC to MAAP-X Sub-Panel) Minimum 24 AWG twisted pair with drain and shield
Recommended max. length 2,000 ft.
Absolute max. length 4,000 ft.
Recommended wire impedance 120 ohms

Speaker Circuits Per SOC: 2 Class B or 1 Class A output(s)
Power: 25 VAC RMS (70.7V P-P),
32 W max. each, 100 W max. per MAAP-X AAC II Backplane (four SOCs max.)
Frequency Response Range: 100 Hz to 10,000 Hz
Supervision: open, short, ground fault
EOL: 3.9 kohm 1/4 W, Class B only
Max. loop resistance: 1.5 ohms per leg
Min. load impedance rating: 25 ohms
Wiring: Standard fire-alarm-rated cable

AUX PWR Requires 24 VDC Auxiliary Power Supply
8A power supply 110V, P/N 404-098-00
8A power supply 230V, P/N 404-098-10
6A power supply 110/230V, P/N 404-150-00

Battery Backup Separate battery enclosure; batteries and enclosure sold separately
Low battery trouble: 21.5 VDC
Low battery disconnect: 19.8 VDC
Battery Float Charge: 27.6 VDC, 3A max.
Battery Boost Charge: 28.8 VDC, 3A max.

AC Input 3-wire autosensing, 100/120/240 VAC, 50/60 Hz, 4.5A to 2A
100 VAC @ 4.5A, (85 to 110 VAC)
120 VAC @ 4.5A, (102 to 132 VAC)
240 VAC @ 2A, (204 to 264 VAC)

AC Fail 100 VAC, below 70 VAC
120 VAC, below 70 VAC
240 VAC, below 70 VAC
< 70 VAC, AC Fail annunciated
< 40 VAC, switches to secondary battery power only
> 60 VAC, switches back to primary AC power

DC Power 24 VDC (nominal)
Factory-adjusted to 28.5 VDC
3A maximum battery charge current
0.320A typical in Standby current
10A max. total for power supply output

Environmental

Operating Temperature 32°F to 120°F (0°C to 40°C)

Relative Humidity 0% to 90% non-condensing

Electrical Specifications: Sub-Panel and Fiber Kits

Part Number	DC Input	DC Current
176-286-02	24 VDC (nominal), 18.5 VDC to 30 VDC	0.035A typical, 0.195A maximum
200-495-02	24 VDC (nominal), 12 VDC to 48 VDC	0.263A maximum
200-490-02	24 VDC (nominal), 12 VDC to 48 VDC	0.233A maximum
194-535-03	24 VDC (nominal), 9 VDC to 36 VDC	0.250A maximum
194-535-02	24 VDC (nominal), 9 VDC to 36 VDC	0.125A maximum
194-538-02	24 VDC (nominal), 10 VDC to 48 VDC	0.108A maximum

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

Ordering Information

MAAP-X Sub-Panel

Part Number	Description
176-273-99	MAAP-X Expansion Backplane Assembly, point reporting, addressable, fire alarm control, mass notification, voice evacuation panel. Must be installed in the main MAAP-X Panel enclosure. • NEMA 1, red enclosure, Surface-mount or flush-mount, 28 in., 43 in. or 60 in. options • 100–240 VAC, 50/60 Hz • ADCs and SOCs sold separately • Batteries and enclosure sold separately

Associated Parts

Part Number	Description
176-286-03	MAAP-X Sub-Panel Text Display Multiplexer (MUX) Kit
176-286-02	MAAP-X Sub-Panel LOC Multiplexer Kit (required for more than 10 LOCs); RS-422 to eight RS-485 ports with surge suppression, 24 VDC, to support MAAP-X LOC/RDU Touch Screens and LOC Keypads per output See **NOTE 1**.
176-297-01	MAAP-X Sub-Panel LOC surge protector PCB kit for connecting up to 10 LOCs
200-495-02	MAAP-X Panel Ethernet Kit 4FO/4CO
200-490-02	MAAP-X Panel Ethernet Kit 2FO/3CO
710-075-01	MAAP-X Text Display, 24 VDC, two line, multicolor, default text display; requires MAAP-X Panel firmware version A.4.6 or higher See **NOTE 2** and **NOTE 3**.
710-072-01	MAAP-X LOC/RDU Touch Screen, fire/MNS, 19 in. H, surface-mount, 115/230 VAC, 50/60 Hz, 72-hour battery backup See **NOTE 1**.
710-072-02	MAAP-X LOC/RDU Touch Screen, fire/MNS, 19 in. H, flush- mount, 115/230 VAC, 50/60 Hz, 72-hour battery backup See **NOTE 1**.
207-625-00	MAAP-X Addressable Planner kit, thumb drive, CAT6 programming cable, 45 DTE-9F DCE adaptor

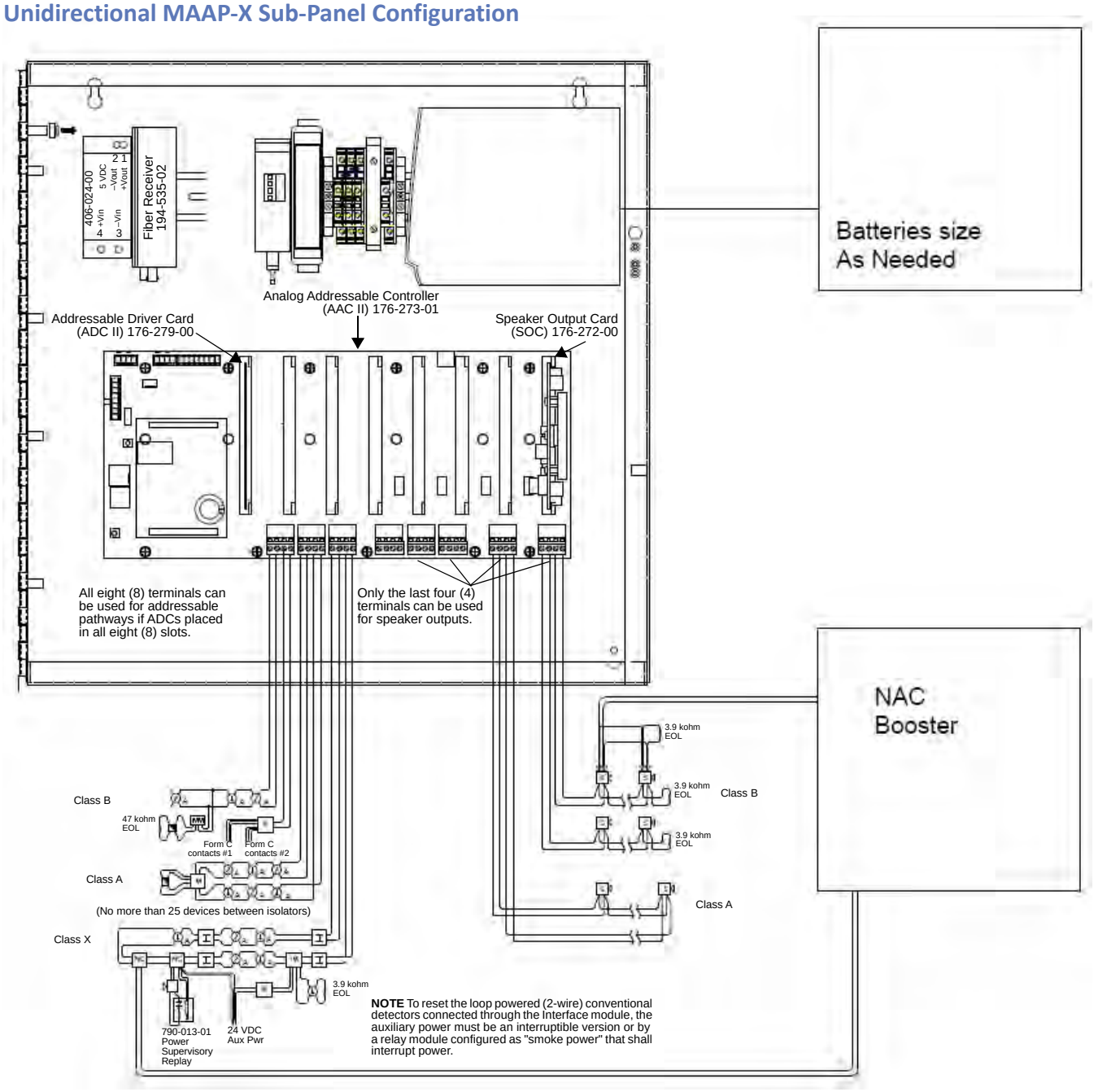
Part Number	Description
176-194-00	Addressable Driver Card (ADC I), supports up to 198 addressable devices on a Signaling Line Circuit **NOTE** Supports CLIP addressable devices only.
176-279-00	Addressable Driver Card (ADC II), supports up to 198 addressable devices on a Signaling Line Circuit, RoHS compliant **NOTE** Supports CLIP and AP addressable devices.
176-272-00	Speaker Output Card (SOC), 32 W AUDIO AMPLIFIER CARD, one Class A or two Class B SUPERVISED Audio outputs for the MAAP-X
NOTE 1 The MAAP-X Panel can support up to 30 LOCs. Of the 30 LOCs a maximum of 10 can be LOC/RDU Touch Screens, the rest need to be LOC Keypads. All 30 can be LOC Keypads. Each MAAP-X enclosure can support one LOC MUX (P/N 176-286-02) that can support a total of 30 LOCs. Each LOC MUX has eight RS-485 outputs that LOCs can be connected to. Each RS-485 output can support 30 LOC Keypads maximum or eight LOC/RDU Touch Screens maximum.Contact Monaco if your system requires more LOCs.	
NOTE 2 Requires Text Display Interface, Program Utility and DC Power Supply, see Cut Sheet 710-075-01 for more information.	
NOTE 3 According to NFPA 72, 2010 24.4.2.21 when the two line, multicolor, text display is mounted more than 10 ft. above the floor with a viewing distance of more than 21 ft., the display is required to be configured with only a single line of text so the font is large enough to view properly.	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Drawings (PLACEHOLDERS)

Unidirectional MAAP-X Sub-Panel Configuration

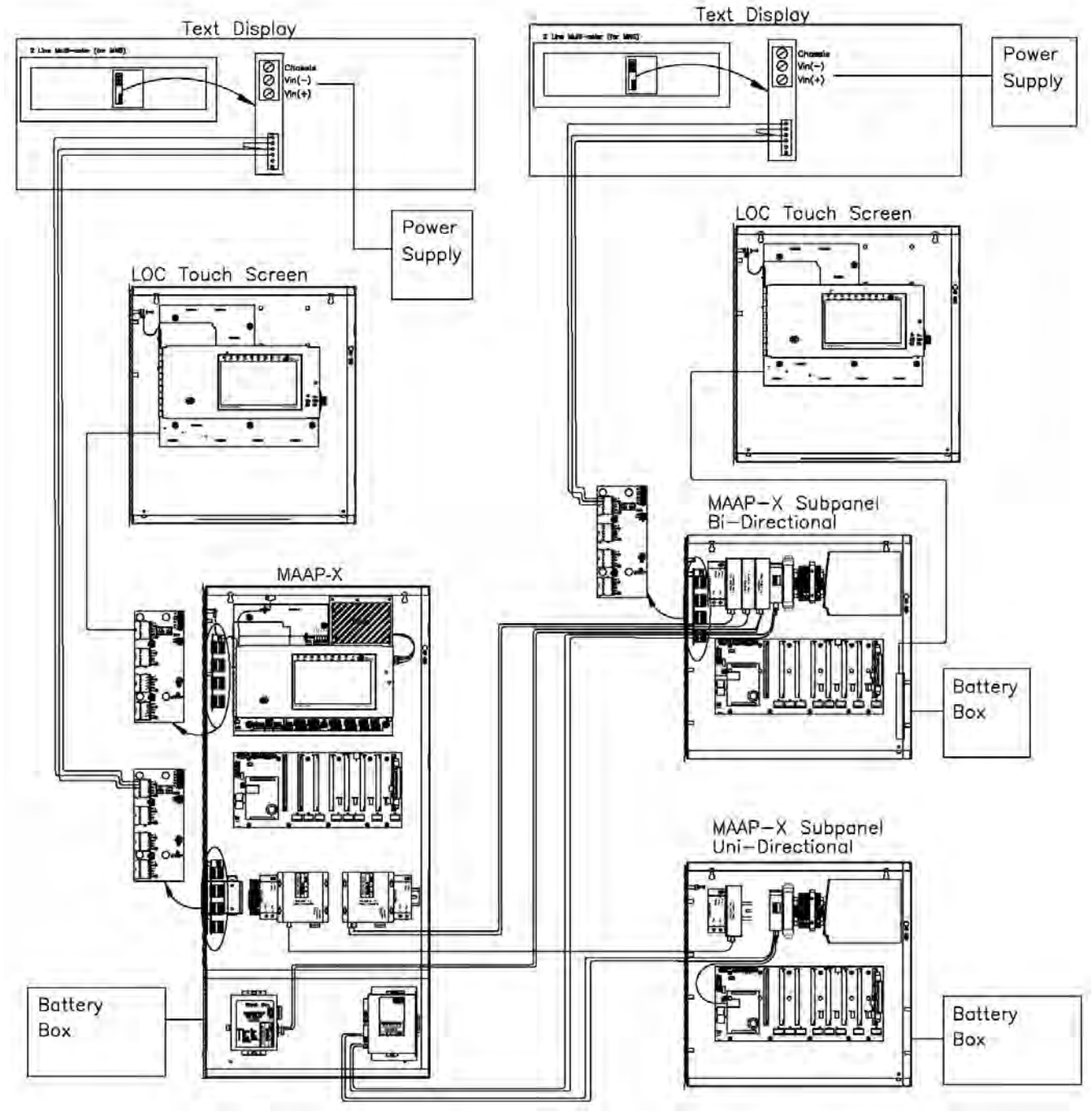


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

MAAP-X System Configuration Option: Includes two Sub-Panels, two LOCs, and two Text Displays



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels with MNS

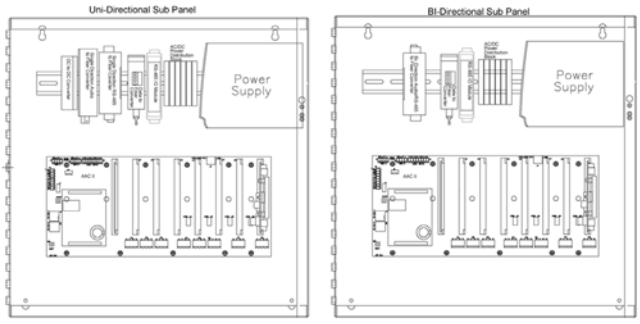
MAAP-X Addressable Fire Alarm Sub-Panel

700-101-00

Description

The latest Monaco MAAP-X FACP with the new CORE III processor has the ability to communicate with up to two MAAP-X Expansion Backplanes within the same enclosure. The MAAP-X and every MAAP-X Sub-Panel contains an intelligent AAC II backplane (Analog Addressable Controller II) with eight card slots: all eight card slots support ADCs for addressable devices, but only the last four card slots can support SOCs for speaker devices. Each ADC can support 99 addressable detectors and 99 addressable modules. Each SOC can support 32W of speaker power, with the combined total of the four SOC cards limited to 100W.

NAC Strobe Devices are supported and activated by an Addressable NAC module, which is connected to a NAC Booster panel. Text Displays, LOC Keypads for MNS, or LOC Touch Screens for Fire Annunciation/control and MNS can be added to MAAP-X Sub-Panels. If auxiliary power is needed at a MAAP-X Sub-Panel location, an Auxiliary Power Supply will need to be added.



A fully expanded MAAP-X System supports up to six intelligent AAC II backplanes, including the main backplane that will always be in the MAAP-X enclosure. The MAAP-X enclosure can accommodate a maximum of three backplanes: the main backplane and two additional AAC II backplanes. When the two additional AAC II backplanes are installed in the MAAP-X enclosure, they are called **MAAP-X Expansion Backplanes.** AAC II backplanes that are not mounted in the MAAP-X enclosure must be mounted in MAAP-X Sub-Panels.

The MAAP-X Sub-Panel offers two communication options that must be determined before ordering:

MAAP-X Unidirectional Sub-Panels can only receive audio sent from the MAAP-X panel; they cannot send audio to the MAAP-X panel. Unidirectional Sub-Panels are typically installed in SCIF areas where audio can only pass into the SCIF area but not out.

MAAP-X Bidirectional Sub-Panels can receive audio from the MAAP-X panel and can also send audio to the MAAP-X panel from LOCs for broadcast to all speaker devices on the MAAP-X System. Bidirectional Sub-Panels are not typically used in SCIF areas but are used in larger systems that have LOCs colocated with the MAAP-X Sub-Panels.

Features

- MAAP-X Systems provide Addressable Fire Detection, prerecorded and live voice MNS compatible with the Monaco D-21 System
- MAAP-X Sub-Panels communicate to the main MAAP-X over fiber connections
  - The cables are single mode fiber with SC and ST connectors and can cover distances up to 9.3 miles (15 km)
- A MAAP-X panel with the CORE III processor can have up to five MAAP-X Sub-Panels connected to it
  - If the MAAP-X panel has MAAP-X Expansion Backplanes (two maximum) installed in the MAAP-X enclosure, it reduces the number of supported MAAP-X Sub-Panels, one to one
- Each MAAP-X Sub-Panel contains an AAC II backplane with eight available card slots: all eight slots support ADCs, but only the last four slots can support SOCs
- MAAP-X Sub-Panels are either Unidirectional for SCIF areas with no LOCs; or Bidirectional when LOCs are colocated with them
  - Additional kits are added to the MAAP-X Sub-Panels to make them unidirectional or bidirectional
  - Additional kits are added to MAAP-X Sub-Panels to support connected Text Displays and LOCs

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels with MNS

- A fully expanded MAAP-X System supports a maximum of:
  - 6 AAC II Backplanes
  - 28 Addressable Driver Cards (ADC IIs)
  - 24 Speaker Output Cards (SOCs)
  - 30 Local Operating Consoles (LOCs)
  - 64 Text Displays

  NOTE *Depending on the MAAP-X System configuration, the number of supported ADCs and SOCs may be less.*

  NOTE *Battery backup may be required for expanded MAAP-X Systems; depending on MAAP-X System configuration and MAAP-X enclosure size, battery backup may require a separate enclosure. Battery backup and battery enclosure must be ordered separately.*

  Contact your Monaco Customer Service Representative for available MAAP-X System configurations to meet your requirements.

Specifications

Electrical

SLC (Addressable)	Per ADC: • Two Class B or one Class A/X SLC input(s) • 99 smoke or heat sensors • 99 monitor or control modules Power: 0 to 29 VDC polling protocol Supervision: open, short, ground fault Max. loop resistance: 40 ohms per leg Wiring: unshielded twisted pair
IDC (Zone Inputs)	Requires addressable modules on Signaling Line Circuits, such as: Mini Monitor Module, P/N 729-218-00 2-Wire Interface Mod, P/N 729-219-00
NAC (Notification Appliance Circuit Outputs)	Requires addressable modules on Signaling Line Circuits, such as: Supervised Module, P/N 729-225-00 **NAC Power Boosters:** Extender 120V 8A, P/N 404-126-00 Extender 220V 8A, P/N 404-126-01 Extender 120V 10A, P/N 404-106-00
Relays, Addressable Only	Requires addressable modules on Signaling Line Circuits, such as: Relay Module, P/N 729-221-00 6 Output Relay Mod, P/N 729-224-00
Line-Level Audio Circuits (LOC to MAAP-X Sub-Panel)	Minimum 22 AWG twisted pair with drain and shield Recommended max. length: 2,000 ft. Absolute max. length: 4,000 ft.
RS-485 Communication Circuits (LOC to MAAP-X Sub-Panel)	Minimum 24 AWG twisted pair with drain and shield Recommended max. length: 2,000 ft. Absolute max. length: 4,000 ft. Recommended wire impedance: 120 ohms
Speaker Circuits	Per SOC: two Class B or one Class A output(s) Power: 25 VAC RMS (70.7V P-P), 32W max. each, 100W max. per MAAP-X AAC II Backplane (four SOCs max.) Frequency Response Range: 100 Hz to 10,000 Hz Supervision: open, short, ground fault EOL: 3.9 kohms 1/4W, Class B only Max. loop resistance: 1.5 ohms per leg Min. load impedance rating: 25 ohms Wiring: Standard fire-alarm-rated cable
AUX PWR	Requires 24 VDC Auxiliary Power Supply 8A power supply 110V, P/N 404-098-00 8A power supply 230V, P/N 404-098-10 6A power supply 110/230V, P/N 404-150-00
Battery Backup	Separate battery enclosure; batteries and enclosure sold separately Low battery trouble: 21.5 VDC Low battery disconnect: 19.8 VDC Battery Float Charge: 27.6 VDC, 3A max. Battery Boost Charge: 28.8 VDC, 3A max.
AC Input	3-wire autosensing, 100/120/240 VAC, 50/60 Hz, 4.5A to 2A 100 VAC at 4.5A, (85 to 110 VAC) 120 VAC at 4.5A, (102 to 132 VAC) 240 VAC at 2A, (204 to 264 VAC)
AC Fail	100 VAC, below 70 VAC 120 VAC, below 70 VAC 240 VAC, below 70 VAC < 70 VAC, AC Fail annunciated < 40 VAC, switches to secondary battery power only > 60 VAC, switches back to primary AC power
DC Power	24 VDC (nominal) Factory-adjusted to 28.5 VDC Maximum battery charge current: 3A Typical in Standby current: 0.320A Max. total for power supply output: 10A

Environmental

Operating Temperature	32°F to 120°F (0°C to 40°C)
Relative Humidity	0% to 90%, non-condensing

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels with MNS

Standards Compliance

FM Approved Class 3010, Approval 3051356

Electrical Specifications: Sub-Panel and Fiber Kits

Part Number	DC Input	DC Current
176-286-02	24 VDC (nominal), 18.5 VDC to 30 VDC	0.035A typical, 0.195A maximum
200-495-02	24 VDC (nominal), 12 VDC to 48 VDC	0.263A maximum
200-490-02	24 VDC (nominal), 12 VDC to 48 VDC	0.233A maximum
194-535-03	24 VDC (nominal), 9 VDC to 36 VDC	0.250A maximum
194-535-02	24 VDC (nominal), 9 VDC to 36 VDC	0.125A maximum
194-538-02	24 VDC (nominal), 10 VDC to 48 VDC	0.108A maximum

Ordering Information

MAAP-X Sub-Panel

Part Number	Description
700-101-00	MAAP-X Sub-Panel Assembly, point reporting, addressable, fire alarm control, mass notification, voice evacuation panel Requires MAAP-X Panel • NEMA 1 surface-mount red enclosure 18 in. x 18 in. x 7 in. • 100 to 240 VAC, 50/60 Hz • ADCs and SOCs sold separately • Batteries and enclosure sold separately

Associated Parts

Part Number	Description
176-286-03	MAAP-X Text Display Multiplexer (MUX) Kit; RS-422 to eight RS-485 ports and eight live voice audio ports with surge suppression, includes mounting hardware
176-286-02	MAAP-X LOC Multiplexer Kit (required for more than 10 LOCs); RS-422 to eight RS-485 ports and eight live voice audio ports with surge suppression, 24 VDC, to support MAAP-X LOC/RDU Touch Screens and LOC Keypads per output See **NOTE 1**
176-297-01	MAAP-X Sub-Panel LOC Surge Protector PCB Kit for connecting up to 10 LOCs
200-495-02	MAAP-X Panel Ethernet Kit 4FO/4CO
200-490-02	MAAP-X Panel Ethernet Kit 2FO/3CO
194-535-03	MAAP-X Sub-Panel Audio Bidirectional Kit
194-535-02	MAAP-X Sub-Panel Audio Unidirectional Kit
194-538-02	MAAP-X Sub-Panel LOC RS-485 Communication Kit
710-075-01	MAAP-X Text Display, 24 VDC, two line, multi-color, default text display **Requires MAAP-X Panel firmware version A.5.1 or higher** See **NOTE 2** and **NOTE 3**
710-072-01	MAAP-X LOC/RDU Touch Screen, fire/MNS, 19 in. H, surface-mount, 115/230 VAC, 50/60 Hz, 72-hour battery backup See **NOTE 1**
710-072-02	MAAP-X LOC/RDU Touch Screen, fire/MNS, 19 in. H, flush-mount, 115/230 VAC, 50/60 Hz, 72-hour battery backup See **NOTE 1**
207-625-00	MAAP-X Addressable Planner Kit, thumb drive, CAT6 programming cable, 45 DTE-9F DCE adaptor
176-194-00	Addressable driver card (ADC I), supports up to 198 addressable devices on a Signaling Line Circuit **NOTE** Supports CLIP addressable devices only.
176-279-00	Addressable Driver Card (ADC II), supports up to 198 addressable devices on a Signaling Line Circuit, RoHS compliant **NOTE** Supports CLIP and AP addressable devices.
176-272-00	Speaker Output Card (SOC), 32W audio amplifier card, 1 Class A or 2 Class B supervised audio outputs for the MAAP-X

NOTE 1 The MAAP-X Panel can support up to 30 LOCs. Of the 30 LOCs, a maximum of 10 can be RDU/LOC Touch Screens, the rest need to be LOC Keypads. All 30 can be LOC Keypads. Each MAAP-X enclosure can support one LOC MUX (P/N 176-286-02) that can support a total of 30 LOCs. Each LOC MUX has eight RS-485 outputs that LOCs can be connected to. Each RS-485 output can support 30 LOC Keypads maximum or eight LOC/RDU Touch Screens maximum. Contact Monaco if your system requires more LOCs.

NOTE 2 Requires Text Display Interface, Program Utility and DC Power Supply, see cut sheet 710-075-01 for more information.

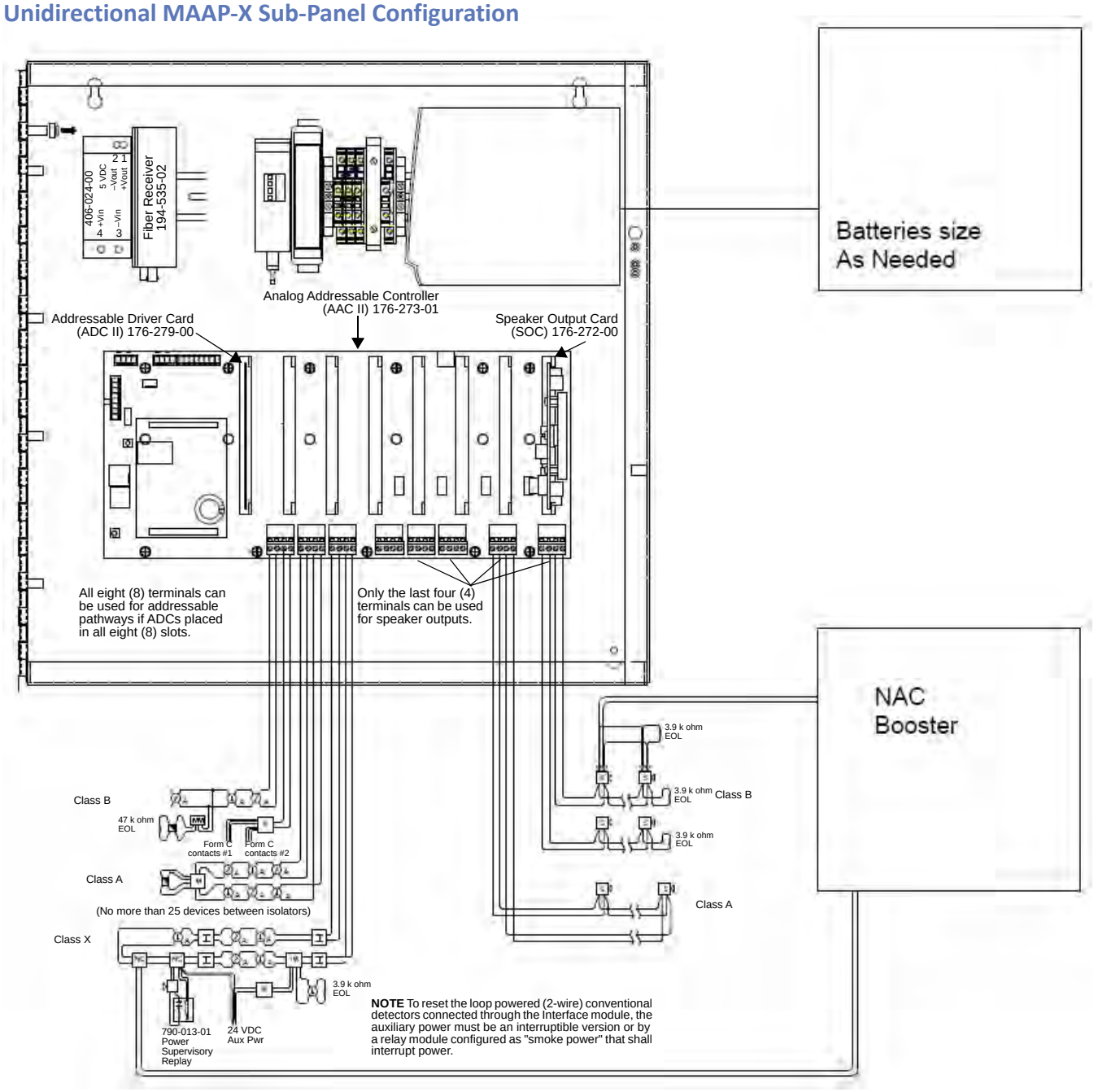
NOTE 3 According to NFPA 72, 2010 24.4.2.21 when the two line, multi-color, text display is mounted more than 10 ft. above the floor with a viewing distance of more than 21 ft., the display is required to be configured with only a single line of text so the font is large enough to view properly.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Drawings

Unidirectional MAAP-X Sub-Panel Configuration

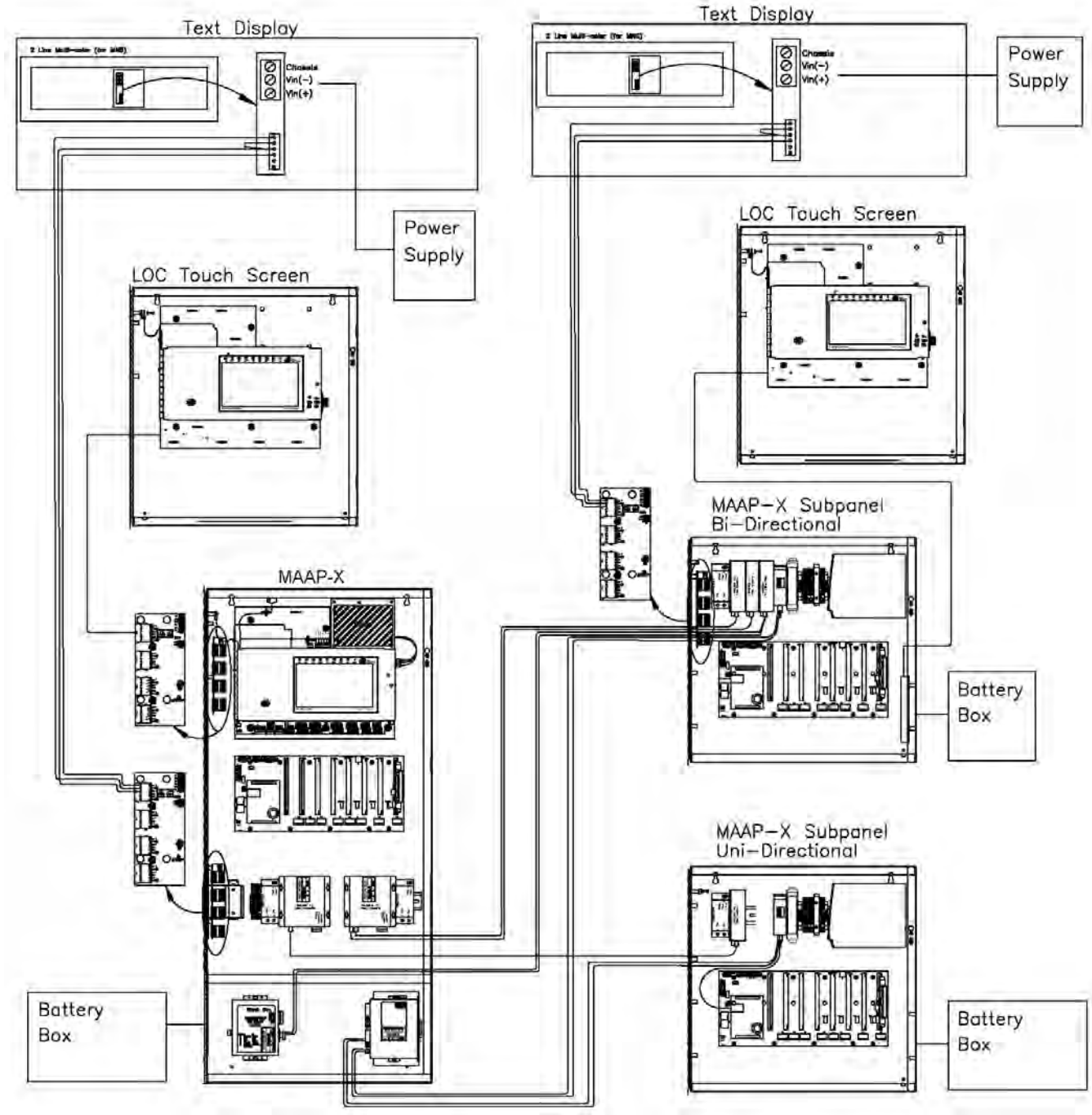


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

MAAP-X System Configuration Option: Includes two Sub-Panels, two LOCs, and two Text Displays



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels with MNS

Local Operating Console/Remote Display Unit
710-072-01, 710-072-02

Description

A Local Operating Console/Remote Display Unit (LOC/RDU) is a critical part of every installation, placed at strategic locations throughout the building. With an advanced approach to technology, Monaco's Touch Screen LOC/RDU combines the prerecorded and live voice message functions of an MNS LOC with the functions of a typically separate Fire Alarm Panel Remote Control Annunciator into one combination LOC.

FM APPROVED

Time is precious in an emergency; seconds matter. The combination LOC/RDU allows the operator to react to incident changes based on the real-time fire and MNS information displayed on the LOC/RDU.

The increased efficiency of combining fire and MNS functions into one LOC/RDU can lead to improved life-saving response times. This design also achieves a reduction in system costs by eliminating the requirement of purchasing two separate panels.

In addition to the standard features of an MNS LOC and Fire Alarm Panel Remote Control Annunciator, the Touch Screen LOC/RDU provides advanced features that only an integrated design can offer.

Features

- Clear situation-awareness at all LOC/RDUs
- At key locations within the protected building, LOC/RDU functions are the same as the main panel:
  - Overriding a fire alarm for live voice or prerecorded announcements
  - Prioritized MNS operation by message, live voice, and LOC/RDU locations
- Built in MNS microphone
  - Optional handheld live voice push-to-talk (PTT) MNS microphone in separate enclosure
  - Optional handheld live voice push-to-talk (PTT) paging microphone in separate enclosure
- Alarm/trouble silence
- Panel reset
- Drill test
- Walktest
- STIPA message for testing voice intelligibility of speakers
- Device enable/disable
- Panel history
- Setting the panel date and time
- Enclosure comes with standard key C415A lock
- Three user-programmable modes of operation based on LOC/RDU location needs—fire and MNS, fire only, and MNS only
- Each touch screen provides a visual indication for active prerecorded or live voice MNS; touch screen displays an explanation message if a lower priority MNS request is denied
- Each LOC/RDU can be independently configured to play the prerecorded message or live voice audio
- HVAC Emergency shutoff switch in enclosure

MAAP-X Touch Screen LOCs are fully supervised and only require one twisted pair with drain and shield serial communication cable and one twisted pair with drain and shield audio cable for live voice, making them easy to install.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels with MNS

Specifications

AC Input Three selectable VAC ranges:
- 100 VAC (85 to 110)
- 1.8A, 120 VAC (102 to 132 VAC)
- 1.1A, 240 VAC (204 to 264 VAC)

45 to 65 Hz

DC Output 24 VDC nominal, factory adjusted to 27.6V

Current Draw 235 mA

Battery Backup Two 12V/18 Ah, Sealed Lead Acid

Data Line RS-485, 24 AWG twisted pair with drain and shield (plenum and non-plenum)
Recommended maximum length: 2,000 ft.
Absolute maximum length: 4,000 ft.
RS-485 Recommend 120 ohm impedance

Audio Line 22 AWG twisted pair with drain and shield
Recommended maximum length: 2,000 ft.
Absolute maximum length: 4,000 ft.

Trouble Sounder 2 kHz tone, 60 dBa at 5 ft.

Operating Temperature 32°F to 120°F (0°C to 49°C)

Relative Humidity 0% to 90%, non-condensing

Dimensions 19 in. H x 18 in. W x 3.5 in. D
(48.3 cm x 45.7 cm x 8.9 cm)

Ordering Information

Part Number	Description
710-072-01	MAAP-X LOC/RDU Touch Screen, fire/MNS, 19 in. H, surface-mount, 115/230 VAC, 50/60 Hz, 72-hour battery backup See **NOTE 1**
710-072-02	MAAP-X LOC/RDU Touch Screen, fire/MNS, 19 in. H, flush-mount, 115/230 VAC, 50/60 Hz, 72-hour battery backup See **NOTE 1**
NOTE 1 The MAAP-X Panel can support up to 30 LOCs. Of the 30 LOCs, a maximum of 10 can be LOC/RDU Touch Screens, the rest need to be LOC Keypads. All 30 can be LOC Keypads. Each MAAP-X enclosure can support one LOC MUX (P/N 176-286-02) that can support a total of 30 LOCs. Each LOC MUX has eight RS-485 outputs that LOCs can be connected to. Each RS-485 output can support 30 LOC Keypads maximum or eight LOC/RDU Touch Screens maximum. Contact Monaco if your system requires more LOCs.	

Associated Parts

Part Number	Description
227-955-xx*	MAAP-X point-reporting, addressable, fire alarm control, mass notification, voice evacuation panel, integrated radio transceiver - single comm: • One AAC II backplane for ADCs/SOCs • One ADC supporting 198 addressable devices • One SOC, 25 VAC RMS, 32 W audio output • NEMA 1 **surface-mount**, red enclosure, 28 in. H x 18 in. W x 3.6 in. D • Two 12V/18 Ah batteries
227-965-xx*	MAAP-X point-reporting, addressable, fire alarm control, mass notification, voice evacuation panel, integrated radio transceiver - single comm: • One AAC II backplane for ADCs/SOCs • One ADC supporting 198 addressable devices • One SOC, 25 VAC RMS, 32 W audio output • NEMA 1 **flush-mount**, red enclosure, 28 in. H x 18 in. W x 3.6 in. D • Two 12V/18 Ah batteries
***Specify frequency (-xx) when ordering.**	
176-286-02	MAAP-X LOC Multiplexer Kit, RS-422 to eight RS-485 ports and eight live voice audio ports with surge suppression, to support MAAP-X LOC/RDU Touch Screens and LOC Keypads per output; • Required for connecting more than 10 LOCs to Sub-Panels • Always required for connecting LOCs to MAAP-X Panels See **NOTE 1**
176-297-01	MAAP-X Sub-Panel LOC Surge Protector PCB Kit; • Required for connecting 10 or fewer LOCs to a Unidirectional Sub-Panel • Always required for connecting LOCs to a Bidirectional Sub-Panel
122-012-00	Handheld PTT Microphone and holder for use on LOC/RDU Touch Screen, includes 2 ft. cable for connection to LOC/RDU Touch Screen
122-012-05	Handheld PTT MNS Microphone in red enclosure, 8 in. H x 6 in. W x 3 in. D with window, includes 15 ft. cable for connecting to MAAP-X or LOC/RDU Touch Screen
122-012-06	Handheld Non-Emergency PTT Paging Microphone in red enclosure, 8 in. H x 6 in. W x 3 in. D with window, includes 15 ft. single cable for connecting to MAAP-X, LOC/RDU Touch Screen or LOC Keypad; dual cable also included if connecting MNS and Paging Microphone to the MAAP-X or LOC/RDU Touch Screen

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

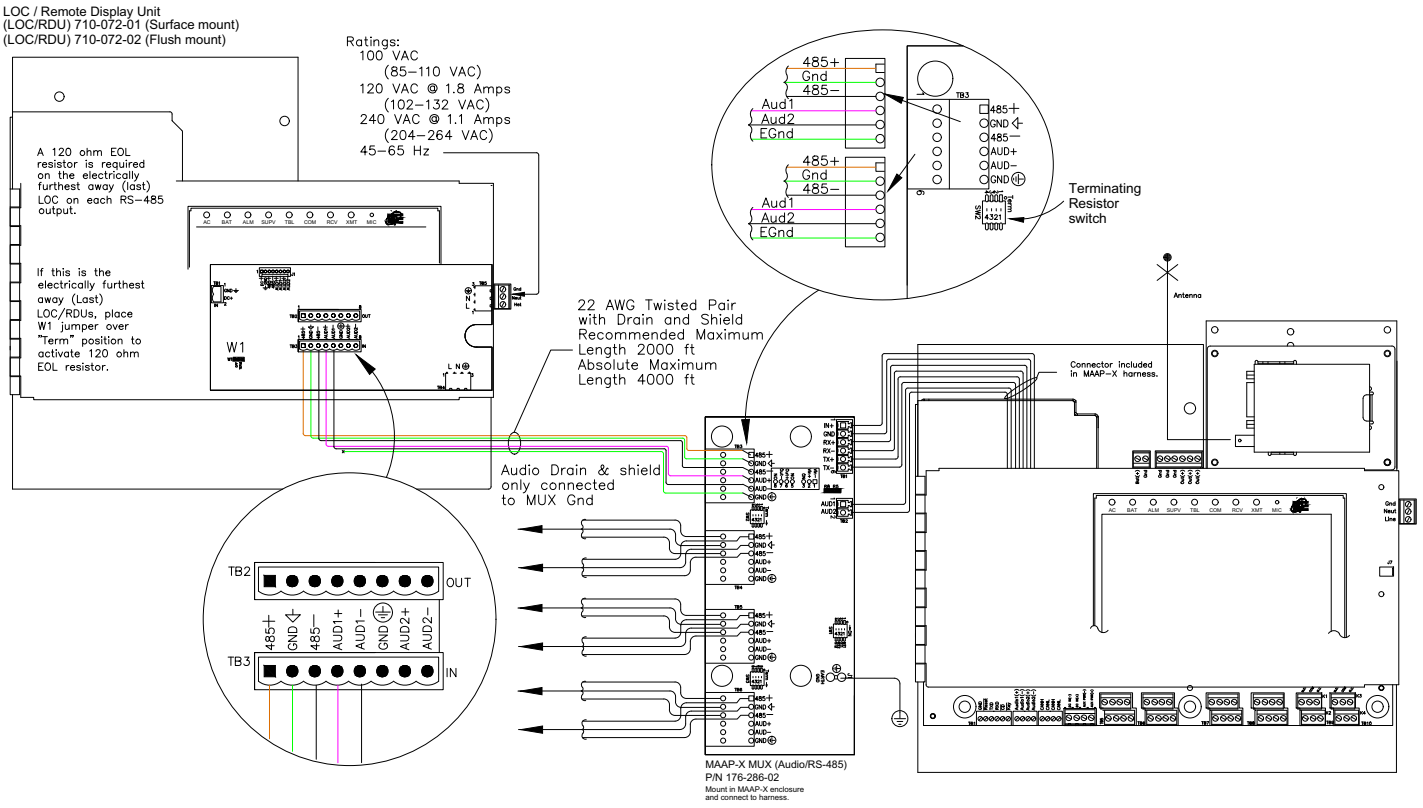
Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

Part Number	Description
708-032-01	HVAC Shutdown Kit, includes shutdown button and cover (Mini-monitor Module P/N 729-218-00 not included)
097-523-00	Turn Latch Lock Kit, 5/8 in. cylinder, tumble-turn lock; replacement for standard MAAP-X LOC/RDU Touch Screen panel lock
621-025-00	22 AWG Twisted Pair with drain and shield, RDU to multiplexer, specify length needed
621-083-00	RS-485 Cable — Plenum Rated • 2 conductors • 24 AWG twisted pair with drain and shield • FFEP insulation • Low Smoke PVC outer jacket • Cable Diameter: 0.204 in. • Temperature range: 32°F to 167°F (0°C to 75°C) • Impedance: 120 ohms
621-084-00	RS-485 Cable — Non-plenum Rated • 2 conductors • 24 AWG twisted pair with drain and shield • PE insulation • PVC outer jacket • Cable diameter: 0.232 in. • Temperature range: –22°F to 176°F (–30°C to 80°C) • Impedance: 120 ohms

NOTE 1 The MAAP-X Panel can support up to 30 LOCs. Of the 30 LOCs, a maximum of 10 can be LOC/RDU Touch Screens, the rest need to be LOC Keypads. All 30 can be LOC Keypads. Each MAAP-X enclosure can support one LOC MUX (P/N 176-286-02) that can support a total of 30 LOCs. Each LOC MUX has eight RS-485 outputs that LOCs can be connected to. Each RS-485 output can support 30 LOC Keypads maximum or eight LOC/RDU Touch Screens maximum. Contact Monaco if your system requires more LOCs.

Wiring Diagram



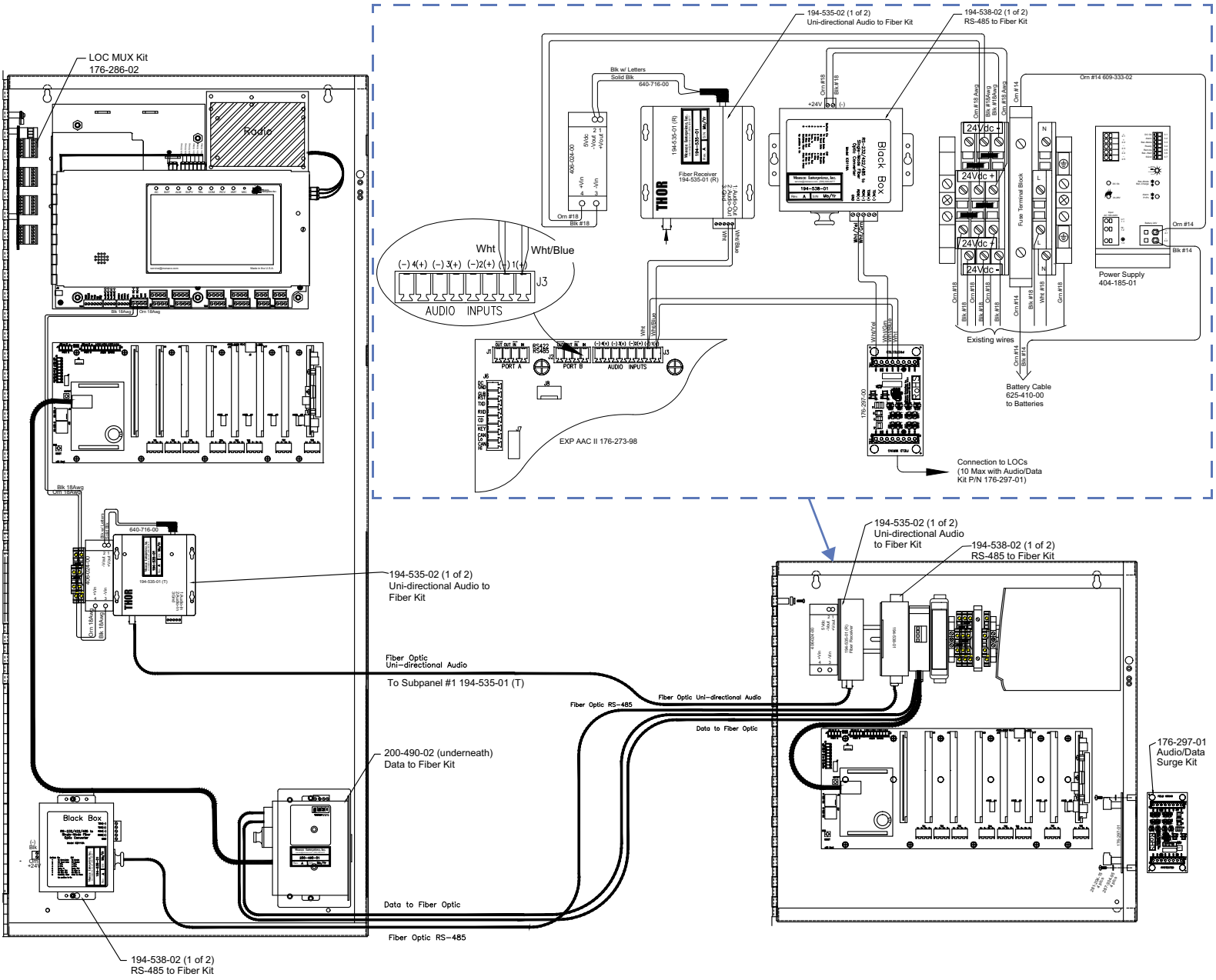
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

Sub-Panel LOC Configurations

MAAP-X to Unidirectional Sub-Panel with 10 or fewer LOCs

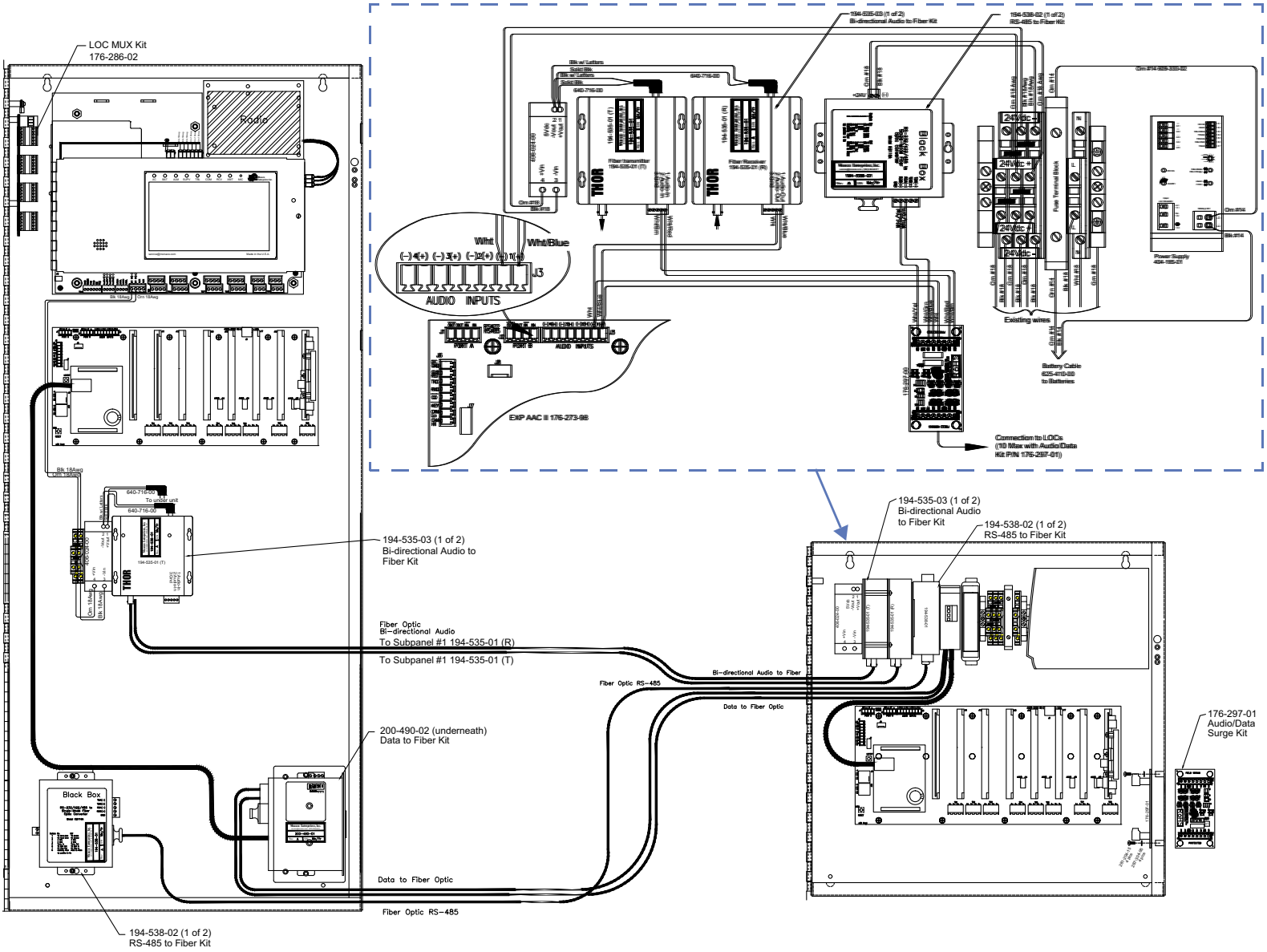


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

MAAP-X to Bidirectional Sub-Panel with 10 or fewer LOCs

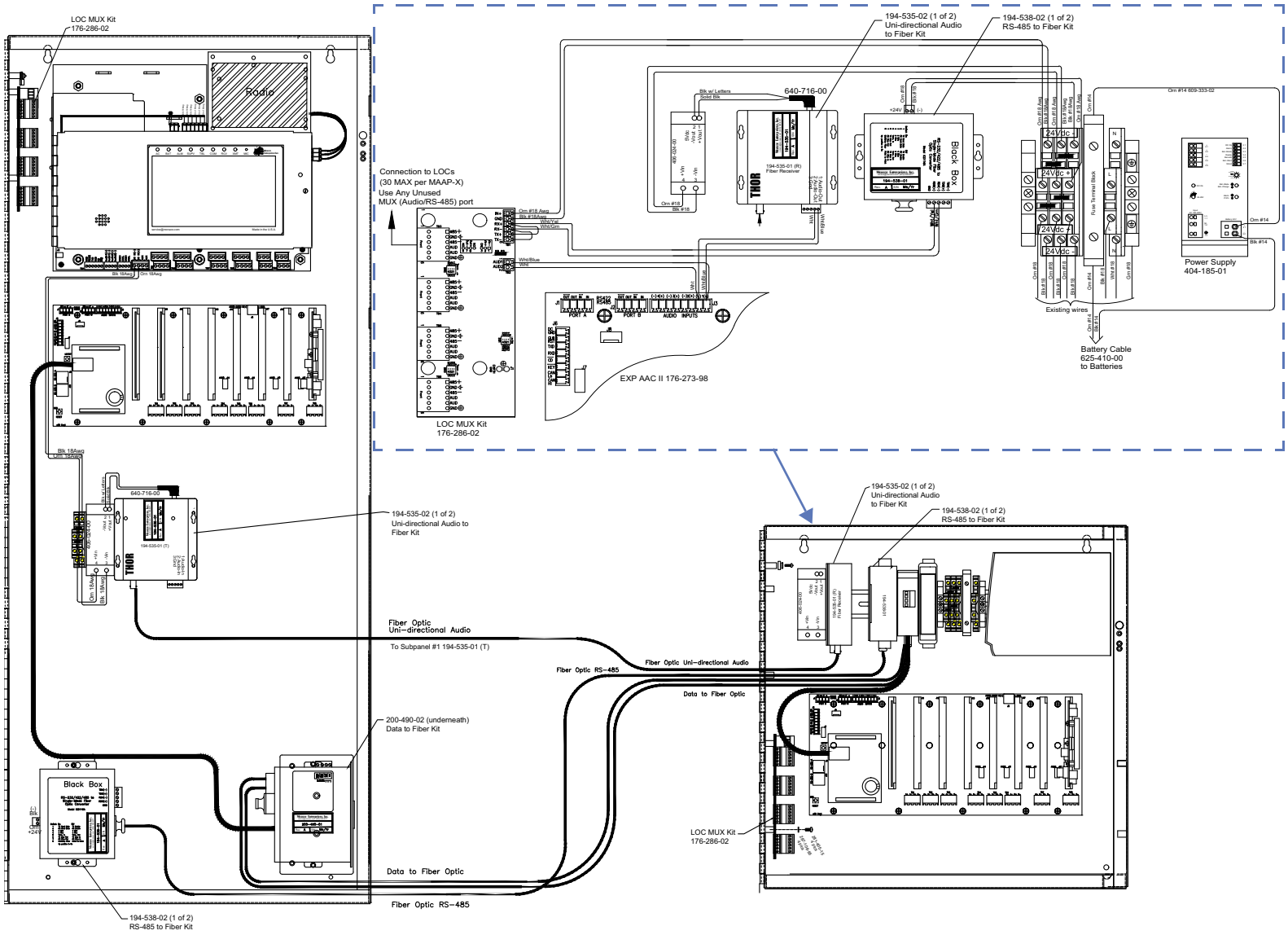


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

MAAP-X to Unidirectional Sub-Panel with 11 or more LOCs



Monaco Enterprises, Inc.

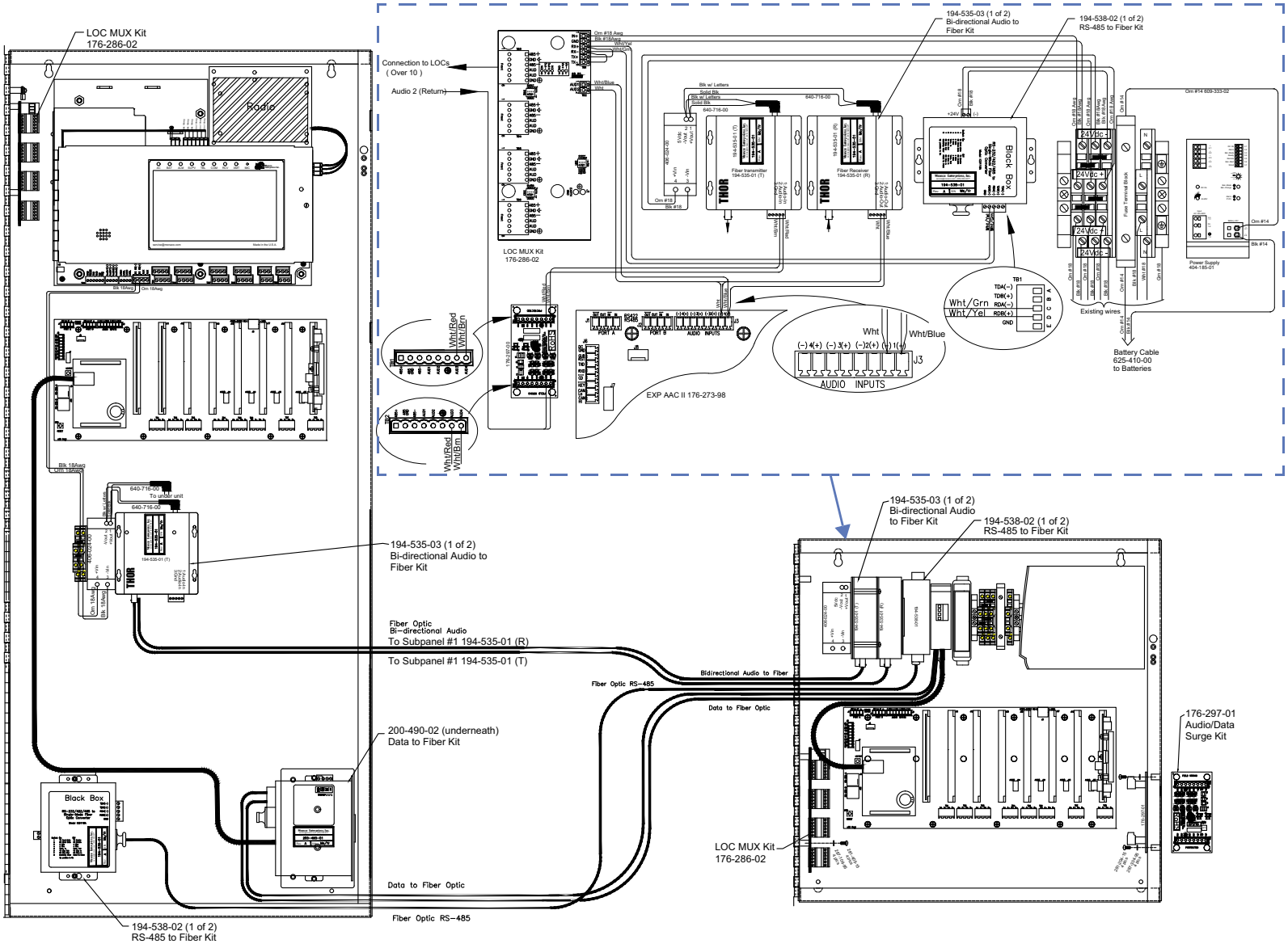
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149

Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

MAAP-X to Bidirectional Sub-Panel with 11 or more LOCs



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

Local Operating Console Keypad

710-072-51, 710-072-52

Description

The Local Operating Console (LOC) Keypad is designed to provide remote activation of live voice and prerecorded announcements of critical emergency conditions within a building when used with Monaco's MAAP-X Addressable MNS Panel.

The LOC Keypad provides user-programmable prioritized MNS for live voice and prerecorded messages. An optional paging microphone is available for non-emergency use. The LOC Keypad is available in a surface- or flush-mount enclosure with a non-locking turn button latch (optional lock kit available). It has 12 tactile push buttons for prerecorded MNS, a push-to-talk (PTT) microphone for live voice MNS, LED status indicators, and a built in AC power supply/battery charger with battery backup.

LEDs on the LOC Keypad clearly indicate the status of the LOC Keypad and communication between the unit and the MAAP-X Panel. LED indicators above each Message Button indicate MNS activity. Printed decals of the most common prerecorded messages, in addition to blank decals for user-definable labels, are provided for Message Button labeling. The console can be located a recommended maximum distance of 2,000 ft. from the MAAP-X Panel; no more than the absolute maximum distance of 4,000 ft.

Features

- Designed for use with MAAP-X Addressable MNS Fire Alarm Control Panel (P/N 227-95x-xx and P/N 227-96x-xx)
- Surface- or flush-mount enclosure
- 12 tactile push buttons to activate digital prerecorded messages at MAAP-X Panel
- User-selectable message name decals
- Console cable to MAAP-X Panel:
  - Recommended maximum length 2,000 ft.
  - Absolute maximum length 4,000 ft.
- Prioritized fire and MNS operation with MAAP-X
  - Programmable prioritized fire and MNS operation by Message, Live Voice, and LOC locations
  - By default, live voice is the highest priority followed by prerecorded, followed by fire
  - LOC locations are also prioritized in the event of two simultaneous requests from different LOCs
  - Prioritization can be changed to meet the emergency response plan
- Built-in PTT live voice MNS microphone
  - Optional handheld live voice PTT paging microphone in separate enclosure
- Fully supervised by MAAP-X Panel
- Built-in speaker programmable to play MNS audio
- Status LEDs for AC, Battery, Trouble, Live Voice, Active MNS, Communication, Receive, and Transmit, in addition to the 12 MNS buttons
- HVAC emergency shutoff switch in enclosure

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels with MNS

Specifications

Power Supply

AC Input	90 to 240 VAC 50/60 Hz
DC Output	24 VDC nominal, factory adjusted to 27.6V

LOC Keypad Assembly

Current Draw	30 mA @ 29.4 VDC (in Standby) 61 mA @ 29.4 VDC (with on-board speaker playing MNS message)
Battery Backup	Two, Sealed Lead Acid 12V/8 Ah
Data Line	RS-485, 24 AWG, twisted pair with drain and shield (plenum and non-plenum) Recommended maximum length: 2,000 ft. Absolute maximum length: 4,000 ft. RS-485 Recommend 120 ohm impedance
Audio Line	22 AWG, twisted pair with drain and shield Recommended maximum length: 2,000 ft. Absolute maximum length: 4,000 ft.
Operating Temperature	32°F to 120°F (0°C to 50°C)
Relative Humidity	0% to 90%, non-condensing
Enclosure Dimensions	20 in. H x 12 in. W x 4 in. D (50.8 cm x 30.5 cm x 10.2 cm)

Ordering Information

LOC Keypad

Part Number	Description
710-072-51*	MAAP-X LOC Keypad, 12 tactile push buttons for prerecorded MNS messages, PTT microphone for live voice, red NEMA 1 **surface-mount** enclosure 20 in. H x 12 in. W x 4 in. D, 115/230 VAC, 50/60 Hz, two 12V/8 Ah batteries for 72-hour battery backup See **NOTE 1**
710-072-52*	MAAP-X LOC Keypad, 12 tactile push buttons for prerecorded MNS messages, PTT microphone for live voice, red NEMA 1 **flush-mount** enclosure 20 in. H x 12 in. W x 4 in. D, 115/230 VAC, 50/60 Hz, two 12V/8 Ah batteries for 72-hour battery backup See **NOTE 1**
***Specify frequency (-xx) when ordering.**	
NOTE 1 The MAAP-X Panel can support up to 30 LOCs. Of the 30 LOCs, a maximum of 10 can be LOC/RDU Touch Screens, the rest need to be LOC Keypads. All 30 can be LOC Keypads. Each MAAP-X enclosure can support one LOC MUX (P/N 176-286-02) that can support a total of 30 LOCs. Each LOC MUX has eight RS-485 outputs that LOCs can be connected to. Each RS-485 output can support 30 LOC Keypads maximum or eight LOC/RDU Touch Screens maximum. Contact Monaco if your system requires more LOCs.	

Associated Parts

Part Number	Description
227-955-xx*	MAAP-X point-reporting, addressable, fire alarm control, mass notification, voice evacuation panel, integrated radio transceiver - single comm: • One AAC II backplane for ADCs/SOCs • One ADC supporting 198 addressable devices • One SOC, 25 VAC RMS, 32 W audio output • NEMA 1 **surface-mount**, red enclosure 28 in. H x 18 in. W x 3.6 in. D • Two 12V/18 Ah batteries
227-965-xx*	MAAP-X point-reporting, addressable, fire alarm control, mass notification, voice evacuation panel, integrated radio transceiver - single comm: • One AAC II backplane for ADCs/SOCs • One ADC supporting 198 addressable devices • One SOC, 25 VAC RMS, 32 W audio output • NEMA 1 **flush-mount**, red enclosure 28 in. H x 18 in. W x 3.6 in. D • Two 12V/18 Ah batteries
***Specify frequency (-xx) when ordering.**	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels with MNS

Part Number	Description
176-286-02	MAAP-X LOC Multiplexer Kit, RS-422 to eight RS-485 ports and eight live voice audio ports with surge suppression, to support MAAP-X LOC/RDU Touch Screens and LOC Keypads per output; • Required for connecting more than 10 LOCs to Sub-Panels • Always required for connecting LOCs to MAAP-X Panels See **NOTE 1**
176-297-01	MAAP-X Sub-Panel LOC Surge Protector PCB Kit; • Required for connecting 10 or fewer LOCs to a Unidirectional Sub-Panel • Always required for connecting LOCs to a Bidirectional Sub-Panel
122-012-06	Handheld Non-Emergency PTT Paging Microphone in red enclosure with window, 8 in. H x 6 in. W x 3 in. D, includes 15 ft. single cable for connecting to MAAP-X, LOC/RDU Touch Screen or LOC Keypad; dual cable also included if connecting MNS and Paging Microphone to the MAAP-X or LOC/RDU Touch Screen
708-032-01	HVAC Shutdown Kit, includes shutdown button and cover (Mini-monitor Module P/N 729-218-00 not included)
729-218-00	Intelligent Mini-monitor Module, AP/CLIP, white, Type II
621-025-00	22 AWG Twisted Pair with drain and shield, RDU to multiplexer, specify length needed

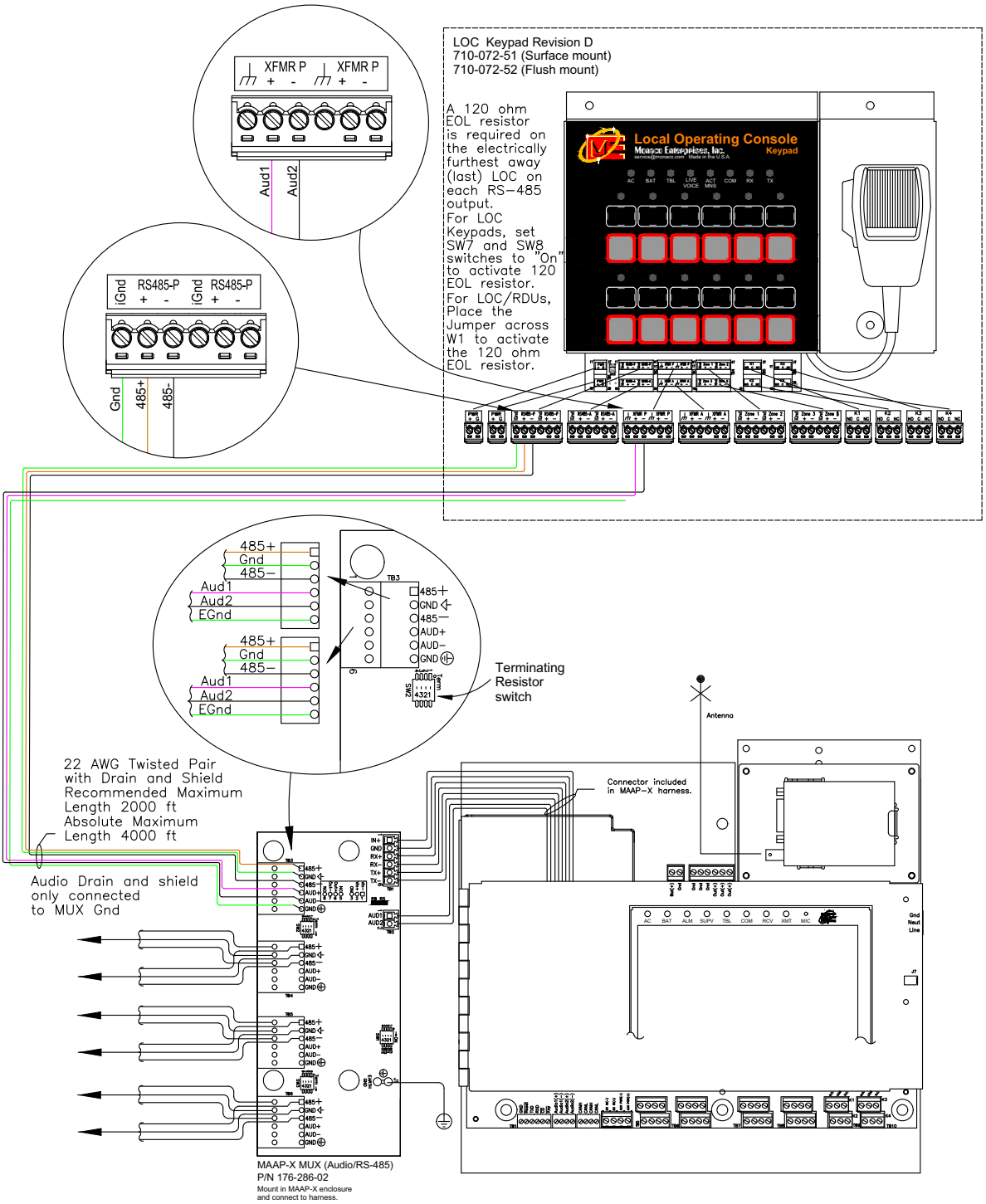
Part Number	Description
621-083-00	RS-485 Cable — Plenum Rated • 2 conductors • 24 AWG twisted pair with drain and shield • FFEP insulation • Low Smoke PVC outer jacket • Cable diameter: 0.204 in. • Temperature range: 32°F to 167°F (0°C to 75°C) • Impedance: 120 ohms
621-084-00	RS-485 Cable — Non-plenum Rated • 2 conductors • 24 AWG twisted pair with drain and shield • PE insulation • PVC outer jacket • Cable diameter: 0.232 in. • Temperature range: –22°F to 176°F (–30°C to 80°C) • Impedance: 120 ohms
NOTE 1 The MAAP-X Panel can support up to 30 LOCs. Of the 30 LOCs, a maximum of 10 can be LOC/RDU Touch Screens, the rest need to be LOC Keypads. All 30 can be LOC Keypads. Each MAAP-X enclosure can support one LOC MUX (P/N 176-286-02) that can support a total of 30 LOCs. Each LOC MUX has eight RS-485 outputs that LOCs can be connected to. Each RS-485 output can support 30 LOC Keypads maximum or eight LOC/RDU Touch Screens maximum. Contact Monaco if your system requires more LOCs.	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

Wiring Diagram



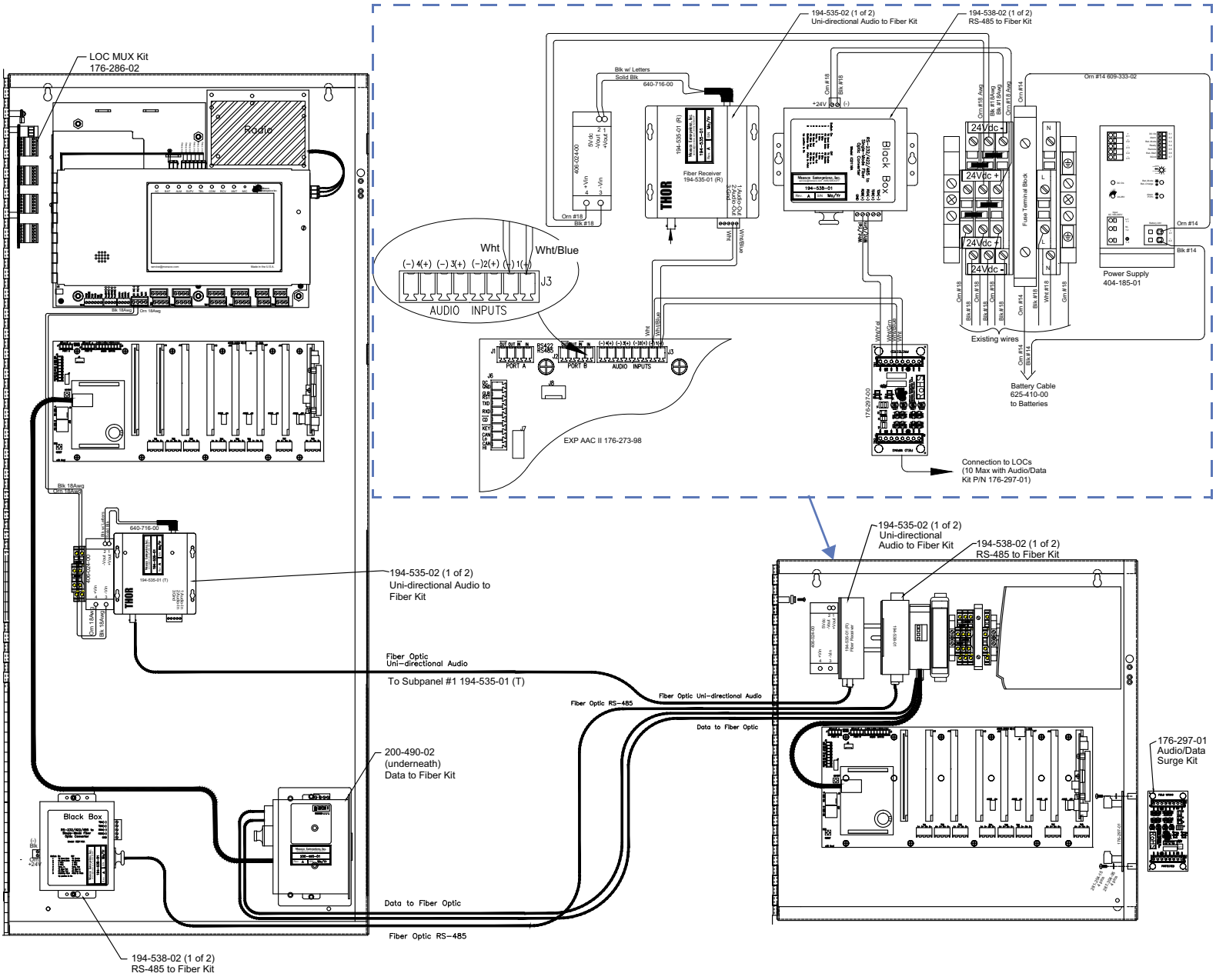
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels with MNS

Sub-Panel LOC Configurations

MAAP-X to Unidirectional Sub-Panel with 10 or fewer LOCs

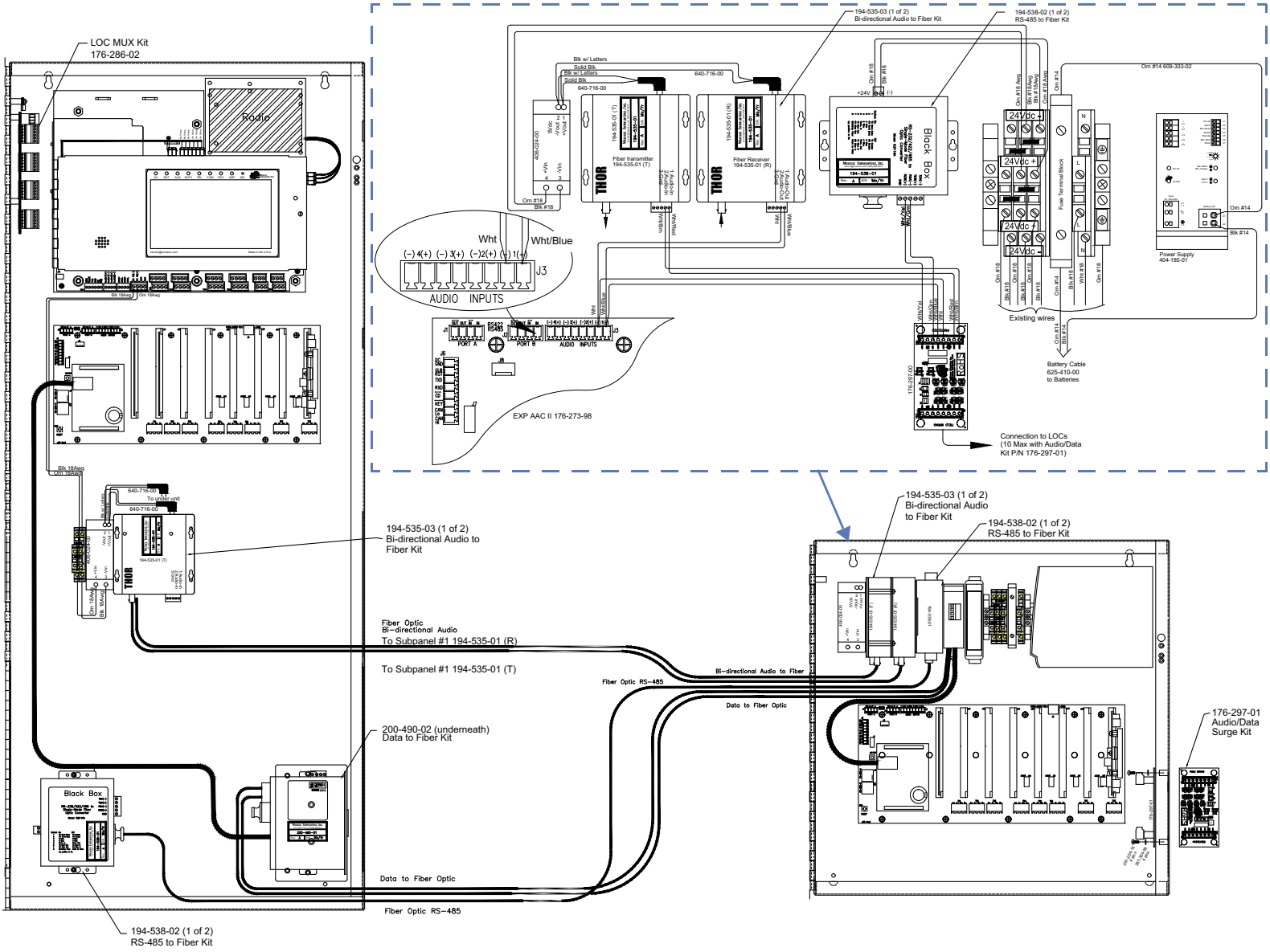


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

MAAP-X to Bidirectional Sub-Panel with 10 or fewer LOCs

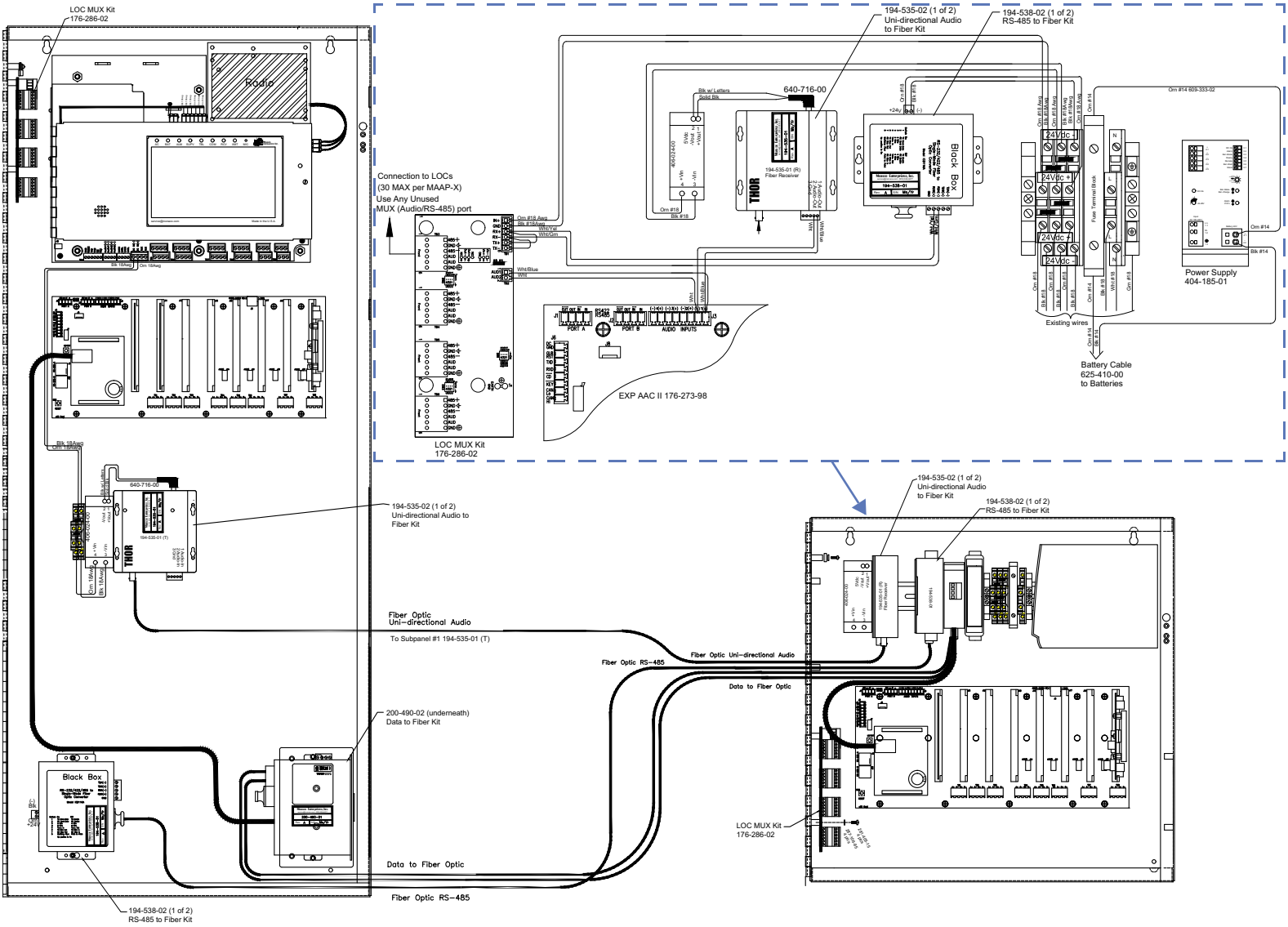


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

MAAP-X to Unidirectional Sub-Panel with 11 or more LOCs

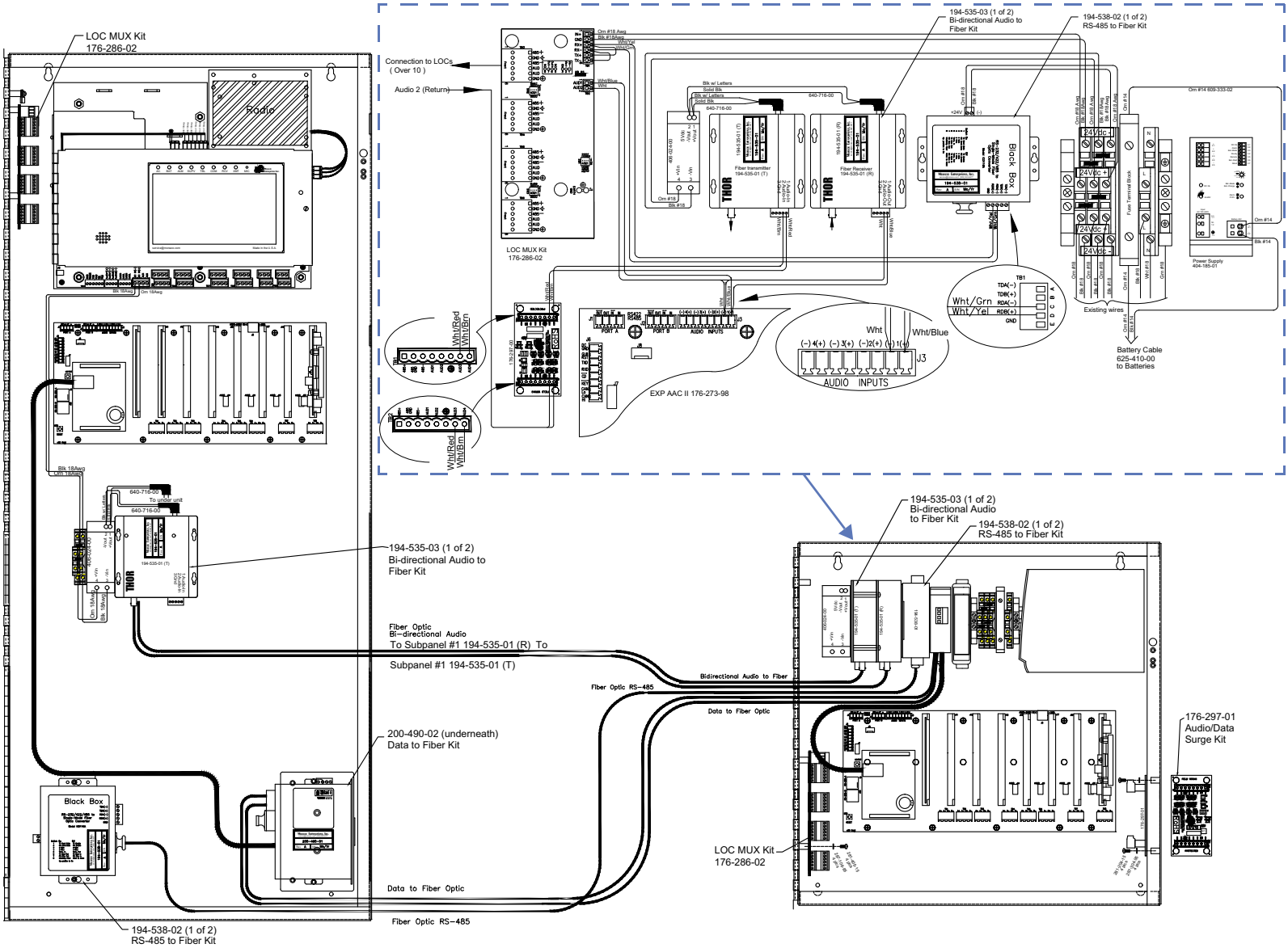


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

MAAP-X to Bidirectional Sub-Panel with 11 or more LOCs



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

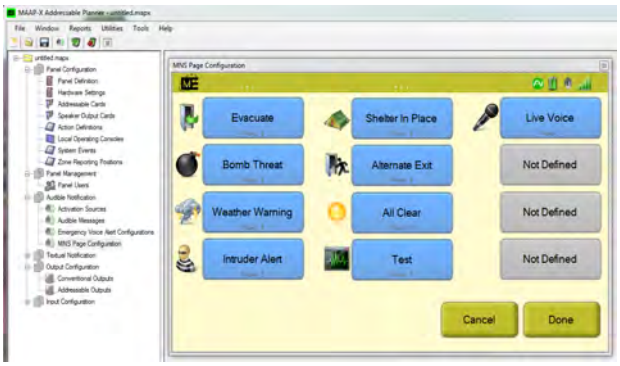
Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

MAAP-X Planner Kit
207-625-00

Description

The MAAP-X Planner is a Microsoft® Windows®-based program that creates a configuration file for use by the Monaco Addressable Fire Alarm MNS Voice Evacuation Panel (MAAP-X).



Features

MAAP-X Planner Kit allows the user to program the panel. Planner functions include:

- Uploading/downloading the MAAP-X program file to/from the panel
- Creating a MAAP-X configuration file that is imported into the D-21 Central; manual entry of information to the D-21 is not required
- Central reporting modes:
  - Point reporting (addressable device addresses with zone reporting to D-21 and MNS operation)
  - Legacy (zone reporting to D-21 and MNS operation)
  - Stand-alone (in-building fire and MNS operation only)
- Setting D-21 Central communication modes—radio or hard-wire (Ethernet, fiber), single comm or dual comm
- Configuring fire and MNS devices and circuits
- Configuring MAAP-X and LOC/RDUs for fire and MNS operation
- Provides the ability to keep panel configuration files for backup
- Windows® compatible (XP Professional, Vista, 7, 8, and 10)
- Define zone and device descriptions

Specifications

Operating Systems	Microsoft Windows XP Professional (32-bit), Windows Vista (32-bit and 64-bit), Windows 7 or 8 (32-bit and 64-bit), and Windows 10
Processor	Pentium
RAM	16 MB minimum; 32 MB recommended
Communication Port	RS-232
Monitor Display	256 color

NOTE Newer laptops typically do not have a serial port, so a USB to serial adaptor must be used to program the Monaco panels. The Monaco USB to serial adaptor (P/N 649-118-00) has provided the most reliable communication between various laptops and Monaco panels. Other USB to serial adaptors may not produce a satisfactory customer experience.

Ordering Information

Part Number	Description
207-625-00	MAAP-X Addressable Planner Kit, thumb drive, CAT6 programming cable, 45 DTE-9F DCE adaptor

Associated Parts

Part Number	Description
649-118-00	USB to 9-pin Serial Adaptor
227-574-00	MAAP Serial Interface Kit, includes programming cable and adaptor

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels with MNS

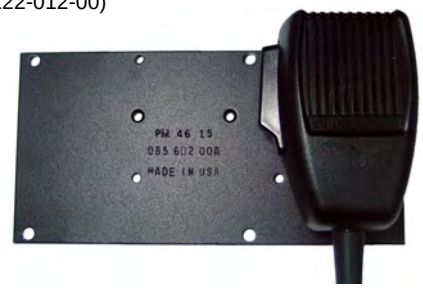
MAAP-X Push-to-Talk MNS Microphone

122-012-00, 122-012-05

Description

This Push-to-Talk (PTT) MNS Microphone is ideal for the MAAP-X Addressable Fire Alarm Control Panel (FACP) with Mass Notification System (MNS).

LOC Handheld Push-to-Talk MNS Microphone and Holder (P/N 122-012-00)



MAAP-X or LOC/RDU Touch Screen with Handheld Push-to-Talk MNS Microphone in Enclosure (P/N 122-012-05)

The LOC Handheld PTT MNS Microphone and Holder (P/N 122-012-00) comes ready to install in a LOC/RDU.

The MAAP-X or LOC Touch Screen with Handheld PTT MNS Microphone in Enclosure (P/N 122-012-05) comes in a separate red enclosure to connect to the MAAP-X or LOC/RDU Touch Screen.

Features

- Wiring harness to connect directly back to the MAAP-X
- Easy-to-use, PTT dynamic handheld microphone
- 5 ft. extended length microphone cord
- P/N 122-012-05 includes a red enclosure with an easy access turn latch

Specifications

P/N 122-012-00

For use With	LOC/RDU
Holder Dimensions	6.6 in. W x 3.3 in. H (16.77 cm x 8.4 cm)
Connector Cable Length	2 ft. (0.6 m)

P/N 122-012-05

For use With	MAAP-X Addressable FACP with MNS or LOC/RDU
Enclosure Color	Red
Enclosure Dimensions	8 in. H x 6 in. W x 3 in. D (20.32 cm x 15.24 x 7.62 cm)
Connector Cable Length	15 ft. (4.572 m)

Microphone (for P/N 122-012-00 and 122-012-05)

Impedance	400 ohms at 1,000 Hz
Frequency Response	200 to 5,000 Hz
Type	Dynamic
Polar Pattern	Omnidirectional
Output Level	–33 dB ±3 dB
Relative Humidity	0% to 95%, non-condensing
Operating Temperature	–40°F to 165°F (–40°C to 74°C)
Cable Length	5 ft. (1.5 m) extended length
Cable Material	4-conductor (2 shielded) vinyl-jacketed coil cable
Cable Color	Black

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

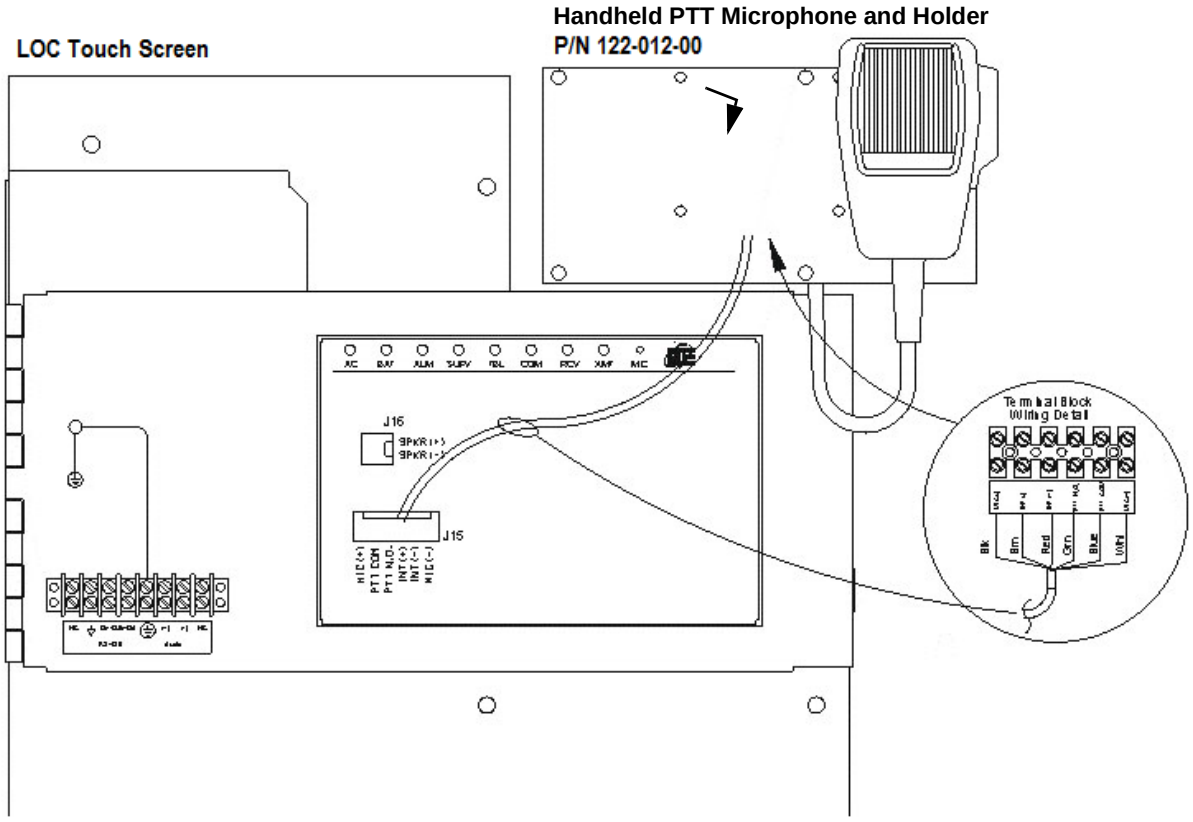
Detect
Manage
Record

Ordering Information

Part Number	Description
122-012-00	Handheld PTT Microphone and Holder for use on LOC/RDU Touch Screen, includes 2 ft. cable for connection to LOC/RDU Touch Screen
122-012-05	Handheld PTT MNS Microphone in red enclosure, 8 in. H x 6 in. W x 3 in. D with window, includes 15 ft. cable for connecting to MAAP-X or LOC/RDU Touch Screen

Assembly Drawings

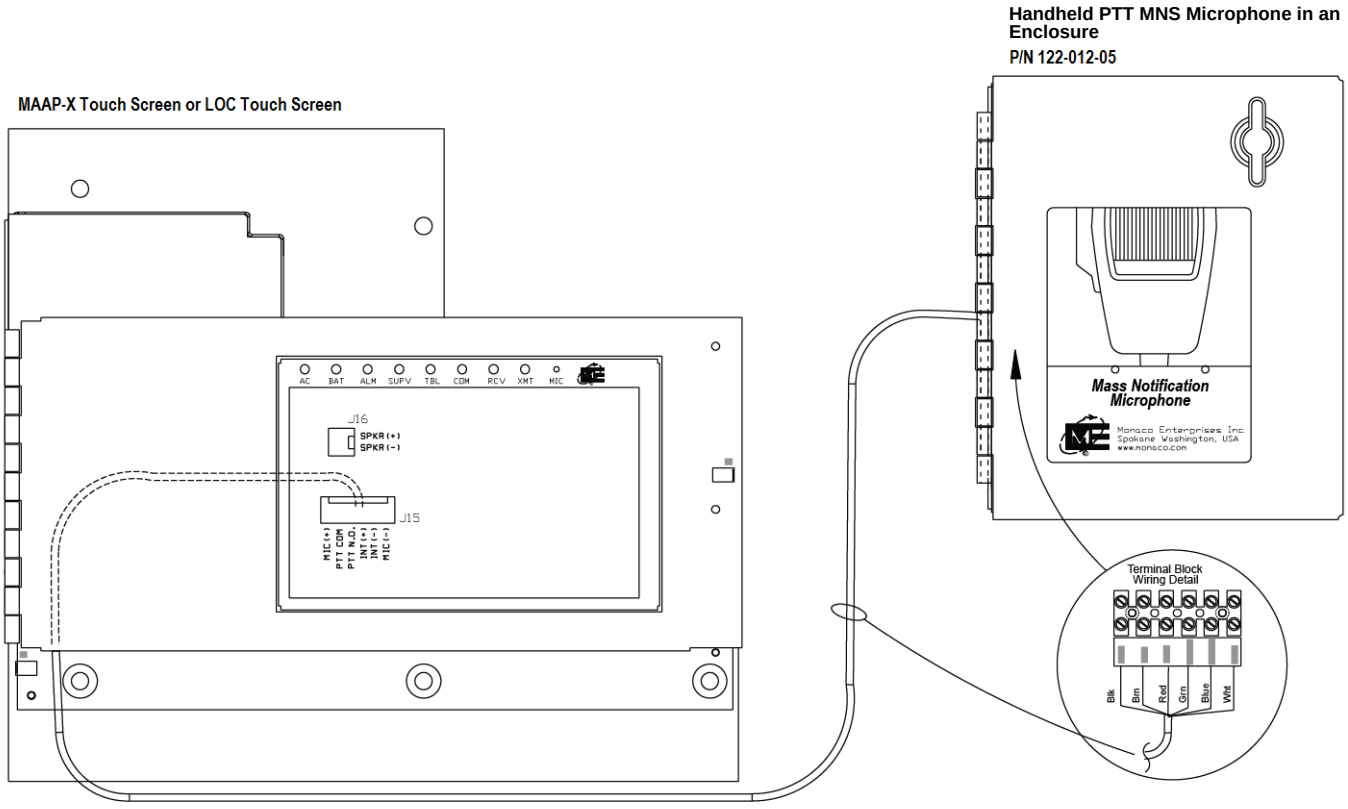
LOC Touch Screen with Handheld PTT Microphone and Holder (P/N 122-012-00)



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

MAAP-X or LOC Touch Screen with Handheld PTT Microphone in Enclosure (P/N 122-012-05)



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

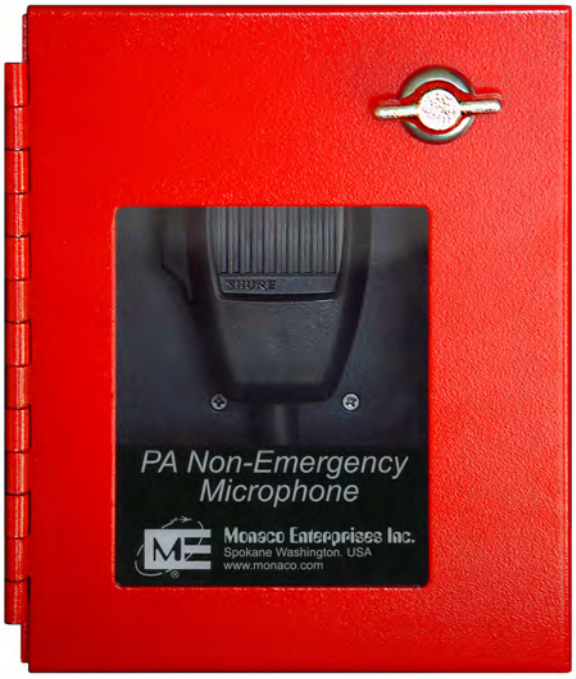
Addressable Fire Alarm Control Panels with MNS

MAAP-X Push-to-Talk Paging Microphone

122-012-06

Description

This Push-to-Talk (PTT) Paging Microphone is ideal for the MAAP-X Addressable Fire Alarm Control Panel (FACP) with Mass Notification System (MNS). This Paging Microphone activates audio output only (not strobes).



The Handheld PTT Paging Microphone comes in a separate red enclosure to connect to the MAAP-X. The microphone is disabled during AC fail per UFC.

Features

- Wiring harness to connect directly back to the MAAP-X
- Easy-to-use, PTT, dynamic handheld microphone
- 5 ft. extended length microphone cord
- Includes a red enclosure with an easy access turn latch

Specifications

For use With	MAAP-X Addressable FACP with MNS, LOC/RDU Touch Screen, or LOC Keypad
Enclosure Color	Red
Enclosure Dimensions	8 in. H x 6 in. W x 3 in. D (20.32 cm x 15.24 cm x 7.62 cm)
Connector Cable Length	15 ft. (4.6 m)
Microphone:	
Impedance	400 ohm at 1,000 Hz
Frequency Response	200 to 5,000 Hz
Type	Dynamic
Polar Pattern	Omnidirectional
Output Level	–33 dB ±3 dB
Relative Humidity	0% to 95%, non-condensing
Operating Temperature	–40°F to 165°F (–40°C to 74°C)
Cable Length	5 ft. (1.5 m) extended length
Cable Material	4-conductor (2 shielded) vinyl-jacketed coil cable
Cable Color	Black

Ordering Information

Part Number	Description
122-012-06	Handheld Non-Emergency PTT Paging Microphone in red Enclosure, 8 in. H x 6 in. W x 3 in. D with window, includes 15 ft. single cable for connecting to MAAP-X, LOC/RDU Touch Screen, or LOC Keypad; dual cable also included if connecting MNS and paging microphone to the MAAP-X or LOC/RDU Touch Screen

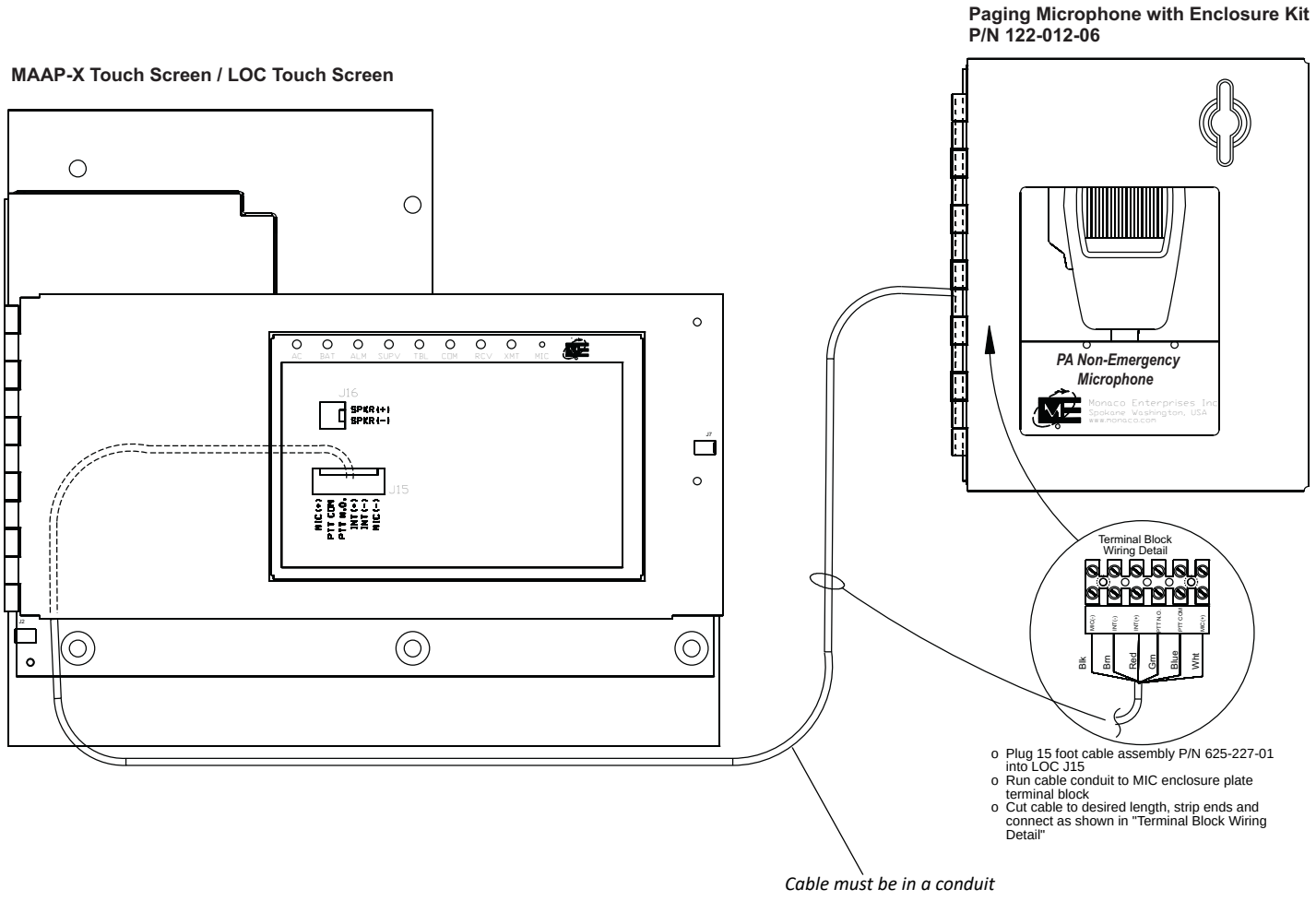
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

Assembly Drawings

Handheld PTT Paging Microphone (P/N 122-012-06) to LOC Touch Screen or MAAP-X Touch Screen

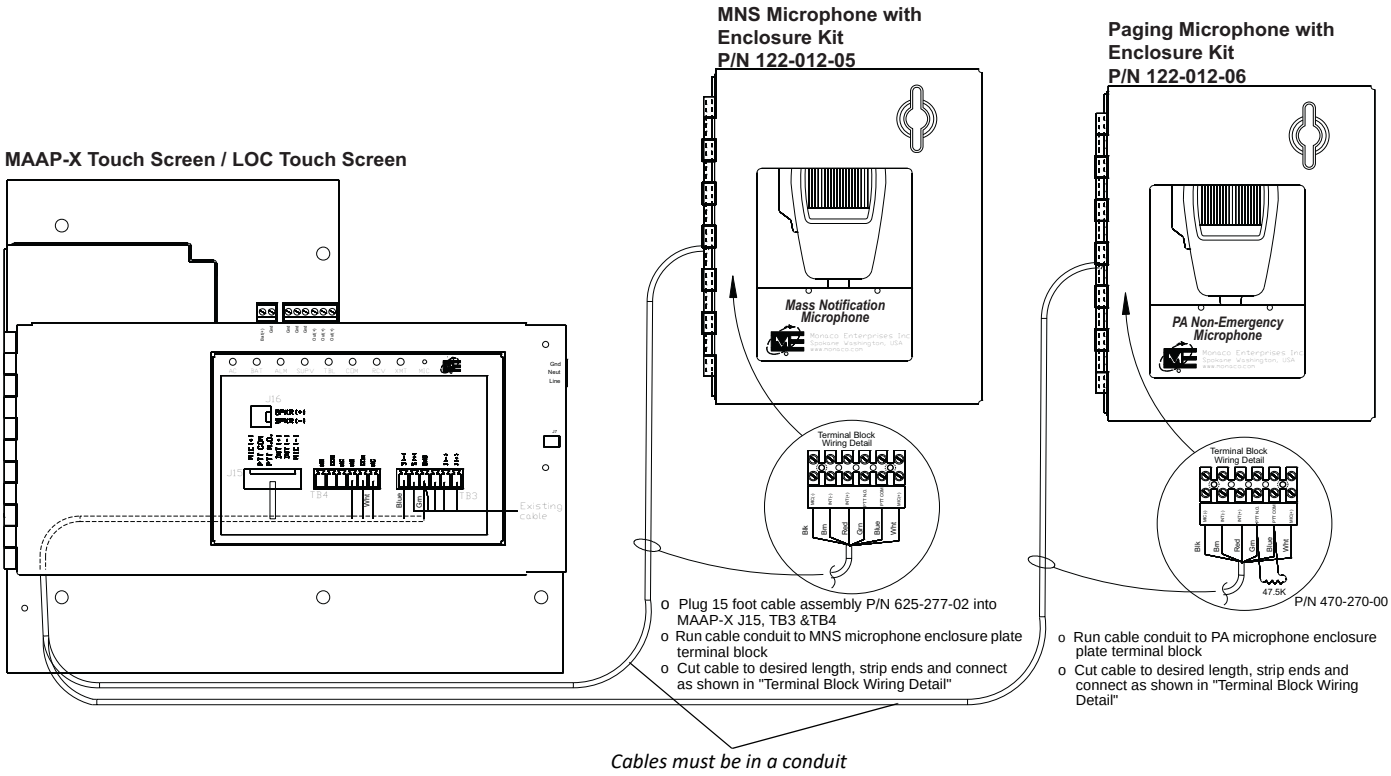


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels with MNS

Handheld Push-to-Talk MNS (P/N 122-012-05) and Paging Microphone (P/N 122-012-06) to LOC Touch Screen or MAAP-X Touch Screen



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Fire Alarm Control Panels with MNS

MAAP-X Text Display, 24 VDC, Two Line, Multicolor
710-075-01

Description

The MAAP-X Text Display (P/N 710-075-01) is a 24 VDC, two line, multicolor text display that provides one or two line text messages. Mass notification message events corresponding to text messages are triggered by the Monaco Enterprises MAAP-X Panel (with CORE III processor) or D-21 Mass Notification System (MNS). Up to 64 text displays can be connected to a single MAAP-X System.

The MAAP-X Text Display is highly visible and can display one or two lines of text in three colors: red, green, and amber. The MAAP-X communicates through a network port to a MAAP-X text display multiplexer (MUX). Text displays can connect to a MUX from an absolute maximum distance of 4,000 ft.

The MAAP-X Text Display operation is supervised. An alert will notify the MAAP-X if any text display goes offline. During idle periods, each text display can show a user-generated message such as the building name or date and time.

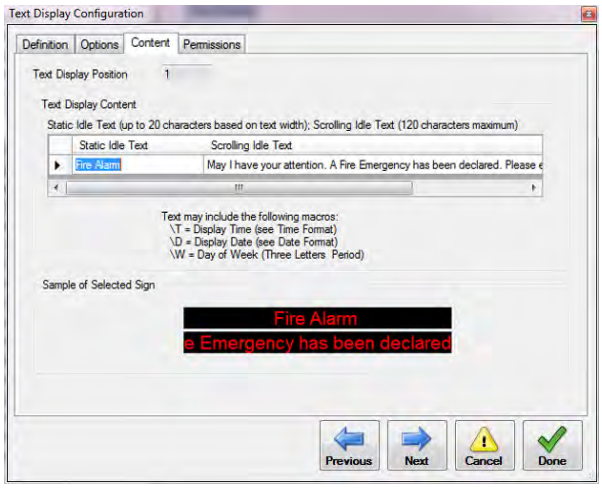
Text display addresses are programmed into each text display using the MAAP-X Text Display Address Programming Utility Planner Kit (P/N 207-627-00). The planner is currently limited to 64 text displays.

Features

- Integrates with Monaco Enterprises MAAP-X MNS
- A MAAP-X System can control up to 64 text displays
- Idle text goes blank during AC failure
- Three text color options: red, green, and amber
- Indoor installation; ceiling- or wall-mount
- Flashing text capability (firmware A.5.1 or higher)
- 24 VDC supervised display operation
- Complies with NFPA® 72, 2019: Section 18.9.4.7

MAAP-X Operation

MAAP-X Planner Text Display Programming Screen



The planner software allows text messages and prerecorded messages to be matched so that when MNS activation occurs, the MAAP-X plays an audio message while simultaneously activating a matching message on the MAAP-X Text Display(s). During a live voice operation (either through D-21 Central or local MNS activation), the text display(s) may indicate that a live voice announcement is in progress.

The text display messages can be programmed with static (non-scrolling), scrolling idle, or scrolling MNS characters.

- Static: up to 20 characters per line
- Scrolling Idle: up to 120 characters per line
- Scrolling MNS: up to 171 characters per line (typical)

NOTE *Depending on the message character set, the maximum character limit for scrolling MNS text may vary between 150 and 171.*

Whenever the MAAP-X panel detects an AC Fail condition, the text display turns off the idle text and reverts to a blank screen to reduce the text display battery backup power requirement. During an emergency, the text display will present the appropriate MNS message text until the notification has ended.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

The date and time shown by the text display is controlled by the MAAP-X. When configured for time synchronization with the D-21, the MAAP-X will update the displayed date and time for Daylight Saving time, etc.

NOTE *The MAAP-X Panel firmware version A.5.1 or higher is required.*

Specifications

MAAP-X Text Display

Power	16 to 33 VDC (30 W maximum) 1.3A maximum
Battery Backup Calculation Currents	0.8A for Alarm Time 0.22A for Standby Time
Networking Options	RS-485 (up to 64 text displays)
Pixel Size (Diameter)	0.2 in. (0.5 cm)
Pixel Spacing (Pitch)	0.3 in. (0.762 cm) center-to-center
Pixel (LED) Color	Red, green, and amber
Resolution	120 columns x 16 rows
Display Array	120 x 16 pixels
Character Size	One line format: 4.8 in. (12.2 cm) Two line format: 2.1 in. (5.3 cm)
Characters per Line	• Static: Up to 20 upper/lower case • Scrolling Idle: 120 maximum • Scrolling MNS: 150 to 171 maximum (171 typical, depends on character set)
Character Set	Block (sans serif), decorative (serif), upper/lower case, slim, wide, double-wide
Real-Time Clock	Date and time; 12 or 24 hour format; without power, accurate time maintained for up to 30 days (typical)
Operating Temperature	–22°F to 122°F (–30°C to 50°C)
Humidity Range	5% to 95% non-condensing
Mounting	Indoor wall-mount (hardware included)
Physical Dimensions	7.4 in. H x 37.2 in. L x 3.2 in. D (18.8 cm x 94.5 cm x 8.13 cm)
Approximate Weight	11 lb (5 kg)
Standards Compliance:	
UL Listed	UL 1638
NFPA	NFPA 72, Section 18.9.4.7
FCC	FCC Class A

Power Supply and Battery Charger

Input Voltage (Maximum)	P/N 404-190-00: 115 VAC, 60 Hz, 4.2A P/N 404-194-00: 220 VAC, 50–60 Hz, 2.5A
Output Voltage	24 VDC maximum
Output Current	10A at 24 VDC continuous maximum Four 2.5A PTC outputs
Battery Charge Current	3.6A maximum
Supervision	Battery and AC failure; form C contacts
Battery Status Indicator	Discharged or not connected
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	85% ±5%
Standards Compliance:	
UL Listed	P/N 404-190-00: UL1481 and UL294
CE Listed	P/N 404-194-00: Approved

MAAP-X Text Display Multiplexer

Standby Current	30 mA at 24 VDC
Impedance	120 ohms
Wiring	24 AWG
Maximum Distance from Text Display	Recommended: 2,000 ft. (609.6 m) Absolute: 4,000 ft. (1,219.2 m)

Ordering Information

Text Display

Part Number	Description
710-075-01	MAAP-X Text Display, 24 VDC, two line, multicolor, default text display, **requires MAAP-X Panel firmware version A.5.1 or higher** **NOTE** Must order appropriate text display multiplexers based on the number of text displays connected to the MAAP-X (64 maximum). **NOTE** The MAAP-X Planner Kit (P/N 207-627-00) is required to program addresses into text displays. **NOTE** According to 2019 NFPA 72, character and symbol height for appliances other than desktop monitors or displays shall meet all of the following criteria: • Minimum character height shall comply with Table 18.9.4.7 • Viewing distance shall be measured as the horizontal distance between the character and an obstruction preventing further approach towards the appliance • Character height shall be based on the uppercase letter “i”

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

MAAP-X Text Display Programming

Part Number	Description
207-627-00	MAAP-X Text Display Address Programming Utility Planner Kit, required to program addresses into text displays

MAAP-X Text Display Multiplexer

Part Number	Description
176-286-03	MAAP-X Text Display Multiplexer (MUX) Kit, for the MAAP-X with CORE III processor, RS-422 to eight RS-485 ports and eight live voice audio ports with surge suppression; each RS-485 port can support up to 10 text displays maximum per output, din-rail-mounted, includes mounting hardware **NOTE** 64 text displays maximum per MAAP-X with CORE III processor; text display MUX draws 30 mA from the MAAP-X 24 VDC Aux Power.

Associated Parts

Ceiling-mount Hardware

Part Number	Description
086-265-00	Ceiling Mounting Bracket for MAAP-X Text Display, includes two brackets and four 6-32 screws

Power Supply and Battery Charger

Part Number	Description
404-190-00	Power Supply/Battery Charger, 10/8A, 115 VAC, 60 Hz, with four 2.5A Class 2 power limited outputs
404-194-00	Power Supply/Battery Charger, 10/8A, 220 VAC, 50–60 Hz, with four 2.5A Class 2 power limited outputs

Batteries

Part Number	Description
400-704-00	Battery, SLA, rechargeable, 12V/8Ah, quick connect, 5.95 in. L x 2.56 in. W x 3.9 in. H, 3.5 lb
400-713-00	Battery, SLA, rechargeable, 12V/12Ah, quick connect, 5.94 in. L x 3.86 in. W x 3.86 in. H, 7.92 lb

NEMA 4X Enclosure

Part Number	Description
081-264-00	NEMA 4X Text Display Enclosure, stainless steel with a clear display window in the front, enclosure dimensions 12 in. H x 12 in. D x 48 in. L

Assembly Information

Application Note

Up to 31 text displays can be connected to a MAAP-X with a CORE II processor.

Up to 64 text displays can be connected to a MAAP-X with a CORE III processor; this is the CORE III solution.

The CORE II solution is available but requires different part numbers. Contact customer service for assistance.

Requirement Note

Each MAAP-X with a CORE III can support one Text Display MUX (P/N 176-286-03) which has eight ports. Each port can have 10 text displays daisy chained.

Each MAAP-X (CORE II) with Firmware A.4.7 can have up to 16 text displays (P/N 710-075-01) maximum.

Each MAAP-X (CORE II) with Firmware A.4.8 can have up to 32 text displays (P/N 710-075-01) maximum.

The MAAP-X Text Display Address Programming Utility Planner (P/N 207-627-00) is required to program addresses into text displays.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

Power Supply Application

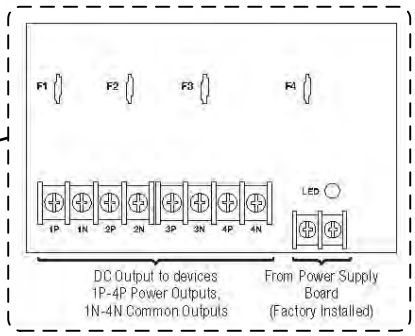
Power Supply/Battery Charger

P/N 404-190-00
115 VAC, 60Hz, 10/8A,
with four 2.5A Class 2 power limited outputs

P/N 404-194-00
220 VAC 50–60 Hz 10/8A,
with four 2.5A Class 2 power limited outputs

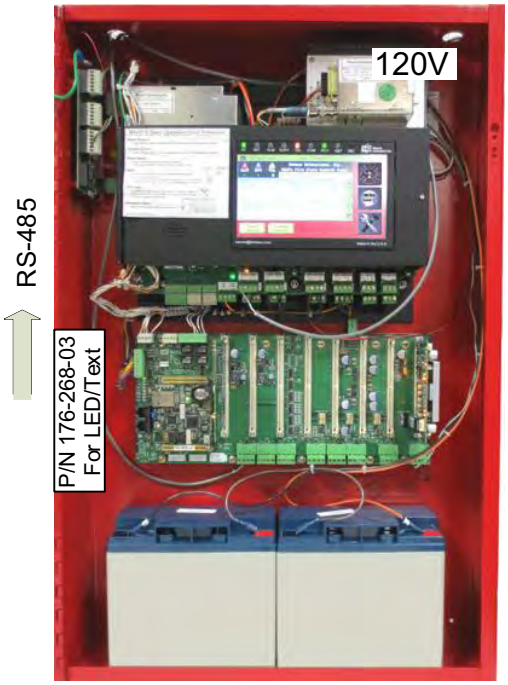
Addressable Monitor
(Input Module)

2.5A 24VDC Circuits: Qty=4



Individual Text Displays to have
a dedicated 2.5A -24VDC circuit

Class 2 – Power Limited
Up to four Text Displays per Power Supply



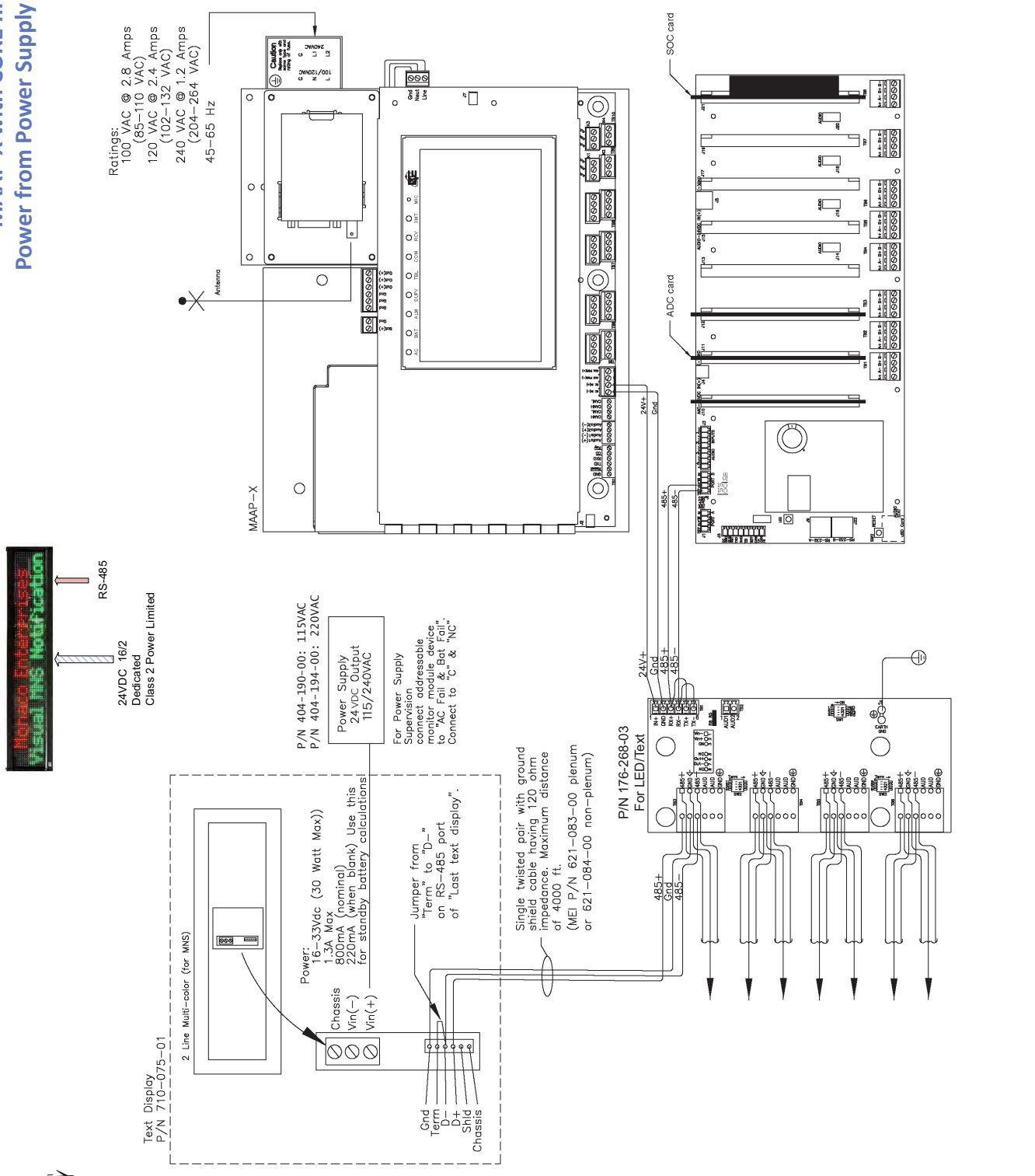
MAAP-X
Enclosure
size based on
application

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

MAAP-X with CORE III
Power from Power Supply

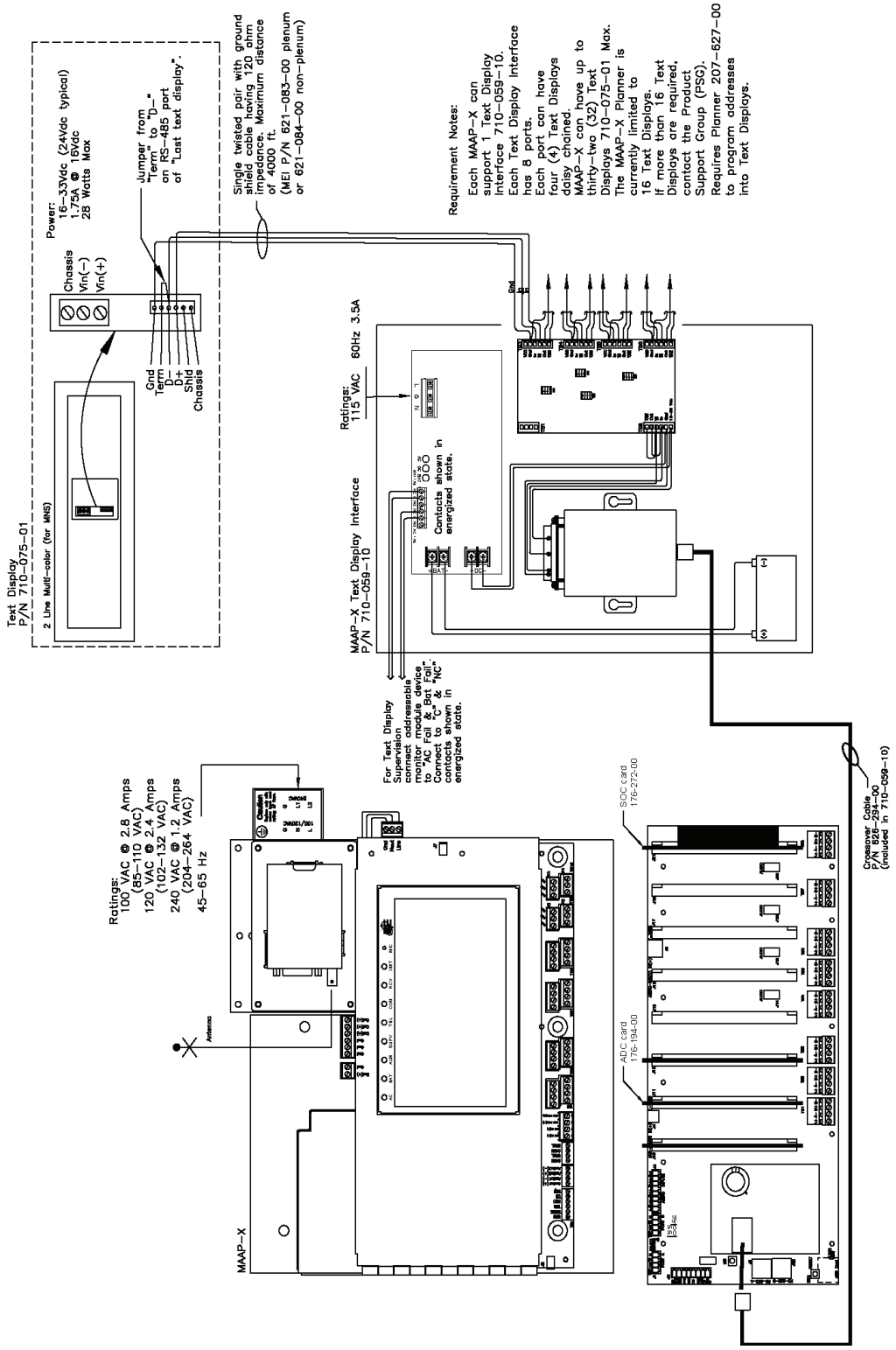


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

MAAP-X with a CORE II
Power from Power Supply



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

MNS Accessories

Addressable Fire Alarm Control Panels w/MNS Catalog Section 06

MNS Accessories

Audio Booster Panels. 703-16x-00, 703-20x-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS

Audio Booster Panels

703-16x-00, 703-20x-00

Description

The Audio Boosters provide additional supervised audio power for live voice and prerecorded messages with 24 VDC battery backup capabilities.

Boosters can be interconnected to accommodate large installations (maximum of 5,280 W supervised audio power) with supervised audio power as well as supervised and synchronized strobe power. Each Audio Booster connected to a MAAP-X SOC requires one Audio Output Limiter.

The 320 W audio booster draws 2.4 W of audio input power to properly operate and provide additional supervised audio output power. The 160 W and 80 W boosters each draw 1.2 W of audio power to properly operate and provides additional supervised audio output power. Additional strobe power is available using Audio Booster P/N 703-167-00 or P/N 703-207-00.

When used with the MAAP-X FACP/MNS, it is required that the following items be included:

- Audio Output 60V P-P Limiter (P/N 176-296-01); one per Audio Booster panel
- Mini-monitor Module (P/N 729-218-00); one per Audio Booster panel
- Supervised Volume Control (P/N 703-166-00); one per SOC on the Audio Booster panel

Features

- OSHA 1910.165 and ADA compliant
- Fully supervised power supply and batteries
- Class D amplifiers
- Power limited circuitry
- Internal battery charger and power supply
- Expansion output used for connecting multiple boosters (Supervised, 0.5A @24 VDC in alarm condition)
- Keyed alike
- Removable quick connect terminals (12–22 AWG)

Specifications

703-164-00, 703-167-00, 703-206-00, 703-207-00

Operating Voltage	703-164-00: 120 VAC, 3.8A, 60 Hz 703-167-00: 120 VAC, 3.8A, 60 Hz 703-206-00: 240 VAC, 2.5A, 50/60 Hz 703-207-00: 240 VAC, 2.5A, 50/60 Hz
Standby Current	120 mA per amplifier board
Audio Alarm Current	9A per amplifier board
Audio Booster Power	703-164-00, 703-206-00: 160 W 703-167-00, 703-207-00: 80 W
Output Voltage	25 or 70 volts (selectable)
Signal Frequency Response	Voice: 400 Hz to 6.5 kHz BGM: 275 Hz to 15 kHz
Signal to Noise Ratio	>70 dB
Dynamic Range	>65 dB
Total Harmonic Distortion	2%
Dimensions	21 in. H x 16 in. W x 6 in. D (53.34 cm x 40.64 cm x 15.24 cm)
Weight	36 lb (16.3 kg) without batteries
Finish	Red
Standards Compliance:	
UL Listed	UL864, File S5361
FM Approval	Approved; Wheelock, SPB-160X: P/N 703-164-00 Wheelock, SPB-80/4: P/N 703-167-00 Wheelock, SPB-160E: P/N 703-206-00 Wheelock, SPB-80/4E: P/N 703-207-00
State of California	6911-0785:157

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

703-165-00, 703-208-00

Power Input	703-165-00: 120 VAC, 3.8A, 60 Hz 703-208-00: 240 VAC, 2.5A, 50/60 Hz
Standby Current	120 mA per amplifier board
Alarm Current	18A per amplifier board
Audio Booster Power	320 W
Output Voltage	25 or 70 volts (selectable)
Signal Frequency Response	Voice: 400 Hz to 6.5 kHz BGM: 275 Hz to 15 kHz
Signal to Noise Ratio	>70 dB
Dynamic Range	>65 dB
Total Harmonic Distortion	2%
Dimensions	36 in. H x 24 in. W x 6 in. D (91.4 cm x 60.96 cm x 15.24 cm)
Weight	80 lb (36.3 kg) without batteries
Finish	Red
Standards Compliance:	
UL Listed	UL864, File S5361
FM Approval	Approved Wheelock, SPB-320: P/N 703-165-00 Wheelock, SPB-320E: P/N 703-208-00
State of California	6911-0785:157

Ordering Information

Audio Boosters

Part Number	Description
703-164-00	Audio Booster 160 W, 120 VAC, 60 Hz, no power for strobe circuits
703-165-00	Audio Booster 320 W, 120 VAC, 60 Hz, no power for strobe circuits
703-167-00	Audio Booster 80 W, 120 VAC, 60 Hz, two 2A strobe circuits
703-206-00	Audio Booster 160 W, 240 VAC, 50/60 Hz, no power for strobe circuits
703-207-00	Audio Booster 80 W, 240 VAC, 50/60 Hz, with two 2A strobe power circuits
703-208-00	Audio Booster 320 W, 240 VAC, 50/60 Hz, no power for strobe circuits

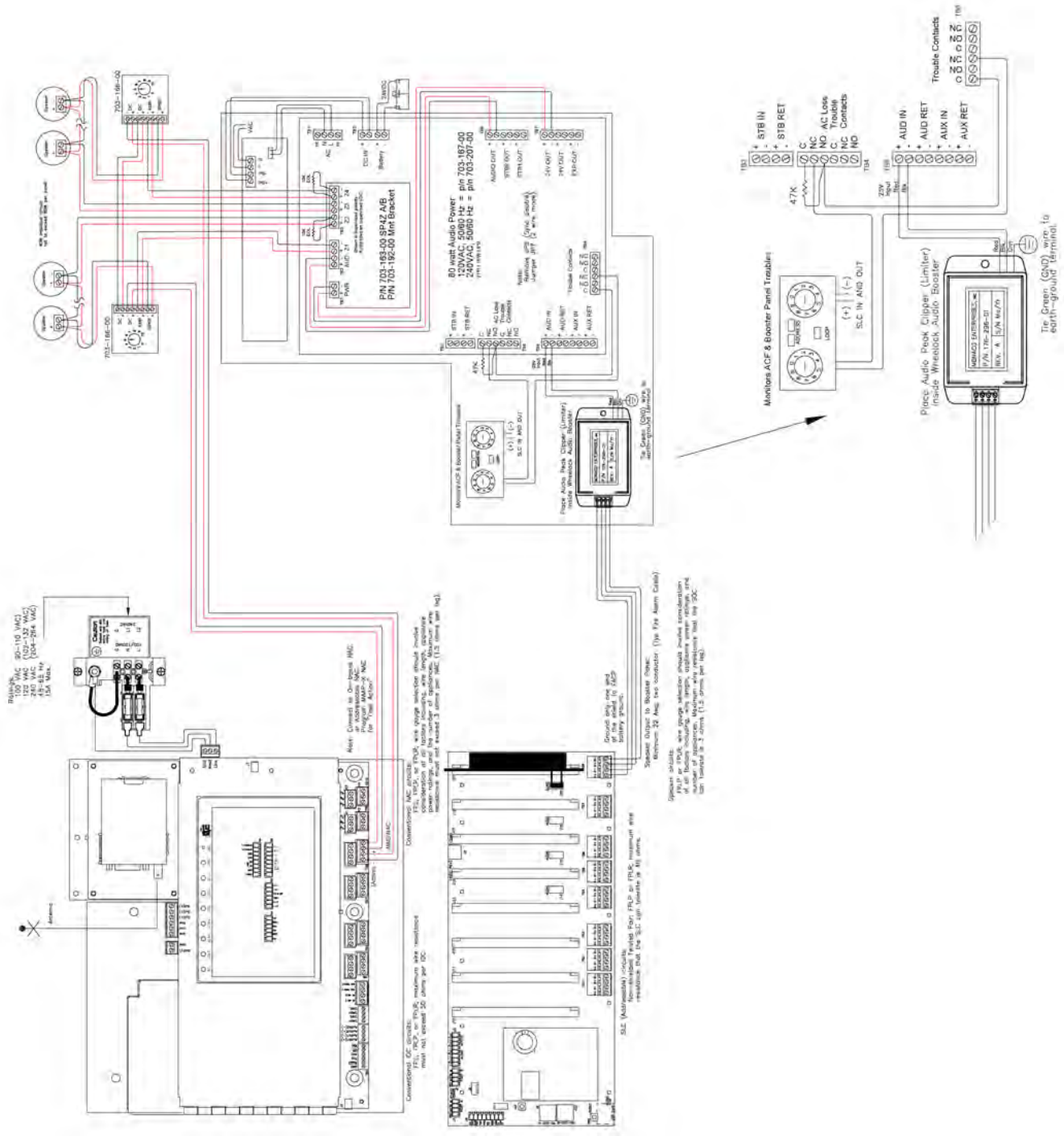
Associated Parts

Part Number	Description
176-296-01	Audio Output 60V P-P Limiter for MAAP-X Speaker Output Card (SOC); one required for each Audio Booster connected to a MAAP-X SOC
400-713-00	Battery, SLA, rechargeable, 12V/12Ah, quick connect, 5.94 in. L x 3.86 in. W x 3.86 in. H, 7.92 lb
703-163-00	Audio Splitter (four Class B or two Class A), audio splitter bracket required
703-192-00	Speaker Splitter Mounting Bracket, required when audio splitter P/N 703-163-00 is used **NOTE** Bracket supports two audio splitters (P/N 703-163-00).
703-166-00	Supervised Volume Control (only one per audio circuit)
729-218-00	Intelligent Mini-monitor Module, AP/CLIP, white, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

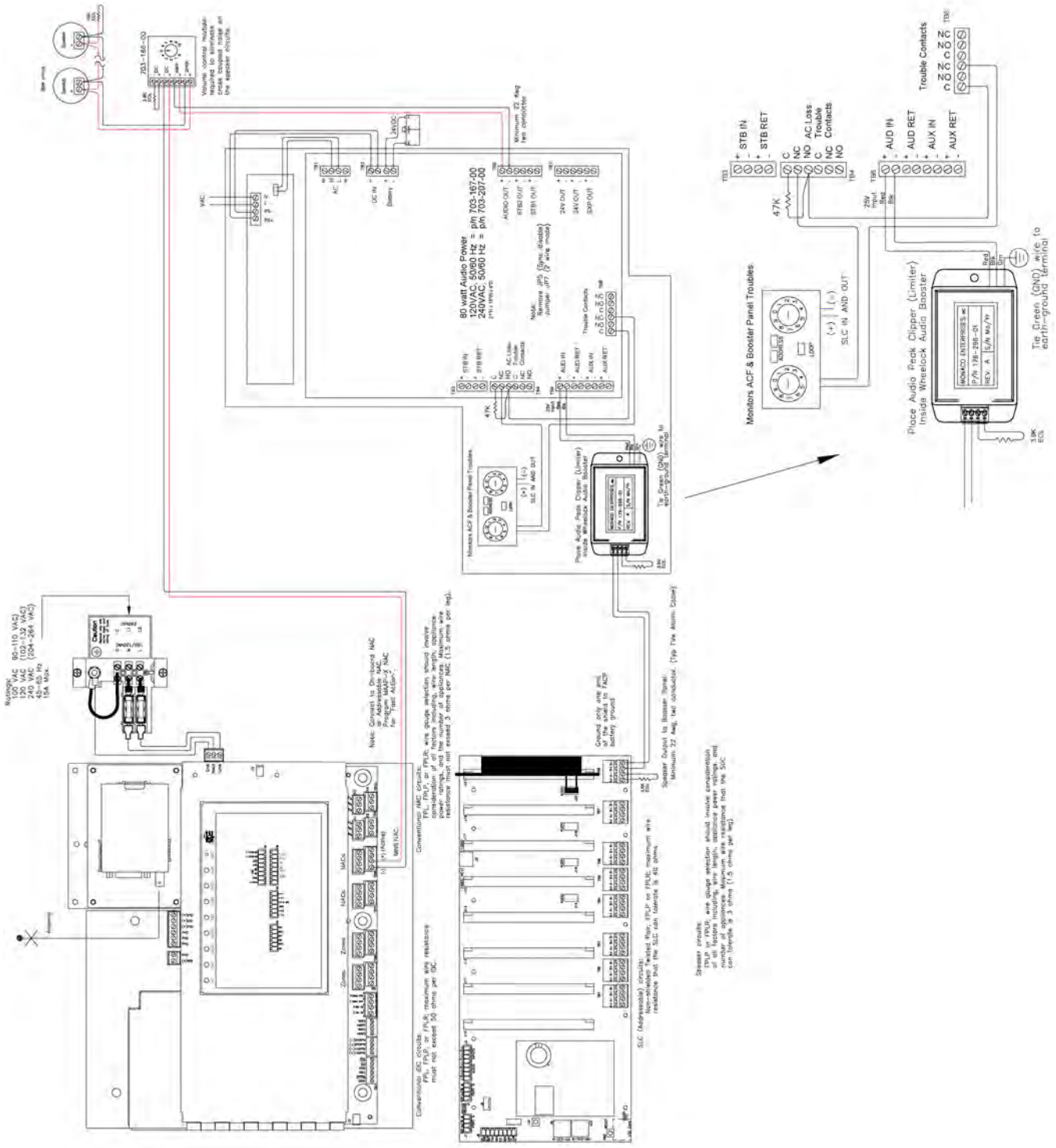
Wiring Diagrams



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Fire Alarm Control Panels with MNS



Monaco Enterprises, Inc.

P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149

Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Fire Alarm Control Panels Catalog Section 07

Section 7. Conventional Fire Alarm Control Panels

M Conventional Planner 207-813-00
M-2 Conventional FACP with Integrated Radio Transceiver 227-55x-xx, 227-56x-xx, 227-570-xx, 227-587-xx
M-2 Conventional FACP, Mass Notification 227-55x-MN, 227-56x-MN, 227-570-MN
Interface PCB, 4-Zone Alarm, 4-Zone Alarm/Trouble 175-047-00, 176-133-00, 176-177-00, 790-026-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

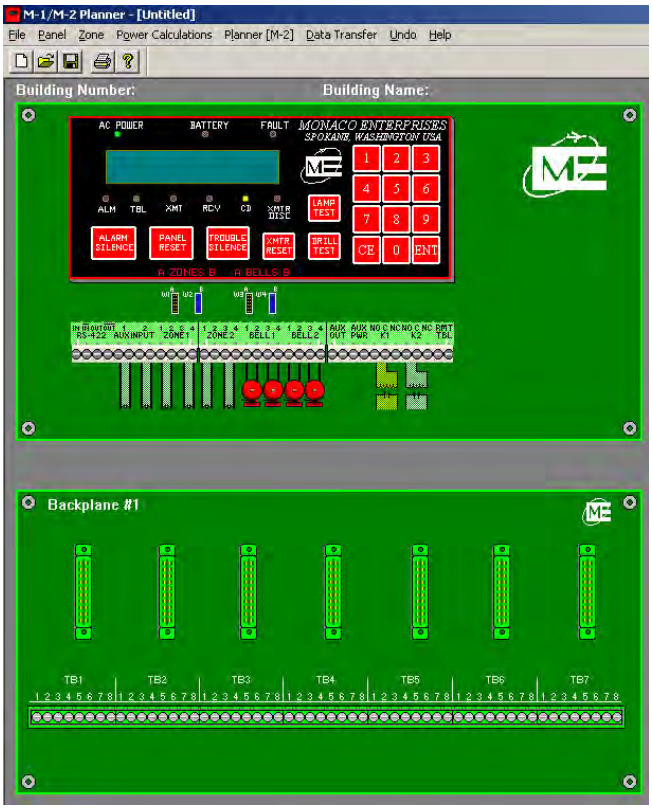
Conventional Fire Alarm Control Panels

M Conventional Planner
207-813-00

Description

The Monaco M Conventional Planner is a Windows®-based program that allows a Monaco M-Series Conventional Fire Alarm Control Panel (FACP) to be programmed using a compatible laptop or PC. The Planner also allows the existing Configuration in the M Conventional FACP to be downloaded to a computer or laptop for modification, printout, or storage.

The M Conventional Planner Kit (P/N 207-813-00) consists of a thumb drive containing the M Conventional Planner program and a programming cable assembly used to connect an M Conventional FACP to the serial port of the Computer running the M Conventional Planner.



Features

- Ease of programming M-Series FACPs
- Fast and consistent programming of large numbers of M-Series FACP units
- Backup of M-Series FACP configuration databases
- Allows easy testing of new configurations with quick fall back to last good configuration
- Battery calculator
- Print configuration reports
- Windows® XP, Vista, 7.0, 8.0, 10 compatible

NOTE Newer laptops typically do not have a serial port, so a USB to serial adaptor must be used to program the Monaco panels. Monaco USB to serial adaptor (P/N 649-118-00) has provided the most reliable communication between various laptops and Monaco panels. Other USB to serial adaptors may not produce a satisfactory customer experience.

Ordering Information

Part Number	Description
207-813-00	M Conventional Planner Kit Assembly; thumb drive, programming cable and adaptor, IOM manual; requires 9-pin serial port on laptop or USB to serial adaptor

Associated Parts

Part Number	Description
008-008-00	M Conventional Planner Upgrade Kit—thumb drive only
226-529-00	Kit, M Serial Data, 9-pin RS232 adaptor and programming cable
649-118-00	USB to 9-pin Serial Adaptor

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

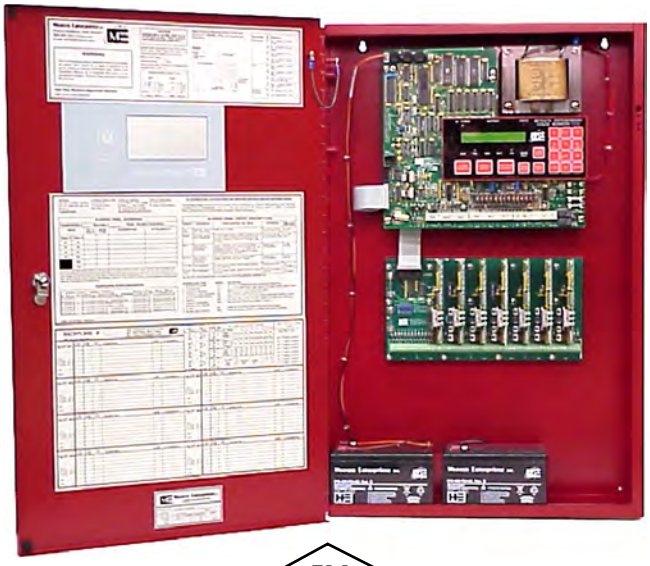
Conventional Fire Alarm Control Panels

M-2 Conventional FACP with Integrated Radio Transceiver

227-55x-xx, 227-56x-xx, 227-570-xx, 227-587-xx

Description

The M-2 is a low-voltage, programmable fire alarm control panel (FACP) with an integrated FSK radio transceiver. All monitoring, supervision, signaling, and reporting functions are incorporated into this unit for real-time, device-level status at Monaco's D-21 Central Receiving System (D-21) through integrated transceiver or hard-wire communication. The integrated transceiver needs no external wiring or interfacing relays.



FM APPROVED

The radio is FCC certified for narrowband operation and meets the requirements of the NTIA (National Telecommunications and Information Administration) Manual of Regulations and Procedures for Federal Frequency Management.

The basic M-2 provides two Class A or four Class B (jumper selectable) and two auxiliary zones. Zones can be added in increments of two Class A or four Class B with Zone Expansion Cards (ZECs)—Class set by switch. These cards plug into an expansion backplane.

Auxiliary Output Cards (AOCs)—eight programmable outputs—and Universal Input Cards (UICs) can also plug into the expansion backplane. Outputs drive annunciator LEDs, relays, or other devices.

An M-2 in the 60 in. enclosure can monitor up to 58 Class A or 60 Class B zones.

User Interface

- Integrates with Monaco D-21 Radio Alarm Central Receiving System (Central) and any of the D-21 fire management systems
- Monitors zones and transmits alarms (fire and supervisory), troubles and restorations, and control panel status
- Status changes are reported to D-21 by automatic, manual, and on-command poll/reply/acknowledge routines
- Built-in diagnostic tests
- LEDs indicate transceiver, control panel, and zone status; an LCD identifies the specific condition in plain English
- Includes lamp test, drill test, walktest, and transmitter disable for all or individual zones
- Individual zones and the transceiver can be disabled at the M-2
- "Stuck" transmitter disconnects automatically
- RF signal components on the assigned frequency are indicated by LEDs
- Types of signaling—radio frequency and non-coded

Messages repeat at programmed intervals until Central acknowledges receipt. If the M-2 does not receive a signal from Central for 30 seconds, it sends any alarm messages without waiting for a command. If the M-2 does not reply to a poll or command, a trouble is indicated at Central.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Fire Alarm Control Panels

Fire Inputs and Outputs

- Types of service:
  - Automatic fire alarm
  - Manual fire alarm
  - Waterflow alarm
  - Sprinkler supervision
- IDC zone types:
  - Standard
  - Supervisory
  - Waterflow alarm
  - Detector verification
  - Master box
  - Positive alarm sequence
  - Tamper
- NACs: four Class B, two Class A
- The Form C relays can be wired for normally open (NO) or normally closed (NC)

  CAUTION! *Do not run 120 VAC for auxiliary devices in the panel enclosure.*
- Auxiliary inputs are two Class B non-powered IDCs
- Auxiliary output is a Class B polarity-reversal circuit
- Auxiliary power supports auxiliary powered detectors or devices
- Remote trouble circuit powers remote bells, horns, etc. and is non-supervised, non-polarity reversing, and self-current-limiting

Configuration Programming

- The onboard LCD and keypad are used to remotely program the M-2 including transceiver address and zone reporting position numbers
- Software gives alarms priority processing
- All programming and current status are stored in transferable, nonvolatile memory at the D-21

Hardware

- NEMA 1 enclosures are 18 in. W x 3.6 in. D; height determines the number of possible expansion backplanes
- All enclosures have two conduit knockouts on top; the 19 in. enclosure has two on each side, and longer enclosures have additional side knockouts
- Expansion backplanes/cards increase zone capacity
- Terminal blocks can be easily removed with the wiring intact when performing maintenance and troubleshooting procedures

Specifications

AC Input Selectable 115 or 230 VAC, 50–60 Hz (Range: 85% to 110% of input, 48–62 Hz)

DC Power 28 VDC, 5A main supply

Auxiliary Power Circuit 24 VDC filtered, 2A

Relays Form C, 1.25A/24 VDC resistive

Integral Battery Backup
- Charging Circuit rated up to 80 Ah
- Dual-rate Charge: 27.8 VDC, 4A limit
- Charger Fully Supervised
- Low Battery: 23 VDC
- Battery Disconnect: 19 VDC

Fire Inputs and Outputs

IDCs (Zones):
- Supply 24 VDC filtered power for loop-powered devices
- Current: 3 mA standby, 50 mA shorted
- Loop Resistance: ≤35 ohms
- 3.9 kohm EOL resistor

NACs:
- Polarity Reversing
- 24 VDC filtered, 1.5A
- Total Bell 1 (B1 and B2) or Bell 2 (B3 and B4)
  - Current: ≤2A
  - Total Current, All NACS: ≤3.5A
- Loop Resistance: ≤3 ohms per circuit
- 4.7 kohm EOL resistor, in parallel, Class B

Auxiliary Input:
- Loop Resistance: ≤35 ohms per circuit
- 4.7 kohm EOL resistor, in parallel

Auxiliary Output:
- Polarity Reversing
- 24 VDC filtered, 1.5A
- Loop Resistance: ≤3 ohms total circuit
- 4.7 kohm EOL resistor, in parallel

Remote Trouble: 150 mA of 24 VDC filtered power

Radio Output Power 4 W

Operating Temperature 32°F to 120°F (0°C to 49°C)

Relative Humidity 0% to 90% non-condensing

IMPORTANT! *Combined current of IDCs, NACs, auxiliary circuits, and remote trouble circuit cannot exceed 4A.*

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Fire Alarm Control Panels

Ordering Information

Part Number	Description
227-550-xx*	M-2 Conventional Surface-mount FACP with Integrated Radio Transceiver: • 19 in. H × 18 in. W × 3.6 in. D (48.3 cm x 45.7 cm x 9.1 cm), NEMA 1 • Narrowband • Two Class A or four Class B zones • Two 12V/18 Ah batteries
227-551-xx*	M-2 Conventional Surface-mount FACP with Integrated Radio Transceiver: • 28 in. H × 18 in. W × 3.6 in. D (71.1 cm x 45.7 cm x 9.1 cm), NEMA 1 • Narrowband • Two Class A or four Class B zones • Two 12V/18 Ah batteries • Space for one expansion backplane—up to seven ZECs, AOCs, UICs
227-552-xx*	M-2 Conventional Surface-mount FACP with Integrated Radio Transceiver: • 43 in. H × 18 in. W × 3.6 in. D (109.2 cm x 45.7 cm x 9.1 cm), NEMA 1 • Narrowband • Two Class A or four Class B zones • Four 12V/18 Ah batteries • Space for two expansion backplanes—up to 14 ZECs, AOCs, UICs
227-554-xx*	M-2 Conventional Surface-mount FACP with Integrated Radio Transceiver: • 60 in. H × 18 in. W × 3.6 in. D (152.4 cm x 45.7 cm x 9.1 cm), NEMA 1 • Narrowband • Two Class A or four Class B zones • Four 12V/18 Ah batteries • Space for four expansion backplanes—up to 28 ZECs, AOCs, UICs
227-560-xx*	M-2 Conventional Flush-mount FACP with Integrated Radio Transceiver: • 19 in. H × 18 in. W × 3.6 in. D (48.3 cm x 45.7 cm x 9.1 cm), NEMA 1 • Narrowband • Two Class A or four Class B zones • Two 12V/18 Ah batteries
227-561-xx*	M-2 Conventional Flush-mount FACP with Integrated Radio Transceiver: • 28 in. H × 18 in. W × 3.6 in. D (71.1 cm x 45.7 cm x 9.1 cm), NEMA 1 • Narrowband • Two Class A or four Class B zones • Two 12V/18 Ah batteries • Space for one expansion backplane—up to seven ZECs, AOCs, UICs
227-562-xx*	M-2 Conventional Flush-mount FACP with Integrated Radio Transceiver: • 43 in. H × 18 in. W × 3.6 in. D (109.2 cm x 45.7 cm x 9.1 cm), NEMA 1 • Narrowband • Two Class A or four Class B zones • Four 12V/18 Ah batteries • Space for two expansion backplanes—up to 14 ZECs, AOCs, UICs
227-563-xx*	M-2 Conventional FACP with Integrated Radio Transceiver: • 24 in. H × 24 in. W × 8 in. D (61.0 cm x 61.0 cm x 20.3 cm), NEMA 3R • Narrowband • Two Class A or four Class B zones • Two 12V/18 Ah batteries **NOTE** Security version configured differently; contact Monaco for details.
227-564-xx*	M-2 Conventional Flush-mount FACP with Integrated Radio Transceiver: • 60 in. H × 18 in. W × 3.6 in. D (152.4 cm x 45.7 cm x 9.1 cm), NEMA 1 • Narrowband • Two Class A or four Class B zones • Four 12V/18 Ah batteries • Space for four expansion backplanes—up to 28 ZECs, AOCs, UICs
227-570-xx*	M-2 Conventional FACP with Integrated Radio Transceiver: • 20 in. H × 16 in. W × 6 in. D (50.8 cm x 40.6 cm x 15.2 cm), NEMA 3R • Narrowband • Two Class A or four Class B zones • Two 12V/18 Ah batteries
227-587-xx*	M-2 Conventional FACP with Integrated Radio Transceiver: • 24 in. H × 24 in. W × 8 in. D (61.0 cm x 61.0 cm x 20.3 cm), NEMA 4X • Narrowband • Two Class A or four Class B zones • Two 12V/18 Ah batteries
*Specify frequency (-xx) when ordering.	
NOTE 1 The antenna system is required for Integrated Radio Units; contact Monaco.	
NOTE 2 Battery options are available. Ah capacity depends on system configuration; contact Monaco for help determining battery requirements.	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Associated Parts

Part Number	Description
227-558-xx*	Narrowband Electronics Package, conventional M-2
227-571-xx*	M-2 Narrowband Upgrade Kit, Type 1: CPU and flash memory chips, transceiver, power supply PCB, and cables
176-184-01	M-2 CPU Replacement Kit
176-184-03	M-2 CPU and FSK Replacement Kit
176-185-00	M Conventional FACP Expansion Backplane; capacity for up to seven expansion cards: ZECs, AOCs, or UICs
176-186-00	Zone Expansion Card (ZEC), two Class A or four Class B zones
176-187-00	Auxiliary Output Card (AOC), drives eight LEDs per card; expansion backplane required for M FACP
176-197-00	Universal Input Card (UIC), four pairs of input terminals connecting up to four 2-wire input zones
513-411-00	M-2 Tamper Switch Kit
517-016-00	Tilt Switch
207-813-00	M Conventional Planner Kit Assembly; thumb drive, programming cable and adaptor, IOM manual; requires 9-pin serial port on laptop or USB to serial adaptor
225-163-00	Planner Suite/ Programmer with interface cables for use with: Monaco FACP/MNS (M-2, MAAP-2, MAAP(+), MAAP-X), BT-X building transceiver, and D-21 compatible repeaters
400-712-00	Battery, SLA, rechargeable, 12V/18 Ah, quick connect, 7.13 in. L x 3.03 in. W x 6.59 in. H, 12.6 lb
***Specify frequency (-xx) when ordering.	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

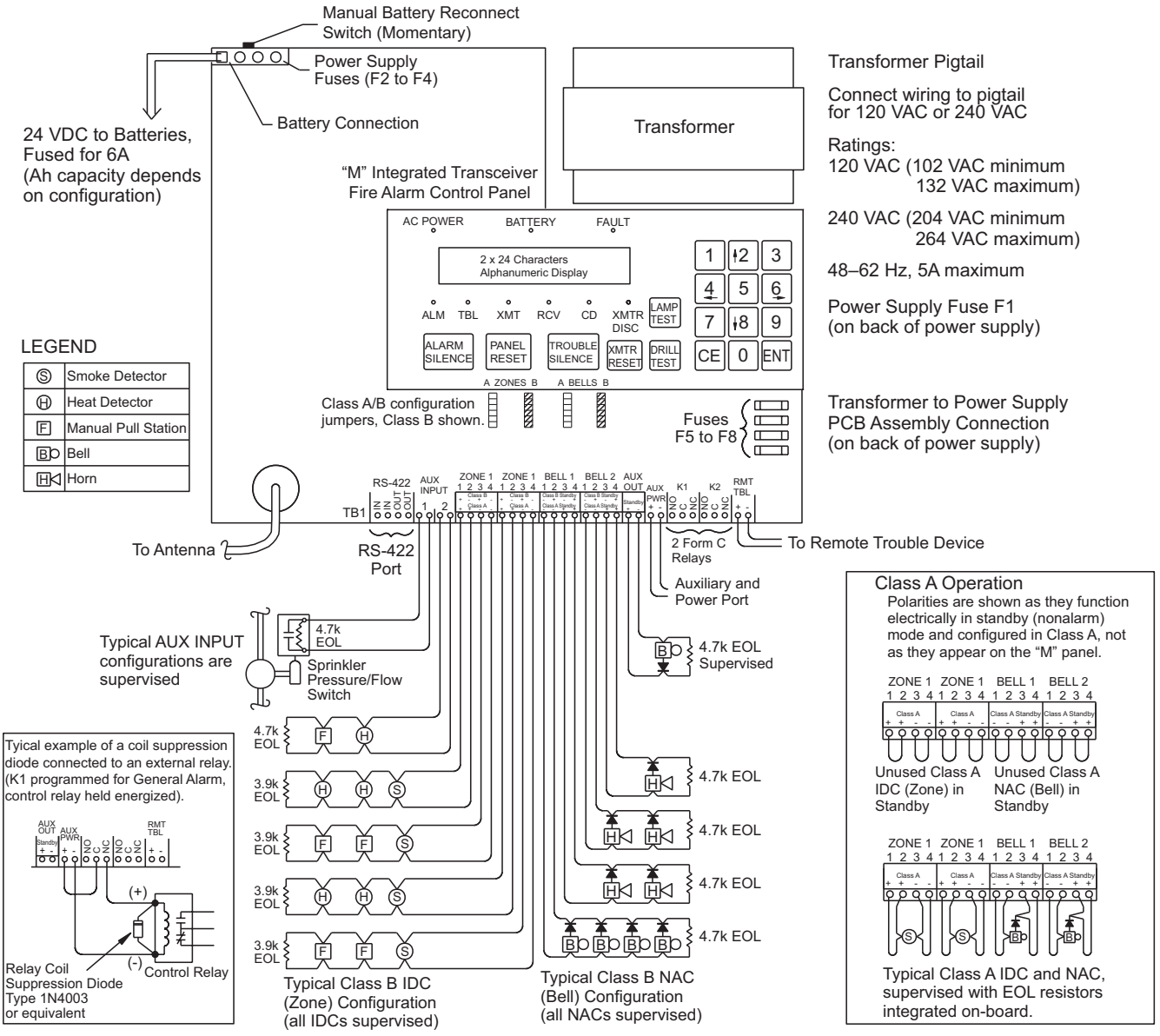
Detect
Manage
Record

Conventional Fire Alarm Control Panels

Wiring Diagrams

The following drawings represent typical applications—not all possible options.

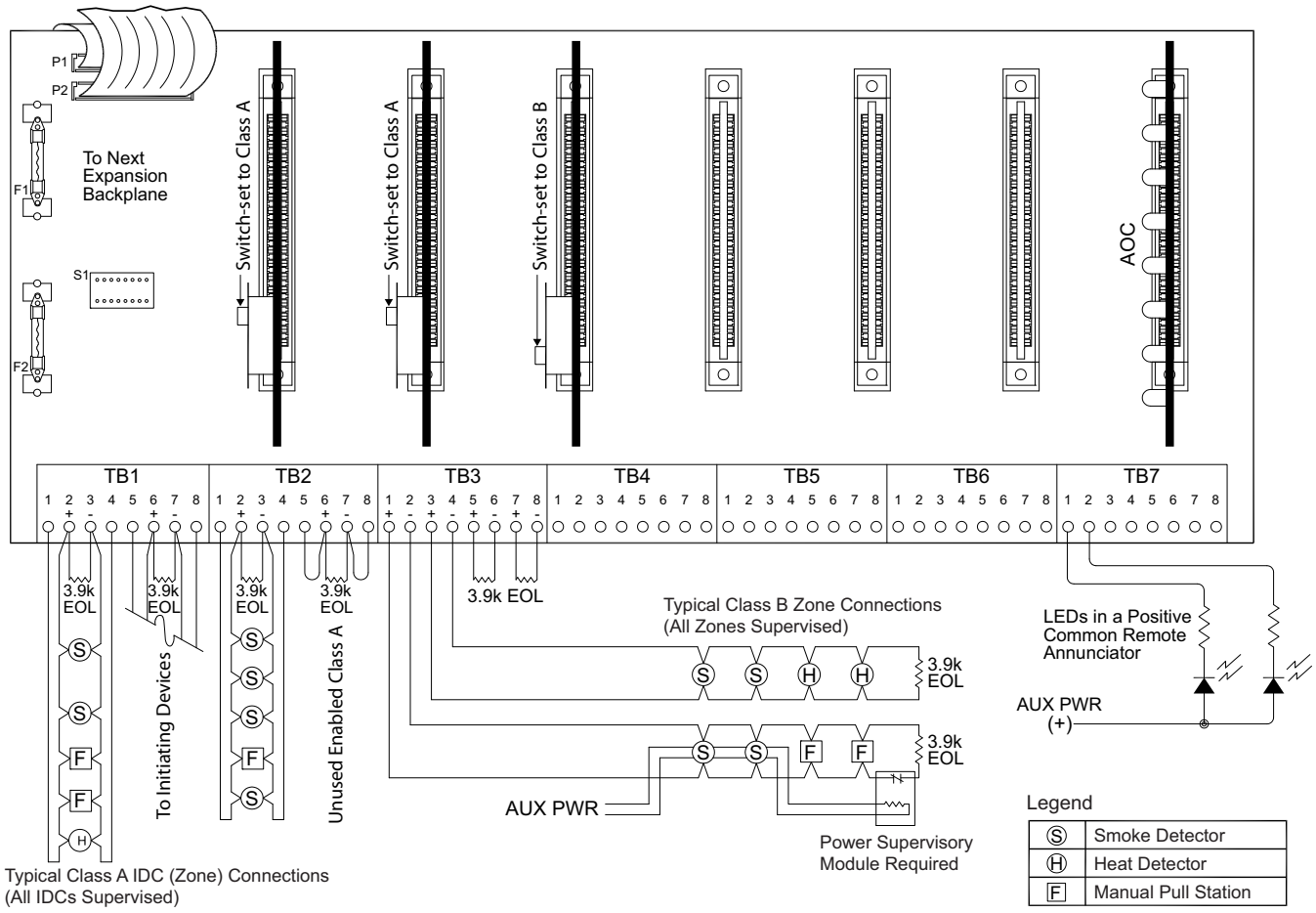
Conventional Wiring, No Expansion Backplane



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Expansion Backplane Wiring



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Fire Alarm Control Panels

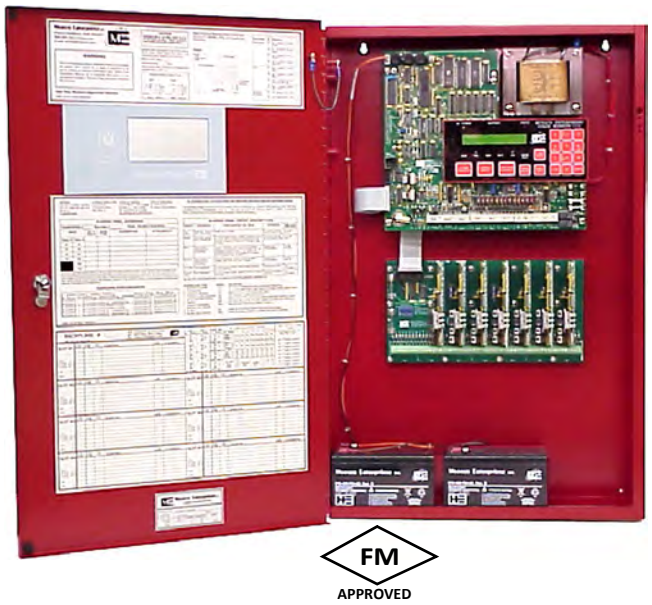
M-2 Conventional FACP, Mass Notification

227-55x-MN, 227-56x-MN, 227-570-MN

Description

The M-2 panel with Mass Notification System (MNS) support replaces the standard radio transceiver (typically on the panel) with an RFM-XM2 interface. This allows the panel to communicate with a BT-XM2 and support a D-21 MNS function that the BT-XM2 activates at an MNS panel.

The M-2 is a low-voltage, programmable fire alarm control panel (FACP). All monitoring, supervision, and reporting functions are incorporated into this unit.



The basic M-2 provides two Class A or four Class B (jumper selectable) and two auxiliary zones. Zones can be added in increments of two Class A or four Class B with Zone Expansion Cards (ZECs)—Class set by switch. These cards plug into an expansion backplane. Auxiliary Output Cards (AOCs)—eight programmable outputs—and Universal Input Cards (UICs) can also plug into the expansion backplane. Outputs drive annunciator LEDs, relays, or other devices.

The M-2 can monitor up to 58 Class A or 60 Class B zones if the enclosure is the 60 in. version. If a second M-2 is needed for additional zones, it connects to the first M-2 through the spare port on the RFM-XM2.

User Interface

- Integrates with the Monaco D-21 Radio Alarm Central Receiving System (Central) and any of the D-21 fire management systems
- Monitors zones and transmits alarms (fire and supervisory), troubles and restorations, and control panel status
- Status changes are reported to D-21 by automatic, manual, and on-command poll/reply/acknowledge routines
- Built-in diagnostic tests
- LEDs indicate control panel and zone status; an LCD identifies the specific condition in plain English
- Includes lamp test, drill test, and walk test for all or individual zones
- Individual zones can be disabled at the M-2

When an alarm is received at the M-2 and an MNS panel connected to the BT-XM2 has been activated, the BT-XM2 determines (by programming) whether the M-2 audible Notification Appliance Circuits (NACs) silence or sound during the MNS activity.

The M-2 reports status changes to Central through the BT-XM2 radio link. Status messages repeat at programmed intervals until Central acknowledges receipt. If the M-2 does not receive a signal from Central for 30 seconds, it sends any alarm messages without waiting for a command. If the M-2 does not reply to a poll or command, a trouble is indicated at Central.

Fire Inputs and Outputs

- Types of service:
  - Automatic fire alarm
  - Manual fire alarm
  - Waterflow alarm
  - Sprinkler supervision

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Conventional Fire Alarm Control Panels

- IDC zone types:
  - Standard
  - Supervisory
  - Waterflow alarm
  - Detector verification
  - Master box
  - Positive alarm sequence
  - Tamper
- NACs: four Class B, two Class A
- Two programmable Form C relays can be wired for normally open (NO) or normally closed (NC)
  CAUTION! Do not run 120 VAC for auxiliary devices in the panel enclosure.
- Auxiliary inputs are two Class B nonpowered IDCs
- Auxiliary output is a Class B polarity-reversal circuit
- Auxiliary power supports auxiliary powered detectors or devices
- Remote trouble circuit is nonsupervised, non-polarity reversing, and self current-limiting, powers remote bells, horns, etc.

Configuration Programming

- M-2 is completely field programmable, including zone reporting position numbers, using the on-board LCD and keypad
- Software gives alarms priority processing
- All programming and current status are stored in transferable, nonvolatile memory at the D-21

Hardware

- NEMA 1 enclosures are 18 in. W x 3.6 in. D, height determines the number of possible expansion backplanes
- All enclosures have two conduit knockouts on top, the 19 in. enclosure has two on each side; longer enclosures have additional side knockouts
- Expansion backplanes/cards increase zone capacity
- M-2 panel terminal blocks can be easily removed with the wiring intact when performing maintenance and troubleshooting procedures

Specifications

AC Input	Selectable 115 or 230 VAC, 50–60 Hz (range = 85 to 110% of input, 48–62 Hz)
DC Power	28 VDC, 5A main supply
Auxiliary Power Circuit	24 VDC filtered, 2A
Relays	Form C, 1.25A/24 VDC resistive
Integral Battery Backup	■ Charging circuit rated up to 80 Ah ■ Dual-rate charge, 27.8 VDC, 4A limit ■ Charger fully supervised ■ Low battery: 23 VDC ■ Battery disconnect: 19 VDC
IDCs	■ Supply 24 VDC filtered power for loop-powered devices ■ Current 3 mA standby, 50 mA shorted ■ 3.9 kohm EOL resistor ■ Loop resistance ≤ 35 ohms
NACs	■ Polarity reversing ■ 24 VDC filtered, 1.5A ■ Total Bell 1 (B1 and B2) or Bell 2 (B3 and B4) current ≤ 2A; total current all NACs ≤ 3.5A ■ Loop resistance ≤ 3 ohms per circuit ■ 4.7 kohm EOL resistor, in parallel, Class B
Auxiliary Input Circuits	■ Total loop resistance ≤ 35 ohms per circuit ■ 4.7 kohm EOL resistor, in parallel
Auxiliary Output Circuit	■ Polarity reversing ■ 24 VDC filtered, 1.5A ■ Loop resistance ≤ 3 ohms total circuit ■ 4.7 kohm EOL resistor, in parallel
Auxiliary Power Circuit	24 VDC filtered, 2A
Remote Trouble Circuit	24 VDC filtered, 150 mA
Operating Temperature	32° to 120°F (0° to 49°C)
Relative Humidity	0 to 90%, noncondensing

IMPORTANT! Combined current of IDCs, NACs, auxiliary circuits, and remote trouble circuits cannot exceed 4A.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Fire Alarm Control Panels

Ordering Information

Panels

Part Number	Description
227-550-MN	M-2 Fire Alarm Control Panel, MNS: ■ 19 in. H × 18 in. W × 3.6 in. D (48.3 cm x 45.7 cm x 9.1 cm) NEMA 1, surface-mount ■ Two Class A or four Class B ■ Two 12V/18 Ah batteries
227-551-MN	M-2 Fire Alarm Control Panel, MNS: ■ 28 in. H × 18 in. W × 3.6 in. D (71.1 cm x 45.7 cm x 9.1 cm) NEMA 1, surface-mount ■ Two Class A or four Class B ■ Two 12V/18 Ah batteries ■ Space for one expansion backplane—up to seven ZECs, AOCs, or UICs
227-552-MN	M-2 Fire Alarm Control Panel, MNS: ■ 43 in. H × 18 in. W × 3.6 in. D (109.2 cm x 45.7 cm x 9.1 cm) NEMA 1, surface-mount ■ Two Class A or four Class B ■ Four 12V/18 Ah batteries ■ Space for two expansion backplanes—up to 14 ZECs, AOCs, or UICs
227-554-MN	M-2 Fire Alarm Control Panel, MNS: ■ 60 in. H × 18 in. W × 3.6 in. D (152.4 cm x 45.7 cm x 9.1 cm) NEMA 1, surface-mount ■ Two Class A or four Class B ■ Four 12V/18 Ah batteries ■ Space for four expansion backplanes—up to 28 ZECs, AOCs, or UICs
227-560-MN	M-2 Fire Alarm Control Panel, MNS: ■ 19 in. H × 18 in. W × 3.6 in. D (48.3 cm x 45.7 cm x 9.1 cm) NEMA 1, flush-mount ■ Two Class A or four Class B ■ Two 12V/18 Ah batteries
227-561-MN	M-2 Fire Alarm Control Panel, MNS: ■ 28 in. H × 18 in. W × 3.6 in. D (71.1 cm x 45.7 cm x 9.1 cm) NEMA 1, flush-mount ■ Two Class A or four Class B ■ Two 12V/18 Ah batteries ■ Space for one expansion backplane—up to seven ZECs, AOCs, or UICs
227-562-MN	M-2 Fire Alarm Control Panel, MNS ■ 43 in. H × 18 in. W × 3.6 in. D (109.2 cm x 45.7 cm x 9.1 cm) NEMA 1, flush-mount ■ Two Class A or four Class B ■ Four 12V/18 Ah batteries ■ Space for two expansion backplanes—up to 14 ZECs, AOCs, or UICs
227-563-MN	M-2 Fire Alarm Control Panel, MNS: ■ 24 in. H × 24 in. W × 8 in. D (61 cm x 61 cm x 20.3 cm) NEMA 3R ■ Two Class A or four Class B ■ Two 12V/18 Ah batteries
227-564-MN	M-2 Fire Alarm Control Panel, MNS: ■ 60 in. H × 18 in. W × 3.6 in. D (152.4 cm x 45.7 cm x 9.1 cm) NEMA 1, flush-mount ■ Two Class A or four Class B ■ Four 12V/18 Ah batteries ■ Space for four expansion backplanes—up to 28 ZECs, AOCs, or UICs
227-570-MN	M-2 Fire Alarm Control Panel, MNS: ■ 20 in. H × 16 in. W × 6 in. D (50.8 cm x 40.6 cm x 15.2 cm) NEMA 3R ■ Two Class A or four Class B ■ Two 12V/18 Ah batteries

NOTES

1. A BT-XM2 consists of a BT-XM (P/N 227-623-XX) with a relay board (P/N 176-214-00), M-2 MNS (-MN) and a BT-XM to BT-XM2 conversion kit (P/N 227-623-MN).
2. An MNS panel is required. If no existing panel is being used, order from Monaco.
3. There are battery options available. Ah capacity depends on system. Contact Monaco for help in determining battery requirements.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Associated Parts

Part Number	Description
227-623-xx*	BT-XM Mass Notification Communicator, narrowband radio, capability for fallback to hard-wire communication, 20 in. H × 12 in. W × 4 in. D single-wide NEMA 1, audio board, two 12V/12 Ah batteries, relay board ordered separately
*Specify frequency (-xx) when ordering. Antenna system for BT-XM2 required. Contact Monaco.	
176-214-00	BT-X Relay Board with 8 on-board Form C relays
227-623-MN	BT-XM to BT-XM2 Conversion Kit: consists of a programming chip to convert BT-XM to BT-XM2 and operating manuals (the BT-XM being converted must have an audio board attached to function correctly)
227-371-02	M-2 to M-2 Conventional FACP Conversion Kit for MNS operation, includes RFM-XM2, interconnection cable, and EPROM
176-185-00	M Conventional FACP Expansion Backplane, capacity for up to 7 expansion cards (ZECs, AOCs, or UICs)
176-186-00	Zone Expansion Card (ZEC), two Class A or four Class B zones
176-187-00	Auxiliary Output Card (AOC), drives eight LEDs per card, exansion backplane required for M FACP
176-197-00	Universal Input Card (UIC), four pairs of input terminals connecting up to four, 2-wire input zones
513-411-00	M-2 Tamper Switch Kit
517-016-00	Tilt Switch
207-813-00	M Conventional Planner Kit Assembly, thumb drive, programming cable and adaptor, IOM manual, requires 9-pin serial port on laptop or USB to serial adaptor
225-163-00	Planner Suite/Programmer with interface cables for use with Monaco FACP/MNS (M-2, MAAP-2, MAAP(+), MAAP-X), BT-X building transceiver, and D-21 compatible repeaters
400-712-00	Battery, SLA, rechargeable, 12V/18 Ah, quick connect, 7.13 in. L x 3.03 in. W x 6.59 in. H, 12.6 lb

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

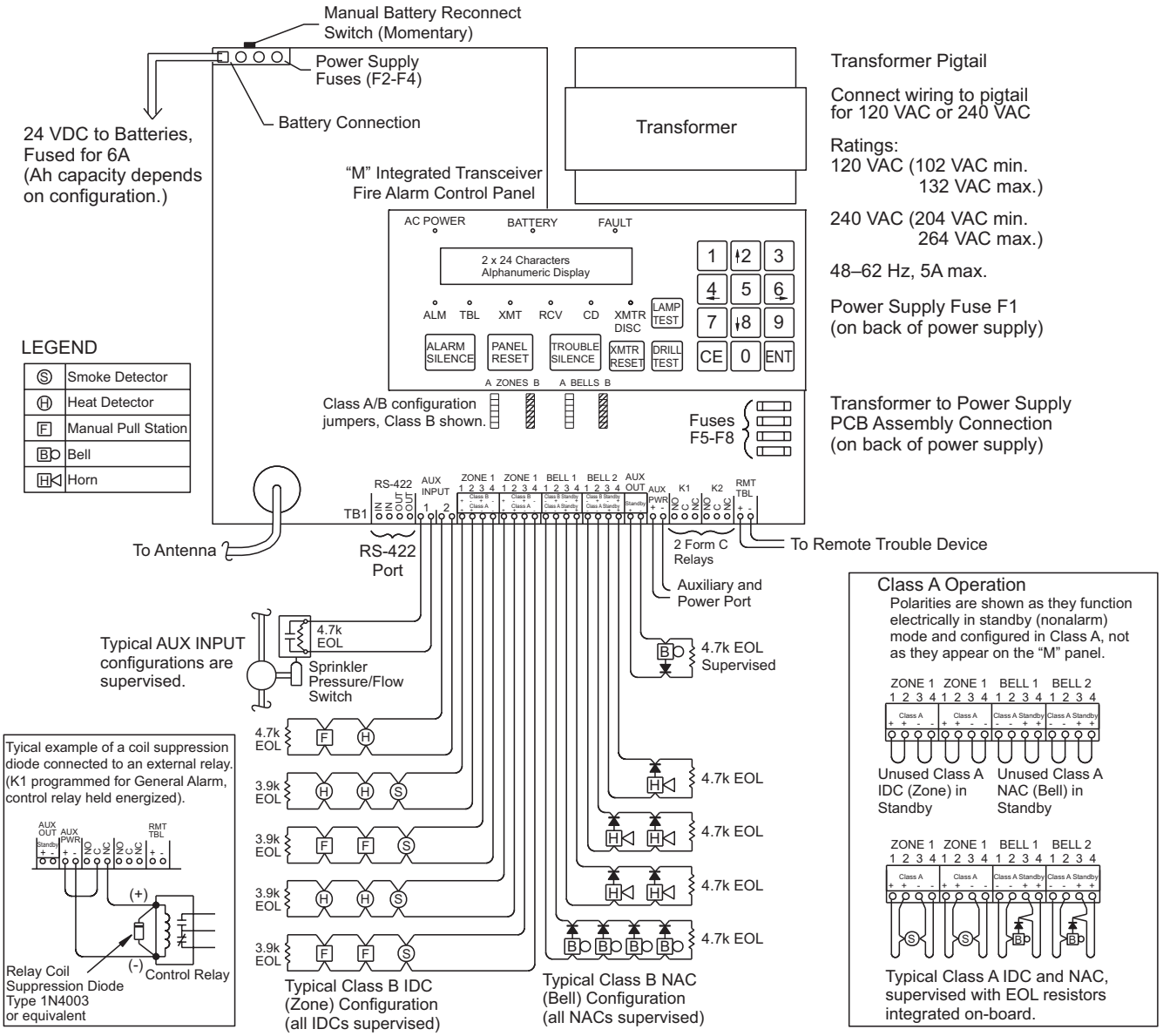
Detect
Manage
Record

Conventional Fire Alarm Control Panels

Wiring Diagrams

The following diagrams represent typical applications, not all possible options.

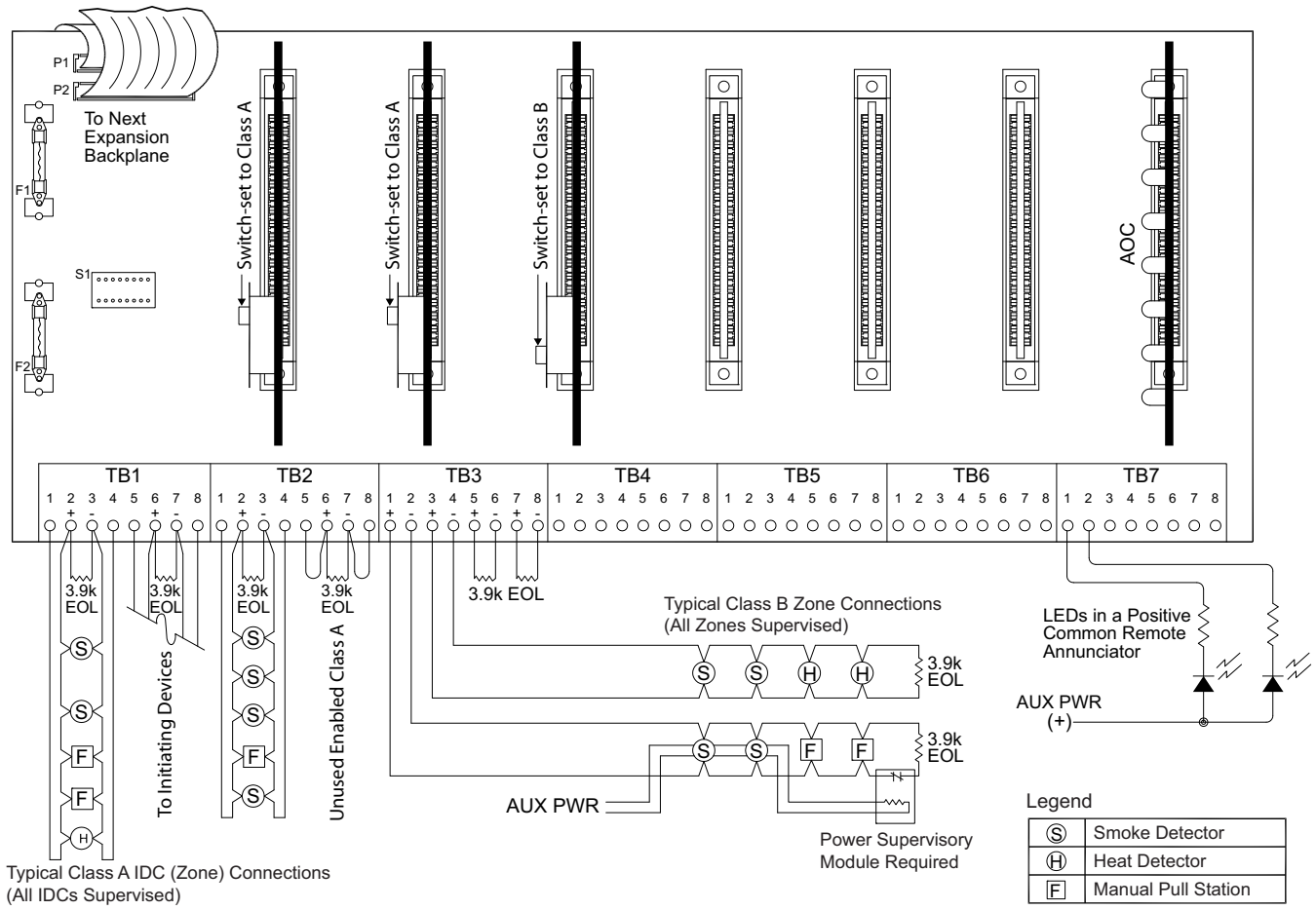
Conventional Wiring, No Expansion Backplane



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Expansion Backplane Wiring



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Fire Alarm Control Panels

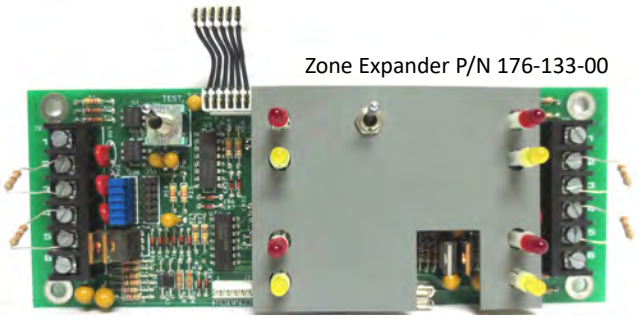
Interface PCB, 4-Zone Alarm, 4-Zone Alarm/Trouble

175-047-00, 176-133-00, 176-177-00, 790-026-00

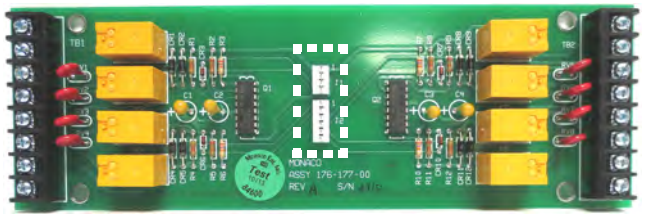
Description

The 4-zone alarm only and 4-zone alarm/trouble interface PCBs, mounted in a Vulcan I enclosure, provide individual detection-loop alarm only and alarm/trouble signaling to a Monaco building transceiver (BT). These features are an enhancement to normal Vulcan I general alarm and general trouble operation.

4-Zone Alarm Interface P/N 175-047-00



Zone Expander P/N 176-133-00



4-Zone Alarm/Trouble Interface P/N 176-177-00

The 4-Zone Alarm Interface Module (P/N 175-047-00) provides individual detection-loop alarm signaling to Monaco BTs. It mounts behind and receives signals from a Zone Expander PCB (P/N 176-133-00). The Vulcan I common auxiliary alarm contact is not used. The auxiliary trouble contact may still be used to signal zone and control panel troubles to a BT zone input.

A 4-Zone Alarm Interface may be field installed behind any Zone Expander PCB in a Vulcan I enclosure; the mounting hardware is provided with the interface PCB.

The Four-Zone Alarm/Trouble Interface PCB (P/N 176-177-00, in kit P/N 790-026-00) provides individual detection-loop alarm and trouble signaling to Monaco BTs. It mounts behind and receives signals from a Zone Expander PCB via a cable assembly soldered to the circuitry of the expander PCB and connected to the front of the interface PCB (see outline highlight in the photo). The interface PCB includes an auxiliary trouble output for each zone to match the alarm device output provided on the Zone Expander PCB.

The expander PCB and interface PCB must be installed as a set. They may be used to add zones to an existing Vulcan I, provided there is room in the enclosure, or to replace a Zone Expander PCB. The Vulcan I enclosure must be large enough to accommodate the number of interface/expander PCBs intended for the site.

Ordering Information

Part Number	Description
175-047-00	4-Zone Alarm Interface PCB, 24 VDC, two Class A or four Class B zone alarm outputs to BT
176-133-00	4-Zone Expander PCB
790-026-00	4-Zone Expander Alarm/Trouble Interface Kit, 24 VDC, two Class A or four Class B zones • One Zone Expander PCB (P/N 176-133-00) modified with cabling harness • One 4-Zone Alarm/Trouble Interface PCB (P/N 176-177-00)

Note Because the alarm/trouble interface PCB requires a zone expander PCB modified with the cabling harness, you must order kit P/N 790-026-00 to get it.

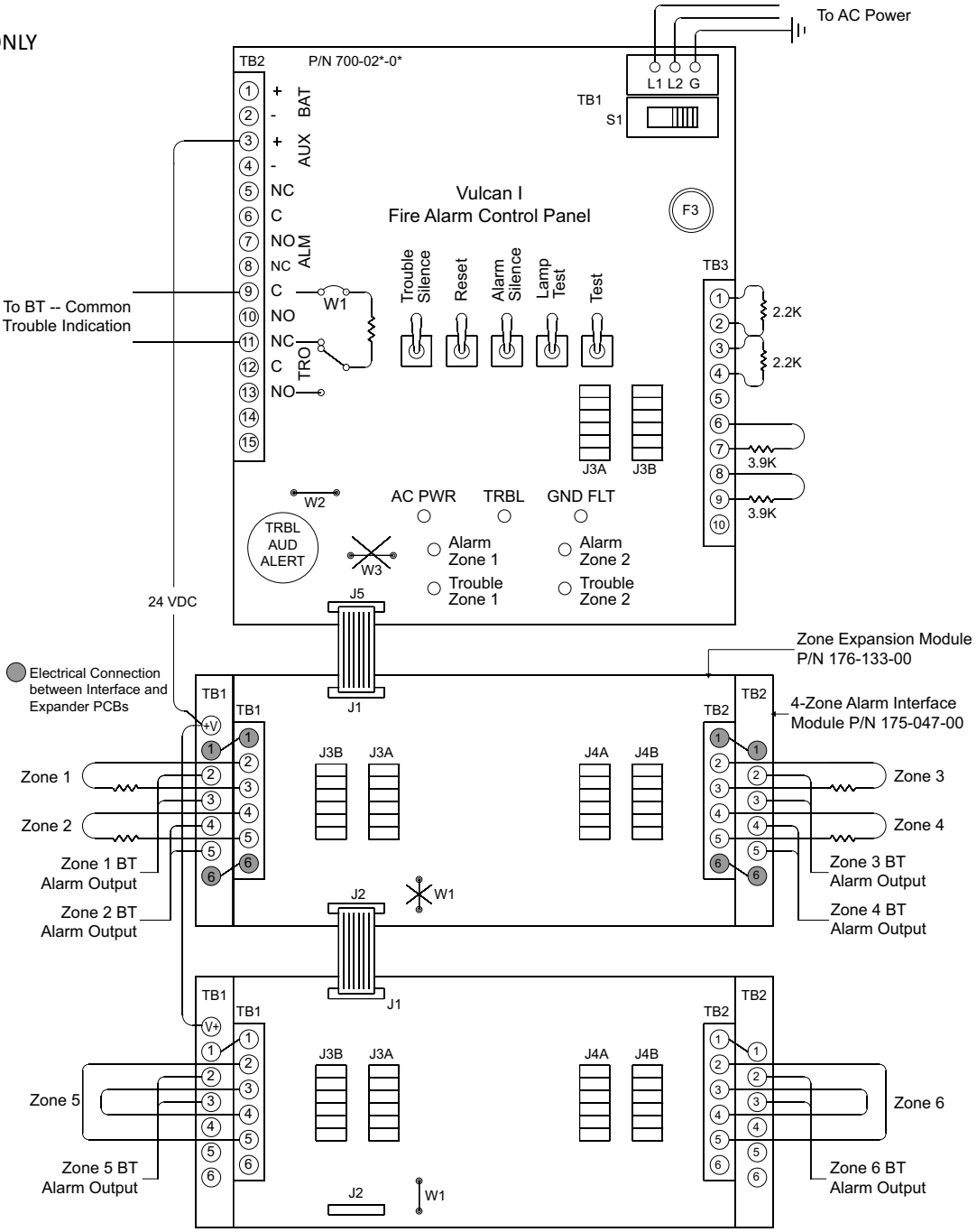
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Wiring Diagrams

4-Zone Alarm Interconnection

EXAMPLE ONLY

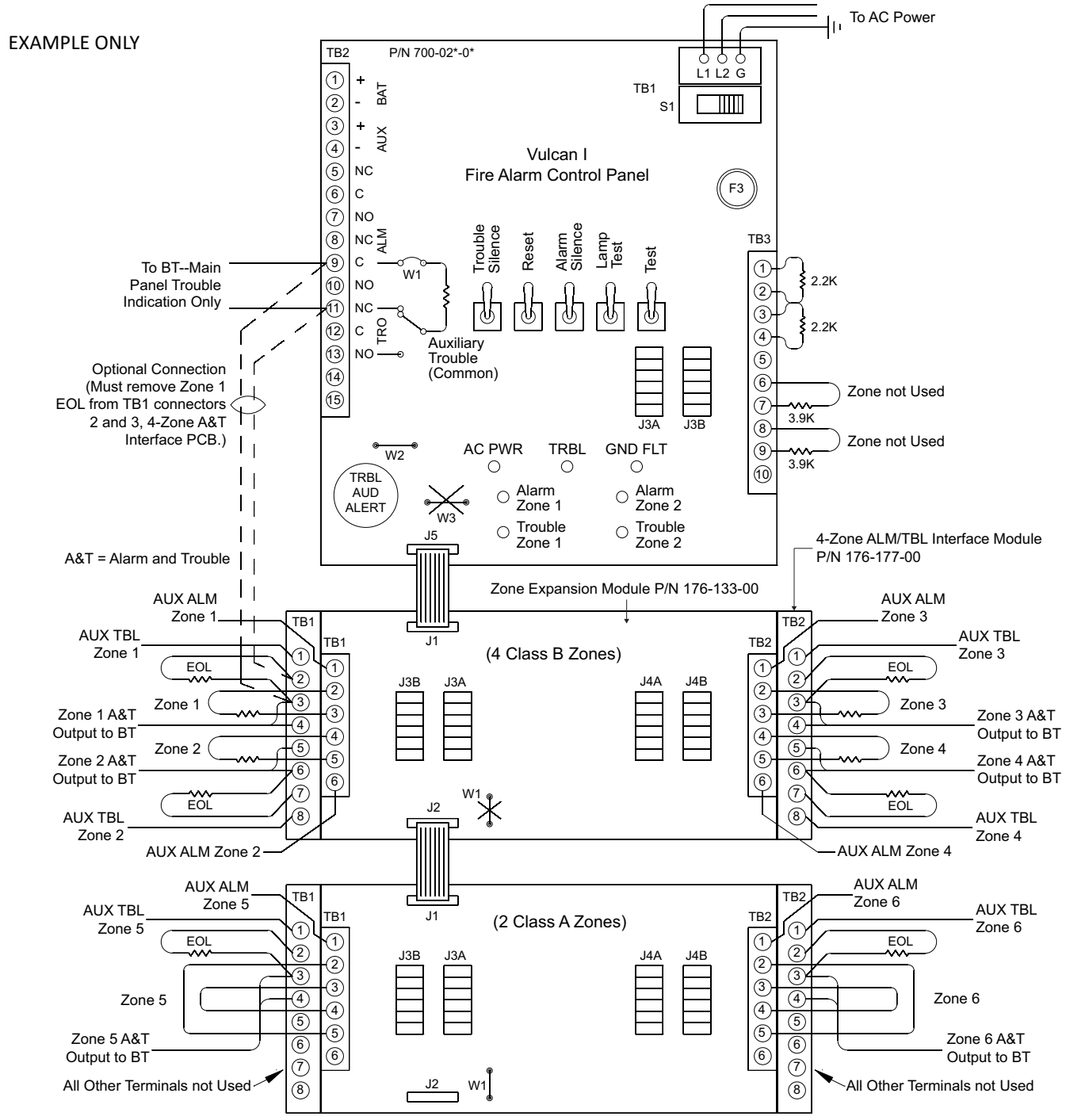


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Fire Alarm Control Panels

4-Zone Alarm/Trouble Interconnection



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Mass Notification (MNS) Catalog Section 08

Section 8. Mass Notification (MNS)

Non-Monaco Mass Notification Panels – Reserved

MNS Accessories

In-Building, 40 Watt, Mass Notification Panel 703-228-00, 703-228-01

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Mass Notification (MNS) Catalog Section
08

Non-Monaco Mass Notification Panels – Reserved

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

MNS Accessories

Mass Notification (MNS) Catalog Section 08

MNS Accessories

In-Building, 40 Watt, Mass Notification Panel 703-228-00, 703-228-01

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

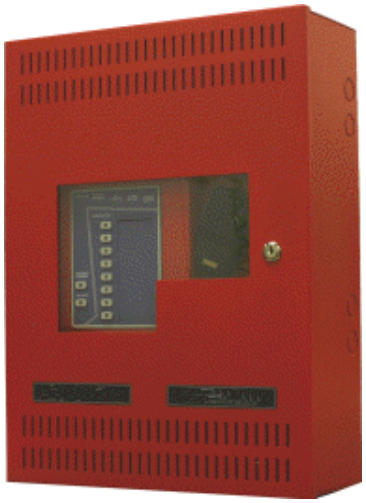
Mass Notification (MNS)

In-Building, 40 Watt, Mass Notification Panel

703-228-00, 703-228-01

Description

The basic 40 W Mass Notification Panel with background music and general paging provides multiple functions with full supervision and 24 VDC battery backup.



To meet the Unified Facilities Criteria (UFC) requirements, the panel's time-out feature causes emergency digital voice message inputs 1 through 6 to shutoff after 10 minutes; alarm digital voice inputs 7 and 8 do not automatically time-out, making them ideal for alarm messages such as fire.

A message can activate from either a closed contact within the system or from the push button at the panel. Digital voice messages 1 through 6 time-out after 10 minutes; if two of these messages are activated during the same period, their individual play times could overlap for a total period longer than 10 minutes.

If a lower priority message is activated while a higher priority message is already in progress, the lower priority message will not play until the higher priority input times out. The lower priority message will play for less than 10 minutes or perhaps not at all.

The single channel system provides 40 W of supervised high fidelity audio power and 2A of supervised 24 VDC synchronized strobe power. The audio circuit is expandable from one Class B to two Class A circuits or to four Class B with an audio splitter (P/N 703-163-00).

The system is expandable to 5,280 W using any of the following supervised audio power boosters:

- 80 W Boosters: P/N 703-167-00, P/N 703-207-00;
- 160 W Boosters: P/N 703-164-00, P/N 703-206-00;
- 320 W Boosters: P/N 703-165-00, P/N 703-208-00;

NOTE Using the same voltage 40 W MNS panel and power booster type is not required. For example, a 120 VAC MNS panel can interface with a 240 VAC power booster.

Features

- Complies to NFPA 72, Sect. 6.8.4, OSHA 1910.165, and Americans with Disabilities Act (ADA) requirements
- Eight digitally prerecorded voice messages (≈30 seconds)
- Two selectable tones: Code 3 Tone or Slow Whoop
- On board push-to-talk microphone with live override capability
- Power supply/battery charger included
- Trouble LED indicators for quick system diagnostics
- Designed for Department of Defense (DOD) facilities
- Meets UFC requirement for automatic audible alarm shutoff after 10 minutes
- Background music; telephone pager interface
- System supervision
- Power-limited circuitry with Class B or Class A wiring (Class A only with use of audio splitter)
- Supervised NAC speaker and strobe circuits
- Field-programmable messaging capability
- Security alerting and night ringer capabilities
- Form C contacts for system alarm and trouble conditions
- Auxiliary input for remote microphone connection
- 120 VAC (60 Hz) or 240 VAC (50/60 Hz) models available

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Mass Notification (MNS)

Specifications

Operating Voltage	P/N 703-228-00: 120 VAC P/N 703-228-01: 240 VAC
Standby Current	130 mA
Alarm Current	4.7A
Audio Power	40 W
Strobe Power	2A
Speaker Output Voltage	25 or 70.7V (selectable)
Frequency Response	Voice: 275 Hz–6.5 kHz Background Music: 100 Hz–15 kHz Meets UL Voice Evacuation Requirements of 800–2,800 Hz
Signal to Noise Ratio	>65 dB
Dynamic Range	>65 dB
Total Harmonic Distortion	<2%
Dimensions	21 in. H x 16 in. W x 6 in. D (53.34 cm x 40.64 cm x 15.24 cm)
Weight	36 lb (16.3 kg) without batteries
Finish	Red
Standards Compliance:	
UL Listed	UL862 and UL1711, File S5361
FM Approved	Approved
MEA Approved	Approved
State of California	6911-0785:0157

Ordering Information

Part Number	Description
703-228-00	Single Channel 40 W MNS Panel 21 in. x 16 in. x 6 in., 120 VAC (60 Hz), 10 minute time-out feature, red enclosure, two batteries required (not included)
703-228-01	Single Channel 40 W MNS Panel 21 in. x 16 in. x 6 in., 240 VAC (50/60 Hz), 10 minute time-out feature, red enclosure, two batteries required (not included)

Associated Parts

Part Number	Description
703-181-00	Message Kit, eight programmed messages
703-163-00	Audio Splitter (four Class B or two Class A), audio splitter bracket required
703-192-00	Audio Splitter Mounting Bracket, required when audio splitter P/N 703-163-00 is used
703-171-00	Addressable Splitter (four Class B or two Class A)
703-172-00	Telephone Controller (13 in. x 7.6 in. x 2.15 in.)
703-166-00	Supervised Volume Control (only one per audio circuit)
703-169-00	Remote Microphone
703-168-00	Remote Microphone Expander
703-167-00	Audio Booster 80 W, 120 VAC, 60 Hz, two 2A strobe circuits
703-207-00	Audio Booster 80 W, 240 VAC, 50/60 Hz, two 2A strobe power circuits
703-164-00	Audio Booster 160 W, 120 VAC, 60 Hz, no power for strobe circuits
703-206-00	Audio Booster 160 W, 240 VAC, 50/60 Hz, no power for strobe circuits
703-165-00	Audio Booster 320 W, 120 VAC, 60 Hz, no power for strobe circuits
703-208-00	Audio Booster 320 W, 240 VAC, 50/60 Hz, no power for strobe circuits
400-704-00	Battery, SLA, rechargeable, 12V/8 Ah, quick connect, 5.95 in. x 2.56 in. x 3.90 in., 3.50 lb
400-713-00	Battery, SLA, rechargeable, 12V/12 Ah, quick connect, 5.94 in. x 3.86 in. x 3.86 in., 7.92 lb
703-188-00	Remote Microphone and Local Operator Console, surface-mount (14.5 in. x 15.5 in. x 4 in.)
703-193-00	Remote Microphone and Local Operator Console, flush-mount (15.5 in. x 16.25 in. x 4 in.)
703-194-00	HVAC Emergency Shutoff Switch Option for P/N 703-188-00 or P/N 703-193-00
097-500-00	Keylock Assembly to key multiple panels with same key set as Monaco equipment
703-161-00	MNS Push Button
210-510-00	Surge Protector Kit, Transient, 120 VAC 60 Hz single phase, 15A fused, pigtail, 2.2 in. x 2.2 in. x 0.88 in.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules Catalog Section 09

Section 9. Addressable Intelligent Devices and Modules

Detectors

Heat Detector, 135°F Fixed/Rate-of-Rise, AP/CLIP, Type II 721-134-00
Heat Detector, 135°F Fixed Temperature, AP/CLIP, Type II 722-129-00
Heat Detector, 190°F Fixed High Temperature, AP/CLIP, Type II 722-413-00
Explosion-proof Smoke Detector. 723-373-00
Smoke Detector, AP/CLIP, Type II 723-601-00
Smoke Detector, Remote Test Capable in Duct, AP/CLIP, Type II 723-602-00
Smoke Detector, 135°F Fixed Temperature, AP/CLIP, Type II 723-603-00
Smoke Detector, Heat, Infrared, AP Only, Type II 723-606-00
Smoke Detector, High Sensitivity, AP Only, Type II 723-607-00
CO Detector, AP Only, Type II 725-603-00
Fire and CO Detector, AP Only, Type II 725-604-00
Smoke and CO Detector, AP Only, Type II 725-605-00
Duct Smoke Detector 723-370-00, 723-371-00
Reflected Beam Smoke Detector 725-002-00

Bases

Detector Base, Sounder, Plug-in, 6.875 in., AP Only, Type II 729-209-00, 729-212-00
Detector Base, Sounder, Plug-in, 6.875 in., AP/CLIP, Type II 729-210-00, 729-211-00
Detector Base, Isolator, Plug-in, 6.85 in., AP/CLIP, Type II 729-213-00
Detector Base, Relay, Plug-in, 6.85 in., AP/CLIP, Type II 729-214-00
Detector Base, Standard, Plug-in, 4 in., AP/CLIP, Type II 729-215-00
Detector Base, Standard, Plug-in, 6 in., AP/CLIP, Type II 729-228-00

Modules

Module, Ten Input Monitor, CLIP, Type I 729-162-00
Module, Monitor, AP/CLIP, Type II 729-217-00
Module, Mini-Monitor, AP/CLIP, Type II 729-218-00
Module, Zone Interface, AP/CLIP, Type II 729-219-00
Module, Supervised NAC Control, AP/CLIP, Type II 729-225-00
Module, Relay Control, AP/CLIP, Type II 729-221-00
Module, Ten Input Monitor, AP/CLIP, Type II. 729-223-00
Module, Six Relay Control, AP/CLIP, Type II 729-224-00
Module, Dual Input Monitor, AP/CLIP, Type II 729-220-00
Module, Fault Isolator 729-140-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Detectors

Addressable Intelligent Devices and Modules Catalog Section 09

Detectors

Heat Detector, 135°F Fixed/Rate-of-Rise, AP/CLIP, Type II 721-134-00
Heat Detector, 135°F Fixed Temperature, AP/CLIP, Type II 722-129-00
Heat Detector, 190°F Fixed High Temperature, AP/CLIP, Type II 722-413-00
Explosion-proof Smoke Detector. 723-373-00
Smoke Detector, AP/CLIP, Type II 723-601-00
Smoke Detector, Remote Test Capable in Duct, AP/CLIP, Type II 723-602-00
Smoke Detector, 135°F Fixed Temperature, AP/CLIP, Type II 723-603-00
Smoke Detector, Heat, Infrared, AP Only, Type II 723-606-00
Smoke Detector, High Sensitivity, AP Only, Type II 723-607-00
CO Detector, AP Only, Type II 725-603-00
Fire and CO Detector, AP Only, Type II 725-604-00
Smoke and CO Detector, AP Only, Type II 725-605-00
Duct Smoke Detector 723-370-00, 723-371-00
Reflected Beam Smoke Detector 725-002-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Heat Detector, 135°F Fixed/Rate-of-Rise, AP/CLIP, Type II

721-134-00

Panel Application

This AP/CLIP single element detector is compatible with the following Monaco FACP SLCs: MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Description

These addressable electronic heat detectors use an advanced electronic thermistor sensing circuit for fast response. Detectors are latched ON by the addressable control panel, indicating an alarm. A remote LED annunciator is an option.

Features

- White Type II 135°F fixed temperature and rate-of-rise heat detector
  NOTE Previous Type I devices are ivory
- Low profile, plug-in
- Low standby current
- Rotary decade dials allow up to 159 addresses; however, Monaco panels only allow addresses up to 99 maximum
  NOTE *Monaco Programming only allows up to 99 addresses (valid programming addresses 1–99)*
- Dual LEDs give 360 degree visibility of alarm
- Open-area protection with 50 ft. spacing
- Tamper resistant
- Sensitivity tested at the device and from the addressable control panel

Specifications

Protocol Capability	AP/CLIP
Operating Voltage	15 to 32 VDC, peak
Standby Current	200 µA at 24 VDC, one communication every five seconds with green LED blink
Alarm Current	2 mA maximum at 24 VDC, one communication every five seconds with red LED solid on
Rate of Rise/135°F Fixed RTI	V2-Fast
Fixed Temperature Rating	135°F (57°C)
Rate-of-Rise Detection	Greater than 15°F/minute (Greater than 8.3°C/minute)
Operating Temperature	–4°F to 100°F (–20°C to 38°C)
Relative Humidity	10% to 93%, non-condensing
Diameter	4.1 in. (104 mm) in P/N 729-215-00
Height	2 in. (51 mm)
Weight	3.4 oz. (95 g)
Standards Compliance:	
UL Listed	UL268, File S2101
FM Approved	3062622
State of California	7270-1653:0509

Ordering Information

Part Number	Description
721-134-00	Intelligent Electronic Heat Detector, Fixed Temperature 135°F, Rate-of-Rise, plug-in, AP/CLIP, white, Type II

Associated Parts

Part Number	Description
729-215-00	Intelligent Detector Standard Base, plug-in, 4 in. flangeless, AP/CLIP, white, Type II
729-209-00	Intelligent Detector Sounder Base, plug-in, 6.875 in., AP Only, white, Type II
729-210-00	Intelligent Detector Sounder Base, plug-in, 6.875 in., AP/CLIP, white, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

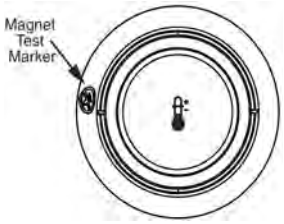
Addressable Intelligent Devices and Modules

Part Number	Description
729-211-00	Intelligent Detector Sounder Base, plug-in, 6.875 in., low frequency, 520 Hz, AP/CLIP, white, Type II
729-212-00	Intelligent Detector Sounder Base, plug-in, 6.875 in., low frequency, 520 Hz, AP Only, white, Type II
729-213-00	Intelligent Detector Isolator Base, plug-in, 6.85 in., AP/CLIP, white, Type II
729-214-00	Intelligent Detector Relay Base, plug-in, 6.85 in., AP/CLIP, white, Type II
729-228-00	Intelligent Detector Standard Base, plug-in, 6 in. flanged, AP/CLIP, white, Type II
729-091-00	Remote, Red LED Annunciator, fits standard single gang electrical box (not included)
729-156-00	Test Magnet with 32 in. telescoping handle

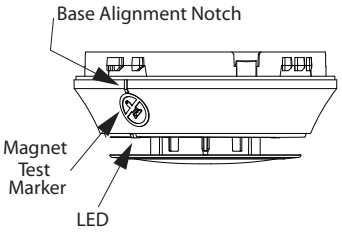
Diagrams

Test Magnet Diagram

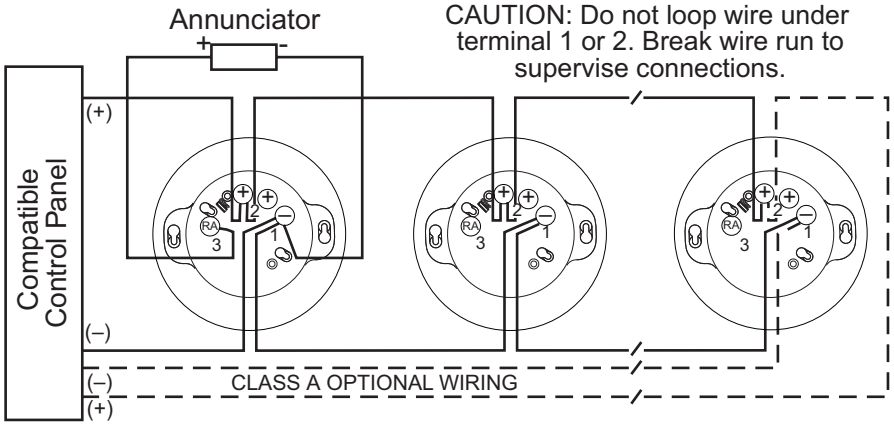
Front View



Side View



Wiring Diagram



Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:

Type I Classic Loop Interface Protocol (CLIP) devices and Type II Advanced Protocol (AP) devices. Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.
NOTE P/N 721-134-00 is an ***AP/CLIP Single Element Detector***.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	***AP/CLIP Single Element Detectors***	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and ***AP/CLIP single element detectors***, bases, and single/multi-input/output modules are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

■ = Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Heat Detector, 135°F Fixed Temperature, AP/CLIP, Type II

722-129-00

Panel Application

This AP/CLIP single element detector is compatible with the following Monaco FACP SLCs: MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Description

These addressable electronic heat detectors use an advanced electronic thermistor sensing circuit for fast response. Detectors are latched ON by the addressable control panel, indicating an alarm. A remote LED annunciator is an option.

Features

- White Type II 135°F fixed temperature heat detector
  NOTE *Previous Type I devices are ivory*
- Low profile, plug-in
- Low standby current
- Rotary decade dials allow up to 159 addresses; however, Monaco panels only allow addresses up to 99 maximum
  NOTE *Monaco Programming only allows up to 99 addresses (valid programming addresses 1–99)*
- Dual LEDs give 360 degree visibility of alarm
- Open-area protection with 50 ft. spacing
- Tamper resistant
- Sensitivity tested at the device and from the addressable control panel

Specifications

Protocol Capability	AP/CLIP
Operating Voltage	15 to 32 VDC, peak
Standby Current	200 µA at 24 VDC, one communication every 5 seconds with green LED blink
Alarm Current	2 mA maximum at 24 VDC, one communication every five seconds with red LED solid on
135°F Fixed RTI	Fast
Fixed Temperature Rating	135°F (57°C)
Operating Temperature	–4°F to 100°F (–20°C to 38°C)
Relative Humidity	10% to 93%, non-condensing
Diameter	4.1 in. (104 mm) in P/N 729-215-00
Height	2 in. (51 mm)
Weight	3.4 oz. (95 g)
Standards Compliance:	
UL Listed	UL268, File S2101
FM Approved	3062622
State of California	7270-1653:0509

Ordering Information

Part Number	Description
722-129-00	Intelligent Electronic Heat Detector, Fixed-Temperature 135°F, plug-in, AP/CLIP, white, Type II

Associated Parts

Part Number	Description
729-215-00	Intelligent Detector Standard Base, plug-in, 4 in. flangeless, AP/CLIP, white, Type II
729-209-00	Intelligent Detector Sounder Base, plug-in, AP Only, white, Type II
729-210-00	Intelligent Detector Sounder Base, plug-in, AP/CLIP, white, Type II
729-211-00	Intelligent Detector Sounder Base, plug-in, low frequency, AP/CLIP, white, Type II
729-212-00	Intelligent Detector Sounder Base, plug-in, low frequency, AP Only, white, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

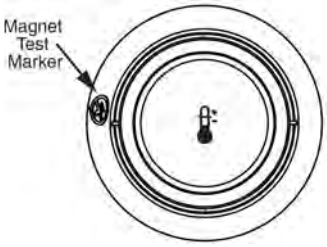
Addressable Intelligent Devices and Modules

Part Number	Description
729-213-00	Intelligent Detector Isolator Base, plug-in, 6.85 in., AP/CLIP, white, Type II
729-228-00	Intelligent Detector Standard Base, plug-in, 6 in. flanged, AP/CLIP, white, Type II
729-091-00	Remote, Red LED Annunciator, fits standard single gang electrical box (not included)
729-156-00	Test Magnet with 32 in. telescoping handle

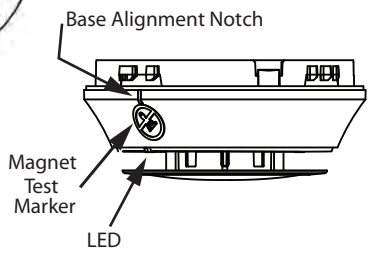
Diagrams

Test Magnet Diagram

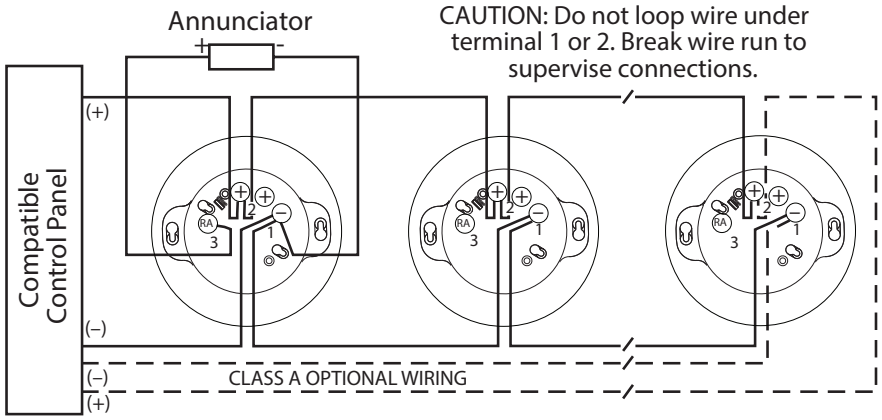
Front View



Side View



Wiring Diagram



Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices.
Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.
NOTE P/N 722-129-00 is an ***AP/CLIP Single Element Detector***.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	***AP/CLIP Single Element Detectors***	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and ***AP/CLIP single element detectors***, bases, and single/multi-input/output modules are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

= Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Heat Detector, 190°F Fixed High Temperature, AP/CLIP, Type II
722-413-00

Panel Application

This AP/CLIP single element detector is compatible with the following Monaco FACP SLCs: MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Description

These addressable electronic heat detectors use an advanced electronic thermistor sensing circuit for fast response. Detectors are latched ON by the addressable control panel, indicating an alarm. A remote LED annunciator is an option.

Features

- White Type II fixed high temperature heat detector
  NOTE *Previous Type I devices are ivory*
- Low profile, plug-in
- Low standby current
- Rotary decade dials allow up to 159 addresses; however, Monaco panels only allow addresses up to 99 maximum
  NOTE *Monaco Programming only allows up to 99 addresses (valid programming addresses 1–99)*
- Dual LEDs give 360 degree visibility of alarm
- Open area protection with 50 ft. spacing
- Tamper resistant
- Sensitivity tested at the device and from the addressable control panel

Specifications

Protocol Capability	AP/CLIP
Operating Voltage	15 to 32 VDC, peak
Standby Current	200 µA at 24 VDC, one communication every 5 seconds with green LED blink
Alarm Current	2 mA maximum at 24 VDC, one communication every five seconds with red LED solid on
190°F Fixed RTI	Quick
High Heat Rating	190°F (88°C)
Operating Temperature	–4°F to 150°F (–20°C to 66°C)
Relative Humidity	10% to 93%, non-condensing
Diameter	4.1 in. (104 mm) in P/N 729-215-00
Height	2 in. (51 mm)
Weight	3.4 oz. (95 g)
Standards Compliance:	
UL Listed	UL268, File S2101
FM Approved	3062622
State of California	7270-1653:0509

Ordering Information

Part Number	Description
722-413-00	Intelligent Electronic Heat Detector, Fixed High Temperature 190°F, plug-in, AP/CLIP, white, Type II

Associated Parts

Part Number	Description
729-215-00	Intelligent Detector Standard Base, plug-in, 4 in. flangeless, AP/CLIP, white, Type II
729-209-00	Intelligent Detector Sounder Base, plug-in, AP Only, white, Type II
729-210-00	Intelligent Detector Sounder Base, plug-in, AP/CLIP, white, Type II
729-211-00	Intelligent Detector Sounder Base, plug-in, low frequency, AP/CLIP, white, Type II
729-212-00	Intelligent Detector Sounder Base, plug-in, 6.875 in., low frequency, 520 Hz, AP Only, white, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

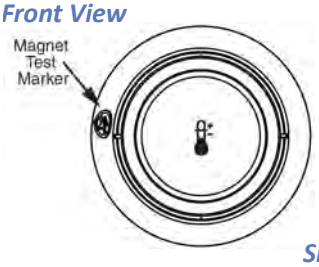
Addressable Intelligent Devices and Modules

Part Number	Description
729-213-00	Intelligent Detector Isolator Base, plug-in, 6.85 in., AP/CLIP, white, Type II
729-214-00	Intelligent Detector Relay Base, plug-in, AP/CLIP, white, Type II
729-228-00	Intelligent Detector Standard Base, plug-in, 6 in. flanged, AP/CLIP, white, Type II
729-091-00	Remote, Red LED Annunciator, fits standard single gang electrical box (not included)
729-156-00	Test Magnet with 32 in. telescoping handle

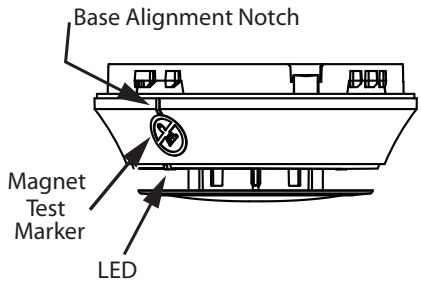
Diagrams

Test Magnet Diagram

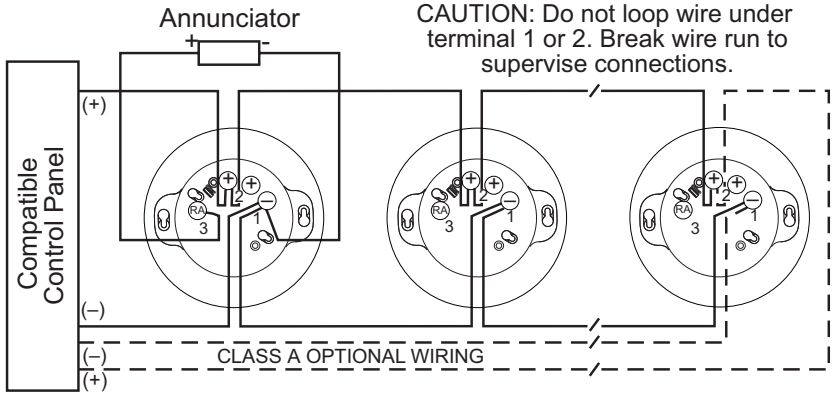
Front View



Side View



Wiring Diagram



Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices.
Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.
NOTE P/N 722-413-00 is an ***AP/CLIP Single Element Detector***.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	***AP/CLIP Single Element Detectors***	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and ***AP/CLIP single element detectors***, bases, and single/multi-input/output modules are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

■ = Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Explosion-proof Smoke Detector
723-373-00

Description

This corrosion resistant smoke detector is specially designed to function in hazardous environments. The advanced optical detector is protected by an aluminum alloy retaining ring and companion junction box. Performance by the optical detector is effective with both slow developing and fast growing fires.

Maintenance without the need to declassify the protected area is possible due to the safe, hot-swappable sensor module. For installation, the detector has alarm, auxiliary, and trouble relays that integrate easily with other fire systems and auxiliary equipment.

Features

- High performance optical smoke detection
- Built in 0 to 20 W output for easy distributed control system (DCS) integration
- Substantial reliability due to self diagnostics
- Onboard LED for local annunciation
- Non-latching operation
- Magnetic switch for manual testing

Specifications

Nominal Voltage	24 VDC
Voltage Range	12 to 30 VDC
Power	3.5 W maximum
Relay Current	5A
Current Output	20 mA maximum
Terminals	14 to 18 AWG
Operating Temperature	–4°F to 149°F (–20°C to 65°C)
Relative Humidity	5 to 95%
Threading	3/4 in. NPT or M25
Enclosure Material	Detector: Polycarbonate/ ABS Junction Box: Copper-free aluminum
Standards Compliance:	
FM	Approved
IECEx	Approved

Ordering Information

Part Number	Description
723-373-00	Explosion-proof Smoke Detector, optical detector, 24V, aluminum alloy retaining ring, companion junction box, LED, alarm, auxiliary, and trouble relays

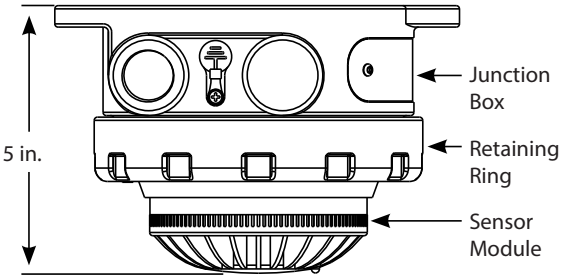
Associated Parts

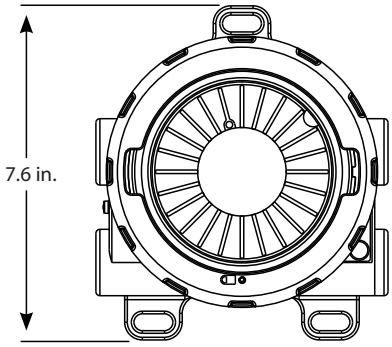
Part Number	Description
729-156-00	Test Magnet with 32 in. telescoping handle

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

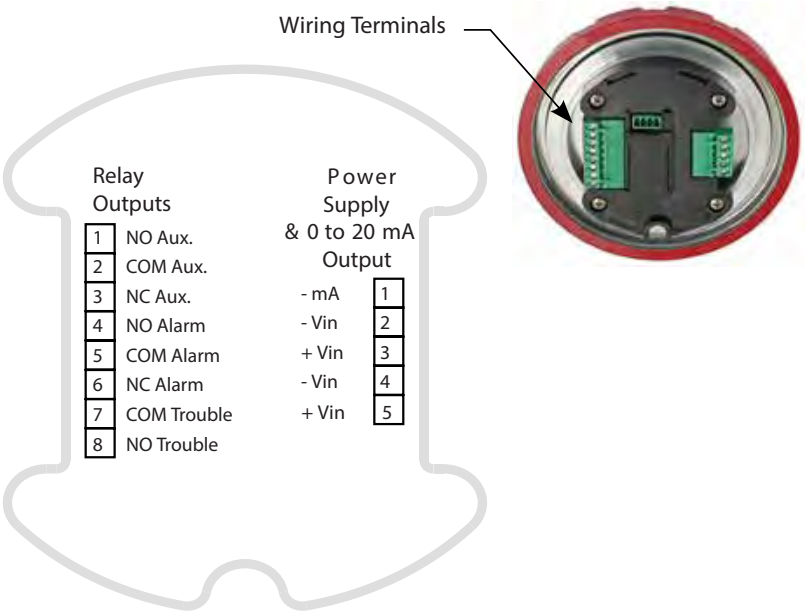
Detect
Manage
Record

Dimensions





Wiring



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Smoke Detector, AP/CLIP, Type II
723-601-00

Panel Application

This AP/CLIP single element detector is compatible with the following Monaco FACP SLCs: MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Description

Monaco addressable low profile plug-in smoke detectors provide features that surpass conventional detectors. Detector sensitivity can be programmed at the addressable control panel; sensitivity is continuously monitored and reported to the addressable control panel. Each detector's address can be easily set with rotary decade dials. Knowing the exact location of each detector can facilitate swift response to a specific fire situation or allow for selective maintenance when required.

Features

- White Type II smoke detector
  NOTE *Previous Type I devices are ivory*
- Sleek, low profile design
- Addressable-analog communications
- Communicates individual identity, sensitivity, and status to Monaco addressable control panels
- Low standby current
- Remote sensitivity adjustment
- Versatile plug-in design
- Dual LEDs for 360 degree visibility
- Rotary decade dials allow up to 159 addresses; however, Monaco panels only allow addresses up to 99 maximum

  NOTE *Monaco Programming only allows up to 99 addresses (valid programming addresses 1–99)*
- Removable cover and insect screen for easy cleaning
- Reed switch for local magnet test
- Output to optional remote LED accessory
- Eight detector base options for maximum flexibility

Specifications

Protocol Capability	AP/CLIP
Operating Voltage	15 to 32 VDC
Standby Current	200 µA maximum at 24 VDC, one communication every five seconds with green LED blink
Alarm Current	2 mA maximum at 24 VDC, one communication every five seconds with red LED solid on
Air Velocity	0 to 4,000 ft./minute (0 to 1,219.2 m/minute)
Operating Temperature	32°F to 122°F (0°C to 50°C)
Relative Humidity	10% to 93%, non-condensing
Diameter	4.1 in. (104 mm) in P/N 729-215-00
Height	2 in. (51 mm)
Weight	3.4 oz. (95 g)
Standards Compliance:	
UL Listed	UL268, File S911
FM Approved	3062622
State of California	7270-1653:0508

Ordering Information

Part Number	Description
723-601-00	Intelligent Photoelectric Smoke Detector, plug-in, low profile, AP/CLIP, white, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

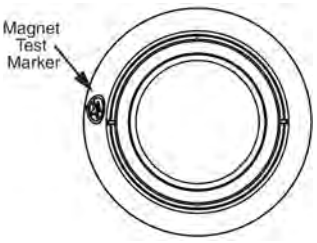
Associated Parts

Part Number	Description
729-215-00	Intelligent Detector Standard Base, plug-in, 4 in. flangeless, AP/CLIP, white, Type II
729-209-00	Intelligent Detector Sounder Base, plug-in, 6.875 in., AP Only, white, Type II
729-210-00	Intelligent Detector Sounder Base, plug-in, 6.875 in., AP/CLIP, white, Type II
729-211-00	Intelligent Detector Sounder Base, plug-in, low frequency, 520 Hz, 6.875 in., AP/CLIP, white, Type II
729-212-00	Intelligent Detector Sounder Base, plug-in, low frequency, 520 Hz, 6.875 in., AP Only, white, Type II
729-213-00	Intelligent Detector Sounder Base, plug-in, 6.85 in., AP/CLIP, white, Type II
729-214-00	Intelligent Detector Relay Base, plug-in, 6.85 in., AP/CLIP, white, Type II
729-228-00	Intelligent Detector Standard Base, plug-in, 6 in. flanged, AP/CLIP, white, Type II
729-091-00	Remote, Red LED Annunciator, fits standard single gang electrical box (not included)
729-156-00	Test Magnet with 32 in. telescoping handle
729-226-00	Cover/Trim Ring, ivory, for AP/CLIP smoke detectors

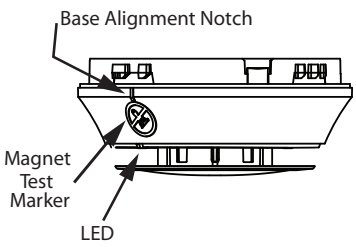
Diagrams

Test Magnet Diagram

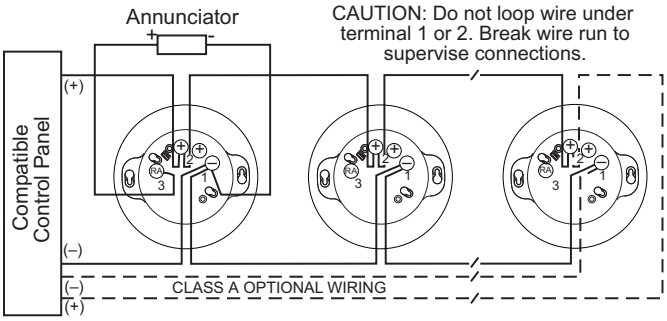
Front View



Side View



Wiring Diagram



Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices.
Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.
NOTE P/N 723-601-00 is an ***AP/CLIP Single Element Detector***.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	***AP/CLIP Single Element Detectors***	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and ***AP/CLIP single element detectors***, bases, and single/multi-input/output modules are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

= Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protoco***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Smoke Detector, Remote Test Capable in Duct, AP/CLIP, Type II
723-602-00

Panel Application

This AP/CLIP single element detector is compatible with the following Monaco FACP SLCs: MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Description

Monaco addressable low profile plug-in smoke detectors provide features that surpass conventional detectors. Detector sensitivity can be programmed at the addressable control panel; sensitivity is continuously monitored and reported to the addressable control panel. Each detector's address can be easily set with the rotary decade dials. Knowing the exact location of each detector can facilitate swift response to a specific fire situation or allow for selective maintenance when required.

This device is remote-test capable when used with duct detector housing P/N 723-370-00 or P/N 723-371-00.

Features

- White Type II smoke detector
  NOTE *Previous Type I devices are ivory*
- Sleek, low profile design
- Addressable-analog communications
- Communicates individual identity, sensitivity, and status to Monaco addressable control panels
- Low standby current
- Remote sensitivity adjustment
- Versatile plug-in design
- Dual LEDs for 360 degree visibility
- Rotary decade dials allow up to 159 addresses; however, Monaco panels only allow addresses up to 99 maximum

  NOTE *Monaco Programming only allows up to 99 addresses (valid programming addresses 1–99)*
- Removable cover and insect screen for easy cleaning
- Reed switch for local magnet test
- Optional remote LED accessory
- Recommended for use with duct detector housing P/N 723-370-00 or P/N 723-371-00
  – AP/CLIP or AP Only bases are compatible for use in non-duct applications where remote testing is not required

Specifications

Protocol Capability	AP/CLIP
Operating Voltage	15 to 32 VDC, peak
Standby Current	200 µA maximum at 24 VDC, one communication every five seconds with green LED blink
Alarm Current	2 mA maximum at 24 VDC, one communication every five seconds with red LED solid on
Air Velocity	0 to 4,000 ft./minute (0 to 1,219.2 m/minute)
Operating Temperature	32°F to 122°F (0°C to 50°C), In Duct: –4°F to 158°F (–20°C to 70°C)
Relative Humidity	10% to 93%, non-condensing
Diameter	4.1 in. (104 mm) installed in P/N 729-215-00
Height	2 in. (51 mm)
Weight	5.2 oz. (147 g)
Standards Compliance:	
UL Listed	UL268, File S911
FM Approved	3062622
State of California	7270-1653:0508

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Ordering Information

Part Number	Description
723-602-00	Intelligent Photoelectric Smoke Detector, Remote Test in Duct, plug-in, low profile, AP/CLIP, white, Type II

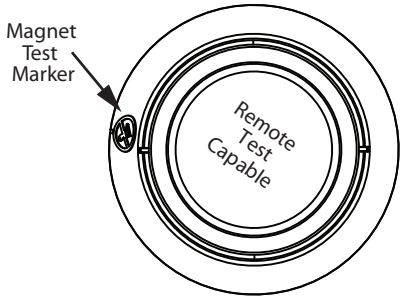
Associated Parts

Part Number	Description
723-370-00	Duct Detector Housing
723-371-00	Duct Detector Housing, watertight, NEMA 5
729-091-00	Remote, Red LED Annunciator, fits standard single gang electrical box (not included)
729-156-00	Test Magnet with 32 in. telescoping handle

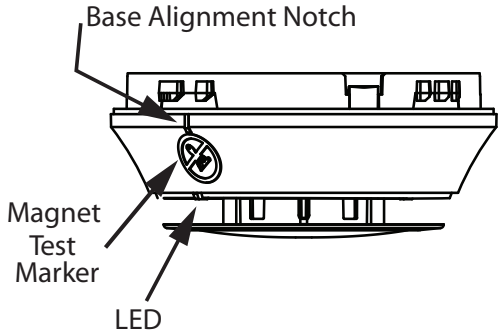
Diagrams

Test Magnet Diagram

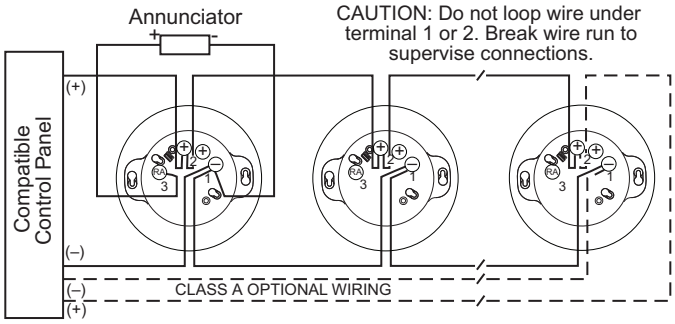
Front View



Side View



Wiring Diagram



Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices.
Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.
NOTE P/N 723-602-00 is an ***AP/CLIP Single Element Detector***.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	***AP/CLIP Single Element Detectors***	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "Alarm Output" below				●
	AP Only Sounder Bases				●

CLIP and ***AP/CLIP single element detectors***, bases, and single/multi-input/output modules are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

= Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Smoke Detector, 135°F Fixed Temperature, AP/CLIP, Type II
723-603-00

Panel Application

This AP/CLIP multielement detector is compatible with the following Monaco FACP SLCs: MAAP-X with a CORE II processor and MAAP-X with a CORE III processor.

The detector elements will emit a single combined alarm output unless installed on a MAAP-X with a CORE III processor and an ADC II.

Description

Monaco addressable low profile plug-in smoke detectors provide features that surpass conventional detectors. Detector sensitivity can be programmed at the addressable control panel; sensitivity is continuously monitored and reported to the addressable control panel. Each detector's address can be easily set with the rotary decade dials. Knowing the exact location of each detector can facilitate swift response to a specific fire situation or allow for selective maintenance when required.

This multi-element detector contains both a photoelectronic sensing chamber and a 135°F (57.2°C) fixed temperature thermal sensor, enabling the device to provide smoke and heat detection.

Features

- White Type II smoke and 135°F fixed heat detector
  NOTE Previous Type I devices are ivory
- Sleek, low profile design
- Addressable-analog communications
- Communicates individual identity, sensitivity, and status to Monaco addressable control panels
- Low standby current
- Remote sensitivity adjustment
- Versatile plug-in design
- Dual LEDs for 360 degree visibility
- Rotary decade dials allow up to 159 addresses; however, Monaco panels only allow addresses up to 99 maximum
  NOTE *Monaco Programming only allows up to 99 addresses (valid programming addresses 1–99)*
- Removable cover and insect screen for easy cleaning
- Reed switch for local magnet test
- Optional remote LED accessory
- Seven detector base options for maximum flexibility

Specifications

Protocol Capability	AP/CLIP
Operating Voltage	15 to 32 VDC
Standby Current	200 µA maximum at 24 VDC, one communication every five seconds with green LED blink
Alarm Current	2 mA maximum at 24 VDC, one communication every five seconds with red LED solid on
Air Velocity	0 to 4,000 ft./minute (0 to 1,219.2 m/minute)
Operating Temperature	32°F to 100°F (0°C to 38°C)
Relative Humidity	10% to 93% non-condensing
Diameter	4.1 in. (104 mm) installed in P/N 729-215-00
Height	2 in. (51 mm)
Weight	3.4 oz. (95 g)
Standards Compliance:	
UL Listed	UL 521 & UL268, File S911
FM Approved	3062622
State of California	7270-1653:0508

Ordering Information

Part Number	Description
723-603-00	Intelligent Photoelectric Smoke Detector, plug-in, low profile, fixed temperature 135°F, AP/CLIP, white, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

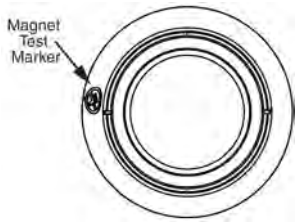
Associated Parts

Part Number	Description
729-215-00	Intelligent Detector Standard Base, plug-in, 4 in. flangeless, AP/CLIP, white, Type II
729-209-00	Intelligent Detector Sounder Base, plug-in, AP Only, white, Type II
729-210-00	Intelligent Detector Sounder Base, plug-in, AP/CLIP, white, Type II
729-211-00	Intelligent Detector Sounder Base, plug-in, low frequency, 520 Hz, AP/CLIP, white, Type II
729-212-00	Intelligent Detector Sounder Base, plug-in, low frequency, 520 Hz, AP Only, white, Type II
729-213-00	Intelligent Detector Isolator Base, plug-in, 6.85 in., AP/CLIP, white, Type II
729-214-00	Intelligent Detector Relay Base, plug-in, 6.85 in., AP/CLIP, white, Type II
729-228-00	Intelligent Detector Standard Base, plug-in, 6 in. flanged, AP/CLIP, white, Type II
729-091-00	Remote, Red LED Annunciator, fits standard single gang electrical box (not included)
729-156-00	Test Magnet with 32 in. telescoping handle
729-226-00	Cover/Trim Ring, ivory, for AP/CLIP smoke detectors

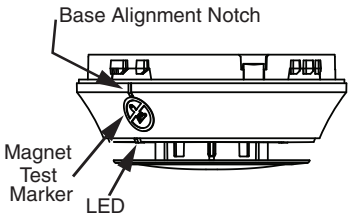
Diagrams

Test Magnet Diagram

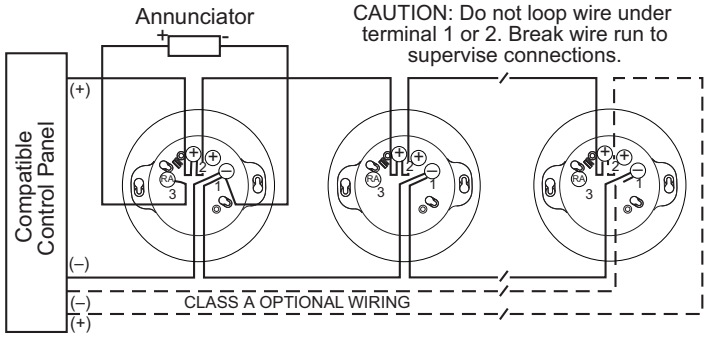
Front View



Side View



Wiring Diagram



Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices. Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.
NOTE P/N 723-603-00 is an ***AP/CLIP Multielement Detector***.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	AP/CLIP Single Element Detectors	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and AP/CLIP single element detectors, bases, and single/multi-input/output modules are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend	
● = Compatible	= Incompatible

Alarm Output	
Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Smoke Detector, Heat, Infrared, AP Only, Type II
723-606-00

Panel Application

This AP Only multielement detector is compatible with the following Monaco FACP SLCs: MAAP-X with a CORE III processor.

Description

These detectors incorporate photoelectric sensors, 135°F (57°C) fixed temperature thermal sensors, and infrared sensors. Advanced algorithms maximize the advantages of each sensor, allowing the detector to reject nuisance sources but still responding quickly to real fires, making these detectors ideal for applications where moderate nuisance conditions exist.

Detector sensitivity can be programmed at the addressable control panel; sensitivity is continuously monitored and reported to the addressable control panel. Each detector's address can be easily set with rotary decade dials. Knowing the exact location of each detector can facilitate swift response to a specific fire situation or allow for selective maintenance when required.

Features

- White Type II photoelectric, thermal, and infrared smoke detector

  NOTE Previous Type I devices are ivory
- Sleek, low profile design
- Addressable analog communications
- Communicates individual identity, sensitivity, and status to Monaco addressable control panels
- Low standby current
- Remote sensitivity adjustment
- Versatile plug-in design
- Dual LEDs for 360 degree visibility
- Rotary decade dials allow up to 159 addresses; however, Monaco panels only allow addresses up to 99 maximum

  NOTE *Monaco Programming only allows up to 99 addresses (valid programming addresses 1–99)*
- Removable cover and insect screen for easy cleaning
- Reed switch for local magnet test
- Output to optional remote LED accessory

Specifications

Protocol Capability	AP Only
Operating Voltage	15 to 32 VDC
Standby Current	200 µA maximum at 24 VDC, one communication every five seconds with green LED blink
Alarm Current	2 mA maximum at 24 VDC, one communication every five seconds with red LED solid on
Air Velocity	0 to 300 ft./minute (0 to 1,219.2 m/minute)
Operating Temperature	32°F to 115°F (0°C to 47°C)
Relative Humidity	10% to 93% non-condensing
Diameter	4.1 in. (10.4 cm) in P/N 729-215-00
Height	2 in. (5.1 cm)
Weight	3.4 oz. (0.095 kg)
Standards Compliance:	
UL Listed	UL268, File S911
FM Approved	3062622
State of California	7272-1653:0515

Ordering Information

Part Number	Description
723-606-00	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, plug-in, low profile, AP Only, white, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

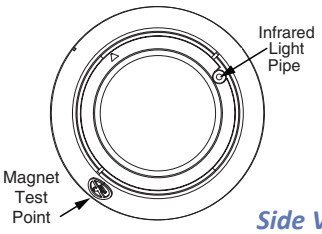
Associated Parts

Part Number	Description
729-215-00	Intelligent Detector Standard Base, plug-in, 4 in. flangeless, AP/CLIP, white, Type II
729-209-00	Intelligent Detector Sounder Base, plug-in, AP Only, white, Type II
729-210-00	Intelligent Detector Sounder Base, plug-in, AP/CLIP, white, Type II
729-211-00	Intelligent Detector Sounder Base, plug-in, low frequency, 520 Hz, AP/CLIP, white, Type II
729-212-00	Intelligent Detector Sounder Base, plug-in, low frequency, 520 Hz, AP Only, white, Type II
729-213-00	Intelligent Detector Isolator Base, plug-in, AP/CLIP, white, Type II
729-214-00	Intelligent Detector Relay Base, plug-in, AP/CLIP, white, Type II
729-228-00	Intelligent Detector Standard Base, plug-in, 6 in. flanged, AP/CLIP, white, Type II
729-091-00	Remote, Red LED Annunciator, fits standard single gang electrical box (not included)
729-156-00	Test Magnet with 32 in. telescoping handle
729-227-00	Cover/Trim Ring, ivory, for AP/CLIP white smoke detectors with infrared

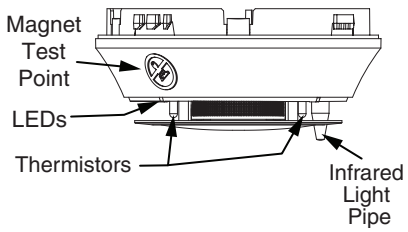
Diagrams

Test Magnet Diagram

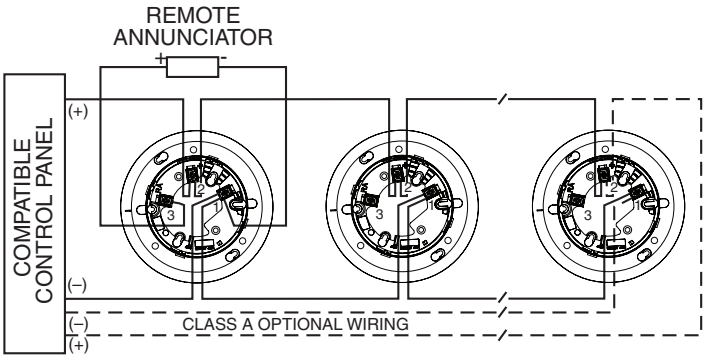
Front View



Side View



Wiring Diagram



CAUTION: Do not loop wire under terminal 1 or 2. Break wire run to provide supervision of connections.

Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices. Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.
NOTE P/N 723-606-00 is an ***AP Only Multielement Detector***.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	AP/CLIP Single Element Detectors	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and AP/CLIP single element detectors, bases, and single/multi-input/output modules are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

= Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Smoke Detector, High Sensitivity, AP Only, Type II

723-607-00

Panel Application

This AP Only single element detector is compatible with the following Monaco FACP SLCs: MAAP-X with a CORE III processor.

Description

Monaco's addressable high sensitivity smoke detector features a photoelectronic sensing chamber with LED technology that allows for sensitivity levels from 0.02 to 2%/ft. obscuration for Early Warning Fire Detection (EWFD) or Very Early Warning Fire Detection (VEWFD). Monaco's high sensitivity smoke detectors also include multi-alert drift compensation, internal self-diagnostics, and superior transient signal rejection algorithms to produce unprecedented stability at ultra-high sensitivities across the full temperature range. This device is ideal for use in sensitive environments like computer rooms and data centers.

Detector sensitivity can be programmed at the addressable control panel; sensitivity is continuously monitored and reported to the addressable control panel. Each detector's address can be easily set with rotary decade dials. Knowing the exact location of each detector can facilitate swift response to a specific fire situation or allow for selective maintenance when required.

Features

- White Type II high sensitivity smoke detector
  NOTE *Previous Type I devices are ivory*
- Up to 25x more sensitive than standard smoke detectors
- UL listed for Open Air Protection, Special Application, and Duct Applications
- Sleek, low profile design
- Addressable-analog communications
- Communicates individual identity, sensitivity, and status to Monaco addressable control panels
- Low standby current
- Remote sensitivity adjustment
- Versatile plug-in design
- Dual LEDs for 360 degree visibility
- Rotary decade dials allow up to 159 addresses; however, Monaco panels only allow addresses up to 99 maximum
  NOTE *Monaco Programming only allows up to 99 addresses (valid programming addresses 1–99)*
- Removable cover and insect screen for easy cleaning
- Reed switch for local magnet test
- Output to optional remote LED accessory

Specifications

Protocol Capability	AP Only
Operating Voltage	15 to 32 VDC
Standby Current	300 µA maximum at 24 VDC, one communication every five seconds with green LED blink
Alarm Current	2 mA maximum at 24 VDC, one communication every five seconds with red LED solid on
Air Velocity	0 to 4,000 ft./minute (0 to 1,219.2 m/minute)
Operating Temperature	14°F to 140°F (–10°C to 60°C)
Relative Humidity	10% to 93% non-condensing
Diameter	4.1 in. (104 mm) in P/N 729-215-00
Height	2 in. (51 mm)
Weight	3.4 oz. (95 g)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Standards Compliance:

UL Listed	UL268, File S911
FM Approved	3062622
State of California	7272-1653:0512

Ordering Information

Part Number	Description
723-607-00	Intelligent High Sensitivity Smoke Detector, plug-in, low profile, AP Only, white, Type II

Associated Parts

Part Number	Description
729-215-00	Intelligent Detector Standard Base, plug-in, 4 in. flangeless, AP/CLIP, white, Type II
729-209-00	Intelligent Detector Sounder Base, plug-in, AP Only, white, Type II
729-210-00	Intelligent Detector Sounder Base, plug-in, AP/CLIP, white, Type II
729-211-00	Intelligent Detector Sounder Base, plug-in, low frequency, 520 Hz, AP/CLIP, white, Type II
729-212-00	Intelligent Detector Sounder Base, plug-in, low frequency, 520 Hz, AP Only, white, Type II
729-213-00	Intelligent Detector Isolator Base, plug-in, AP/CLIP, white, Type II
729-214-00	Intelligent Detector Relay Base, plug-in, AP/CLIP, white, Type II
729-228-00	Intelligent Detector Standard Base, plug-in, 6 in. flanged, AP/CLIP, white, Type II
729-091-00	Remote, Red LED Annunciator, fits standard single gang electrical box (not included)
729-156-00	Test Magnet with 32 in. telescoping handle
729-226-00	Cover/Trim Ring, ivory, for AP/CLIP white smoke detectors

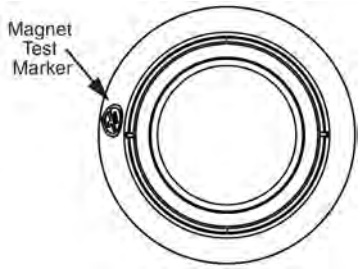
Smoke Sensitivity Levels

Level	%/ft. obscuration	%/m obscuration
1	0.02	0.06
2	0.03	0.10
3	0.05	0.16
4	0.10	0.33
5	0.20	0.66
6	0.50	1.65
7	1.00	3.24
8	1.50	4.85
9	2.00	6.41

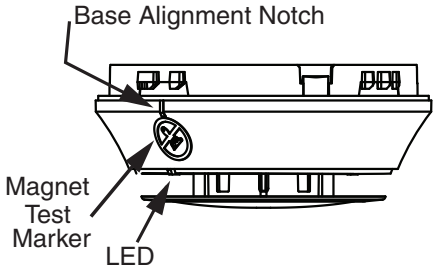
Diagrams

Test Magnet Diagram

Front View



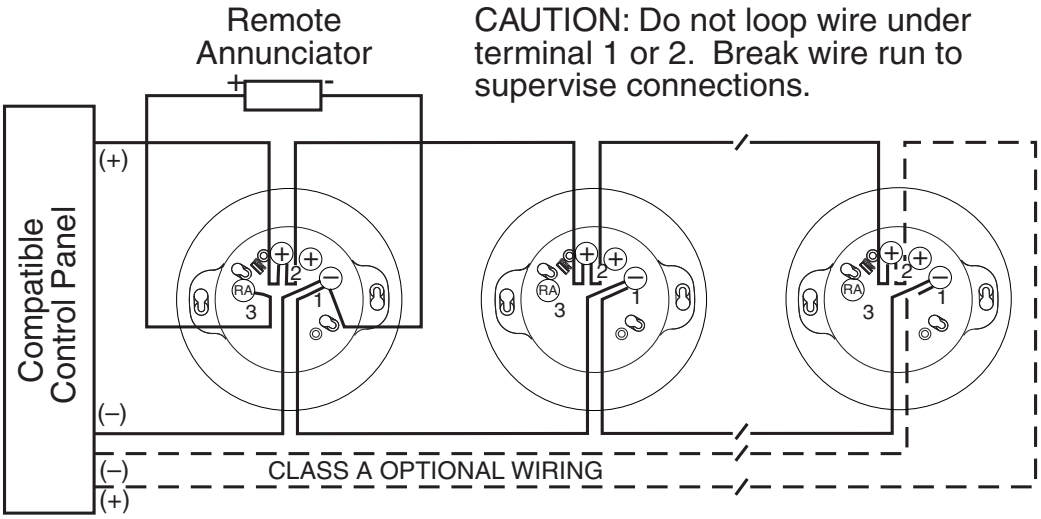
Side View



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Wiring Diagram



Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices.
Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.
NOTE P/N 723-607-00 is an ***AP Only Single Element Detector***.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	AP/CLIP Single Element Detectors	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and AP/CLIP single element detectors, bases, and single/multi-input/output modules are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

= Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

CO Detector, AP Only, Type II

725-603-00

Panel Application

This AP Only single element detector is compatible with the following Monaco FACP SLCs: MAAP-X with a CORE III processor.

Description

Monaco addressable carbon monoxide (CO) detectors use electrochemical technology to sense CO in its area. CO density is then communicated to the FACP.

Detector sensitivity is continuously monitored and reported to the addressable control panel. Each detector's address can be easily set with decade dials. Knowing the exact location of each detector can facilitate swift response to a specific fire situation or allow for selective maintenance when required.

Features

- White Type II CO detector
  NOTE *Previous Type I devices are ivory*
- 10 year CO cell with end-of-life warning and fault
- Audible Temporal 4 signal for CO alarm when used with AP Only sounder bases
- Addressable-analog communications
- Communicates individual identity, sensitivity, and status to Monaco addressable control panels
- Low standby current
- Remote sensitivity adjustment
- Versatile plug-in design
- Dual LEDs for 360 degree visibility
- Decade dials allow up to 159 addresses; however, Monaco panels only allow addresses up to 99 maximum
  NOTE *Monaco Programming only allows up to 99 addresses (valid programming addresses 1–99)*
- Removable cover and insect screen for easy cleaning
- Reed switch for local magnet test
- Output to optional remote LED accessory

Specifications

Protocol Capability	AP Only
Operating Voltage	15 to 32 VDC
Standby Current	200 µA maximum at 24 VDC, one communication every five seconds with green LED blink
Alarm Current	2 mA maximum at 24 VDC, one communication every five seconds with red LED solid on
Air Velocity	0 to 4,000 ft./minute (0 to 1,219.2 m/minute)
Maximum Detection Range	350 to 750 ppm
Operating Temperature	32°F to 122°F (0°C to 50°C)
Relative Humidity	15% to 90%, non-condensing
Diameter	6.875 in. (17.5 cm) in P/N 729-209-00
Height	2.7 in. (6.9 cm) in P/N 729-209-00
Weight	3.4 oz. (0.095 kg)
Standards Compliance:	
UL Listed	S911
State of California	5278-1653:0523

Ordering Information

Part Number	Description
725-603-00	Intelligent CO Detector, plug-in, low profile, AP Only, white, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Associated Parts

Part Number	Description
729-209-00	Intelligent Detector Sounder Base, plug-in, AP Only, white, Type II
729-212-00	Intelligent Detector Sounder Base, plug-in, low frequency, 520 Hz, AP Only, white, Type II
729-215-00	Intelligent Detector Standard Base, plug-in, 4 in. flangeless, AP/CLIP, white, Type II
729-210-00	Intelligent Detector Sounder Base, plug-in, AP/CLIP, white, Type II
729-211-00	Intelligent Detector Sounder Base, plug-in, low frequency, 520 Hz, AP/CLIP, white, Type II
729-213-00	Intelligent Detector Isolator Base, plug-in, AP/CLIP, white, Type II
729-214-00	Intelligent Detector Relay Base, plug-in, AP/CLIP, white, Type II
729-228-00	Intelligent Detector Standard Base, plug-in, 6 in. flanged, AP/CLIP, white, Type II
729-091-00	Remote, Red LED Annunciator, fits standard single gang electrical box (not included)
729-156-00	Test Magnet with 32 in. telescoping handle

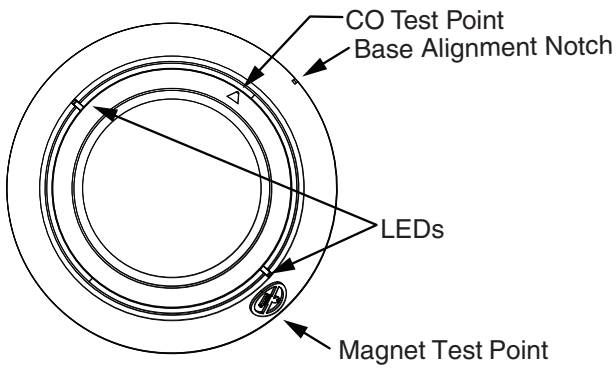
CO Sensitivity

Alarm Thresholds	
Parts per Million (ppm)	**Response Time**
70 ± 5ppm	60 to 240 minutes
150 ± 5ppm	10 to 50 minutes
400 ± 10ppm	4 to 15 minutes

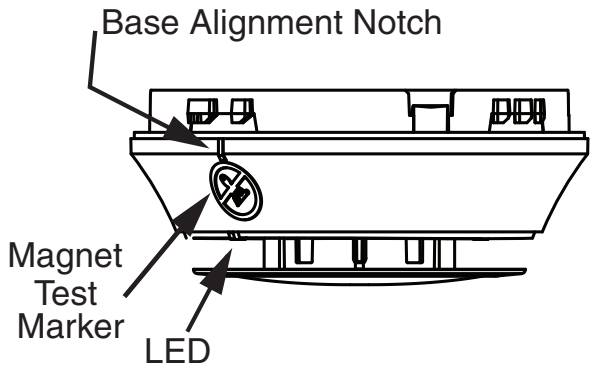
Diagrams

Test Magnet Diagram

Front View



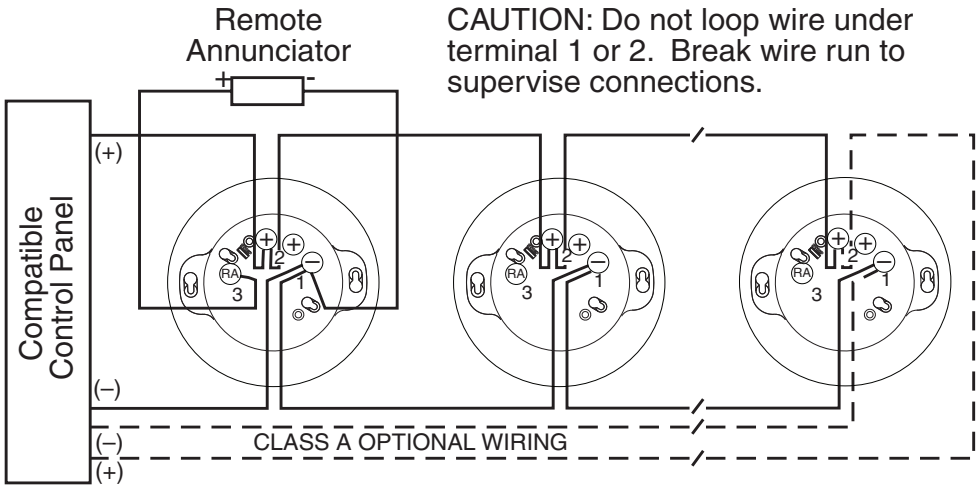
Side View



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Wiring Diagram



CAUTION: Do not loop wire under terminal 1 or 2. Break wire run to provide supervision of connections.

Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices.
Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.
NOTE P/N 725-603-00 is an ***AP Only Single Element Detector***.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	AP/CLIP Single Element Detectors	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and AP/CLIP single element detectors, bases, and single/multi-input/output modules are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

= Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Fire and CO Detector, AP Only, Type II

725-604-00

Panel Application

This AP Only multielement detector is compatible with the following Monaco FACP SLCs: MAAP-X with a CORE III processor.

Description

These detectors uses photoelectric, thermal, infrared, and carbon monoxide (CO) components that provide both fire and CO detection. If paired with AP Only bases P/N 729-209-00 or P/N 729-212-00, the detectors are able to be used as components of the general evacuation signal, along with other horns, horn strobes, and chimes when connected to a power supply or FACP.

Detector sensitivity can be programmed at the addressable control panel; sensitivity is continuously monitored and reported to the addressable control panel. Smoke and/or carbon monoxide density is also communicated to the FACP. Each detector's address can be easily set with rotary decade dials. Knowing the exact location of each detector can facilitate swift response to a specific fire situation or allow for selective maintenance when required.

Features

- White Type II fire and CO detector
  NOTE *Previous Type I devices are ivory*
- Detects all four major elements of a fire
- 135°F (57°C) fixed temperature threshold
- 10 year CO cell with end-of-life warning and fault
- Low standby current
- Addressable-analog communications
- Communicates individual identity, sensitivity, and status to Monaco addressable control panels
- Remote sensitivity adjustment
- Versatile plug-in design
- Dual LEDs for 360 degree visibility
- Rotary decade dials allow up to 159 addresses; however, Monaco panels only allow addresses up to 99 maximum
  NOTE *Monaco Programming only allows up to 99 addresses (valid programming addresses 1–99)*
- Removable cover and insect screen for easy cleaning
- Reed switch for local magnet test
- Output to optional remote LED accessory

Specifications

Protocol Capability	AP Only
Operating Voltage	15 to 32 VDC
Standby Current	200 µA maximum at 24 VDC, one communication every five seconds with green LED blink
Alarm Current	2 mA maximum at 24 VDC, one communication every five seconds with red LED solid on
Air Velocity	0 to 4,000 ft./minute (0 to 1,219.2 m/minute)
Operating Temperature	32°F to 115°F (0°C to 47°C)
Relative Humidity	15% to 90%, non-condensing
Diameter	6.875 in. (175 mm) in P/N 729-215-00
Height	2.7 in. (69 mm) in P/N 729-209-00
Weight	3.4 oz. (95 g)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Standards Compliance:

UL Listed File S911

FM Approved 3062622

State of California 7275-1653:0524

Ordering Information

Part Number	Description
725-604-00	Intelligent Fire/CO Detector, plug-in, low profile, AP Only, white, Type II

Associated Parts

Part Number	Description
729-209-00	Intelligent Detector Sounder Base, plug-in, AP Only, white, Type II
729-212-00	Intelligent Detector Sounder Base, plug-in, low frequency, 520 Hz, AP Only, white, Type II
729-215-00	Intelligent Detector Standard Base, plug-in, 4 in. flangeless, AP/CLIP, white, Type II
729-210-00	Intelligent Detector Sounder Base, plug-in, AP/CLIP, white, Type II
729-211-00	Intelligent Detector Sounder Base, plug-in, low frequency, 520 Hz, AP/CLIP, white, Type II
729-213-00	Intelligent Detector Isolator Base, plug-in, AP/CLIP, white, Type II
729-214-00	Intelligent Detector Relay Base, plug-in, AP/CLIP, white, Type II
729-228-00	Intelligent Detector Standard Base, plug-in, 6 in. flanged, AP/CLIP, white, Type II
729-091-00	Remote, Red LED Annunciator, fits standard single gang electrical box (not included).
729-156-00	Test Magnet with 32 in. telescoping handle
729-227-00	Cover/Trim Ring, ivory, for AP/CLIP white smoke detectors with infrared

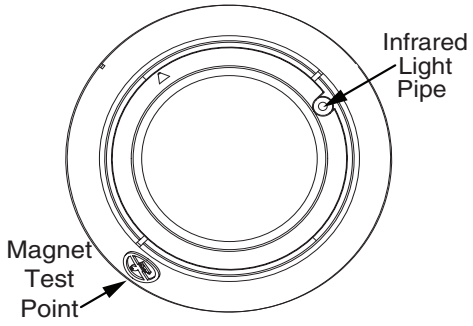
CO Sensitivity

Alarm Thresholds	
Parts per Million (ppm)	**Response Time**
70 ± 5ppm	60 to 240 minutes
150 ± 5ppm	10 to 50 minutes
400 ± 10ppm	4 to 15 minutes

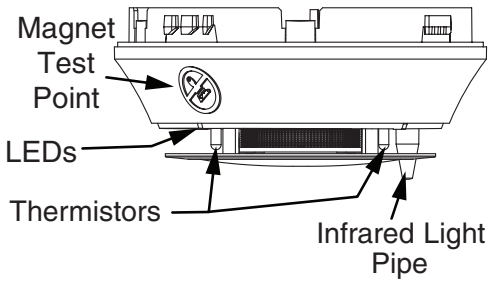
Diagrams

Test Magnet Diagram

Front View



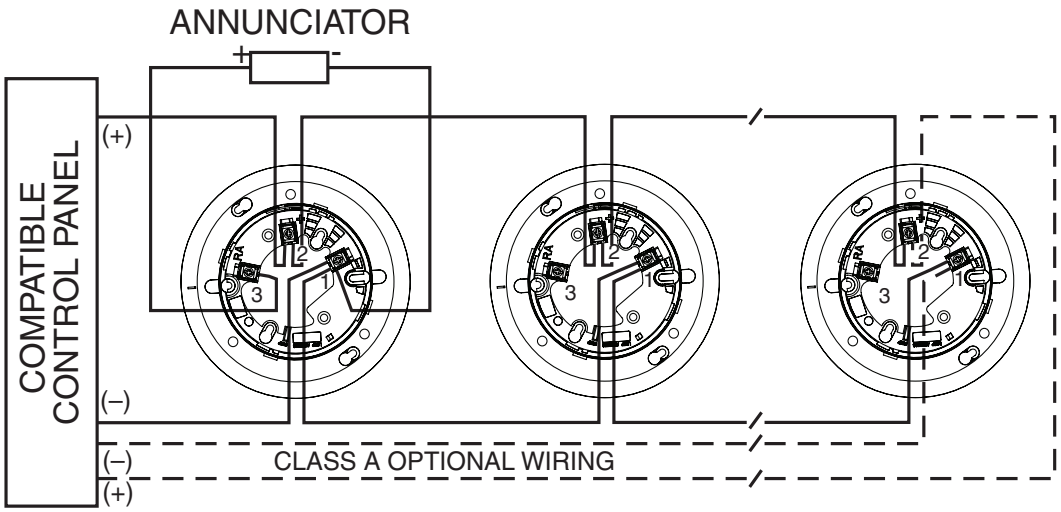
Side View



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Wiring Diagram



CAUTION: Do not loop wire under terminal 1 or 2. Break wire run to provide supervision of connections.

Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices.
Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.
NOTE P/N 725-604-00 is an ***AP Only Multielement Detector***.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	AP/CLIP Single Element Detectors	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and AP/CLIP single element detectors, bases, and single/multi-input/output modules are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

= Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Smoke and CO Detector, AP Only, Type II

725-605-00

Panel Application

This AP Only multielement detector is compatible with the following Monaco FACP SLCs: MAAP-X with a CORE III processor.

Description

Monaco addressable carbon monoxide (CO) and smoke detectors provide features that make them ideal for hotels, schools, high-rise residential applications, and other locations that require both smoke and CO detection. If paired with AP Only bases P/N 729-209-00 or P/N 729-212-00, the detectors are able to be used as components of the general evacuation signal, along with other horns, horn strobes, and chimes when connected to a power supply or FACP.

Detector smoke sensitivity can be programmed at the addressable control panel; smoke sensitivity and carbon monoxide density are continuously monitored and reported to the addressable control panel. Each detector's address can be easily set with rotary decade dials. Knowing the exact location of each detector can facilitate swift response to a specific fire situation or allow for selective maintenance when required.

Features

- White Type II smoke and CO detector
  NOTE *Previous Type I devices are ivory*
- 10 year CO cell with end-of-life warning and fault
- Addressable-analog communications
- Communicates individual identity, sensitivity, and status to Monaco addressable control panels
- Low standby current
- Remote sensitivity adjustment
- Versatile plug-in design
- Dual LEDs for 360 degree visibility
- Rotary decade dials allow up to 159 addresses; however, Monaco panels only allow addresses up to 99 maximum
  NOTE *Monaco Programming only allows up to 99 addresses (valid programming addresses 1–99)*
- Removable cover and insect screen for easy cleaning
- Reed switch for local magnet test
- Output to optional remote LED accessory

Specifications

Protocol Capability	AP Only
Operating Voltage	15 to 32 VDC
Standby Current	200 µA maximum at 24 VDC, one communication every five seconds with green LED blink
Alarm Current	2 mA maximum at 24 VDC, one communication every five seconds with red LED solid on
Air Velocity	0 to 4,000 ft./minute (0 to 1,219.2 m/minute)
Operating Temperature	32°F to 122°F (0°C to 50°C)
Relative Humidity	15% to 90%, non-condensing
Diameter	6.875 in. (175 mm) in P/N 729-215-00
Height	2.7 in. (69 mm) in P/N 729-215-00
Weight	3.4 oz. (95 g)
Standards Compliance:	
UL Listed	File S911
State of California	7275-1653:0524

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Ordering Information

Part Number	Description
725-605-00	Intelligent Smoke/CO Detector, plug-in, low profile, AP Only, white, Type II

Associated Parts

Part Number	Description
729-209-00	Intelligent Detector Sounder Base, plug-in, AP Only, white, Type II
729-212-00	Intelligent Detector Sounder Base, plug-in, low frequency, 520 Hz, AP Only, white, Type II
729-215-00	Intelligent Detector Standard Base, plug-in, 4 in. flangeless, AP/CLIP, white, Type II
729-210-00	Intelligent Detector Sounder Base, plug-in, AP/CLIP, white, Type II
729-211-00	Intelligent Detector Sounder Base, plug-in, low frequency, 520 Hz, AP/CLIP, white, Type II
729-213-00	Intelligent Detector Isolator Base, plug-in, AP/CLIP, white, Type II
729-214-00	Intelligent Detector Relay Base, plug-in, AP/CLIP, white, Type II
729-228-00	Intelligent Detector Standard Base, plug-in, 6 in. flanged, AP/CLIP, white, Type II
729-091-00	Remote, Red LED Annunciator, fits standard single gang electrical box (not included)
729-226-00	Cover/Trim Ring, ivory, for AP/CLIP white smoke detectors

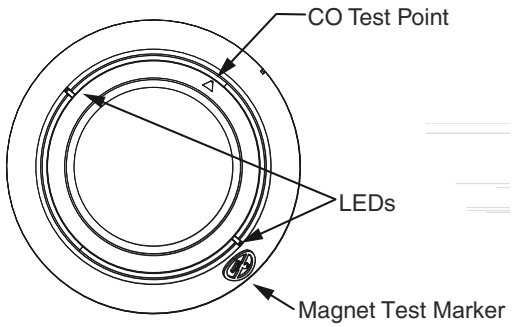
CO Sensitivity

Alarm Thresholds	
Parts per Million (ppm)	**Response Time**
70 ± 5ppm	60 to 240 minutes
150 ± 5ppm	10 to 50 minutes
400 ± 10ppm	4 to 15 minutes

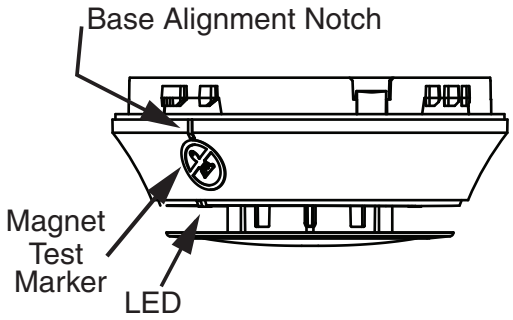
Diagrams

Test Magnet Diagram

Front View



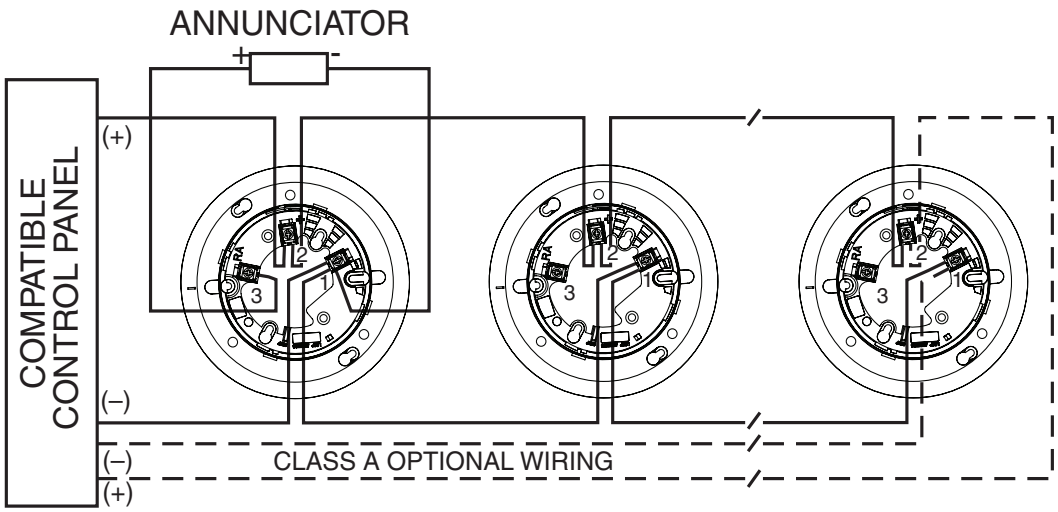
Side View



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Wiring Diagram



CAUTION: Do not loop wire under terminal 1 or 2. Break wire run to provide supervision of connections.

Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices.
Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.
NOTE P/N 725-605-00 is an ***AP Only Multielement Detector***.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	AP/CLIP Single Element Detectors	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and AP/CLIP single element detectors, bases, and single/multi-input/output modules are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

= Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Duct Smoke Detector
723-370-00, 723-371-00

Description

NOTE *For use with all Monaco Addressable Integrated Radio Transceiver and Fire Alarm Control Panel (FACP) signaling line circuit (SLC).*

Monaco's Addressable Duct Detector Housings are easy to install and maintain. The detector housing mounts to both round and rectangular ducts, and fits both square and rectangular footprints. The housing is available in either standard or NEMA 4 watertight versions.

Duct detector housing kit contains:

- Three #10 sheet metal screws for mounting
- Drilling template
- One sampling tube end cap
- One plastic exhaust tube

NOTE *Duct detector sampling tube must be ordered separately to complete the installation. It must be the correct length for the width of the duct where it will be installed. Duct widths from 1 to 12 ft. can be accommodated. Be sure to check engineering specifications to ensure that the air velocity in the duct is between 100 and 4,000 ft/minute.*

The detector housing is installed with an addressable photoelectric sensor head (P/N 723-602-00), which must be ordered separately.

The detector samples air currents passing through a duct and gives dependable performance for shutdown of fans, blowers, and air conditioning systems, preventing the spread of toxic smoke and fire gases through the protected area.

Additional DC power is *not* required. Detector is powered from SLC and can power a remote LED annunciator or interface with remote test stations with LED annunciator (key and no-key models). External addressable relay required for HVAC shutdown. Optional interface relay may be required for some HVAC interfaces.

The detector communicates with a Monaco addressable FACP via an SLC. Detected changes caused by dirt, temperature, or humidity are reported to the panel to enable compensation algorithms that maintain the detector's set sensitivity. An advance maintenance alert indication at the panel specifies the detector address so that maintenance can be performed as needed.

NOTE *Duct smoke detectors have limitations. They are not substitutes for open-area smoke detectors or early warning systems, nor can they replace a building's regular fire detection system. Duct smoke detectors function only when air handlers are turned on.*

Features

- Continuous sensitivity monitoring from Monaco Addressable FACPs with integrated radio transceiver
- Rated for air velocities from 100 to 4,000 ft/minute
- Sampling tube installs to the front or the back of the detector with no tools required
- Square or rectangular mounting options
- Remote testing capability
- Clear cover simplifies visual inspection
- NEMA 4, watertight detector housing available

Specifications

Air Velocity	100 to 4,000 ft/minute (0.5 to 20.32 m/second)
Operating Temperature	–4°F to 158°F (–20°C to 70°C)
Relative Humidity	0% to 95% non-condensing
Dimensions	Rectangular: 14.38 in. L × 5 in. W × 2.5 in. D (36.5 cm × 12.7 cm × 6.35 cm) Square: 7.75 in. L x 9 in. W x 2.5 in. D (19.7 cm x 22.9 cm x 6.35 cm)
Weight	1.6 lb (0.73 kg)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Standards Compliance:

UL Listed	2911
FM Approved	3029700
State of California	3240-1653:0209
MSFM Approved	2125

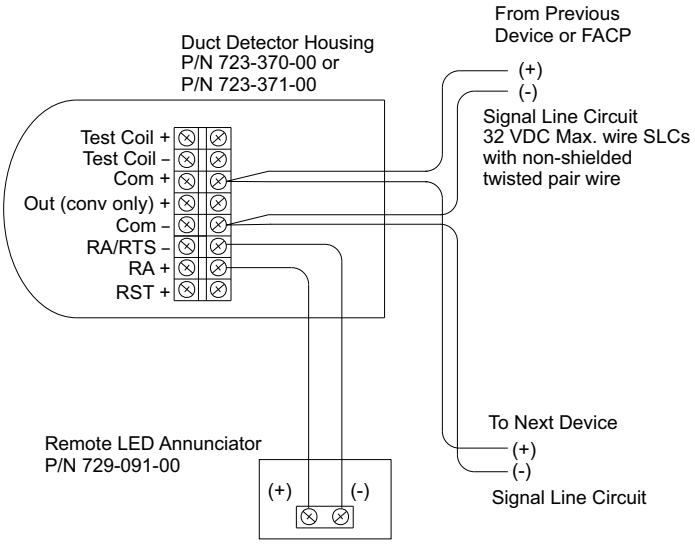
Ordering Information

Part Number	Description
723-370-00	Duct Detector Housing
723-371-00	Duct Detector Housing, Watertight, NEMA 4

Associated Parts

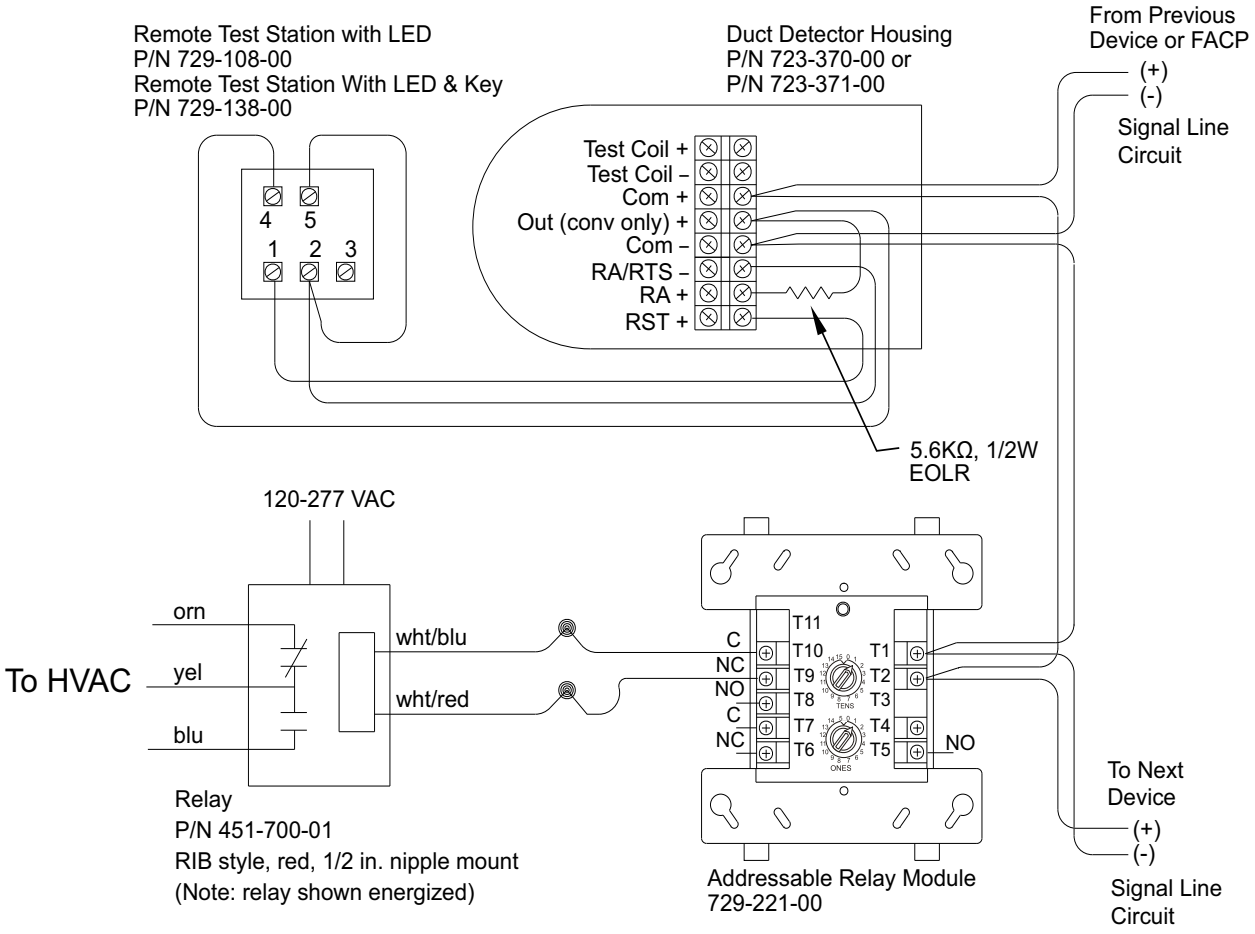
Part Number	Description
723-602-00	Intelligent Photoelectric Smoke Detector, Remote Test in Duct, plug-in, low profile, AP/CLIP, white, Type II **NOTE** For use in duct detector P/Ns 723-370-00 and 723-371-00 only.
729-205-00	Duct Smoke Detector, Sampling Tube, 1 to 2 ft.
729-205-01	Duct Smoke Detector, Sampling Tube, 2 to 4 ft.
729-205-02	Duct Smoke Detector, Sampling Tube, 4 to 8 ft.
729-205-03	Duct Smoke Detector, Sampling Tube, 8 to 12 ft.
729-221-00	Intelligent Relay Control Module, two Form C contacts, AP/CLIP, white, Type II
729-108-00	Remote Test Station with LED for duct or beam smoke detector; requires test coil P/N 729-206-00
729-138-00	Remote Test Station with LED and Key for duct or beam smoke detectors; requires test coil P/N 729-206-00
729-091-00	Remote, Red LED Annunciator, fits standard single-gang electrical box
729-156-00	Test Magnet with 32 in. telescoping handle
451-700-01	SPDT Relay, 120 to 277 VAC, 10A contacts, LED, red enclosure

Wiring Diagrams



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Reflected Beam Smoke Detector
725-002-00

Description

This is a single-ended reflected-type, long range, projected beam smoke detector. It is intended for open-area protection in locations where spot-type detection is impractical. Such environments can include freezers, warehouses, factories, parking facilities, arenas, concert halls, and barns.

Environments unsuitable for the detector include high humidity, rapidly changing temperatures, outdoors, locations where direct sunlight will strike the detector, or locations where glass panes or other objects will be in the path of the optical beam between the detector and the reflector.

FM APPROVED

UL

MEA approved

The detector consists of a transmitter/receiver unit (shown above) and a reflector.

Indicators

- **Green LED** Flashing pattern indicates standby
- **Red LED** Illuminated solid indicates alarm
- **Yellow LED** Flashing pattern indicates trouble diagnostics
- **Dual Digital Display** 0 to 99, indicates beam signal strength and sensitivity in percent obscuration

Testing

Integral sensitivity (obscuration) test, local test switch, or test commands from either the panel or the optional remote test station.

Features

- Rotary switch addressing
- Two-wire Signaling Line Circuit (SLC) communication to the control panel
- Internal identifying code for control panel use
- Sensitivity setting and testing
- Dual digital display
- Circuit isolation (Style 7) option by jumper setting

Specifications

Operating Voltage	24 VDC nominal (15 to 32V): • SLC loop • External (aux. power required) • Remote output
Standby Current	Standby 2 mA maximum, one communication every 5 seconds (LED flashing)
Alarm Current	8.5 mA maximum (LED on)
Remote Output	15 mA maximum, 6 mA minimum, limited by 2.2 kohm resistor
Trouble Current	4.5 mA maximum (LED on)
Alignment Current	20 mA maximum
External Supply	Voltage: 15 to 32 VDC Current: 0.5A maximum
Range	16 ft. to 230 ft. (5 m to 70 m); With Associated Part P/N 729-188-00: 230 ft. to 328 ft. (70 m to 100 m)
Spacing	30 ft. to 60 ft. (9.1 m to 18.3 m)
Adjustment Angle	±10 degrees horizontal and vertical
Typical Response Time	Alarm: 20 seconds Trouble: 30 seconds
Wiring	12 to 22 AWG, unshielded, twisted pair removable terminal block
Operating Temperature	–22°F to 131°F (–30°C to 55°C)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Relative Humidity	10% to 93%, non-condensing (essential)
Detector Dimensions	10 in. H x 7.5 in. W x 3.3 in. D (254 mm × 191 mm × 84 mm)
Reflector Dimensions	7.9 in. H x 9.1 in. W (200 mm × 230 mm)
Weight (Shipping)	3.9 lb (1.77 kg)
Standards Compliance:	
UL Listed	File S911
FM Approved	3017888
MEA Approved	53-04-E
State of California	7260-1653:0169

Sensitivity

Sensitivity Setting	Obscuration	Display Reading	Acceptable Distance Between Detector and Reflector	
			Feet	Meters
Level 1	25%	25	16.4 to 120	5 to 36.6
Level 2	30%	30	25 to 150	7.6 to 45.7
Level 3	40%	40	60 to 220	18.3 to 67
Level 4*	50%	50	80 to 328	24.4 to 100
Acclimate Level 1	30% to 50%	A1	80 to 150	24.4 to 45.7
Acclimate Level 2	40% to 50%	A2	80 to 220	24.4 to 67
*Factory default				

Ordering Information

Part Number	Description
725-002-00	Intelligent Reflected Beam Smoke Detector, loop powered, 32V maximum, integral sensitivity test capability (separately powered)

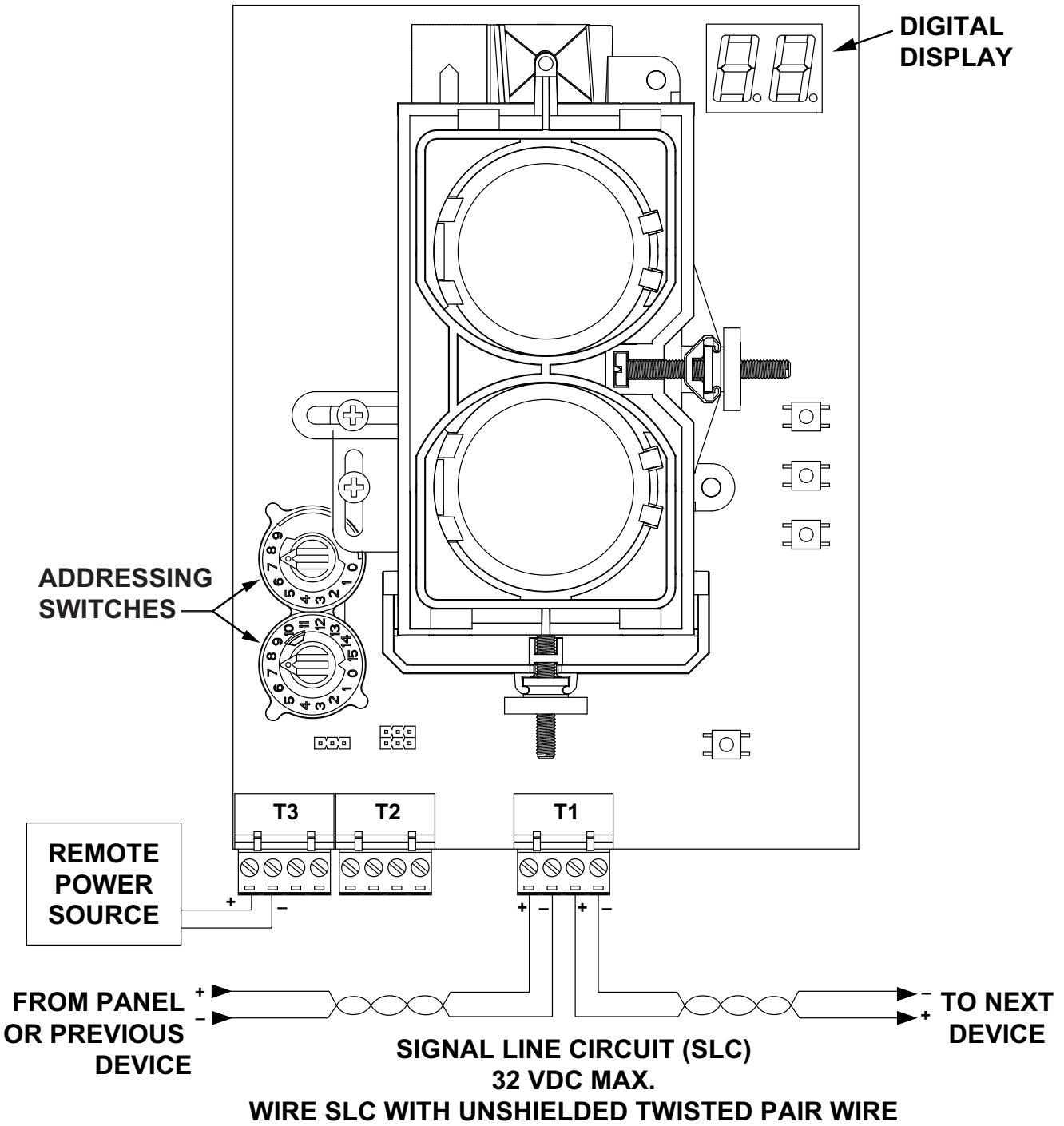
Associated Parts

Part Number	Description
729-108-00	Duct Smoke Detector, remote test station with LED; requires test coil P/N 729-206-00 See **NOTE**
729-138-00	Duct Smoke Detector, remote test station with LED and key; requires test coil P/N 729-206-00 See **NOTE**
729-187-00	Mounting Kit for Smoke Detector P/N 725-002-00, if needed to achieve ±10 degree alignment angle with either transmitter/receiver unit or reflector; not compatible with P/N 729-188-00
729-188-00	Kit of Three Additional Reflectors to extend range of smoke detector P/N 725-002-00 from 230 to 328 ft.; not compatible with P/N 729-187-00
729-189-00	Kit Required for Smoke Detector P/N 725-002-00 when mounting the transmitte/receiver unit: • Over a recessed J box • With multi-mount kit P/N 729-187-00
NOTE Test station can be used for smoke detector applications other than duct.	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules Catalog Section 09

Bases

Detector Base, Sounder, Plug-in, 6.875 in., AP Only, Type II 729-209-00, 729-212-00
Detector Base, Sounder, Plug-in, 6.875 in., AP/CLIP, Type II 729-210-00, 729-211-00
Detector Base, Isolator, Plug-in, 6.85 in., AP/CLIP, Type II 729-213-00
Detector Base, Relay, Plug-in, 6.85 in., AP/CLIP, Type II 729-214-00
Detector Base, Standard, Plug-in, 4 in., AP/CLIP, Type II 729-215-00
Detector Base, Standard, Plug-in, 6 in., AP/CLIP, Type II 729-228-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Addressable Intelligent Devices and Modules

Detector Base, Sounder, Plug-in, 6.875 in., AP Only, Type II

729-209-00, 729-212-00

Panel Application

These AP Only sounder bases are compatible with the following Monaco FACP SLCs: MAAP-X with a CORE III processor and an ADC II.

Description

These bases, intended for use in intelligent systems, are designed for new or existing dwelling units. Their flexibility in configuration, installation, and operation meet or exceed UL268 and UL464. P/N 729-212-00 meets the NFPA 72 sleeping space requirement to produce a low frequency tone of 520 Hz ± 10% with a square wave or its equivalent.

The bases produce a variety of tones, including Continuous, ANSI Temporal 3, ANSI Temporal 4, and March Time. Tone volume can be set at 75 dBa or 85 dBa.

Through the FACP, the bases can adopt the address of the attached sensor with a unique sub-address on the loop. This allows the panel to activate an individual sounder or a group of sounders. The command set from the panel can be customized to the specific event, allowing selection of volume, tone, and group.
The connections for 24V constant/NAC power and the communication loop are isolated to prevent electrical interaction between them.

NOTE Type II detector bases are white; previous Type I detector bases are ivory.

Specifications

729-209-00

Protocol Capability	AP Only
External Supply Voltage	16 to 33 VDC (VFWR)
Standby Current	500 µA maximum
High Volume Alarm Current	35 mA maximum
Low Volume Alarm Current	15 mA maximum
SLC Operating Voltage	15 to 32 VDC
SLC Standby Current	300 µA maximum
Sound Output	High Volume: >85 dBA minimum Low Volume: >75 dBA minimum, Measured in a UL reverberant room at 10 ft., 24V (continuous tone)
Input Wiring	12 to 14 AWG
Relative Humidity	10% to 93% non-condensing
Diameter	6.875 in. (17.46 cm)
Height (Without Sensor)	2 in. (5.08 cm)
Weight	0.5 lb (227 g)
Mounting	4 in. square (with or without ring), 4 in. octagonal, 3.5 in. octagonal, single gang, and double gang junction boxes.
Color	White
Standards Compliance:	
UL Listed	UL268 & UL464, File S911
State of California	7300-1653:0232

729-212-00

Protocol Capability	AP Only
External Supply Voltage	16 to 33 VDC (VFWR)
Standby Current	550 µA maximum
High Volume Alarm Current	70 mA maximum at 33 VDC, 90 mA maximum at 24 VDC
Low Volume Alarm Current	15 mA maximum at 33 VDC, 20 mA maximum at 24 VDC
SLC Operating Voltage	15 to 32 VDC
SLC Standby Current	300 µA maximum
Sound Output	High Volume: >85 dBA minimum Low Volume: >75 dBA minimum, Measured in a UL reverberant room at 10 ft., 24V (continuous tone
Input Wiring	12 to 14 AWG

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Relative Humidity	10% to 93% non-condensing
Diameter	6.875 in. (17.46 cm)
Height (Without Sensor)	2 in. (5.08 cm)
Weight	0.6 lb (272 g)
Mounting	4 in. square (with or without ring), 4 in. octagonal, 3.5 in. octagonal, single or double gang junction boxes.
Color	White
Standards Compliance:	
UL Listed	UL268 & UL464, File S911
State of California	7300-1653:0240

Ordering Information

Part Number	Description
729-209-00	Intelligent Detector Sounder Base, plug-in, 6.875 in., AP Only, white, Type II
729-212-00	Intelligent Detector Sounder Base, plug-in, 6.875 in., low frequency, 520 Hz, AP Only, white, Type II

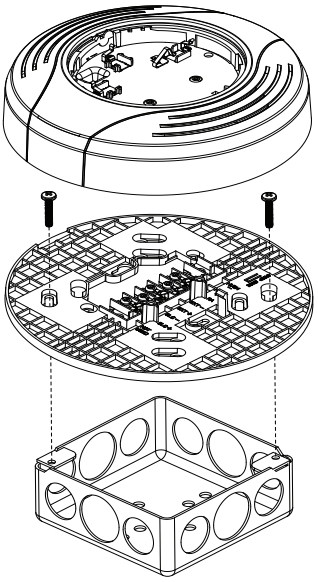
Associated Parts

Part Number	Description
729-218-00	Intelligent Mini-Monitor Module, AP/CLIP, white, Type II
790-013-01	End-of-line Power Supervision Relay Module, non-polarized, 9–40 VDC, with built-in 47k EOL resistor or a set of N.C. dry contacts

Diagrams

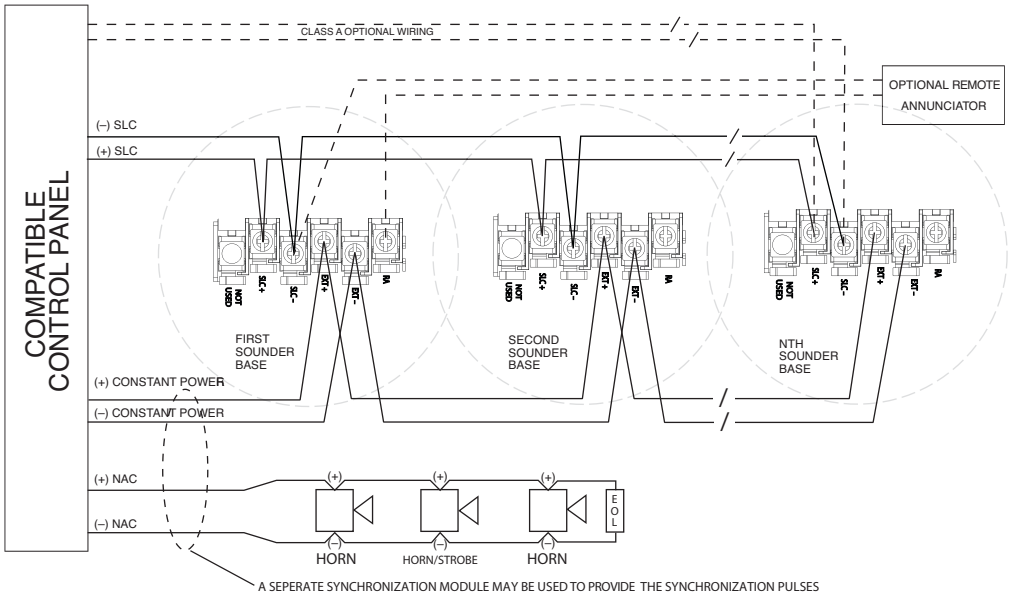
Mounting

The mounting plate allows connection pre-wiring. The housing locks with the plate using two retaining screws for added tamper resistance.



Wiring Diagrams

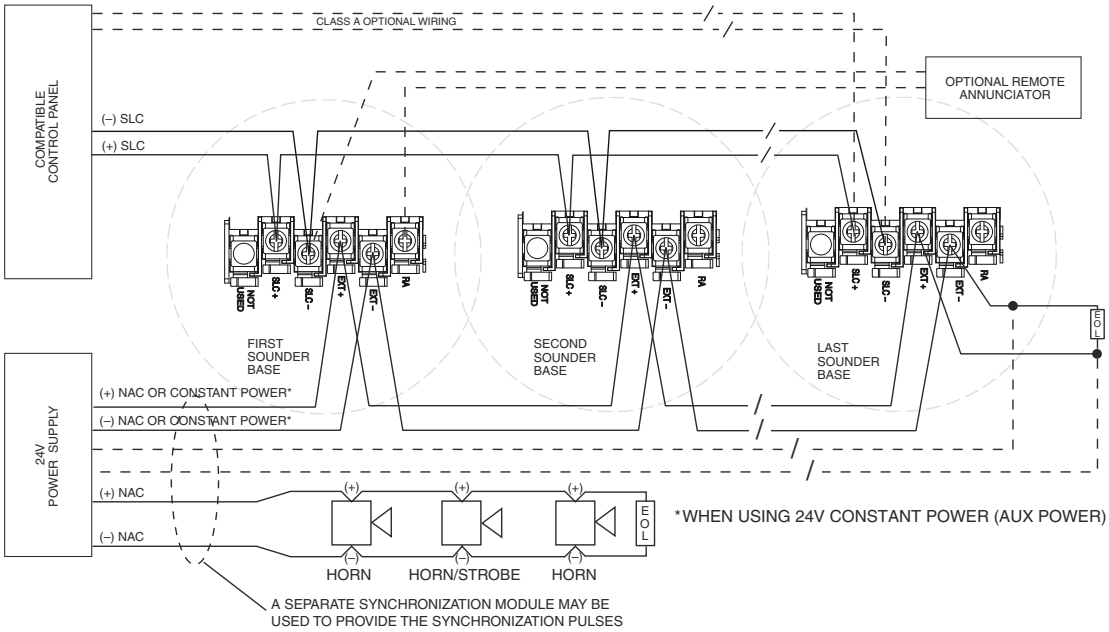
FACP Supplying Constant 24V Power



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Connected to 24V Power



Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices. Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.

NOTE P/N 729-209-00 and P/N 729-212-00 are ***AP Only Sounder Bases*** for use with detectors utilizing AP protocol; devices utilizing AP protocol are only compatible with the ***ADC II on a MAAP-X with a CORE III processor.***

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	AP/CLIP Single Element Detectors	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and AP/CLIP single element detectors, bases, and single/multi-input/output modules are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

Devices utilizing AP protocol are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

= Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Detector Base, Sounder, Plug-in, 6.875 in., AP/CLIP, Type II

729-210-00, 729-211-00

Panel Application

These AP/CLIP sounder bases are compatible with the following Monaco FACP SLCs: MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Description

These bases, intended for use in intelligent systems, are designed for new or existing dwelling units. Their flexibility in configuration, installation, and operation meet or exceed UL268 and UL464. P/N 729-211-00 meets the NFPA 72 sleeping space requirement to produce a low frequency tone of 520 Hz ± 10% with a square wave or its equivalent.

One of the two supported tones, ANSI Temporal 3 or Continuous, can be selected using the included jumper.

UL has approved grouping for up to six sounder bases maximum. When one in a group sounds, the rest sound also. Grouping horns through the sounder base interconnect is not supervised and must be used only as a supplementary evacuation system. Bases grouped by software are not so limited and may be part of primary alarm signaling. The connections for 24V constant/NAC power and the communication loop are isolated to prevent electrical interaction between them.

NOTE Type II detector bases are white; previous Type I detector bases are ivory.

Specifications

729-210-00

Protocol Capability	AP/CLIP
External Supply Voltage	16 to 33 VDC (VFWR)
Standby Current	500 µA maximum
Alarm Current	35 mA maximum
SLC Operating Voltage	15 to 32 VDC
SLC Standby Current	300 µA maximum
Sound Output	>85 dBA minimum, Measured in a UL reverberant room at 10 ft., 24V (continuous tone)
Input Wiring	12 to 14 AWG
Relative Humidity	10% to 93%, non-condensing
Diameter	6.875 in. (17.46 cm)
Base Height (Without Sensor)	2 in. (5.08 cm)
Weight	0.5 lb (227 g)
Mounting	4 in. square (with or without ring), 4 in. octagonal, 3.5 in. octagonal, single gang, and double gang junction boxes
Color	White
Standards Compliance:	
UL Listed	UL268 & UL464, File S911
FM Approved	3062622
State of California	7135-1653:0213

729-211-00

Protocol Capability	AP/CLIP
External Supply Voltage	16 to 33 VDC (VFWR)
Standby Current	1 mA maximum VDC
Alarm Current	65 mA maximum at 33 VDC 90 mA maximum at 24 VDC
SLC Operating Voltage	15 to 32 VDC
SLC Standby Current	Refer to applicable sensor specification
Sound Output	>85 dBA minimum, Measured in a UL reverberant room at 10 ft., 24V (continuous tone)
Relative Humidity	10% to 93%, non-condensing
Input Wiring	12 to 14 AWG
Diameter	6.875 in. (17.46 cm)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Base Height (Without Sensor)	2 in. (5.08 cm)
Weight	0.6 lb (272 g)
Mounting	4 in. square (with or without ring), 4 in. octagonal, 3.5 in. octagonal, single gang, and double gang junction boxes
Color	White
Standards Compliance:	
UL Listed	UL268 & UL464, File S911
FM Approved	3062622
State of California	7300-1653:0238

Ordering Information

Part Number	Description
729-210-00	Intelligent Detector Sounder Base, plug-in, 6.875 in., AP/CLIP, white, Type II
729-211-00	Intelligent Detector Sounder Base, plug-in, 6.875 in., low frequency, 520 Hz, AP/CLIP, white, Type II

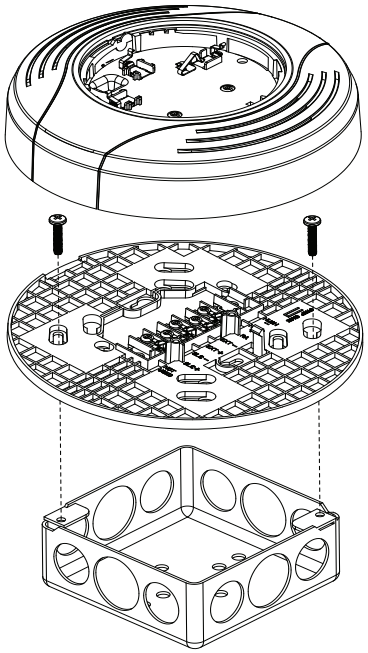
Associated Parts

Part Number	Description
729-218-00	Intelligent Mini-Monitor Module, AP/CLIP, white, Type II
790-013-01	End-of-line Power Supervision Relay Module, non-polarized, 90–40 VDC, with built-in 47k EOL resistor or a set of N.C. dry contacts
729-226-00	Cover/Trim Ring, ivory, for AP/CLIP white smoke detectors
729-227-00	Cover/Trim Ring, ivory, for AP/CLIP white smoke detectors with infrared

Diagrams

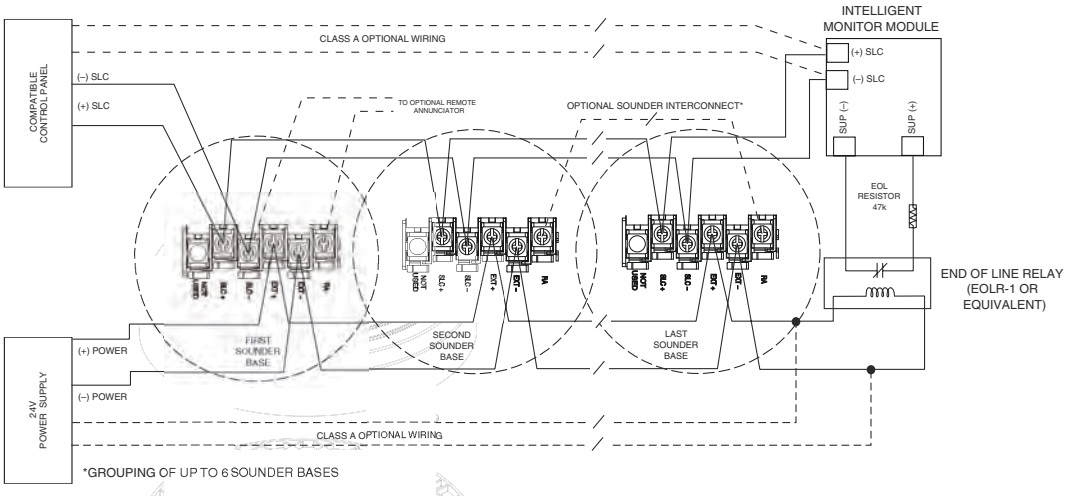
Mounting

The mounting plate allows connection pre-wiring. The housing locks with the plate using two retaining screws for added tamper resistance.



Wiring Diagrams

Detector Activates Sounder Base(s)

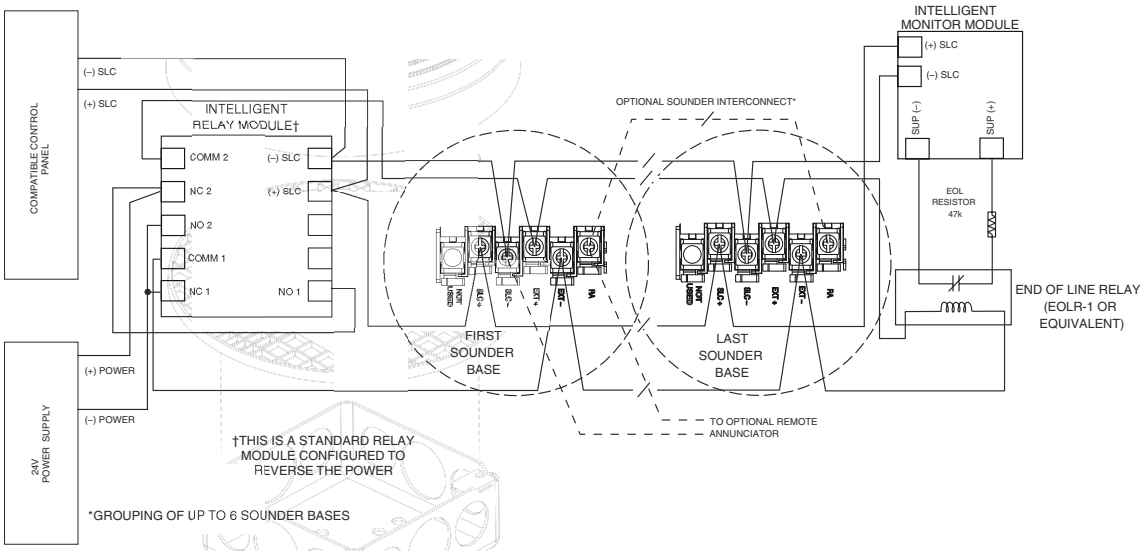


Monaco Enterprises, Inc.

P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Detector Activates Sounder Base(s);
Intelligent Relay Module Activates All Sounder Bases



Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices. Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

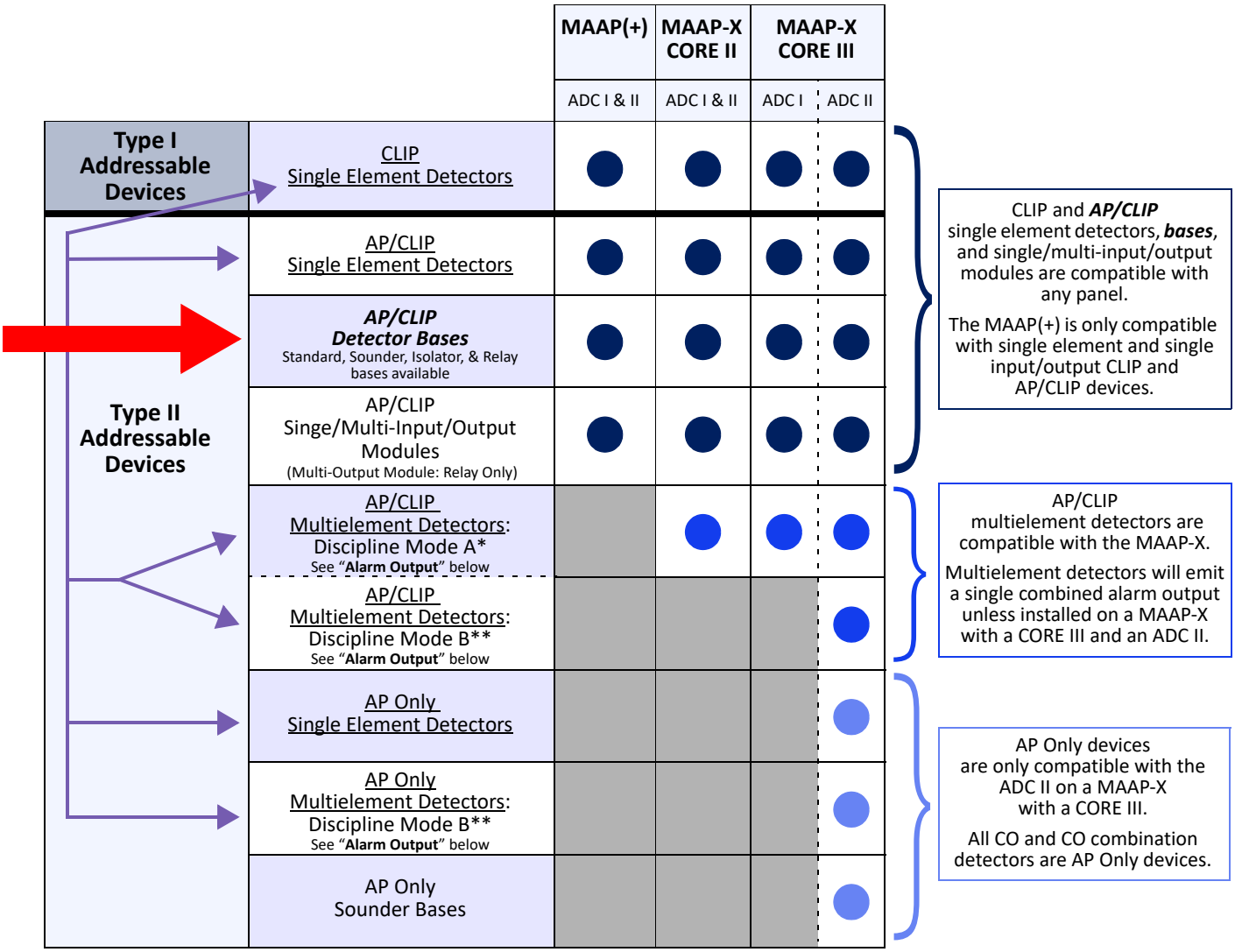
See “Addressable Device Compatibility Requirements” to determine your compatibility.

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.

NOTE P/N 729-210-00 and P/N 729-211-00 are ***AP/CLIP Sounder Bases*** that are compatible with Type I and Type II detectors. Also note that AP/CLIP Detector Bases are white and will not match the color of Type I detectors, which are ivory.



Legend	
= Compatible	= Incompatible

Alarm Output	
Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Detector Base, Isolator, Plug-in, 6.85 in., AP/CLIP, Type II
729-213-00

Panel Application

This AP/CLIP isolator base is compatible with the following Monaco FACP SLCs: MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Description

Isolator bases prevent an entire Signaling Line Circuit (SLC) from being disabled when a short circuit occurs. They do this by isolating the shorted portion of the SLC from the remainder of the SLC. These bases automatically restore the entire SLC when the short is corrected. Up to 25 addressable detectors may be installed between isolator bases. Tamper-resist feature included.

NOTE Type II detector bases are white; previous Type I detector bases are ivory.

Specifications

Protocol Capability	AP/CLIP
Operating Voltage	15 to 32 VDC
Standby Current	450 µA maximum
Isolation Current	15 mA maximum
Input Wiring	12 to 18 AWG
Relative Humidity	10% to 93% non-condensing
Diameter	6.85 in. (17.4 cm)
Height (Without Sensor)	1.61 in. (4.1 cm)
Weight	0.5 lb (227 g)
Mounting	4 in. square (with or without ring), 4 in. octagonal, 3.5 in. octagonal, single gang, and double gang junction boxes.
Color	White
Standards Compliance:	
UL Listing	File S911
FM Approval	3062622
State of California	7300-1653:0126

Ordering Information

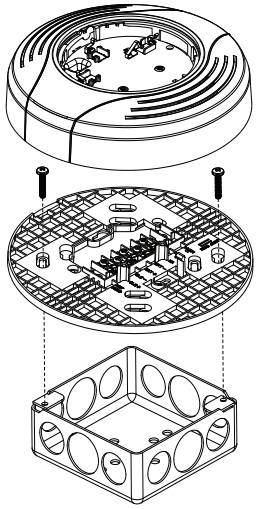
Part Number	Description
729-213-00	Intelligent Detector Isolator Base, plug-in, 6.85 in., AP/CLIP, white, Type II

Associated Parts

Part Number	Description
729-226-00	Cover/Trim Ring, ivory, for AP/CLIP white smoke detectors
729-227-00	Cover/Trim Ring, ivory, for AP/CLIP white smoke detectors with infrared

Diagrams

Mounting

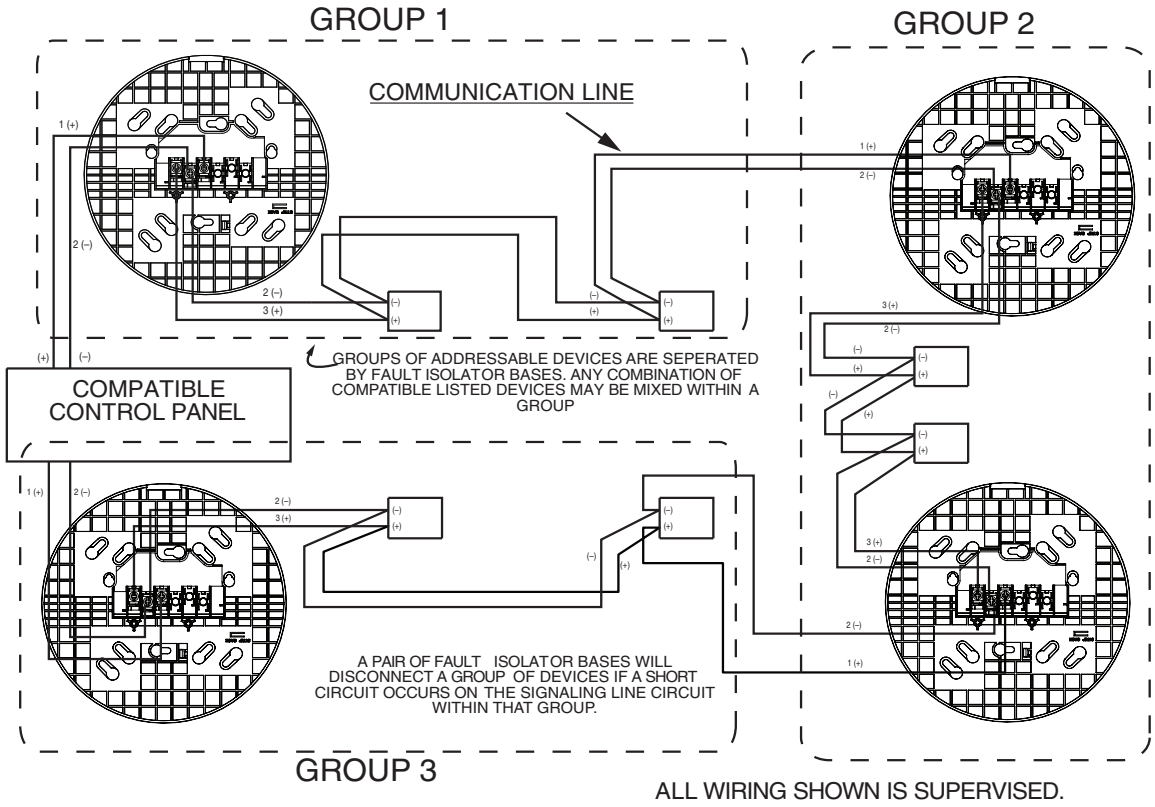


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-com.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Wiring Diagram



Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices. Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.

NOTE P/N 729-213-00 is an ***AP/CLIP Isolator Base*** that is compatible with Type I and Type II detectors.
Also note that AP/CLIP Detector Bases are white and will not match the color of Type I detectors, which are ivory.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	AP/CLIP Single Element Detectors	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and ***AP/CLIP*** single element detectors, ***bases***, and single/multi-input/output modules are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

= Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Detector Base, Relay, Plug-in, 6.85 in., AP/CLIP, Type II
729-214-00

Panel Application

This AP/CLIP relay base is compatible with the following Monaco FACP SLCs: MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Description

This relay provides one form C contact relay that can be used to control an auxiliary function, such as a fire-door release or elevator recall. Short or long delay activation modes are available and are determined by shunt position.

NOTE Type II detector bases are white; previous Type I detector bases are ivory.

Specifications

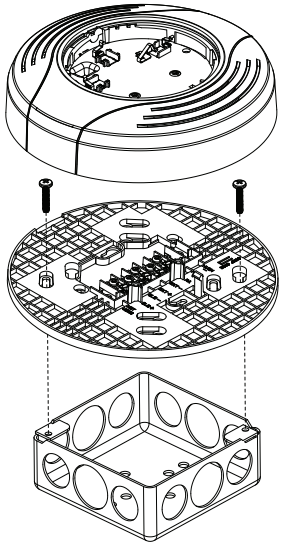
Protocol Capability	AP/CLIP
Operating Voltage	15 to 32 VDC
Standby Current	170 µA maximum
Latching Relay	2 Coil
Contact Type	1 Form C Contact
Contact Relay Ratings	0.5A: 125 VAC maximum; 0.9A: 125 VDC maximum; 3A: 30 VDC maximum
Set Time	Short Delay: 60 to 100 milliseconds Long Delay: 6 to 10 seconds
Reset Time	20 milliseconds maximum
Input Wiring	12 to 18 AWG
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Diameter	6.85 in. (17.46 cm)
Height (Without Sensor)	1.61 in. (4.1 cm)
Weight	0.5 lb (227 g)
Mounting	4 in. square (with or without ring), 4 in. octagonal, 3.5 in. octagonal, single gang, and double gang junction boxes
Color	White
Standards Compliance:	
UL Listed	File S911
FM Approved	3062622
State of California	7300-1653:0126

Ordering Information

Part Number	Description
729-214-00	Intelligent Detector Relay Base, plug-in, 6.85 in., AP/CLIP, white, Type II

Diagrams

Mounting

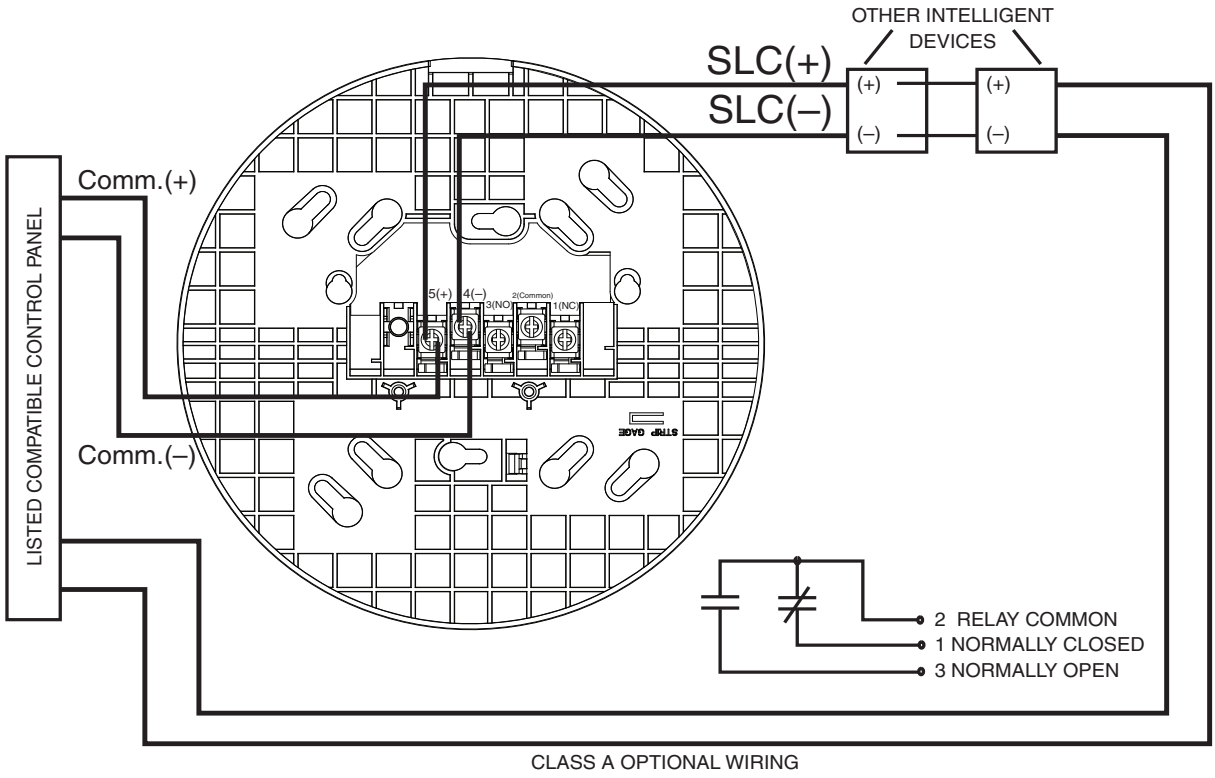


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Wiring Diagram



Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices. Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.
NOTE P/N 729-214-00 is an ***AP/CLIP Relay Base*** that is compatible with Type I and Type II detectors.
Also note that AP/CLIP Detector Bases are white and will not match the color of Type I detectors, which are ivory.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	AP/CLIP Single Element Detectors	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and ***AP/CLIP*** single element detectors, ***bases***, and single/multi-input/output modules are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

= Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Detector Base, Standard, Plug-in, 4 in., AP/CLIP, Type II
729-215-00

Panel Application

This AP/CLIP standard base is compatible with the following Monaco FACP SLCs: MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Description

This plug-in detector base is for use with intelligent systems. Screw terminals are provided for power (+) and (–), and for remote annunciator connections. Communication takes place over the SLC. Mechanical locking feature restricts removal of attached sensor head.

NOTE Type II detector bases are white; previous Type I detector bases are ivory.

Specifications

Protocol Capability	AP/CLIP
Operating Voltage	15 to 32 VDC (base and detector)
Standby Current	150 µA maximum (base and detector)
Input Wiring	12 to 18 AWG
Relative Humidity	10% to 93% non-condensing
Diameter	4 in. (10.2 cm)
Height (Without Sensor)	0.74 in. (18.8 mm)
Weight	0.32 lb (145g)
Mounting	4 in. square junction box with 3 in. ring, 3.5 in. octagonal junction box, 50 mm, 60 mm, and 70 mm centers
Color	White
Standards Compliance:	
UL Listed	UL268 File S911
FM Approved	3062622
State of California	7300-1653:0109

Ordering Information

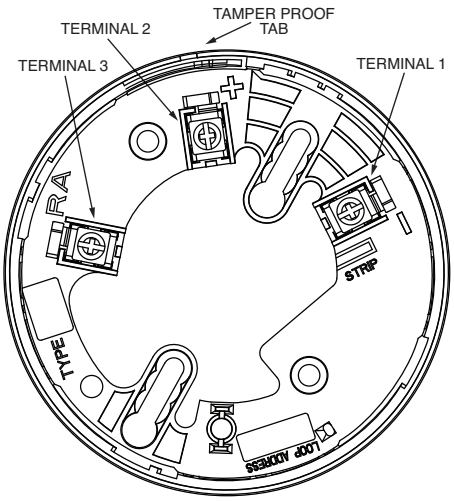
Part Number	Description
729-215-00	Intelligent Detector Standard Base, plug-in, 4 in. flangeless, AP/CLIP, white, Type II

Associated Parts

Part Number	Description
729-226-00	Cover/Trim Ring, ivory, for AP/CLIP white smoke detectors
729-227-00	Cover/Trim Ring, ivory, for AP/CLIP white smoke detectors with infrared

Diagrams

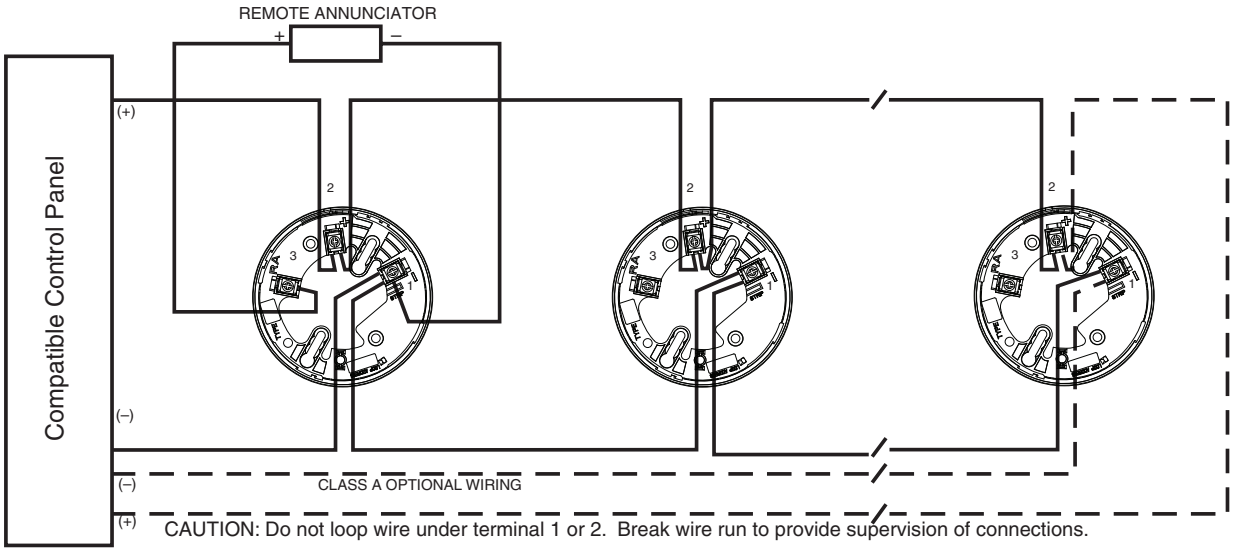
Terminal Layout



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Wiring Diagram



Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices.
Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.

NOTE P/N 729-215-00 is a ***Standard AP/CLIP Detector Base*** that is compatible with Type I and Type II detectors. Also note that AP/CLIP Detector Bases are white and will not match the color of Type I detectors, which are ivory.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	AP/CLIP Single Element Detectors	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and ***AP/CLIP*** single element detectors, ***bases***, and single/multi-input/output modules are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

= Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	Recommended Type II Device			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Detector Base, Standard, Plug-in, 6 in., AP/CLIP, Type II
729-228-00

Panel Application

This AP/CLIP sounder base is compatible with the following Monaco FACP SLCs: MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Description

This plug-in detector base is for use with intelligent systems. Screw terminals are provided for power (+) and (–) and for remote annunciator connections. Communication takes place over the SLC. Mechanical locking feature restricts removal of attached sensor head.

NOTE Type II detector bases are white; previous Type I detector bases are ivory.

Specifications

Protocol Capability	AP/CLIP
Operating Voltage	15 to 32 VDC (base and detector)
Standby Current	170 µA maximum (base and detector)
Input Wiring	12 to 18 AWG
Relative Humidity	10% to 93% non-condensing
Diameter	6.1 in. (15.5 cm)
Height (Without Sensor)	0.76 in. (1.9 cm)
Weight	0.32 lb (0.145 kg)
Mounting	4 in. square (with or without ring), 3.5 in. or 4 in. octagonal, and single gang junction boxes
Color	White
Standards Compliance:	
UL Listed	UL268 File S911
FM Approved	3062622
State of California	7300-1653:0109

Ordering Information

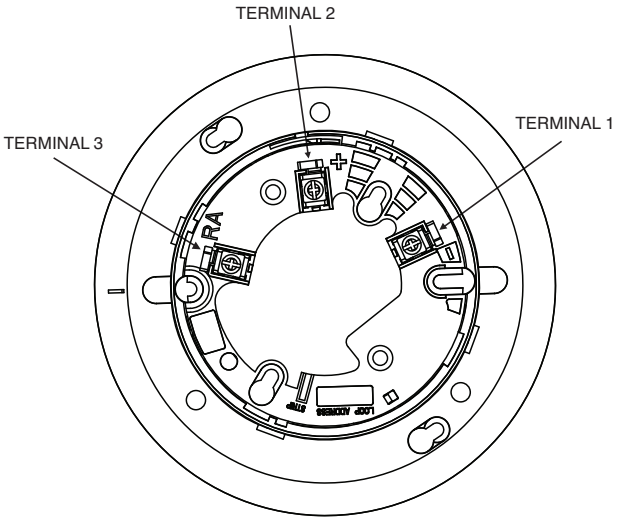
Part Number	Description
729-228-00	Intelligent Detector Standard Base, plug-in, 6 in. flanged, AP/CLIP, white, Type II

Associated Parts

Part Number	Description
729-226-00	Cover/Trim Ring, ivory, for AP/CLIP white smoke detectors
729-227-00	Cover/Trim Ring, ivory, for AP/CLIP white smoke detectors with infrared

Diagrams

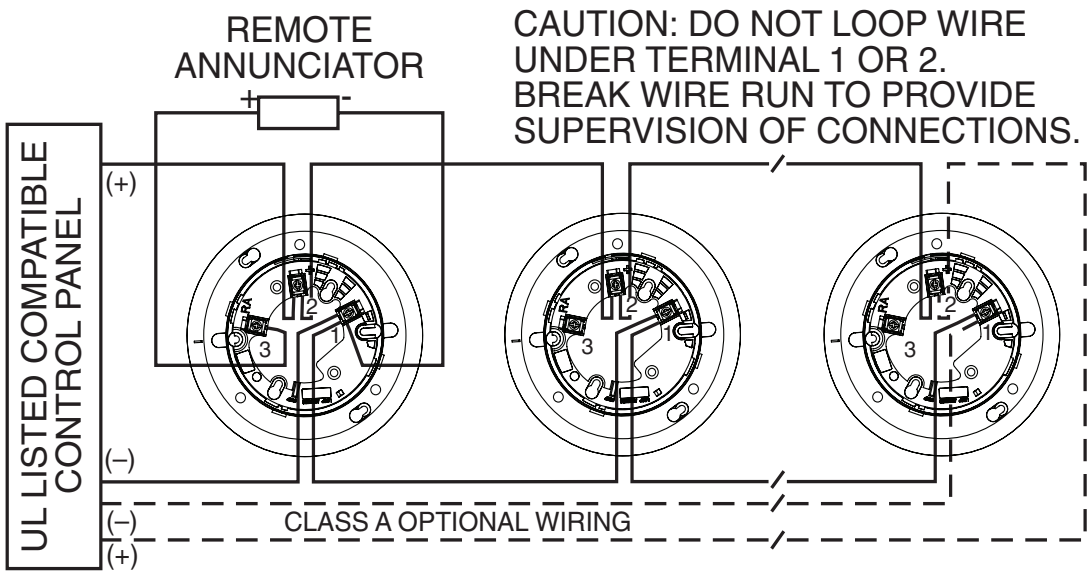
Terminal Layout



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Wiring Diagram



.

Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices. Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.

NOTE P/N 729-228-00 is a ***Standard AP/CLIP Detector Base*** that is compatible with Type I and Type II detectors. Also note that AP/CLIP Detector Bases are white and will not match the color of Type I detectors, which are ivory.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	AP/CLIP Single Element Detectors	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and ***AP/CLIP*** single element detectors, ***bases***, and single/multi-input/output modules are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

■ = Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules Catalog Section 09

Modules

Module, Ten Input Monitor, CLIP, Type I 729-162-00
Module, Monitor, AP/CLIP, Type II 729-217-00
Module, Mini-Monitor, AP/CLIP, Type II 729-218-00
Module, Zone Interface, AP/CLIP, Type II 729-219-00
Module, Supervised NAC Control, AP/CLIP, Type II 729-225-00
Module, Relay Control, AP/CLIP, Type II 729-221-00
Module, Ten Input Monitor, AP/CLIP, Type II. 729-223-00
Module, Six Relay Control, AP/CLIP, Type II 729-224-00
Module, Dual Input Monitor, AP/CLIP, Type II 729-220-00
Module, Fault Isolator 729-140-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

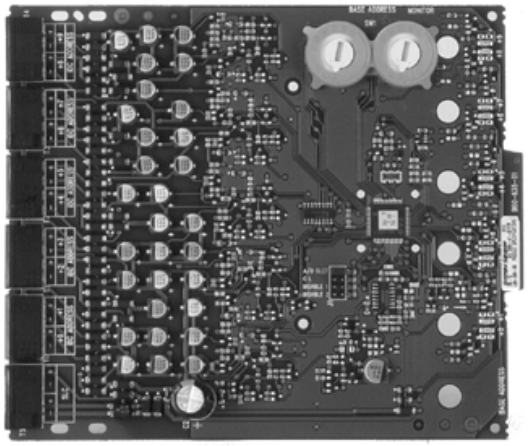
Addressable Intelligent Devices and Modules

Module, Ten Input Monitor, CLIP, Type I
729-162-00

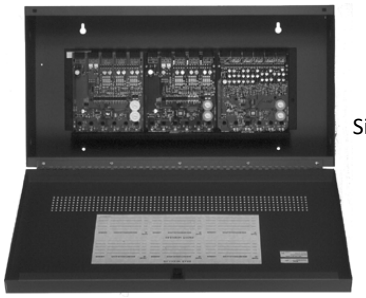
Description

This CLIP multi-input module is compatible with all Monaco Addressable Integrated Radio Transceiver and Fire Alarm Control Panel SLCs.

Addressable Ten Input Monitor Module P/N 729-162-00



Two Module Cabinet P/N 729-160-00



Six Module Cabinet P/N 729-161-00

This monitor module interfaces to non-loop-powered contact devices such as water-flow switches, pull stations, and valve tampers. It is capable of Class A and Class B supervised wiring to the load device. Conventional 4-wire (auxiliary power source) smoke detectors can be monitored through their alarm contacts, wired as an IDC to the module.

The supervised state of the monitored device (Normal, Short, or Open) is transmitted back to the panel along with the full analog supervision measurement. This allows detection of impedance changes in the supervised loop.

A shunt sets operation class—installed for Class B, removed for Class A. In Class B operation, setting one address causes the module to automatically assign the next sequential nine. However, in Class A, terminals are paired. Addresses go to the pair with every other address automatically assigned—if the first address set on the rotary switch is 28, the next automatic address is 30, and then 32, 34, and 36. Addresses 29, 31, 33, 35, and 37 can be set on another module PCB or on addressable devices on the SLC. A maximum of one Class A or two Class B inputs can be disabled.

Features

- Replaces ten Class B/five Class A monitor modules
- Class A or B determined by supplied shunt
- A pair of rotary switches sets the address of the first input; the remaining nine inputs set automatically to the next nine higher addresses (see “Description” for more information)
- Each input LED is controlled by the addressable control panel as off, blinking, or illuminated solid
- Each initiating device circuit (IDC) input is fully supervised

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Specifications

Protocol	CLIP
Operating Voltage	15 to 32 VDC
IDC Voltage	12 VDC maximum
Standby Current	3.5 mA
IDC Current	1 mA maximum
Alarm Current	60 mA (assumes all LEDs illuminated solid)
Input Wiring	12 to 18 AWG
SLC Resistance	40 ohms maximum
IDC Resistance	40 ohms maximum
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 85% non-condensing
Dimensions	6.8 in. H × 5.8 in. W × 1.25 in. D (17.27 cm × 14.73 cm × 3.175 cm)
Standards Compliance:	
UL Listed	UOXX.S3705

Ordering Information

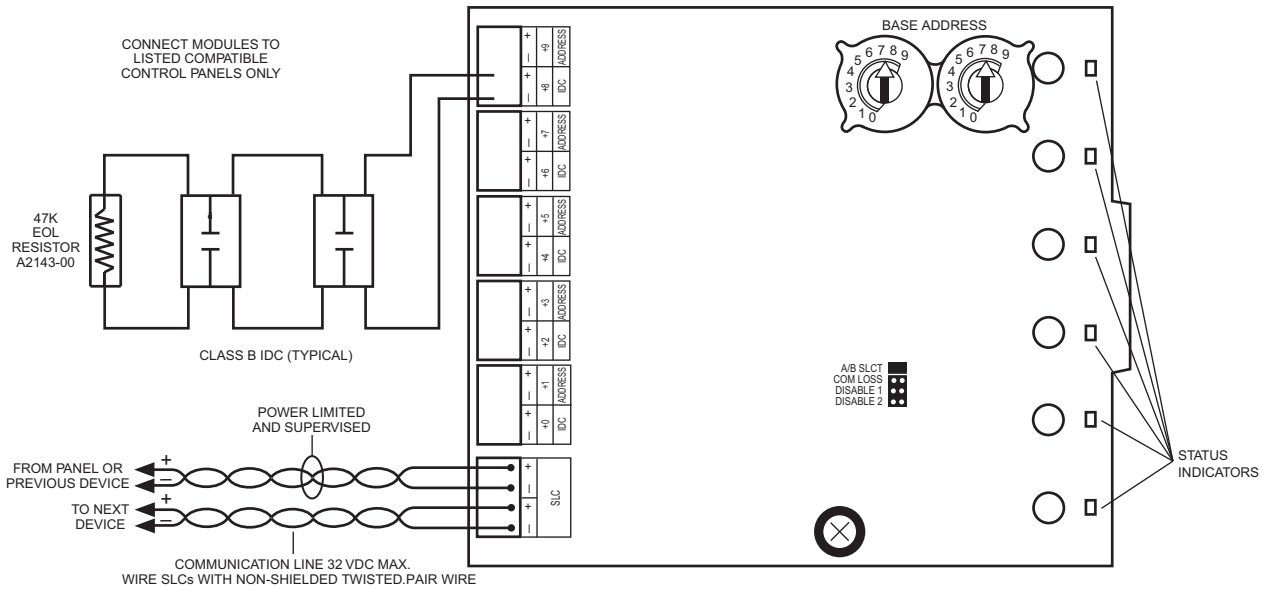
Part Number	Description
729-162-00	Intelligent Ten Input Monitor Module CLIP Type I

Associated Parts

Part Number	Description
729-160-00	Two Module Cabinet, red, 12 in. H × 9 in. W × 3.67 in. D
729-161-00	Six Module Cabinet, red, 24 in. H × 12.55 in. W × 6.5 in. D
729-166-00	Mounting Bracket for six module cabinet

Wiring Diagrams

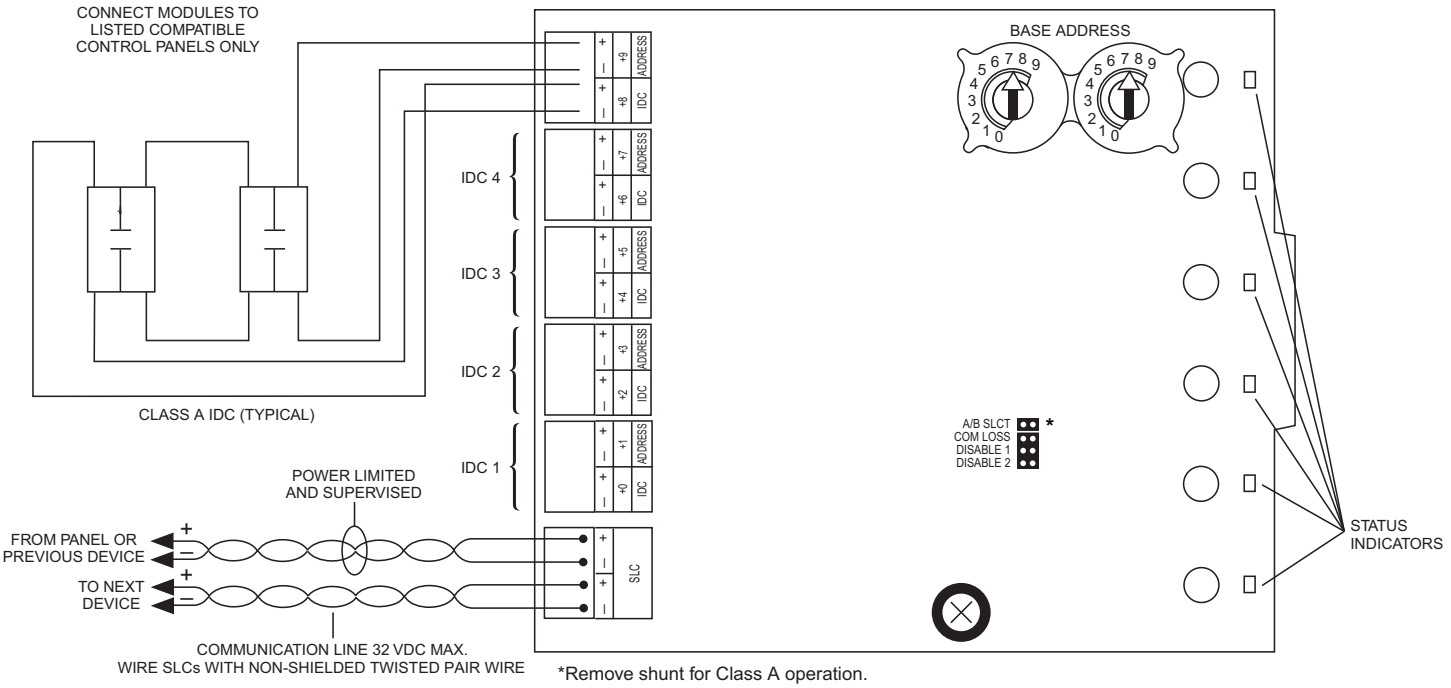
Typical IDC Configuration—Class B



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Typical Fault Tolerant IDC Configuration—Class A



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Module, Monitor, AP/CLIP, Type II

729-217-00

Panel Application

This AP/CLIP single input module is compatible with the following Monaco FACP SLCs: MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Description

The Monaco Monitor Module is an interface to non-loop-powered contact devices such as waterflow switches, pull stations, and valve tampers. It is capable of Class A and B supervised wiring to the load device. Conventional 4-wire (auxiliary power source) smoke detectors can be monitored through their alarm and trouble contacts, wired to the module as an initiating device circuit (IDC).

The supervised state of the monitored device (normal, short, or open) is transmitted back to the addressable control panel along with the full analog supervision measurement. This allows detection of impedance changes in the supervised loop. All status changes are annunciated at the addressable control panel.

Features

- Full supervision of a connected IDC; 4-wire is fault tolerant
- LED controlled by the addressable control panel
- Low standby current
- Rotary decade dials allow up to 159 addresses; however, Monaco panels only allow addresses up to 99 maximum

  NOTE *Monaco Programming only allows up to 99 addresses (valid programming addresses 1–99)*
- Stable communications with noise immunity

Specifications

Protocol Capability	AP/CLIP
Operating Voltage	15 to 32 VDC
Standby Current	400 µA, one communication every five seconds (47k EOL)
Alarm Current	5 mA maximum (LED on)
EOL Resistance	47 kohms
IDC Resistance	40 ohms maximum
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Dimensions	4.5 in. W × 4.0 in. H × 1.25 in. D (11.43 cm x 10.16 cm x 3.175 cm)
Mounting	4 in. square x 2.125 in. deep junction box
Color	White
Standards Compliance:	
UL Listed	File S3705
State of California	7300-1653:0520

Ordering Information

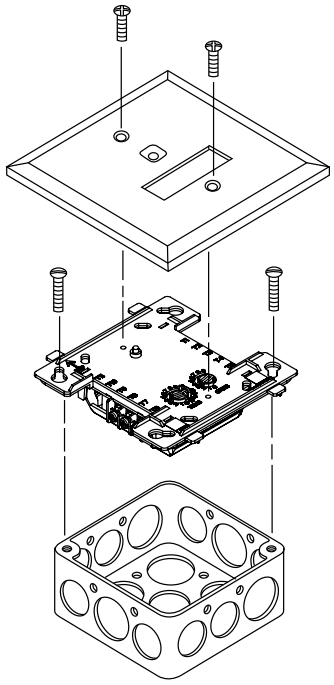
Part Number	Description
729-217-00	Intelligent Monitor Module, AP/CLIP, white, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

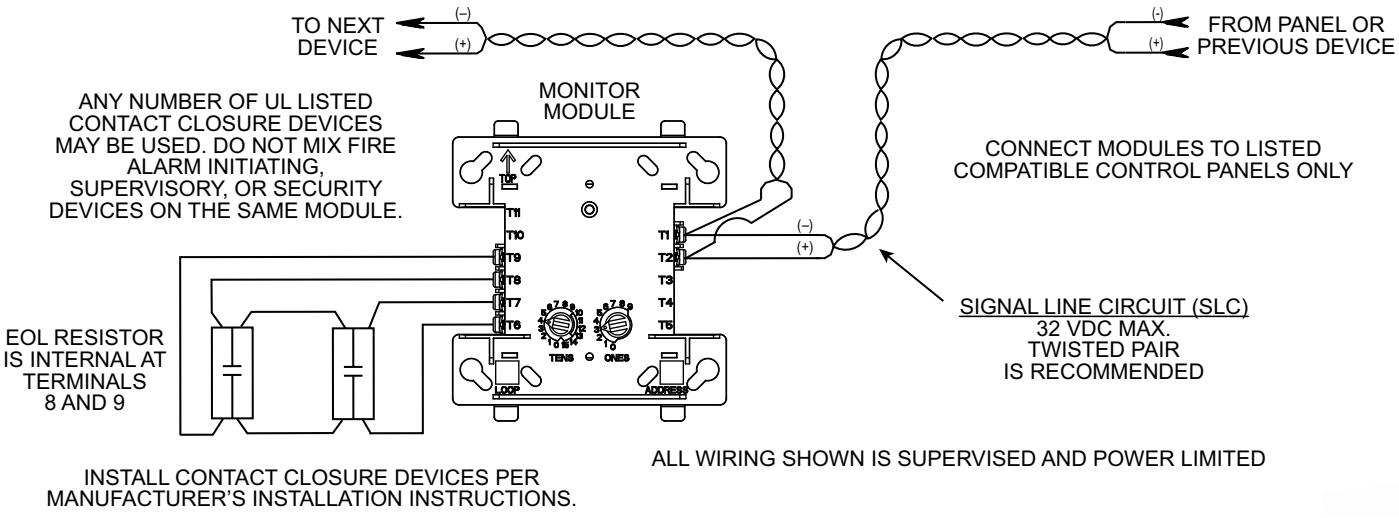
Diagrams

Mounting



Wiring Diagrams

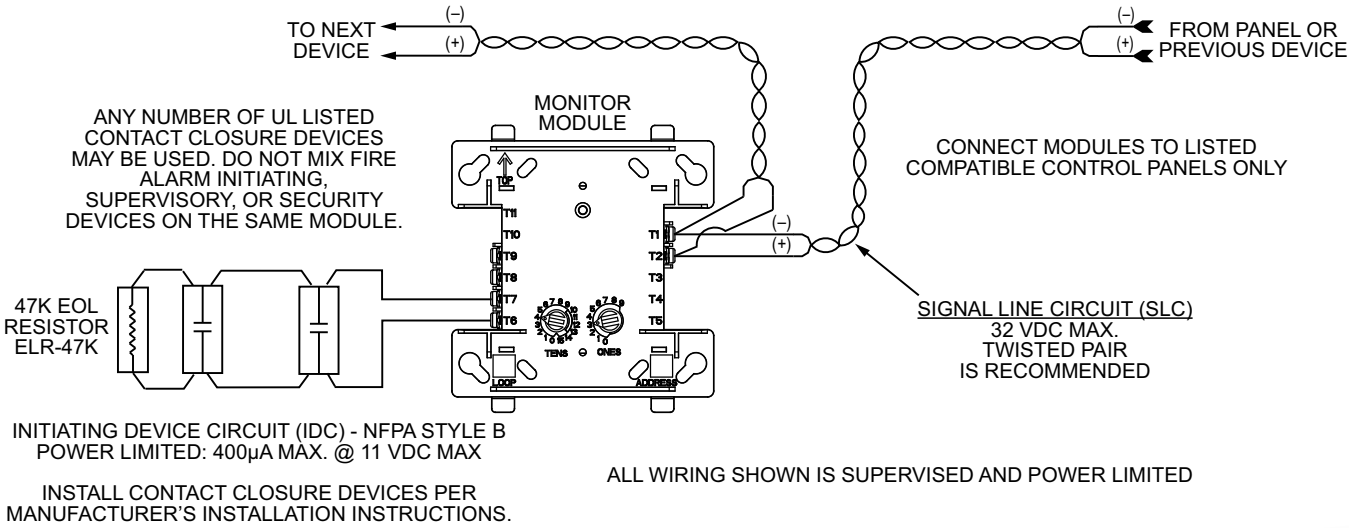
Typical Class A 4-Wire Fault Tolerant IDC



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Typical Class B 2-Wire IDC



Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices. Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See "Addressable Device Compatibility Requirements" to determine your compatibility.

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.
NOTE P/N 729-217-00 is an ***AP/CLIP Single Input Module***.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	AP/CLIP Single Element Detectors	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and AP/CLIP single element detectors, bases, and ***single/multi-input/output modules*** are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

= Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Module, Mini-Monitor, AP/CLIP, Type II

729-218-00

Panel Application

This AP/CLIP single input module is compatible with the following Monaco FACP SLCs: MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Description

The Monaco Mini-Monitor Module interfaces to conventional non-loop-powered devices, such as waterflow switches, pull stations, and valve tamper switches. It is capable of Class B supervised wiring to the load device.

The device provides a two wire initiating circuit for normally open contact fire alarm and security devices

Features

- Full supervision of input circuit
- Monitors dry-contact closure for a single device
- Low standby current
- Rotary decade dials allow up to 159 addresses; however, Monaco panels only allow addresses up to 99 maximum

  NOTE Monaco Programming only allows up to 99 addresses *(valid programming addresses 1–99)*
- Stable communications with noise immunity

Specifications

Protocol Capability	AP/CLIP
Operating Voltage	15 to 32 VDC
Standby Current	400 µA maximum at 24 VDC, one communication every five seconds (47k EOL)
EOL Resistance	47 kohms
IDC Resistance	40 ohms maximum
IDC Voltage	11 volts maximum
IDC Current	400 µA maximum
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Dimensions	1.3 in. H x 2.75 in. W x 0.65 in. D (3.3 cm x 6.985 cm x 1.651 cm)
Mounting	4 in. square junction box
Color	White
Standards Compliance:	
UL Listed	File S3705
State of California	7300-1653:0520

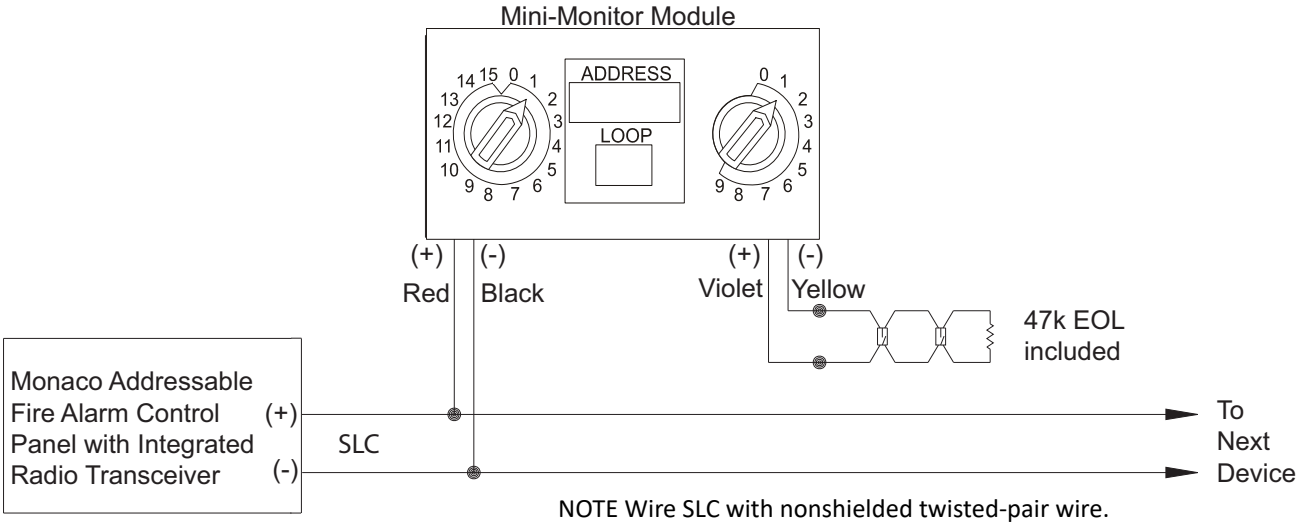
Ordering Information

Part Number	Description
729-218-00	Intelligent Mini-Monitor Module, AP/CLIP, white, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Wiring Diagram



Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices.
Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.
NOTE P/N 729-218-00 is an ***AP/CLIP Single Input Module***.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	AP/CLIP Single Element Detectors	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and AP/CLIP single element detectors, bases, and ***single/multi-input/output modules*** are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

= Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Module, Zone Interface, AP/CLIP, Type II

729-219-00

Panel Application

This AP/CLIP single input module is compatible with the following Monaco FACP SLCs: MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Description

The Monaco Interface Module allows the addressable control panel to interface and monitor compatible two-wire, 24V smoke detectors. Power to the interface module must be externally switched to reset loop-powered detectors on a panel reset. An addressable relay module with an action assignment of smoke power can be used to switch power from an auxiliary power supply to the interface module.

Rotary decade dials set the address at each module. When the module is interrogated, it transmits the status of one zone of two-wire detectors to the addressable control panel. Status conditions are reported as normal, open, or alarm. The interface module supervises the zone of detectors and the connection of the required external power supply. A status LED is provided and is controlled by the addressable control panel.

Features

- Full supervision of the Initiating Device Circuit (IDC)
- Interface with 2-wire (loop-powered) conventional smoke detectors
- Visible LED controlled by the addressable control panel to be off, blinking, or illuminated solid
- Low standby current
- Rotary decade dials allow up to 159 addresses; however, Monaco panels only allow addresses up to 99 maximum

  NOTE *Monaco Programming only allows up to 99 addresses (valid programming addresses 1–99)*
- Stable communications with noise immunity

Specifications

Protocol Capability	AP/CLIP
Operating Voltage	15 to 32 VDC
Standby Current	400 µA, one communication and one LED flash every five seconds (3.9k EOL)
Alarm Current	5.1 mA maximum (LED on)
EOL Resistance	3.9 kohms
IDC Resistance	25 ohms maximum
IDC Supply Voltage (Between Terminals T3 & T4)	Regulated VDC: 24 VDC Ripple Voltage: 0.1 Vrms maximum
Current	90 mA per module
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Dimensions	4.5 in. H x 4.0 in. W x 1.25 in. D (11.43 cm x 10.16 cm x 3.175 cm)
Mounting	4 in. square x 2.125 in. deep junction box
Color	White
Standards Compliance:	
UL Listed	File S3705
State of California	7300-1477:0167

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Ordering Information

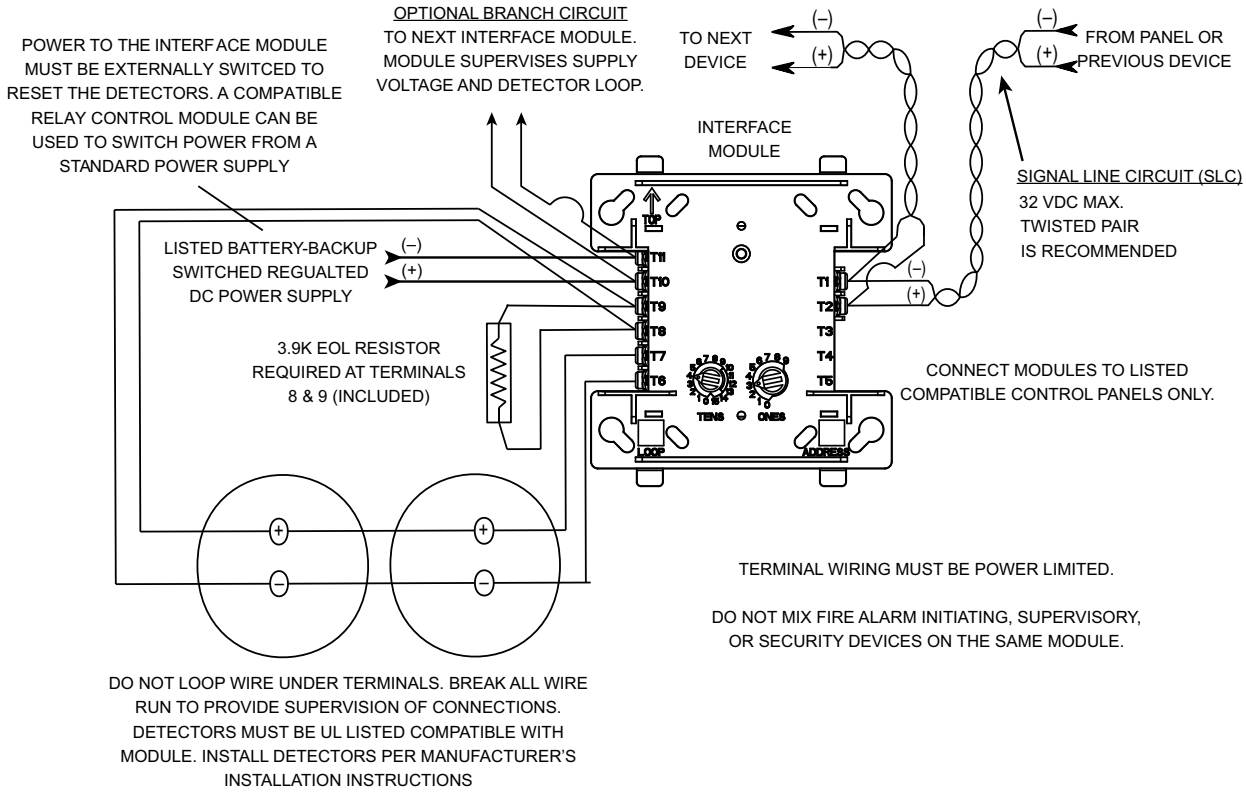
Part Number	Description
729-219-00	Intelligent Zone Interface Module, AP/CLIP, white, Type II

Associated Parts

Part Number	Description
729-221-00	Intelligent Relay Control Module, two Form C contacts, AP/CLIP, white, Type II

Wiring Diagrams

Typical Class A IDC

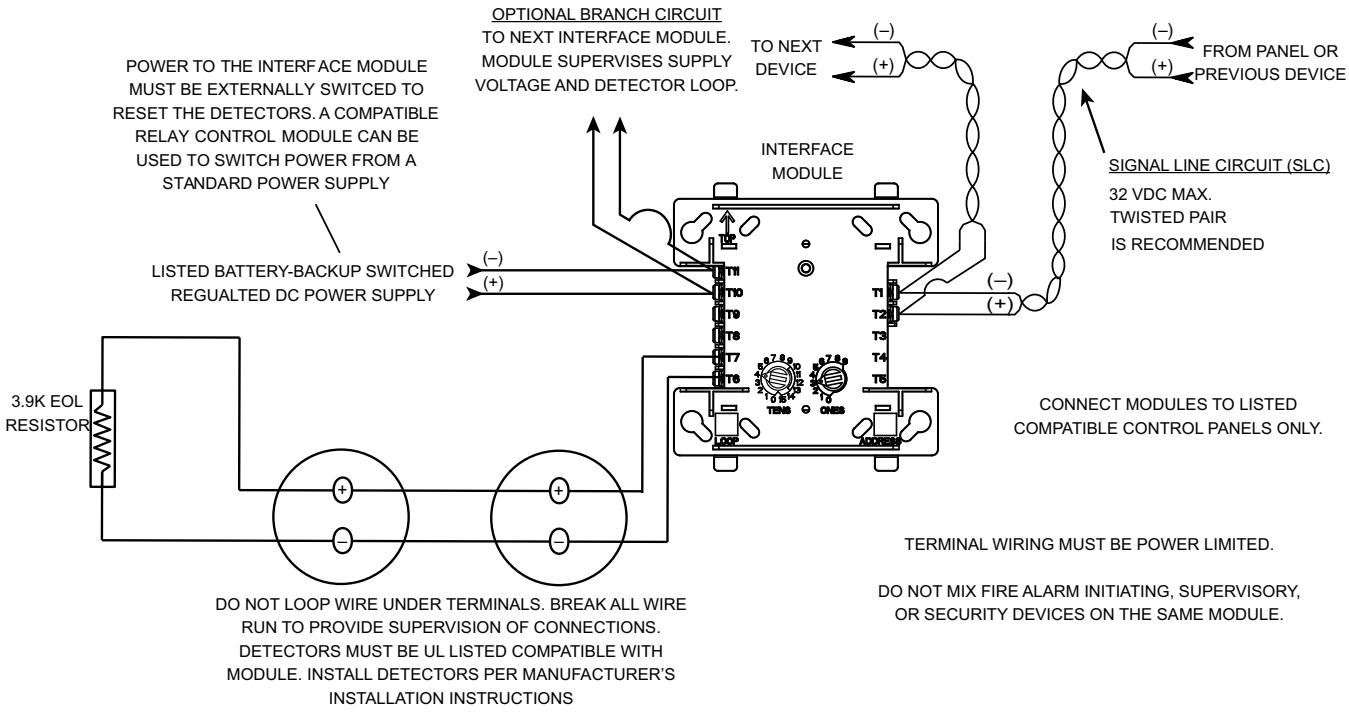


*NOTE: ANY FAULT IN THE POWER SUPPLY IS LIMITED TO THAT ZONE AND DOES NOT RESULT IN A FAULT IN A SEPARATE ZONE.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Typical Class B IDC



NOTE: ANY FAULT IN THE POWER SUPPLY IS LIMITED TO THAT ZONE AND DOES NOT RESULT IN A FAULT IN A SEPARATE ZONE.

Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices. Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See "Addressable Device Compatibility Requirements" to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.
NOTE P/N 729-219-00 is an ***AP/CLIP Single Input Module***.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	AP/CLIP Single Element Detectors	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and AP/CLIP single element detectors, bases, and ***single/multi-input/output modules*** are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

= Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

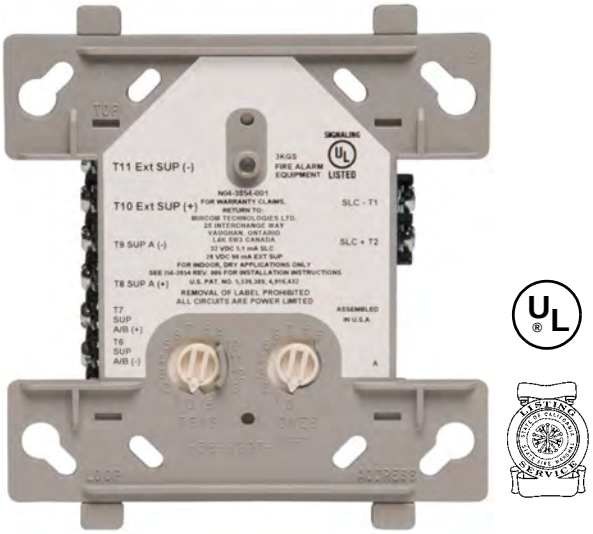
Detect Manage Record

Addressable Intelligent Devices and Modules

Module, Supervised NAC Control, AP/CLIP, Type II
729-225-00

Panel Application

This AP/CLIP single output module is compatible with the following Monaco FACP SLCs: MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.



Description

The Monaco supervised Notification Appliance Circuit (NAC) control module is used to switch an external power supply, which can be a DC power supply or an audio amplifier (up to 80 Vrms) to notification appliances. It also supervises the wiring to the connected loads and reports their status to the panel as NORMAL, OPEN, or SHORT CIRCUIT. The control module has two pairs of output termination points available for fault-tolerance wiring and an LED indicator that is controlled at the panel.

NOTE The module requires an auxiliary power source and an end-of-line power supervisory relay module per 24 VDC branch. The power source should be an isolated, regulated, 24 VDC power supply, which is listed for fire protection with battery backup and is power limited per NFPA 70.

Features

- Capable of Class A and Class B supervision of Notification Appliance Circuits (NACs)—horns, bells, strobes, and other notification appliances
- Low standby current
- Visible LED controlled by addressable control panel to be off, blinking, or illuminated solid
- Rotary decade dials allow up to 159 addresses; however, Monaco panels only allow addresses up to 99 maximum

  NOTE *Monaco Programming only allows up to 99 addresses (valid programming addresses 1–99)*
- Stable communications technique with noise immunity

Specifications

Protocol Capability	AP/CLIP
Operating Voltage	15 to 32 VDC
Standby Current	400 µA maximum, one communication every five seconds (47k EOL resistor, 485 uA maximum)
Alarm Current	6.5 mA maximum (LED on)
NAC Line Loss	4 VDC maximum
External Supply Voltage (Between Terminals T3 & T4)	NAC: Regulated 24 VDC maximum Speakers: 70.07 Vrms, 50 W maximum
Maximum NAC Current Rating	Class A: 2A Class B: 3A
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Dimensions	4.5 in. H x 4.0 in. W x 1.25 in. D (11.43 cm x 10.16 cm x 3.175 cm)
Mounting	4 in. square x 2.125 in. deep junction box
Color	White
Standards Compliance:	
UL Listed	UL864, File S3705
State of California	7300-1653:0520

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Ordering Information

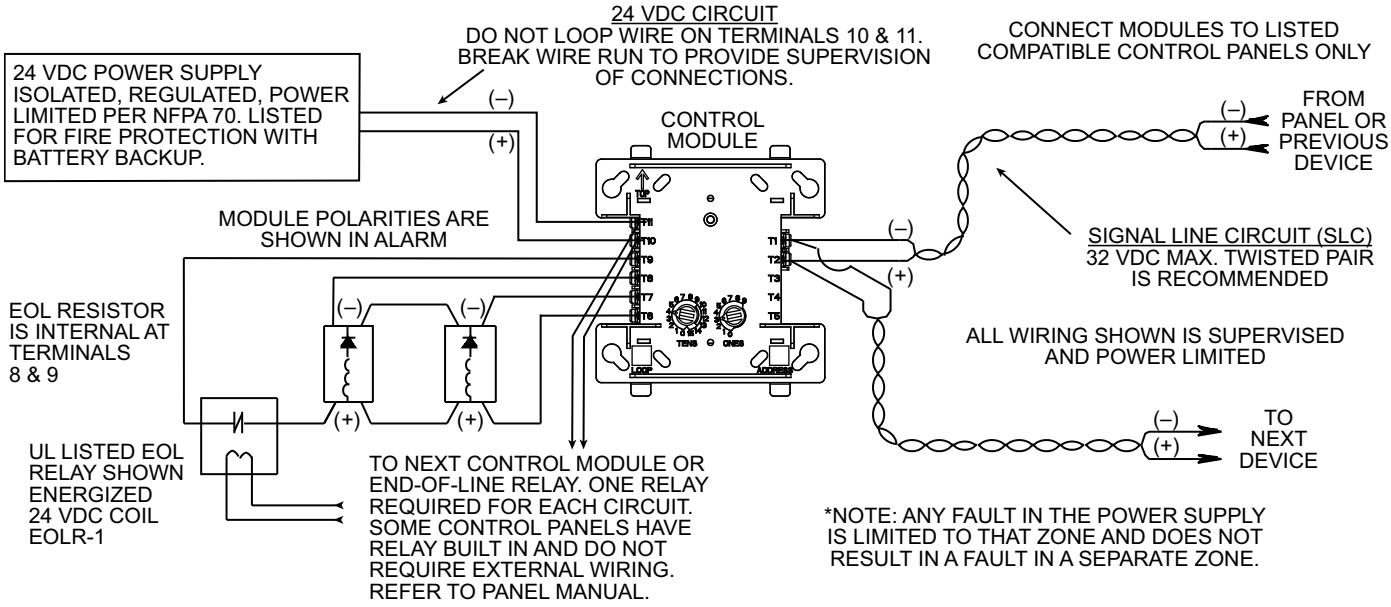
Part Number	Description
729-225-00	Intelligent Supervised NAC Control Module, AP/CLIP, white, Type II

Associated Parts

Part Number	Description
790-012-00	End-of-line Power Supervision Relay Module, 9–40 VDC

Wiring Diagrams

Typical Class A NAC Configuration

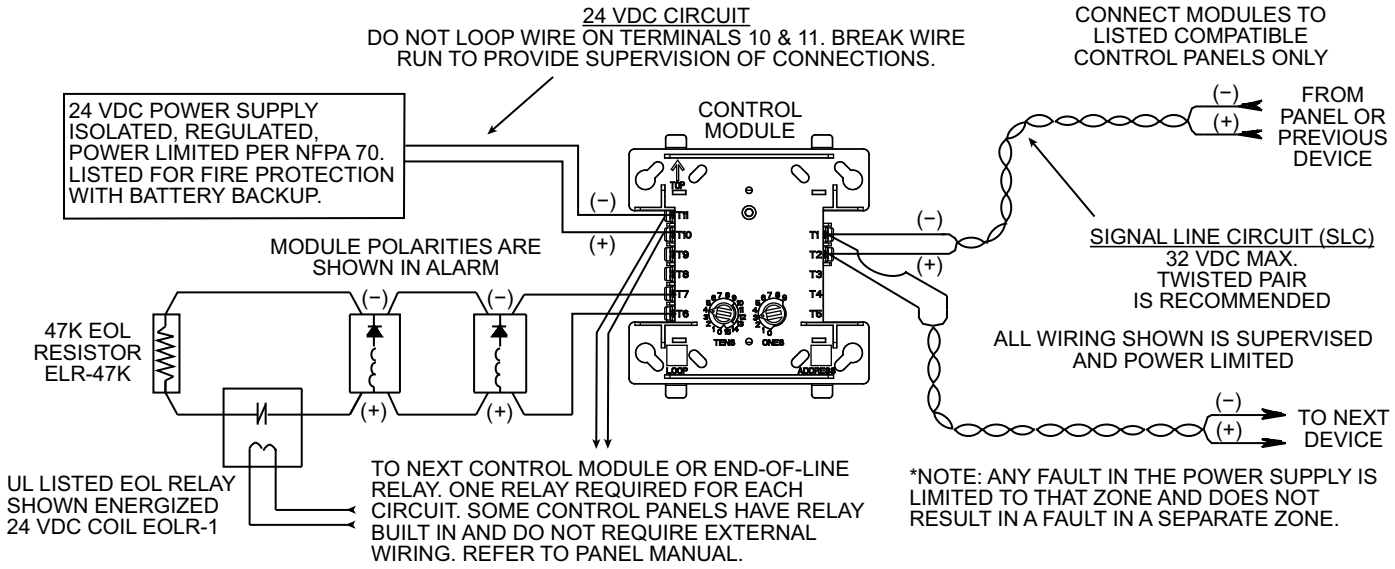


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Typical Class B Fault Tolerant NAC



Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices.
Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.
NOTE P/N 729-225-00 is an ***AP/CLIP Single Output Module***.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	AP/CLIP Single Element Detectors	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and AP/CLIP single element detectors, bases, and ***single/multi-input/output modules*** are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

= Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Module, Relay Control, AP/CLIP, Type II

729-221-00

Panel Application

This AP/CLIP single output module is compatible with the following Monaco FACP SLCs: MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Description

This relay control module has two isolated sets of Form C contacts, which operate as a DPDT switch. The module allows the control panel to switch contacts on command. The module does not supervise the circuit connections to the relay contacts.

Relay P/N 451-700-01 is a dry contact input style relay used to interface the relay control module with systems that are beyond the voltage or current rating of the relay control module. The dry contact relay derives its power from the device it is controlling. The control input is a dry contact, and the wiring is Class II power limited.

Features

- Two isolated sets of Form C contacts
- Latching output drive circuit controlled by the addressable control panel
- Visible LED controlled by addressable control panel to be off, blinking, or illuminated solid
- Low standby current
- Rotary decade dials allow up to 159 addresses; however, Monaco panels only allow addresses up to 99 maximum

  NOTE *Monaco Programming only allows up to 99 addresses (valid programming addresses 1–99)*
- Stable communications technique with noise immunity

Specifications

Protocol Capability	AP/CLIP
Operating Voltage	15 to 32 VDC
Standby Current	300 µA, one communication every 5 seconds
Alarm Current	6.5 mA maximum (LED on)
Relay Contact Ratings	0.5A: 125 VAC maximum; 0.9A: 125 VAC maximum; 3.0A: 30 VDC maximum
Temperature Range	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Dimensions	4.5 in. H x 4 in. W x 1.25 in. D (11.43 cm x 10.16 cm x 3.175 cm)
Mounting	4 in. square x 2.125 in. deep junction box
Color	White
Standards Compliance:	
UL Listed	UL864, File S3705
State of California	7300-1653:0520

Ordering Information

Part Number	Description
729-221-00	Intelligent Relay Control Module, two Form C contacts, AP/CLIP, white, Type II

Associated Parts

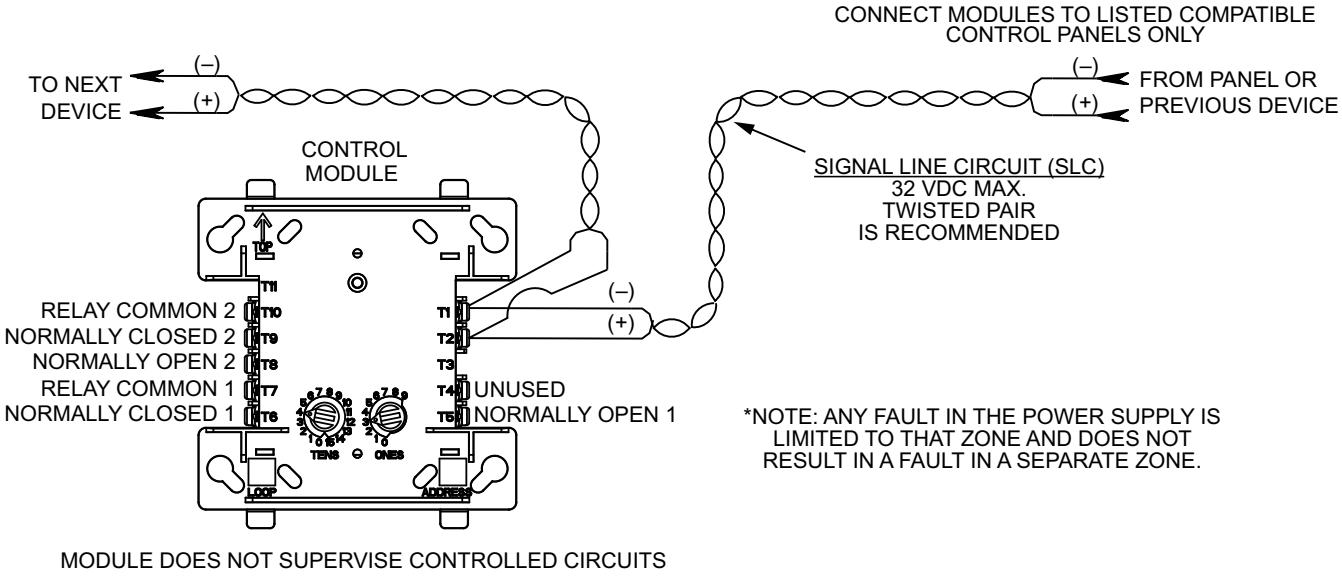
Part Number	Description
451-700-01	SPDT Relay, 120–277 VAC, 10A contacts, LED, red enclosure

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Wiring Diagram



Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices. Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.
NOTE P/N 729-221-00 is an ***AP/CLIP Single Output Module***.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	AP/CLIP Single Element Detectors	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and AP/CLIP single element detectors, bases, and ***single/multi-input/output modules*** are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

= Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

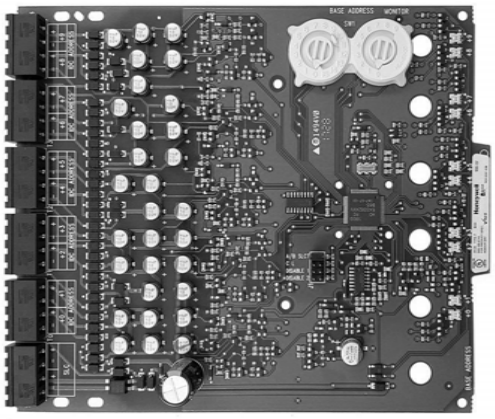
Detect Manage Record

Addressable Intelligent Devices and Modules

Module, Ten Input Monitor, AP/CLIP, Type II
729-223-00

Panel Application

This AP/CLIP multi-input module is compatible with the following Monaco FACP SLCs: MAAP-X with a CORE II processor and MAAP-X with a CORE III processor.



Addressable Ten Input Monitor Module

Two-module Cabinet

Six-module Cabinet

Description

This monitor module interfaces to non-loop-powered contact devices such as water-flow switches, pull stations, and valve tampers. It is capable of Class A and Class B supervised wiring to the load device. Conventional 4-wire (auxiliary power source) smoke detectors can be monitored through their alarm contacts, wired as an IDC to the module.

The supervised state of the monitored device (Normal, Short, or Open) is transmitted back to the panel along with the full analog supervision measurement. This allows detection of impedance changes in the supervised loop.

A shunt sets operation class—installed for Class B, removed for Class A. In Class B operation, setting one address causes the module to automatically assign the next sequential nine. However, in Class A, terminals are paired. Addresses go to the pair, with every other address automatically assigned—if the first address set on the rotary switch is 28, the next automatic address is 30 and then 32, 34, and 36. Addresses 29, 31, 33, 35, and 37 can be set on another module PCB or on addressable devices on the SLC. A maximum of one Class A or two Class B inputs can be disabled.

Features

- Replaces ten Class B/five Class A monitor modules
- Class A or B determined by supplied shunt
- A pair of rotary dials set the address of the first input; the remaining nine inputs set automatically to the next nine higher addresses
  (see “Description” for more information)
- Each input LED is controlled by the addressable control panel as off, blinking, or illuminated solid
- Each Initiating Device Circuit (IDC) input is fully supervised
- Rotary dials allow up to 159 addresses; however, Monaco panels only allow addresses up to 99 maximum

  NOTE *Monaco Programming only allows up to 99 addresses (valid programming addresses 1–99)*

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Specifications

Protocol	AP/CLIP
Operating Voltage	15 to 32 VDC
Standby Current	3.5 mA
Alarm Current	55 mA (with all 10 LEDs illuminated solid)
IDC Resistance	1,500 ohms maximum
IDC Voltage	10.2 VDC maximum
IDC Current	240 µA maximum
Input Wiring	12 to 18 AWG
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Dimensions	6.8 in. H × 5.8 in. W × 1.25 in. D (17.27 cm × 14.73 cm × 3.175 cm)
Mounting	Up to two modules in P/N 729-160-00, Up to six modules in P/N 729-161-00
Standards Compliance:	
UL Listed	S3705
State of California	7300-1477:0166

Ordering Information

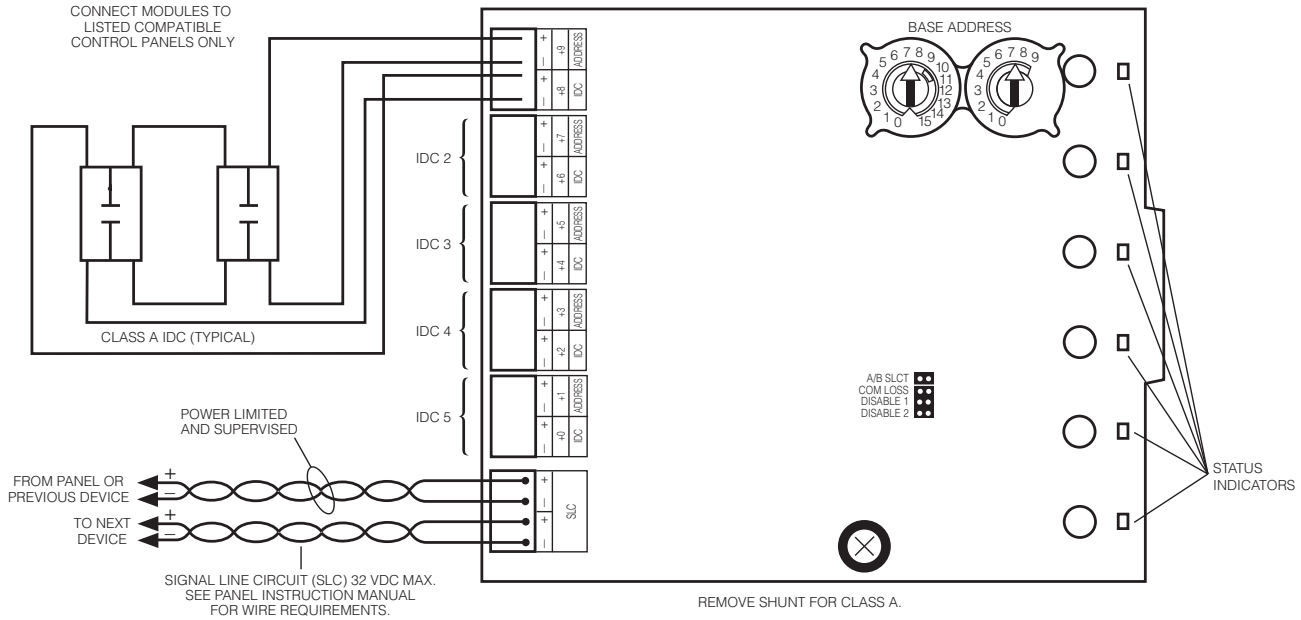
Part Number	Description
729-223-00	Intelligent Ten Input Monitor Module, AP/CLIP, Type II

Associated Parts

Part Number	Description
729-160-00	Red Two Module Cabinet, 12 in. × 9 in. × 3.67 in.
729-161-00	Red Six Module Cabinet, 24 in. × 12.55 in. × 6.5 in.
729-166-00	Mounting Bracket for six module cabinet

Wiring Diagrams

Typical Class A IDC

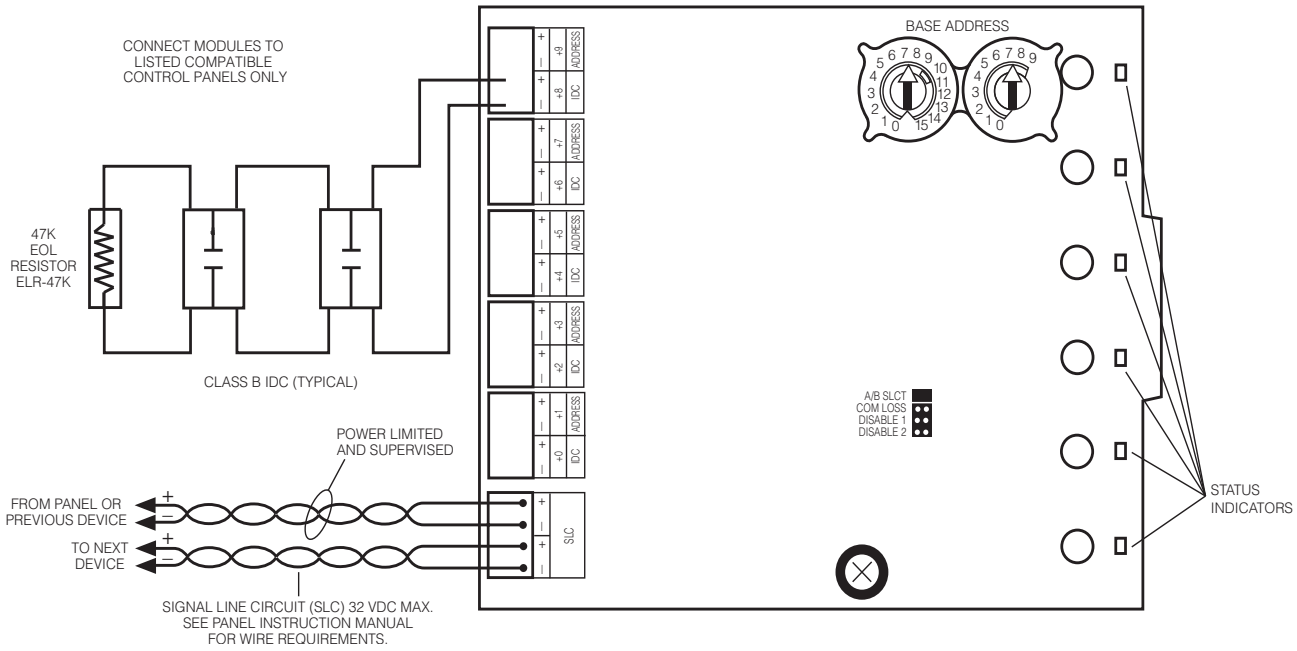


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Typical Class B IDC



Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices.
Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.
NOTE P/N 729-223-00 is an ***AP/CLIP Multi-Input Module***.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	AP/CLIP Single Element Detectors	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and AP/CLIP single element detectors, bases, and ***single/multi-input/output modules*** are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

= Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

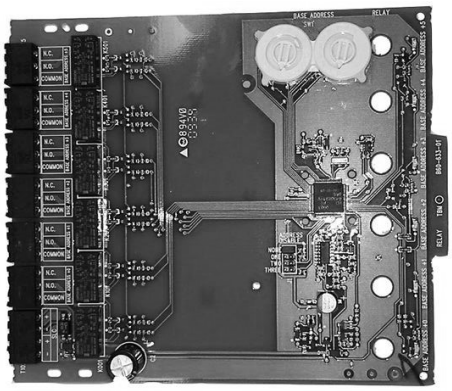
Addressable Intelligent Devices and Modules

Module, Six Relay Control, AP/CLIP, Type II

729-224-00

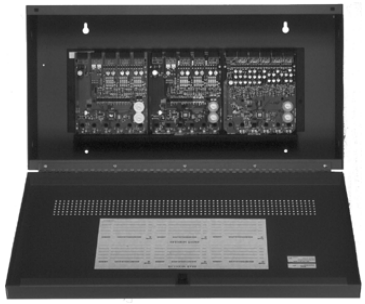
Panel Application

This AP/CLIP multi-output module is compatible with the following Monaco FACP SLCs: MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.



Six Relay Control Addressable Module

Two Module Cabinet



Six Module Cabinet

Description

The Monaco six relay control addressable module is used for Form C switching applications that do not require wiring supervision for the controlled circuit. Each set of dry relay contacts can be wired for normally open or normally closed. The addressable control panel can switch contacts on command. A single Signaling Line Circuit (SLC) is used for all relays on the module. Through use of a single shunt, a maximum of three addresses can be disabled (see wiring diagram, next page).

Features

- Six Form C relays
- A pair of rotary switches set the address of the first relay; addresses for the remaining relays are automatically set to the next five higher addresses
- Each input has an LED controlled by the addressable control panel to be off, blinking, or illuminated solid
- Rotary dials allow up to 159 addresses; however, Monaco panels only allow addresses up to 99 maximum

  NOTE *Monaco Programming only allows up to 99 addresses (valid programming addresses 1–99)*

Specifications

Protocol Capability	AP/CLIP
Operating Voltage	15 to 32 VDC
Standby Current	1.45 mA maximum
Alarm Current	32 mA (assumes all six relays have been switched once and all six LEDs are “solid” on)
Relay Current	30 mA relay pulse with 15.6 ms pulse duration (FACP controls pulse)
Contact Relay Ratings	0.5A at 30 VDC; 0.9A at 110 VDC; 3A at 30 VDC
SLC Loop Resistance	40 ohms maximum
Input Wiring	12 to 18 AWG

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Dimensions	6.8 in. H × 5.8 in. W × 1.0 in. D (17.27 cm x 14.73 x 2.54 cm)
Mounting	Up to two modules in P/N 729-160-00, Up to six modules in P/N 729-161-00
Standards Compliance:	
UL Listed	S3705
CSFM	7300-1477:0166

Ordering Information

Part Number	Description
729-224-00	Intelligent Six Relay Control Module, form C contacts, AP/CLIP, Type II

Associated Parts

Part Number	Description
729-160-00	Red Two Module Cabinet, 12 in. H × 9 in. W × 3.67 in. D
729-161-00	Red Six Module Cabinet, 24 in. H × 12.55 in. W × 6.5 in. D
729-166-00	Mounting Bracket for six module cabinet

Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices. Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

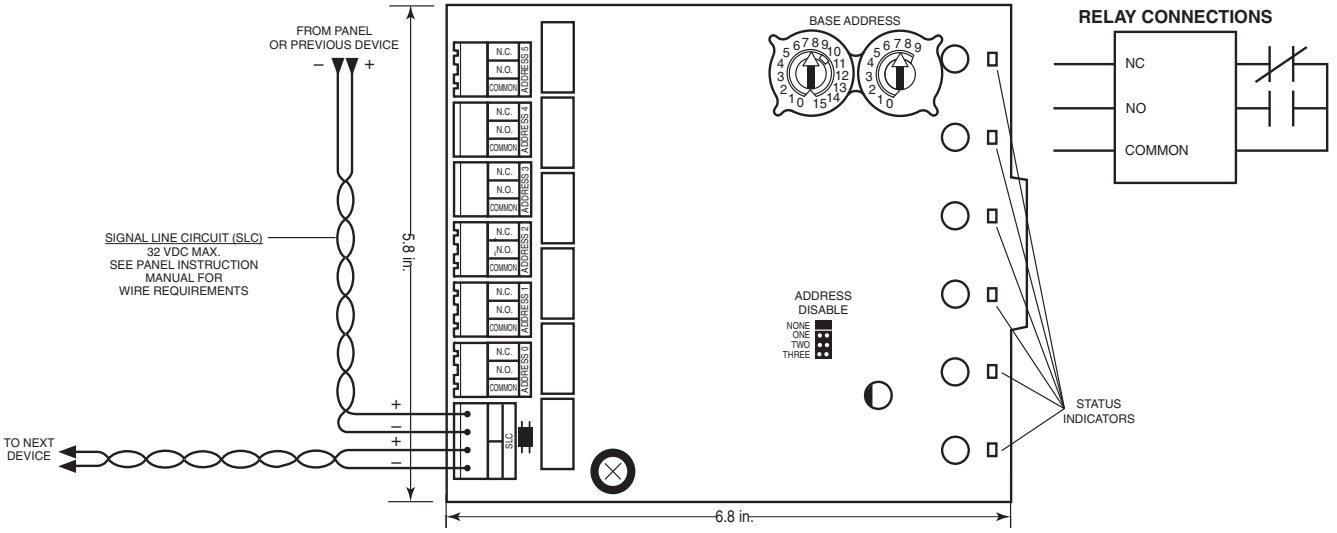
Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See “Addressable Device Compatibility Requirements” to determine your compatibility.

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.
NOTE P/N 729-224-00 is an ***AP/CLIP Multi-Output Module***.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	AP/CLIP Single Element Detectors	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and AP/CLIP single element detectors, bases, and ***single/multi-input/output modules*** are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

= Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Module, Dual Input Monitor, AP/CLIP, Type II
729-220-00

Panel Application

This AP/CLIP dual input module is compatible with the following Monaco FACP SLCs: MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Description

The Monaco Interface Module allows the addressable control panel to monitor two Class B IDCs for non-loop-powered devices. Conventional 4-wire (auxiliary power source) smoke detectors can be monitored through their alarm contacts, wired as an IDC to the module.

When the module is interrogated by the addressable control panel, it transmits the status of the two IDCs back to the panel. Each zone has a separate address and monitors normally open contact fire alarm and supervisory devices, or either normally open or normally closed security devices. Rotary decade switches set the address for module A; module B automatically uses the next higher address. See the wiring diagram on the next page. Status conditions are reported as normal, open, or alarm. A status LED indicator is provided and controlled by the addressable control panel.

Features

- Full supervision of two Class B initiating device circuits (IDCs)
- Visible LED controlled by the addressable control panel to be off, blinking, or illuminated solid
- Rotary decade dials allow up to 159 addresses; however, Monaco panels only allow addresses up to 99 maximum

  NOTE *Monaco Programming only allows up to 99 addresses (valid programming addresses 1–99)*
- Stable communications technique with noise immunity

Specifications

Protocol Capability	AP/CLIP
Operating Voltage	15 to 32 VDC
Standby Current	750 µA, one communication every 5 seconds (47k EOL)
Alarm Current	6.4 mA maximum (LED on)
SLC Resistance	40 ohms maximum
EOL Resistance	47 kohms
IDC Resistance	1,500 ohms maximum
IDC Voltage	11V maximum
IDC Current	240 µA maximum
Temperature Range	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Module Dimensions	4.5 in. H x 4.0 in. W x 1.25 in. D (11.43 cm x 10.16 cm x 3.175 cm)
Junction Box Dimensions	4 in. square x 2.125 in. deep (10.16 cm x 10.16 cm x 5.498 cm)
Color	White
Standards Compliance:	
UL Listed	S3705
State of California	7300-1653:0237

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

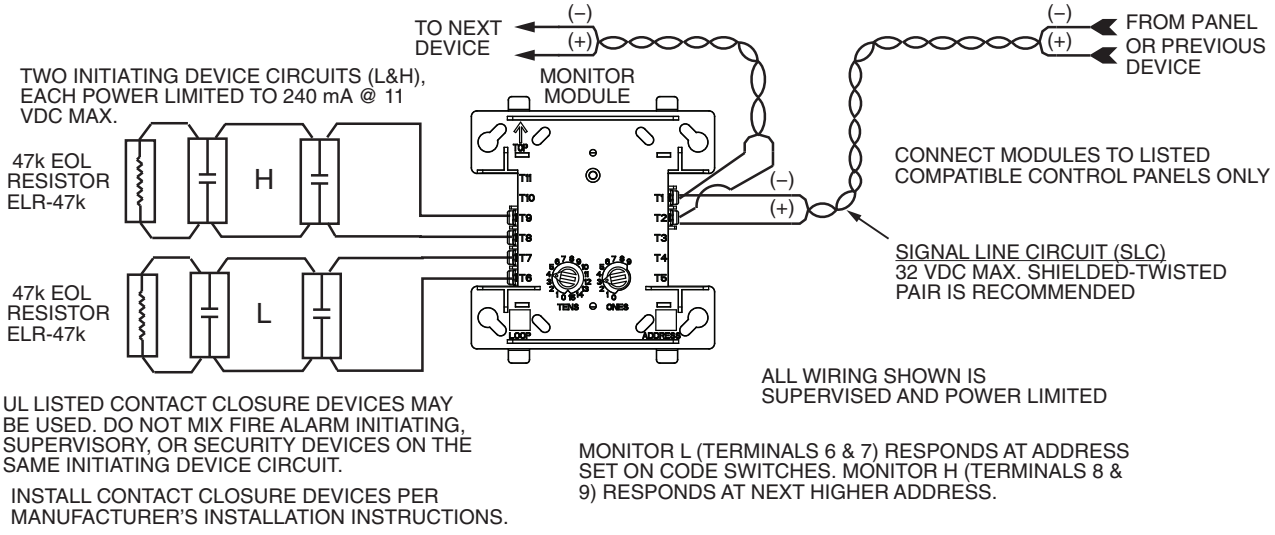
Addressable Intelligent Devices and Modules

Ordering Information

Part Number	Description
729-220-00	Intelligent Dual Input Monitor Module, AP/CLIP, white, Type II

Wiring Diagram

Typical 2-Wire Class B IDC



Monaco Type I and Type II Addressable Devices

Monaco addressable devices have been categorized into two types:
Type I Classic Loop Interface Protocol (CLIP) devices and **Type II** Advanced Protocol (AP) devices.
Type II devices can utilize either AP Only or AP/CLIP protocols.

Monaco Enterprises also has a new Addressable Driver Card (ADC II) that utilizes the same protocol as the new Type II devices (P/N 176-279-00).

Type I devices are compatible with both the ADC I (P/N 176-194-00) and the ADC II (P/N 176-279-00).

Type II devices are compatible with both the ADC I and the ADC II depending on what protocol they utilize and which panel they are attached to.

For example:
Type II AP/CLIP single element devices are compatible with both the ADC I and the ADC II on the MAAP(+), MAAP-X with a CORE II processor, and MAAP-X with a CORE III processor.

Type II AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III processor.

See "Addressable Device Compatibility Requirements" to determine your compatibility.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Addressable Device Compatibility Requirements

For more information about Monaco Addressable Device Compatibility, see 001-605-00.
NOTE P/N 729-220-00 is an ***AP/CLIP Multi-Input Module***.

		MAAP(+)	MAAP-X CORE II	MAAP-X CORE III	
		ADC I & II	ADC I & II	ADC I	ADC II
Type I Addressable Devices	CLIP Single Element Detectors	●	●	●	●
Type II Addressable Devices	AP/CLIP Single Element Detectors	●	●	●	●
	AP/CLIP Detector Bases Standard, Sounder, Isolator, & Relay bases available	●	●	●	●
	AP/CLIP Singe/Multi-Input/Output Modules (Multi-Output Module: Relay Only)	●	●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode A* See "**Alarm Output**" below		●	●	●
	AP/CLIP Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Single Element Detectors				●
	AP Only Multielement Detectors: Discipline Mode B** See "**Alarm Output**" below				●
	AP Only Sounder Bases				●

CLIP and AP/CLIP single element detectors, bases, and ***single/multi-input/output modules*** are compatible with any panel.

The MAAP(+) is only compatible with single element and single input/output CLIP and AP/CLIP devices.

AP/CLIP multielement detectors are compatible with the MAAP-X.

Multielement detectors will emit a single combined alarm output unless installed on a MAAP-X with a CORE III and an ADC II.

AP Only devices are only compatible with the ADC II on a MAAP-X with a CORE III.

All CO and CO combination detectors are AP Only devices.

Legend

● = Compatible

= Incompatible

Alarm Output

Discipline Mode A*	Single Combined Alarm Output
Discipline Mode B**	Alarm Output For Each Element

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Type II Replacements for Type I Devices

NOTE Type I devices are ivory; Type II devices are white.

Type I Device	**Recommended Type II Device**			
Part Number	***Part Number***	***Protocol***	***Category***	***Description***
721-124-00	**721-134-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Rate-of-Rise, Plug-in, AP/CLIP, White, Type II
722-121-00	**722-129-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 135°F Fixed Temperature, Plug-in, AP/CLIP, White, Type II
722-406-00	**722-413-00**	AP/CLIP	Detector	Intelligent Electronic Heat Detector, 190°F Fixed High Temperature, Plug-in, AP/CLIP, White, Type II
723-353-00	**723-601-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, AP/CLIP, White, Type II
723-361-00	**723-603-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, 135°F Fixed Temperature, Plug-in, Low Profile, AP/CLIP, White, Type II
723-600-00	**723-602-00**	AP/CLIP	Detector	Intelligent Photoelectric Smoke Detector, Plug-in, Low Profile, Remote Test in Duct, AP/CLIP, White, Type II
N/A	**723-606-00**	AP Only	Detector	Intelligent Photoelectric, 135°F Fixed Temperature, and Infrared Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**723-607-00**	AP Only	Detector	High Sensitivity Smoke Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-603-00**	AP Only	Detector	Intelligent CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-604-00**	AP Only	Detector	Intelligent Fire/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
N/A	**725-605-00**	AP Only	Detector	Intelligent Smoke/CO Detector, Plug-in, Low Profile, AP Only, White, Type II
729-127-00	**729-215-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 4 in. Flangeless, AP/CLIP, White, Type II
N/A	**729-209-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP Only, White, Type II
729-129-00	**729-210-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., AP/CLIP, White, Type II
729-129-01	**729-211-00**	AP/CLIP	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP/CLIP, White, Type II
N/A	**729-212-00**	AP Only	Base	Intelligent Detector Sounder Base, Plug-in, 6.875 in., Low Frequency, 520 Hz, AP Only, White, Type II
729-132-00	**729-228-00**	AP/CLIP	Base	Intelligent Detector Standard Base, Plug-in, 6 in. Flanged, AP/CLIP, White, Type II
729-133-00	**729-213-00**	AP/CLIP	Base	Intelligent Detector Isolator Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-134-00	**729-214-00**	AP/CLIP	Base	Intelligent Detector Relay Base, Plug-in, 6.85 in. AP/CLIP, White, Type II
729-142-00	**729-217-00**	AP/CLIP	Module	Intelligent Monitor Module, AP/CLIP, White, Type II
729-143-00	**729-218-00**	AP/CLIP	Module	Intelligent Mini-Monitor Module, AP/CLIP, White, Type II
729-144-00	**729-219-00**	AP/CLIP	Module	Intelligent Zone Interface Module, AP/CLIP, White, Type II
729-158-00	**729-225-00**	AP/CLIP	Module	Intelligent Supervised NAC Control Module, AP/CLIP, White, Type II
729-159-00	**729-221-00**	AP/CLIP	Module	Intelligent Relay Control Module, 2 Form C Contacts, AP/CLIP, White, Type II
729-162-00	**729-223-00**	AP/CLIP	Module	Intelligent Ten Input Monitor Module, AP/CLIP, Type II
729-165-00	**729-224-00**	AP/CLIP	Module	Intelligent Six Relay Control Module, Form C Contacts, AP/CLIP, Type II
729-182-00	**729-220-00**	AP/CLIP	Module	Intelligent Dual Input Monitor Module, AP/CLIP, White, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Addressable Intelligent Devices and Modules

Module, Fault Isolator
729-140-00

Description

NOTE For use with all Monaco Addressable Integrated Radio Transceiver and Fire Alarm Control Panel SLCs.

The Monaco fault isolator module enables part of the Signaling Line Circuit (SLC) to continue operating when a short circuit occurs. An LED indicator blinks in the normal condition and turns on during a short-circuit condition. The module will restore after the Addressable Driver Card (ADC) is reset.

This module is an automatic switch that opens when the line voltage drops below 4V. Fault isolator modules should be spaced between groups of detectors in an SLC to protect the rest of the circuit. If a short occurs between any two isolators, then both isolators immediately switch to an open circuit state and isolate the detectors between them. The remaining detectors on the SLC continue to operate. No more than 25 devices are recommended for each group.

Features

- Low standby current
- Visible LED indicates module status
- Rugged industrial construction
- Compatible with Type I (CLIP) and Type II (AP/CLIP) addressable devices

Specifications

Operating Voltage	15 to 32 VDC
Fault Detection Threshold	4V
Line Restoration Threshold	7V
Standby Current	450 µA maximum (not isolating)
Isolation Current	17 mA
Fault Detection Delay	250 ms minimum
SLC Impedance	40 ohms
Isolation Impedance	2.25 to 2.9 kohms
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-mcondensing
Mounting	Directly to 4 in. square × 2 1/8 in. deep junction box
Dimensions	4.5 in. H x 4 in. W x 0.25 in. D (11.43 cm x 10.16 cm x 0.64 cm)
Standards Compliance:	
UL Listed	UL864 File S3705
FM Approval	Approved
State of California	7300-1653:0103

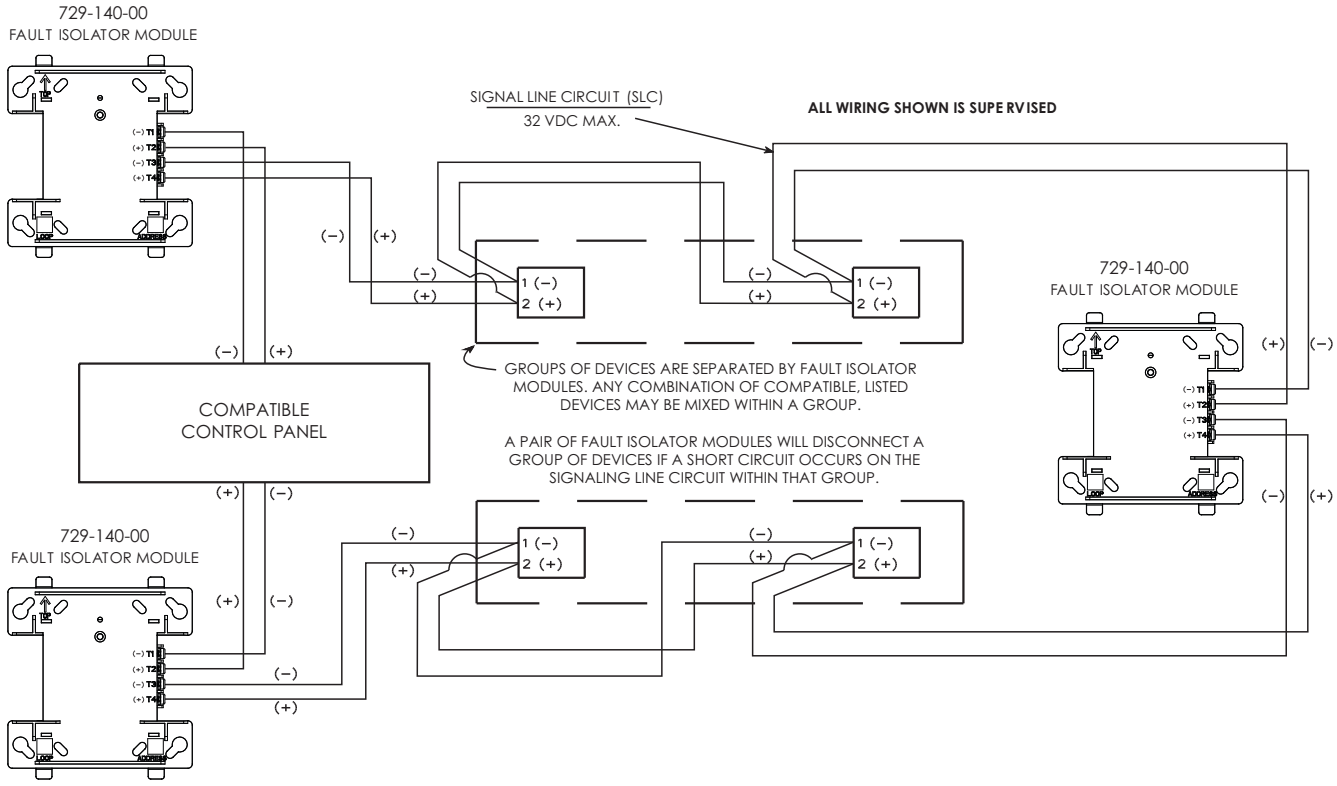
Ordering Information

Part Number	Description
729-140-00	Intelligent Fault Isolator Module; compatible with Type I and Type II addressable devices

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Conventional Detection Devices Catalog Section 10

Section 10. Conventional Detection Devices

Smoke Detectors

Smoke Detector, 2- or 4-Wire, Photoelectric 723-002-00
Smoke Detector, 2- or 4-Wire, Photoelectric, 135°F Fixed 723-003-00
Smoke Detector 723-340-00, 723-340-01, 723-508-00, 723-508-01
Smoke Detector 723-372-00
Reflected Beam Smoke Detector 725-313-00

Heat Detectors

Heat Detector, 194° Fixed Temperature Rate Compensation 721-107-00
Heat Detector, 194° Fixed Temperature Rate Compensation 721-108-00
Heat Detector, 135° Fixed Temp/Rate Comp, Explosion-Proof 721-109-00
Heat Detector, 194°F Fixed Temp/Rate Comp, Explosion-Proof 721-110-00
Heat Detector, 135° Fixed Temperature Rate Compensation 721-117-00
Heat Detector, 135°F Fixed Temperature/Rate-of-Rise 721-122-00
Heat Detector, 135°F Fixed Temperature/Rate-of-Rise 721-123-00
Heat Detector, 135°F Fixed Temperature/Rate Compensation 721-125-00
Heat Detector, 135°F Fixed Temperature/Rate-of-Rise 721-127-00
Heat Detector, 135°F Fixed Temperature/Rate-of-Rise 721-128-00
Heat Detector, 194° Fixed Temperature Rate Compensation 721-132-00
Heat Detector, 135° Fixed Temperature Rate Compensation 721-133-00
Heat Detector, 190°F Fixed Temperature/Rate-of-Rise 721-404-00
Heat Detector, 200°F Fixed Temperature/Rate Compensation 721-405-00
Heat Detector, 194°F Fixed Temperature/Rate-of-Rise 721-407-00
Heat Detector, 194°F Fixed Temperature/Rate-of-Rise 721-408-00
Heat Detector, 135°F Fixed Temperature 722-123-00
Heat Detector 722-125-00, 722-409-00
Heat Detector 135°F Fixed Temperature 722-127-00
Heat Detector, 194°F Fixed Temperature 722-408-00

Duct Detectors

Duct Smoke Detector, Photoelectric 723-367-00
Duct Smoke Detector 723-368-00
Duct Smoke Detector, Photoelectric 723-369-00

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Flame Detectors – Reserved

Pull Stations

Pull Station, Dual Action/Single Action Fire Alarm, NEMA 4X 708-015-01, 708-015-03
Pull Station, Single Action. 708-022-00
Pull Station, Single Action. 708-025-01
Pull Station, Single Action. 708-025-03
Pull Station, Dual Action 708-026-01
Pull Station, Dual/Single Action 708-031-00

Flow Switches

Pressure-Type Waterflow Switch 514-001-00
Pressure-Type Supervisory Switch 514-003-00

Tamper Switches

Outside Screw & Yoke Valve Supervisory/Tamper Switch 514-000-00, 514-000-01

Carbon Monoxide Detectors

Carbon Monoxide Detector 725-602-00, 725-602-01

Bases

Detector Base, Plug-in, 2-Wire 729-097-00
Detector Base, Plug-in, 2-Wire 729-150-00
Detector Base, Plug-in, 4-Wire 729-151-00

Accessories

Remote Test Station. 729-108-00
Remote Test Station with Key 729-138-00

End-of-Line Supervision Relays

End-of-Line Power Supervision Relay Module. 790-012-00
End-of-line Power Supervision Relay Module 790-013-01

Click to go back to "Table of Contents - Index by Product Name"

Conventional Detection Devices Catalog Section 10

Smoke Detectors

Smoke Detector, 2- or 4-Wire, Photoelectric. 723-002-00
Smoke Detector, 2- or 4-Wire, Photoelectric, 135°F Fixed. 723-003-00
Smoke Detector 723-340-00, 723-340-01, 723-508-00, 723-508-01
Smoke Detector 723-372-00
Reflected Beam Smoke Detector. 725-313-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Conventional Detection Devices

Smoke Detector, 2- or 4-Wire, Photoelectric

723-002-00

Features

- White, photoelectric, conventional smoke detector
  NOTE Can be used as a pendant-mount duct detector in no flow/low flow (0 to 3,000 fpm) air handling systems
- Low profile, flame retardant thermoplastic exterior
- Compatible with 2-wire or 4-wire bases
- Optical sensing chamber
- Dual LEDs for 360 degree alarm visibility
  – LEDs latch on during alarm, flash during standby, and are off during trouble conditions
- Remote LED annunciator capable
- Internal magnet test reed switch
- Removable cover and screen
- Four plug-in detector base options with screw terminals for power, ground, remote annunciator, and relay contact connections as needed

Specifications

Operating Voltage	8.5 to 35 VDC P/Ns 729-097-00, 729-151-00: 24 VDC; P/Ns 729-125-00, 729-150-00: 12/24 VDC
Standby Current	120 µA maximum
Velocity Range	0 to 3,000 ft/minute (0 to 15.2 m/second)
Latching Alarm	Momentary power interruption reset
Open Area Protection	30 ft. spacing (smooth ceiling)
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93%, non-condensing
Dimensions	In base P/N 729-125-00: 2 in. H x 4.1 in. OD (5.08 cm x 10.4 cm) In other associated bases: 2 in. H x 6.2 in. OD (5.08 cm x 15.75 cm)
Weight	0.194 lb (0.088 kg)
Mounting	Installs to single-gang, 3.5 in. octagon, 4 in. octagon, or 4 in. square junction box
Standards Compliance:	
UL Listed	UL268A, File S911
FM Approved	3025009
State of California	7272-1653:0122

Ordering Information

Part Number	Description
723-002-00	Conventional Smoke Detector, Photoelectric, low profile, 2-wire or 4-wire (replacement spare part)

Associated Parts

Part Number	Description
729-097-00	Conventional Detector Base, plug-in, low profile, 24 VDC, 2-wire, current-limiting resistor, 6.2 in. OD
729-125-00	Conventional Detector Base, plug-in, 12/24 VDC, 2-wire, 4 in. OD
729-150-00	Conventional Detector Base, plug-in, low profile, 12/24 VDC, 2-wire, 6.2 in. OD
729-151-00	Conventional Detector Base, plug-in, low profile, 24 VDC, 4-wire, Form A and C relay contacts, 6.2 in. OD
729-091-00	Remote LED Annunciator, fits standard single-gang electrical box (not included)
790-012-00	End-of-Line Power Supervision Relay Module, polarized, 9 to 40 VDC
790-013-01	End-of-Line Power Supervision Relay Module, non-polarized, 9 to 40 VDC, with built-in 47 kohm EOL resistor and a set of NC dry contacts

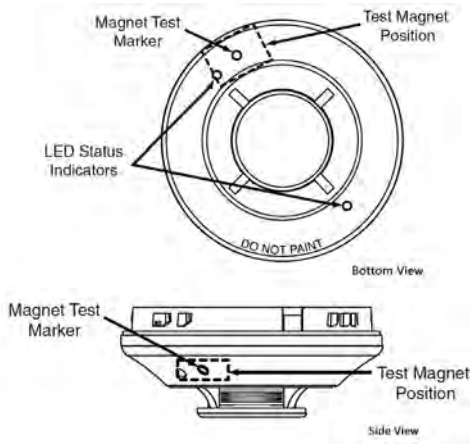
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

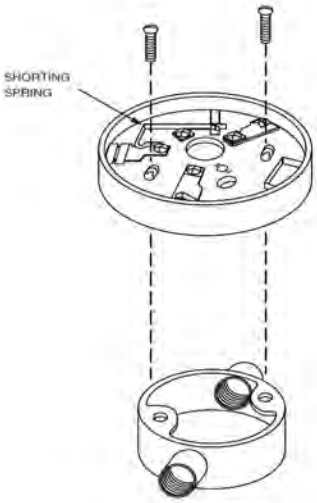
Conventional Detection Devices

Drawings

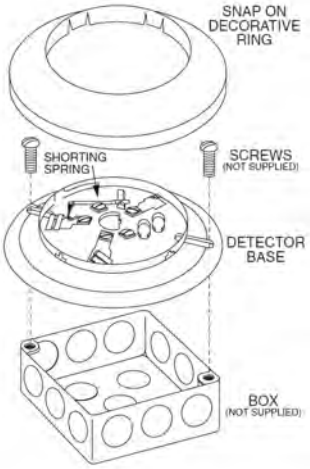
Test Magnet



Mounting



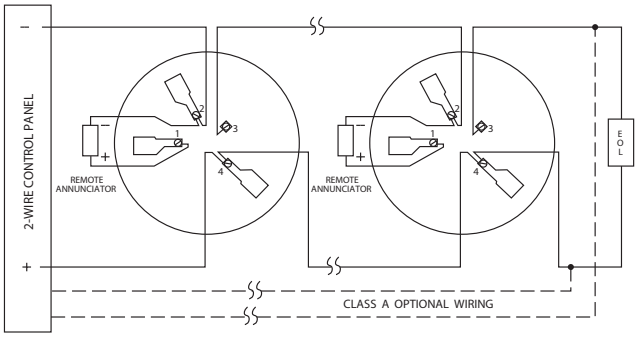
Detector Bases P/Ns
729-097-00,
729-125-00,
729-150-00,
or 729-151-00



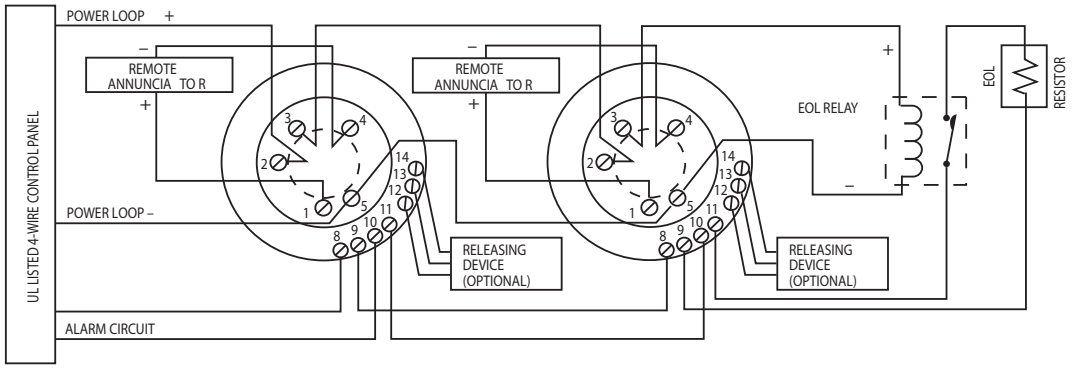
Detector Bases P/Ns
729-097-00,
729-150-00,
or 729-151-00

Typical Detector Base Wiring Diagrams

2-Wire



4-Wire



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Smoke Detector, 2- or 4-Wire, Photoelectric, 135°F Fixed

723-003-00

Features

- White, photoelectric, 135°F fixed temperature, restorable, conventional smoke detector
- Low profile, flame retardant thermoplastic exterior
- Compatible with 2-wire or 4-wire bases
- Optical sensing chamber
- Dual LEDs for 360 degree alarm visibility
  - LEDs latch on during alarm, flash during standby, and are off during trouble conditions
- Output to optional remote LED annunciator
- Internal magnet test reed switch and direct heat thermal testing
- Detachable cover and screen
- Four plug-in detector base options with screw terminals for power, ground, remote annunciator, and relay contact connections as needed

Specifications

Relay Contact Ratings	Resistive or inductive (60% power factor load) Form A: 2A at 30 VAC/VDC Form C: 0.6A at 110 VDC, 2A at 30 VDC; 1A at 125 VAC, 2A at 30 VAC
Operating Voltage	8.5 to 35 VDC P/Ns 729-151-00, 729-097-00: 24 VDC; P/Ns 729-125-00, 729-150-00: 12/24 VDC
Standby Current	120 µA maximum
Velocity Range	0 to 3,000 ft/minute (0 to 15.2 m/second)
Latching Alarm	Momentary power interruption reset
Open Area Protection	30 ft. spacing (smooth ceiling)
Operating Temperature	32°F to 100°F (0°C to 38°C)
Relative Humidity	10% to 93%, non-condensing
Dimensions	In base P/N 729-125-00: 2 in. H x 4.1 in. D (5.08 cm x 10.4 cm) In other associated bases: 2 in. H x 6.2 in. D (5.08 cm x 15.75 cm)
Weight	0.194 lb (0.088 kg)
Mounting	Base P/N 729-097-00, P/N 729-150-00, or P/N 729-151-00 can be installed in a single-gang, 3.5 in. octagon, 4 in. octagon, or 4 in. square junction box
Standards Compliance:	
UL Listed	UL268A, File S911
FM Approved	3025009
State of California	7272-1653:0122
MEA Approved	205-94-E Vol. 8

Ordering Information

Part Number	Description
723-003-00	Conventional Photoelectric Smoke Detector, 2-wire or 4-wire, 135°F fixed temperature, restorable, plug-in, low profile,

Associated Parts

Part Number	Description
729-097-00	Conventional Detector Base, plug-in, low profile, 24 VDC, 2-wire, current-limiting resistor, 6.2 in. OD
729-125-00	Conventional Detector Base, plug-in, 12/24 VDC, 2-wire, 4 in. OD
729-150-00	Conventional Detector Base, plug-in, low profile, 12/24 VDC, 2-wire, 6.2 in. OD
729-151-00	Conventional Detector Base, plug-in, low profile, 24 VDC, 4-wire, Form A and C relay contacts, 6.2 in. OD
729-091-00	Remote Red LED Annunciator, fits standard single-gang electrical box (not included)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

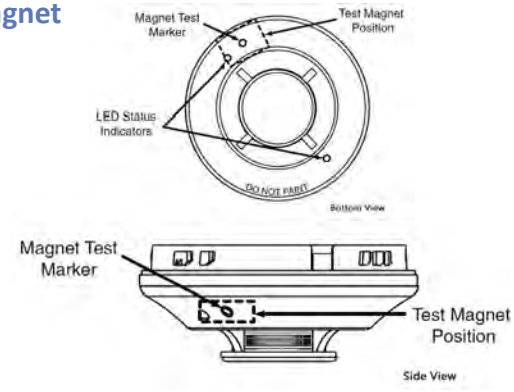
Detect Manage Record

Conventional Detection Devices

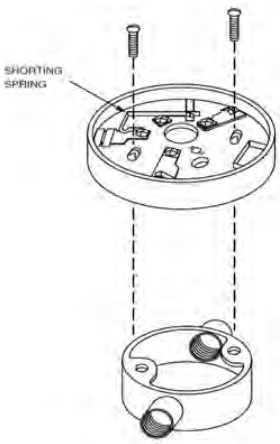
Part Number	Description
790-012-00	End-of-Line Power Supervision Relay Module, polarized, 9 to 40 VDC
790-013-01	End-of-Line Power Supervision Relay Module, non-polarized, 9 to 40 VDC, with built-in 47 kohm EOL resistor and a set of NC dry contacts

Drawings

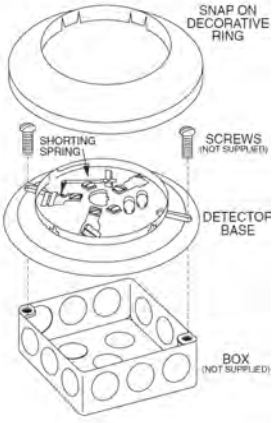
Test Magnet



Mounting



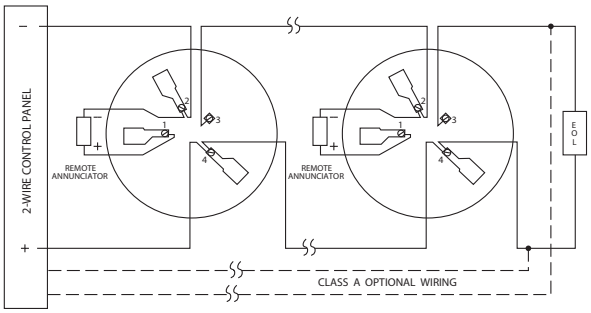
Detector Bases P/Ns
729-097-00,
729-125-00,
729-150-00,
or 729-151-00



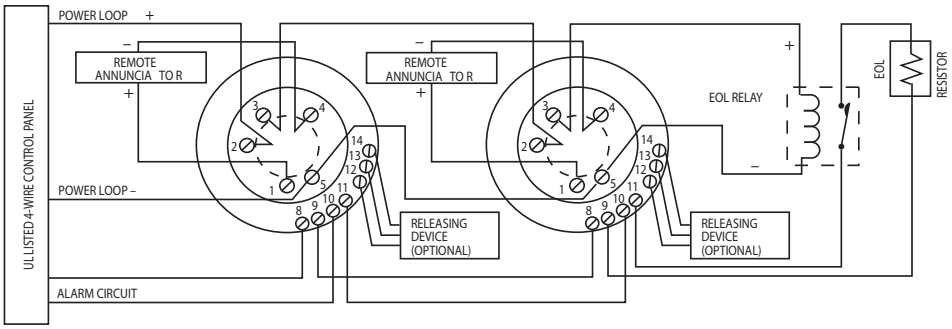
Detector Bases P/Ns
729-097-00,
729-150-00,
or 729-151-00

Typical Detector Base Wiring Diagrams

2-Wire



4-Wire



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Smoke Detector

723-340-00, 723-340-01, 723-508-00, 723-508-01

Description

These are 2-wire and 4-wire detectors, some with a fixed-temperature heat sensor for open area protection. The base is included.

All models incorporate a state-of-the-art optical sensing chamber and an advanced microprocessor. The microprocessor allows the detector to adjust its sensitivity due to contaminants settling in its chamber.

Features

- Plug-in design
- P/Ns 723-340-01 and 723-508-01 have a built-in restorable heat sensor that can also detect a freeze condition
- Red LED and green LED indicators
- Sensing chamber is screened
- Built-in test switch
- Tamper resistant

Specifications

Operating Voltage	Nominal: 12/24 VDC (non-polarized) Range: 8.5 to 35 VDC Max. Ripple: 30% P-P applied voltage
Standby Current	50 µA maximum average
Max. Alarm Current	2-Wire: 130 mA, limited by panel 4-Wire: 20 mA 12 VDC, 23 mA 24 VDC
Alarm Reset Time	0.3 seconds
Sensitivity	2.5% per foot, nominal
Heat Sensor (Applicable Units)	Heat: 135°F fixed (57.2°C) Freeze Trouble: <41°F (4°C)
Input Wiring	14 to 22 AWG (twisted pair acceptable)
Operating Temperature	Smoke Detectors without Heat Sensor: 32°F to 120°F (4°C to 49°C) Smoke Detectors with Heat Sensor: 32°F to 100°F (4°C to 37.8°C)
Relative Humidity	0% to 95%, non-condensing
Dimensions (with Base)	2 in. H x 5.3 in. OD (5.08 cm x 13.5 cm)
Weight	6.3 oz (0.18 kg)
Mounting	Installs to single-gang back box, 3.5 in. octagonal back box, 4 in. square back box, or mount to ceiling
Standards Compliance:	
UL Listed	S911
FM Approved	3011446
MEA Approved	290-01-E
State of California	7272-1653:0152
Intertek Listed	3180932

LED Modes

Mode	Green LED	Red LED
Power-up	Blink every 10 seconds	Blink every 10 seconds
Normal	Blink every 5 seconds	Off
Out of Sensitivity	Off	Blink every 5 seconds
Freeze Trouble	Off	Blink every 10 seconds
Alarm	Off	On solid

Ordering Information

Part Number	Description
723-340-00	Conventional Photoelectric Smoke Detector, 2-wire, plug-in
723-340-01	Conventional Photoelectric Smoke Detector, 2-wire, restorable, 135°F fixed-temperature, freeze detection, plug-in
723-508-00	Conventional Photoelectric Smoke Detector, 4-wire, plug-in
723-508-01	Conventional Photoelectric Smoke Detector, 4-wire, restorable 135°F fixed-temperature, freeze detection, plug-in

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

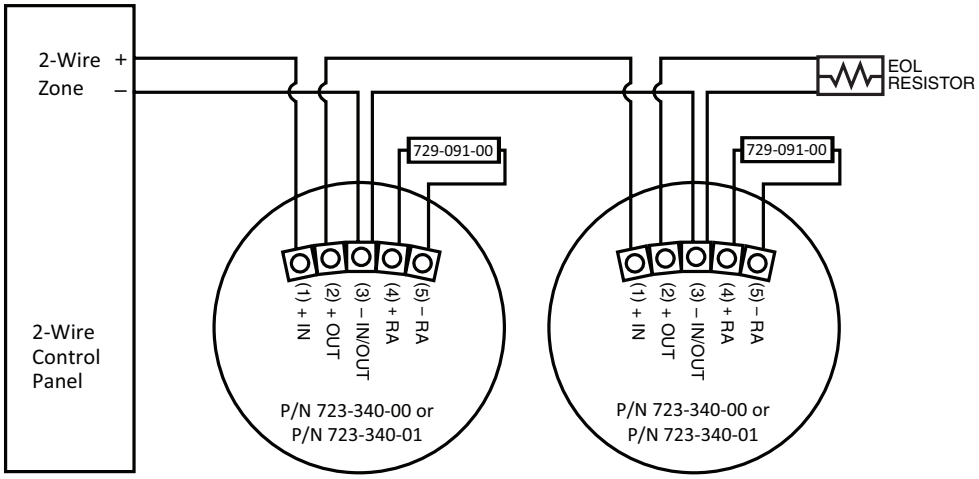
Detect Manage Record

Associated Parts

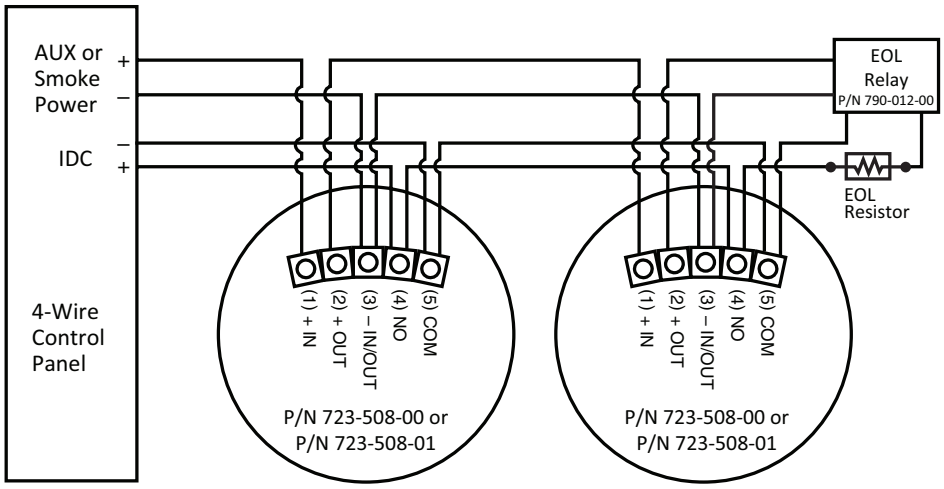
Part Number	Description
729-091-00	Remote Red LED Annunciator, fits standard single-gang electrical box (not included)
790-012-00	End-of-Line Power Supervision Relay Module, polarized, 9 to 40 VDC

Wiring Diagrams

2-Wire Detectors P/N 723-340-00 and P/N 723-340-01



4-Wire Detectors P/N 723-508-00 and P/N 723-508-01



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Conventional Detection Devices

Smoke Detector
723-372-00

Description

This conventional four-wire low profile photoelectric smoke detector uses a state-of-the-art optical sensing chamber. This detector is for duct smoke detector assemblies and requires *intelligent* base P/N 729-132-00 or 729-127-00 only.

Two LEDs:

- Local 360-degree visible alarm indication
- Flash every five seconds for normal operation
- Latch on during an alarm, off for a trouble

Alarm reset options:

- Momentary power interruption from control panel
- Test/reset button on duct assembly power board
- Remote test accessory with reset function

Testing options:

- Magnet on detector's "magnet test" location
- Test/reset button on duct assembly power board
- Remote test accessory

Features

- Low profile, plug-in
- Sensitivity can be checked to meet NFPA 72
- Four-wire base compatibility
- Low standby current
- Signal processing reduces false alarms
- Built-in test switch

Specifications

Operating Voltage	15 to 32 VDC
Standby Current	150 µA or 170 µA, max., depending on base
Operating Temperature	–4°F to 158°F (–20°C to 70°C)
Relative Humidity	10% to 95% non-condensing
Dimensions	Diameter: depends on base Height: 2 in.
Weight	3.1 oz

Ordering Information

Smoke Detector

Part Number	Description
723-372-00	Conventional Duct Smoke Detector, photoelectric, plug-in, 24 VDC/VAC

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Base

One of these is required.

Part Number	Description
729-132-00	Intelligent Detector Mounting Base, plug-in, flanged: • Standby current: 170 µA • Wiring: 12–18 AWG • Mounting: Single gang 4 in. square (plaster ring optional) 3.5 in., 4 in. octagonal 70 mm • Diameter: 6.1 in. • Height: 0.76 in. • Operating temperature: –4 to 158°F (–20 to 70°C) • Relative humidity: 10–93%, noncondensing
729-127-00	Intelligent Detector Mounting Base, plug-in, flangeless: • Standby current: 150 µA • Wiring: 12–18 AWG • Mounting: 4 in. square (plaster ring required) 3.5 in. octagonal 50 mm, 60 mm, 70 mm • Diameter: 4.1 in. • Height: 0.74 in. • Operating temperature: –4 to 158°F (–20 to 70°C) • Relative humidity: 10–93%, noncondensing

Associated Parts

Part Number	Description
729-091-00	Remote LED Annunciator
790-012-00	End-of-line Power Supervision Relay Module, 9–40 VDC
729-108-00	Duct Smoke or Beam Detector, remote test station with LED
729-138-00	Duct Smoke or Beam Detector, remote test station with LED and key

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Conventional Detection Devices

Reflected Beam Smoke Detector
725-313-00

Description

This is a conventional, single-ended reflected type, long-range projected beam, smoke detector. It is intended for open-area protection in locations where spot-type detection is impractical. Such environments can include freezers, warehouses, factories, parking facilities, arenas, concert halls, and barns.

Environments unsuitable for the detector include high humidity and/or rapidly changing temperatures, outdoors, locations where direct sunlight will strike the detector, or locations where glass panes or other objects will be in the path of the optical beam between the detector and the reflector.

The detector consists of a transmitter/receiver unit and a separate reflector. It is a four-wire system connected to a compatible control panel for communication and DC power.

Indicators

- **Green LED** Blinks indicate standby
- **Red LED** On indicates alarm
- **Yellow LED** Blink pattern indicates trouble diagnostics

Testing

Integral sensitivity (obscuration) test, local test switch, or test commands from the panel or optional remote test station.

Features

- Combined transmitter/receiver unit
- Wide 12 degree field of view
- Fast, easy, and intuitive beam alignment
- Resistant to solid object intrusion
- Automatic sensitivity threshold level setting
- Highly resistant to building movement; tolerates ±1 degree of movement
- Removable plug-in terminal blocks
- Resistant to strong light sources; does not alarm when saturated by sunlight
- Built-in imager heater
- Remote test station capable for electronic simulated smoke test from ground level
- Signal-strength monitoring for updating alarm and trouble thresholds
- Paintable housing/cover
- Automatic drift compensation

Specifications

Operating Voltage	10.2 to 32 VDC, 12/24 VDC nominal
Standby Current	11 mA maximum at 24 VDC
Alarm Current	15 mA maximum at 24 VDC (LED on)
Range	16.4 to 328 ft. (5 to 100 m)
Spacing	30 to 60 ft. (9.1 to 18.3 m)
Adjustment Angle	Detector: 50 degrees horizontal, 20 degrees vertical beam alignment Reflector: ±10 degrees horizontal and vertical
Typical Response Time	Alarm: 20 seconds Trouble: 30 seconds

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Sensitivity Levels	Level 1: 25% obscuration, Level 2: 30% obscuration, Level 3: 40% obscuration, Level 4: 50% obscuration (factory default)
Input Wiring	14 AWG
Operating Temperature	UL Listed Range: 32°F to 100°F (0°C to 37.8°C) Application Range: –4°F to 131°F (–20°C to 55°C)
Relative Humidity	0% to 95% non-condensing
Detector Dimensions	6 in. H x 10 in. W x 4.5 in. D (15.24 cm x 25.4 cm x 11.43 cm)
Reflector Dimensions	9.06 in. H x 7.87 in. W (23 cm x 20 cm)
Weight	Shipping: 3.91 lb (1.77 kg) Installed: 2.48 lb (1.12 kg)
Standards Compliance:	
UL Listed	S911
FM Approved	PR449231
State of California	7260-1653:0514

Ordering Information

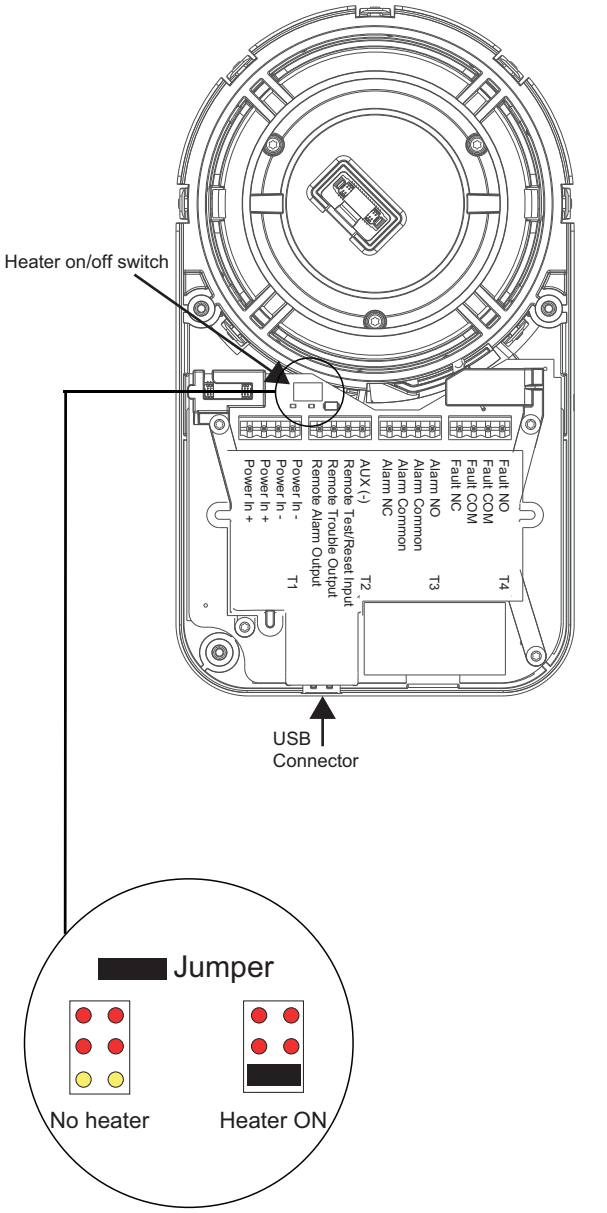
Part Number	Description
725-313-00	Conventional Reflected Beam Smoke Detector, 32V max., 4-wire, integral sensitivity test capability

Associated Parts

Part Number	Description
729-108-00	Duct Smoke Detector, remote test station with LED See NOTE.
729-138-00	Duct Smoke Detector, remote test station with LED and key. See NOTE.
729-188-00	Kit of three additional reflectors to extend range of smoke detector P/N 725-313-00 from 230 to 328 feet; not compatible with P/N 729-187-00
729-189-00	Kit required for smoke detector P/N 725-313-00 when mounting the transmitter/receiver unit: • Over a recessed J box • With multi-mount kit P/N 729-187-00
NOTE Test station can be used for smoke detector applications other than duct.	

Diagrams

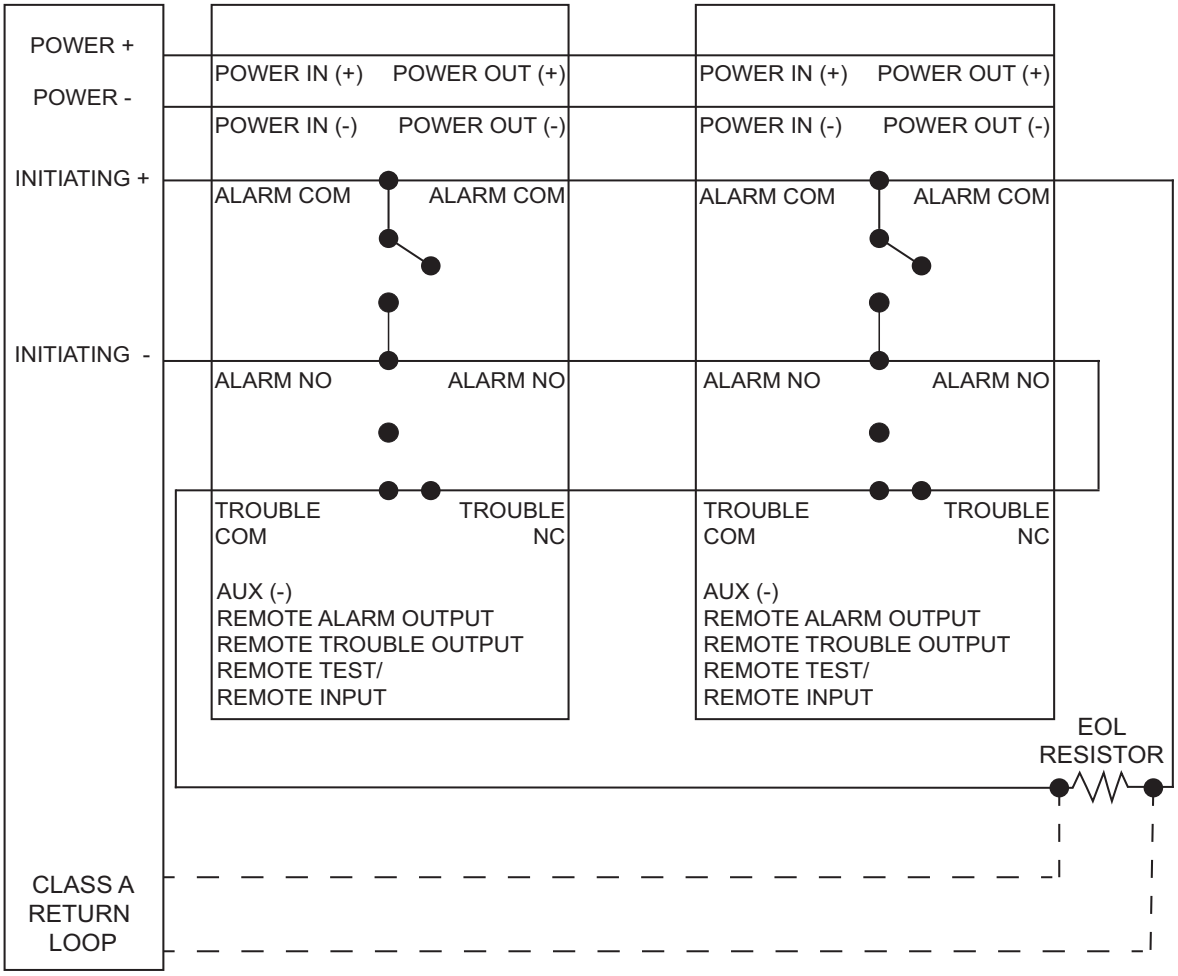
Wiring Connections



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Wiring Diagram



NOTE: If other sensors are installed on the same loop, a listed end of line power supervision module is required.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices Catalog Section 10

Heat Detectors

Heat Detector, 194° Fixed Temperature Rate Compensation 721-107-00
Heat Detector, 194° Fixed Temperature Rate Compensation 721-108-00
Heat Detector, 135° Fixed Temp/Rate Comp, Explosion-Proof 721-109-00
Heat Detector, 194°F Fixed Temp/Rate Comp, Explosion-Proof 721-110-00
Heat Detector, 135° Fixed Temperature Rate Compensation 721-117-00
Heat Detector, 135°F Fixed Temperature/Rate-of-Rise 721-122-00
Heat Detector, 135°F Fixed Temperature/Rate-of-Rise 721-123-00
Heat Detector, 135°F Fixed Temperature/Rate Compensation 721-125-00
Heat Detector, 135°F Fixed Temperature/Rate-of-Rise 721-127-00
Heat Detector, 135°F Fixed Temperature/Rate-of-Rise 721-128-00
Heat Detector, 194° Fixed Temperature Rate Compensation 721-132-00
Heat Detector, 135° Fixed Temperature Rate Compensation 721-133-00
Heat Detector, 190°F Fixed Temperature/Rate-of-Rise 721-404-00
Heat Detector, 200°F Fixed Temperature/Rate Compensation 721-405-00
Heat Detector, 194°F Fixed Temperature/Rate-of-Rise 721-407-00
Heat Detector, 194°F Fixed Temperature/Rate-of-Rise 721-408-00
Heat Detector, 135°F Fixed Temperature 722-123-00
Heat Detector 722-125-00, 722-409-00
Heat Detector 135°F Fixed Temperature 722-127-00
Heat Detector, 194°F Fixed Temperature 722-408-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Conventional Detection Devices

Heat Detector, 194° Fixed Temperature Rate Compensation

721-107-00

Features

- Aluminum housing Conventional heat detector
- Shock and corrosion resistant
- Tamper resistant
- Hermetically sealed
- Nonferrous
- 194°F Fixed Temperature Rate Compensation
  - – Slow rate of temperature rise
  - – Rapid rate of temperature rise
  - – Normally Open (NO) contacts
  - – Restorable
    Detector automatically resets when ambient temperature drops below rated temperature
- Detector should not respond to momentary temperature fluctuation of less that 50°F (10°C) per minute between 60°F (15.6°C) and 150°F (66°C)
- Two testing options
  - – Controlled heat source test at the device, or
  - – Sensitivity calibration test performed in a lab
- Detector has RTI rating for installation of V-FAST
- Interior vertical mounting

Specifications

Operating Voltage/Current	6 to 125 VAC / 5A 6 to 25 VDC / 1A 125 VDC / 0.5A
Detector Type	Fixed Temperature Rate Compensation
Contacts	Normally Open (NO)
Detector Rated Temperature	194°F (90°C)
Min. Ambient Air Temperature	–40°F (–40°C)
Max. Ceiling Temperature	150°F to 155°F (66°C to 68°C)
Open Area Protection	50 ft. spacing (assumes a flat, uninterrupted ceiling at a height not exceeding 10 ft./3m)
Vertical Mounting	3 in. or 4 in. octagon junction box
Dimensions with Mounting Bracket	4.125 in. L x 2 in. OD (105 mm x 51 mm)
Standards Compliance:	NFPA Standard 72
UL Listed	S539
FM	Approved
State of California	7270-0021:0001
MEA Acceptance	193-03-E

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Ordering Information

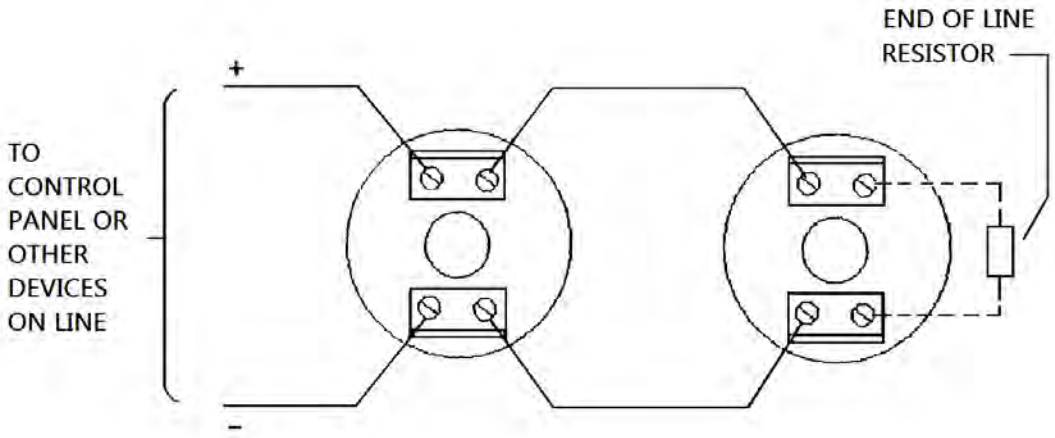
Part Number	Description
721-107-00	Heat Detector, rate compensation 194°F Fixed Temperature (restorable), aluminum, contacts normally open

Associated Parts

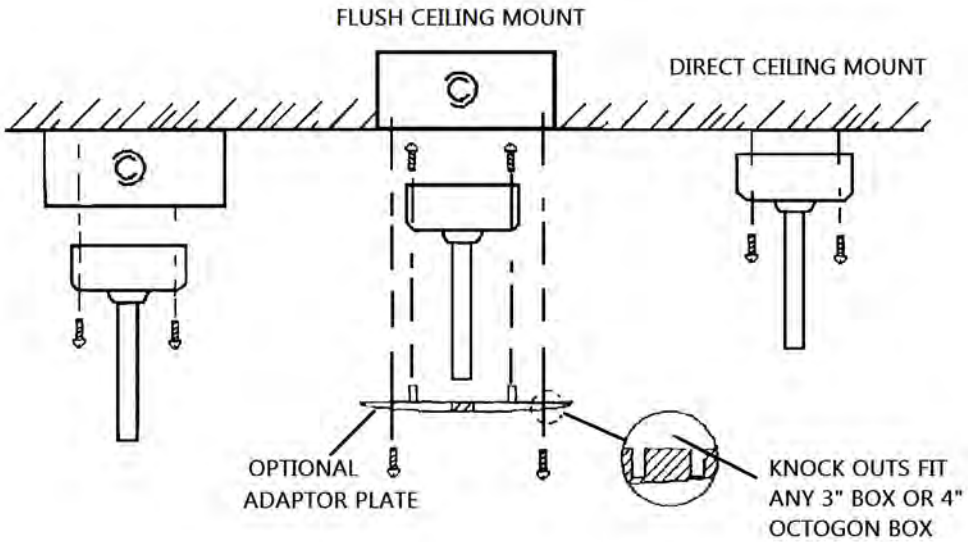
Part Number	Description
729-020-00	Adaptor Plate, white, 4 in. plastic box

Drawings

Wiring Diagram



Junction Box Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Conventional Detection Devices

Heat Detector, 194° Fixed Temperature Rate Compensation

721-108-00

Features

- Aluminum housing Conventional heat detector
- Shock and corrosion resistant
- Tamper resistant
- Hermetically sealed
- Nonferrous
- 194°F Fixed Temperature Rate Compensation
  - Slow rate of temperature rise
  - Rapid rate of temperature rise
  - Normally Open (NO) contacts
  - Restorable
    Detector automatically resets when ambient temperature drops below rated temperature
- Detector should not respond to momentary temperature fluctuation of less than 50°F (10°C) per minute between 60°F (15.6°C) and 150°F (66°C)
- Two testing options
  - Controlled heat source test at the device, or
  - Sensitivity calibration test performed in a lab
- Detector has RTI rating for installation of V-FAST
- Open-area protection
- Weatherproof

Specifications

Operating Voltage/Current	6 to 125 VAC / 5A 6 to 25 VDC / 1A 125 VDC / 0.5A
Detector Type	Rate Compensation 4-Wire Leads, Weatherproof
Contacts	Normally Open (NO)
Detector Rated Temperature	194°F (90°C)
Min. Ambient Air Temperature	–40°F (–40°C)
Max. Ceiling Temperature	150°F to 155°F (66°C to 68°C)
Open Area Protection	Vertical Mount: 50 ft. spacing (assumes a flat, uninterrupted ceiling at a height not exceeding 10 ft./3m)
Vertical Mounting	3 in. or 4 in. octagon junction box
Dimensions with Mounting Bracket	4.125 in. L x 2 in. OD (105 mm x 51 mm)
Standards Compliance:	NFPA Standard 72
UL Listed	S539
FM	Approved
State of California	7270-0021:0001
MEA Acceptance	193-03-E

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Ordering Information

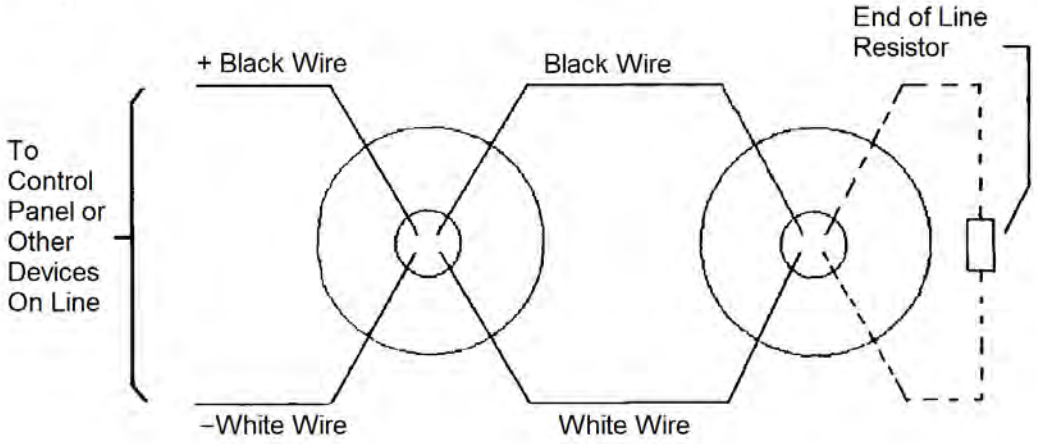
Part Number	Description
721-108-00	Heat Detector, rate compensation 194°F Fixed Temperature (restorable), aluminum with 4-wire leads, contacts normally open, weatherproof

Associated Parts

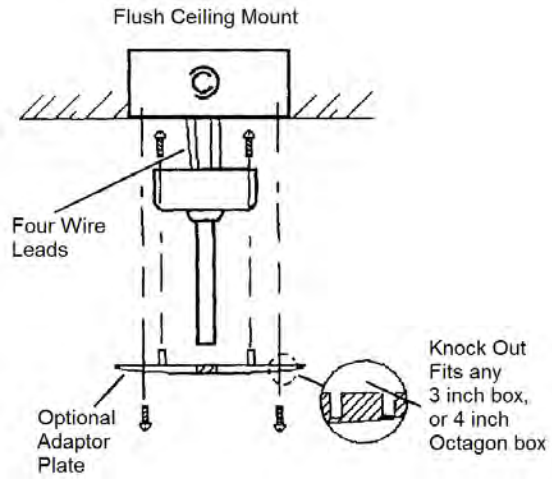
Part Number	Description
729-020-00	Adaptor Plate, white, 4 in. plastic box

Drawings

Wiring Diagram



Junction Box Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Conventional Detection Devices

Heat Detector, 135° Fixed Temp/Rate Comp, Explosion-Proof

721-109-00

- Detector should not respond to momentary temperature fluctuation of less than 30°F (1.1°C) per minute between 60°F (15.6°C) and 100°F (38°C)
- Two testing options
  - – Controlled heat source test at the device, or
  - – Sensitivity calibration test performed in a lab
- Detector has RTI rating for installation of V-FAST
- Vertical or Horizontal Interior Mounting
- Explosion-Proof

Features

- Aluminum housing Conventional heat detector
- Shock and corrosion resistant
- Tamper resistant
- Hermetically sealed
- Nonferrous
- 135°F Fixed Temperature Rate Compensation
  - – Slow rate of temperature rise
  - – Rapid rate of temperature rise
  - – Normally Open (NO) contacts
  - – Restorable
    Detector automatically resets when ambient temperature drops below rated temperature

Specifications

Operating Voltage/Current	6–125 VAC / 5A 6–25 VDC / 1A 125 VDC / 0.5A
Detector Type	Rate Compensation
Contacts	Normally Open (NO)
Detector Rated Temperature	135°F (57°C)
Min. Ambient Air Temperature	–40°F (–40°C)
Max. Ceiling Temperature	100°F to 115°F (38°C to 46°C)
Open Area Protection	Vertical Mount: 40 ft. spacing (assumes a flat, uninterrupted ceiling at a height less than 10 ft./3m) Horizontal Mount: 30 ft. spacing
Mounting	Hexagonal grip bushing with 0.5 in. conduit threads for attaching to threaded hub cover of JL fixture fitting (manufacturer Killark Electric or equal) Must be hand tightened only
Dimensions	3 in. L x 1.25 in. OD (76.2 mm x 31.75 mm)
Standards Compliance	NFPA Standard 72
UL Listed	E35018
State of California	7270-0021:0001
MEA Acceptance	193-03-E
Conduit Outlet Boxes UL Listed for Hazardous Locations	UL E10514 (P/Ns 729-193-00, 588-103-00) Class I, Div. 1 & 2, Groups C, D Class II, Div. 1 & 2, Groups E, F, G Class III

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Ordering Information

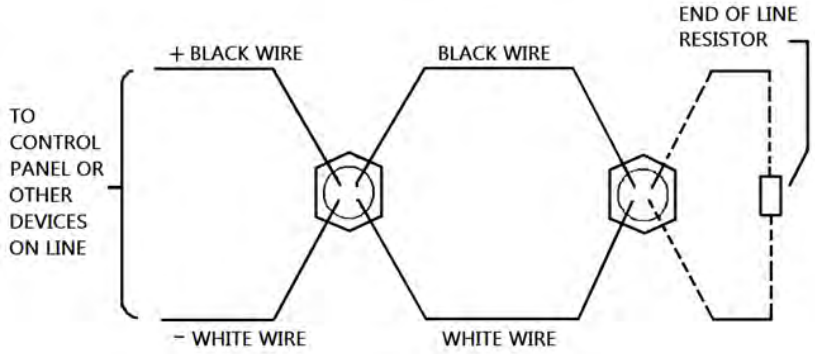
Part Number	Description
721-109-00	Heat Detector, rate compensation 135°F Fixed Temperature (restorable), aluminum, contacts normally open, explosion-proof

Associated Parts

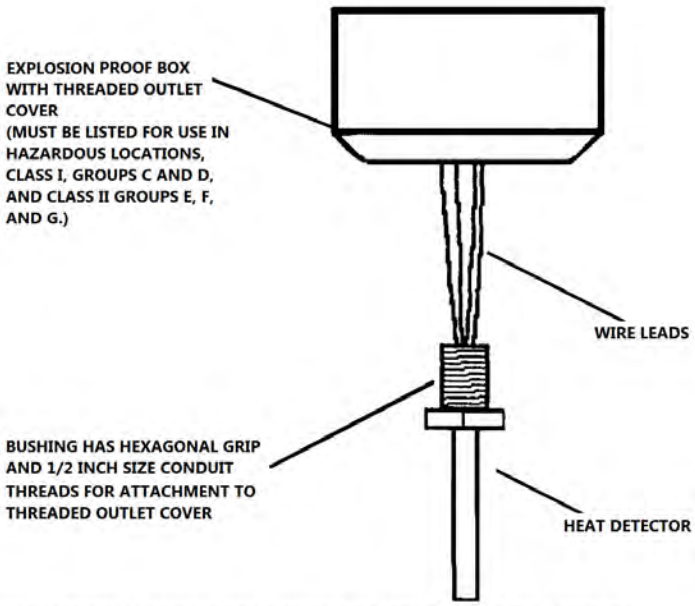
Part Number	Description
729-193-00	Conduit Outlet Box with Cover, explosion-proof. Box has two 1/2 in. threaded conduit entries on opposite sides. Cover as one 1/2 in. threaded conduit entry. See specifications for UL Listing.
588-103-00	Conduit Outlet Box with Cover, explosion-proof. Box has four 3/4 in. threaded conduit entries, one on each side. Cover has one 1/2 in. threaded conduit entry. See specifications for UL Listing.

Drawings

Wiring Diagram



Mounting



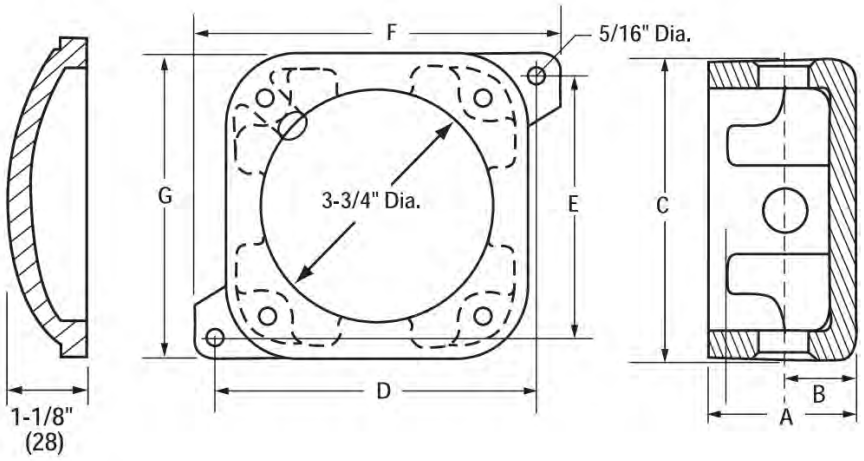
EACH DETECTOR SHOULD HAVE NO TORQUE (I.E., TIGHTENING WITH A WRENCH). HAND TIGHTEN ONLY. FOR EXTERNAL USE ONLY.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

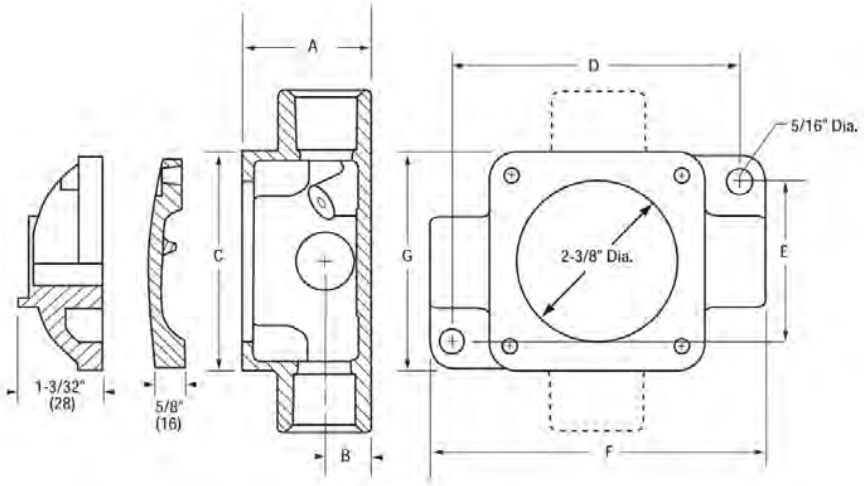
Detect Manage Record

Outlet Box and Cover Dimensions

588-103-00



729-103-00



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Conventional Detection Devices

Heat Detector, 194°F Fixed Temp/Rate Comp, Explosion-Proof

721-110-00

- Detector should not respond to momentary temperature fluctuation of less than 50°F (10°C) per minute between 60°F (15.6°C) and 150°F (66°C)
- Two testing options
  - – Controlled heat source test at the device, or
  - – Sensitivity calibration test performed in a lab
- Detector has RTI rating for installation of V-FAST
- Vertical or horizontal interior mounting
- Explosion-proof

Features

- Aluminum housing Conventional heat detector
- Shock and corrosion resistant
- Tamper resistant
- Hermetically sealed
- Nonferrous
- 194°F Fixed Temperature Rate Compensation
  - – Slow rate of temperature rise
  - – Rapid rate of temperature rise
  - – Normally Open (NO) contacts
  - – Restorable
    Detector automatically resets when ambient temperature drops below rated temperature

Specifications

Operating Voltage/Current	6–125 VAC / 5A 6–25 VDC / 1A 125 VDC / 0.5A
Detector Type	Rate Compensation
Contacts	Normally Open (NO)
Detector Rated Temperature	194°F (90°C)
Min. Ambient Air Temperature	–40°F (–40°C)
Max. Ceiling Temperature	150°F to 155°F (66°C to 68°C)
Open Area Protection	Vertical Mount: 40 ft. spacing (assumes a flat, uninterrupted ceiling at a height not exceeding 10 ft./3m) Horizontal Mount: 30 ft. spacing
Mounting	Hexagonal grip bushing with 1/2 in. conduit threads for attaching to threaded outlet box cover of JL fixture fitting (manufacturer Killark Electric or equal) Must be hand tightened only
Dimensions	3 in. L x 1.25 in. OD (76.2 mm x 31.75 mm)
Standards Compliance	NFPA Standard 72
UL Listed	E35018
State of California	7270-0021:0001
MEA Acceptance	193-03-E
Conduit Outlet Boxes UL Listed for Hazardous Locations	UL E10514 (P/Ns 729-193-00, 588-103-00) Class I, Div. 1 & 2, Groups C, D Class II, Div. 1 & 2, Groups E, F, G Class III

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Ordering Information

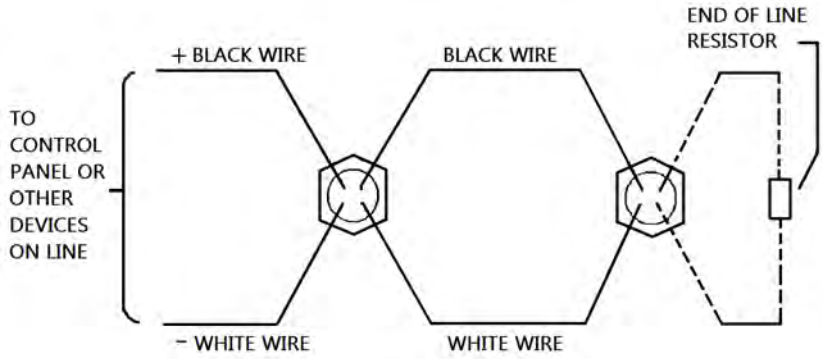
Part Number	Description
721-110-00	Heat Detector, rate compensation 194°F Fixed Temperature (restorable), aluminum, contacts normally open, explosion-proof

Associated Parts

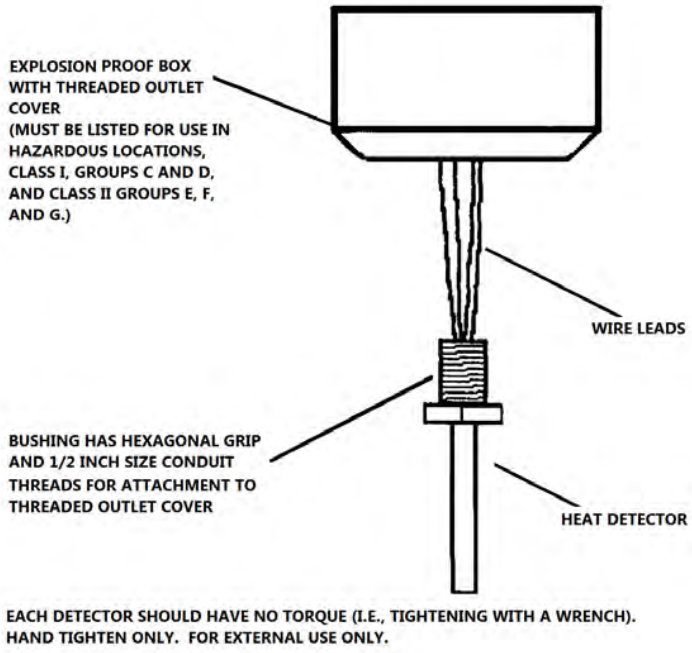
Part Number	Description
729-193-00	Conduit Outlet Box with Cover, explosion-proof. Box has two 1/2 in. threaded conduit entries on opposite sides. Cover as one 1/2 in. threaded conduit entry. See specifications for UL Listing.
588-103-00	Conduit Outlet Box with Cover, explosion-proof. Box has four 3/4 in. threaded conduit entries, one on each side. Cover has one 1/2 in. threaded conduit entry. See specifications for UL Listing.

Drawings

Wiring Diagram



Mounting



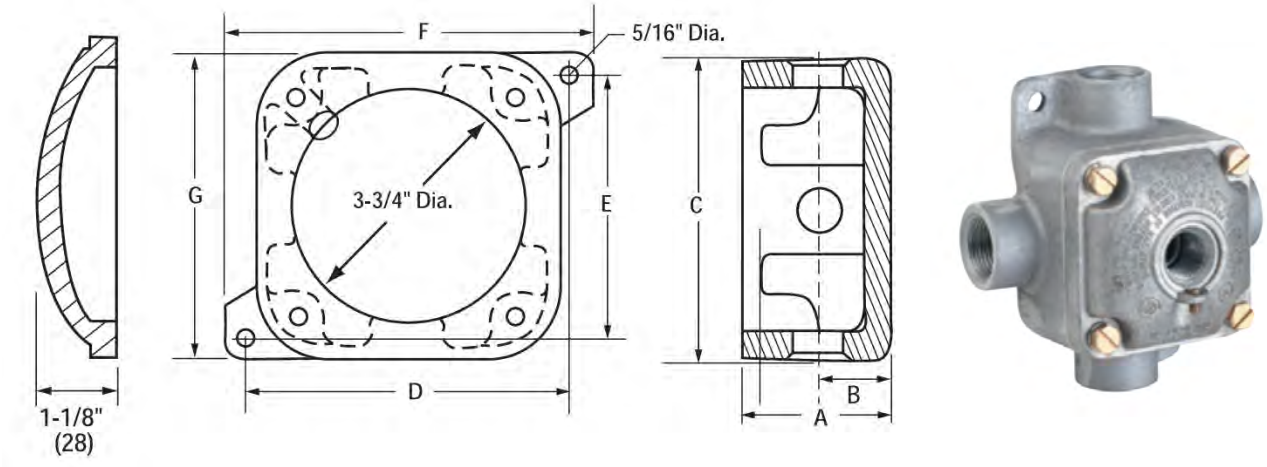
EACH DETECTOR SHOULD HAVE NO TORQUE (I.E., TIGHTENING WITH A WRENCH). HAND TIGHTEN ONLY. FOR EXTERNAL USE ONLY.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

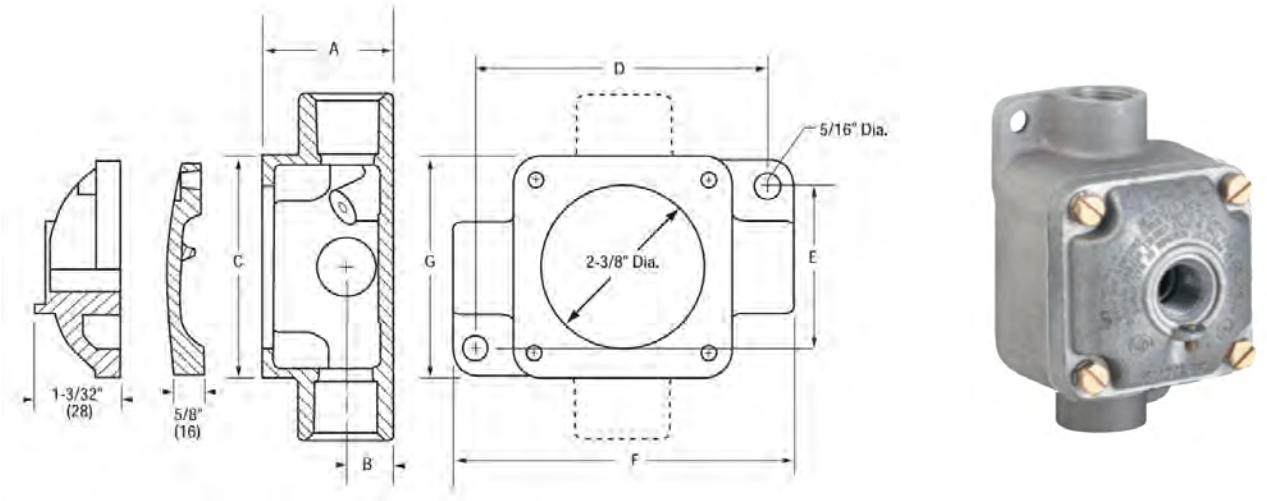
Detect Manage Record

Outlet Box Cover and Dimensions

588-103-00



729-103-00



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Conventional Detection Devices

Heat Detector, 135° Fixed Temperature Rate Compensation

721-117-00

Features

- Aluminum housing Conventional heat detector
- Shock and corrosion resistant
- Tamper resistant
- Hermetically sealed
- Nonferrous
- 135°F Fixed Temperature Rate Compensation
  - – Slow rate of temperature rise
  - – Rapid rate of temperature rise
  - – Normally Open (NO) contacts
  - – Restorable
    Detector automatically resets when ambient temperature drops below rated temperature
- Detector should not respond to momentary temperature fluctuation of less than 30°F (1.1°C) per minute between 60°F (15.6°C) and 100°F (38°C)
- Two testing options
  - – Controlled heat source test at the device, or
  - – Sensitivity calibration test performed in a lab
- Detector has RTI rating for installation of QUICK
- Open-area protection
- Weatherproof

Specifications

Operating Voltage/Current	6 to 125 VAC / 5A 6 to 25 VDC / 1A 125 VDC / 0.5A
Detector Type	Rate Compensation 4-wire Leads, Weatherproof
Contacts	Normally Open (NO)
Detector Rated Temperature	135°F (57°C)
Min. Ambient Air Temperature	–40°F (–40°C)
Max. Ceiling Temperature	100°F to 115°F (38°C to 46°C)
Open Area Protection	Vertical Mount: 50 ft. spacing (assumes a flat, uninterrupted ceiling at a height not exceeding 10 ft./3m) Horizontal Mount: 40 ft. spacing
Vertical Mounting	3 in. or 4 in. octagon junction box
Dimensions with Mounting Bracket	4.125 in. L x 2 in. OD (105 mm x 51 mm)
Standards Compliance	NFPA Standard 72
UL Listed	S539
FM	Approved
State of California	7270-0021:0001
MEA Acceptance	193-03-E

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Ordering Information

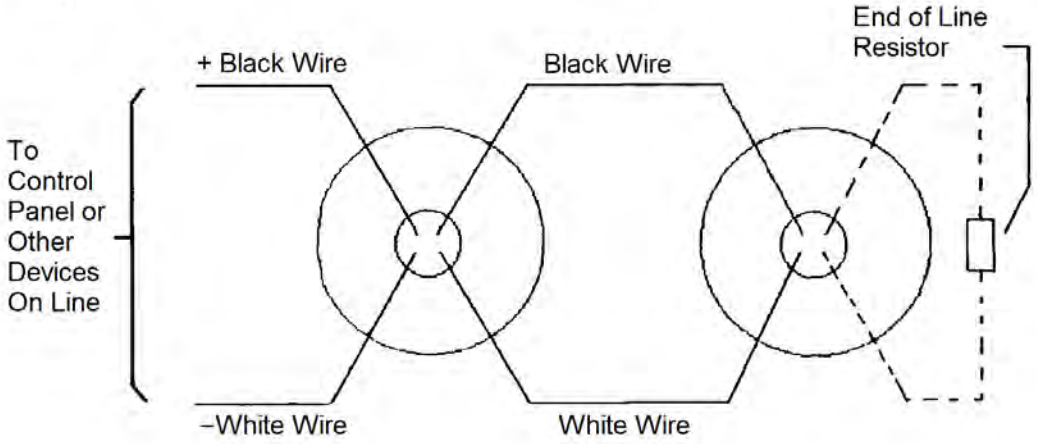
Part Number	Description
721-117-00	Heat Detector, rate compensation 135°F Fixed Temperature (restorable), aluminum with 4-wire leads, contacts normally open, weatherproof

Associated Parts

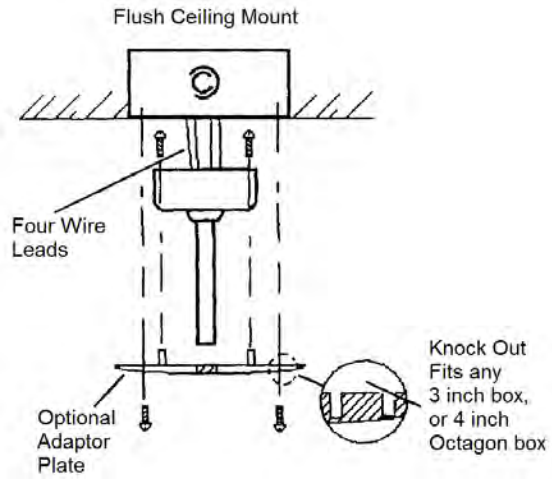
Part Number	Description
729-020-00	Adaptor Plate, white, 4 in. plastic box

Drawings

Wiring Diagram



Junction Box Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Conventional Detection Devices

Heat Detector, 135°F Fixed Temperature/Rate-of-Rise

721-122-00

Features

- Off-white housing two-wire Conventional heat detector
- Low profile plug-in design
- Tamper resistant sensor base capability
- Fixed and Rate-of-Rise thermal detection
  - Detector alarm at 135°F fixed temperature (restorable)
  - Rate-of-Rise element rated at 15°F (–9.4°C) per minute (restorable)
- Dual red LEDs for 360-degree visibility of alarm
- Two testing options
  - Cover magnet test causes LEDs to latch ON within 5 seconds, or
  - Controlled heat source test at device sensor will light LEDs when alarm setpoint is reached
- Low standby current
- Detector has RTI rating for installation of V2-FAST in accordance with FM 3210
- Open-area protection
- Optional remote LED annunciator capability

Specifications

Voltage Range	8.5 to 35 VDC
Standby Current (max. avg.)	80 µA at 24 VDC (one flash every five seconds)
Alarm Current	10 mA min., 130 mA max. (must be limited by control panel)
Detector Type	2-wire, plug-in
Relay Contact Ratings (resistive or inductive 60% power factor load)	**Form A:** 2A at 30 VAC/DC **Form C:** 0.6A at 110 VDC, 2A @ 30 VDC; 1A @ 125 VAC, 2A @ 30 VAC
Operating Temperature	32°F to 100°F (0°C to 38°C)
Fixed Temperature Rating	135°F (57°C)
Rate-of-Rise Rating	15°F/min. (–9.4°C/min.)
Relative Humidity	10% to 93% non-condensing
Open Area Protection	50 ft. spacing (assumes a flat, uninterrupted ceiling at a height not exceeding 10 ft./3m)
Mounting Junction Box (at least 1.5 in. deep)	Single gang 4 in. square (with/without ring), or 3.5 in. octagonal, or 4 in. octagonal, or 50mm, 60mm, 70mm, or 75mm
Dimensions	1.64 in. H x 4 in. OD (42 mm x 102 mm)
Weight	2.8 oz (80 g)
Standards Compliance	Listed to UL 521 and FM 3210
UL/ULC Listed	S2101
FM	Approved
State of California	7270-1653:104

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

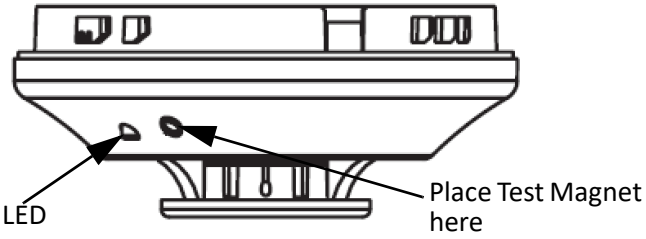
Ordering Information

Part Number	Description
721-122-00	Heat Detector, combination 135°F Fixed Temperature (restorable) and 15°F/min. Rate-of-Rise (restorable), off-white, 2-wire, plug-in

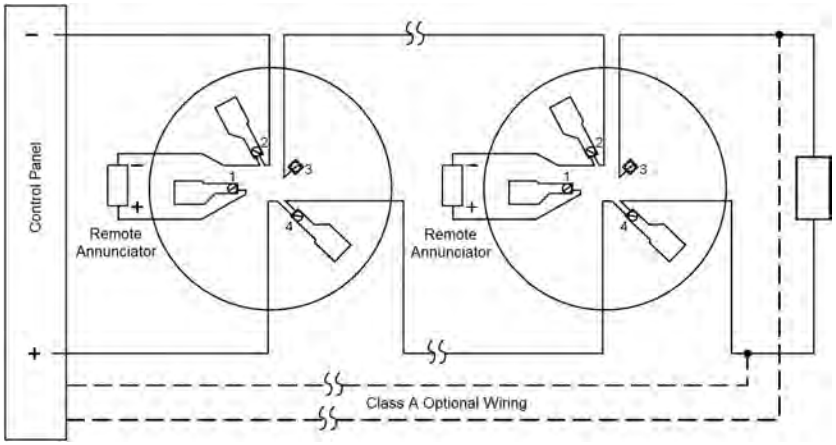
Associated Parts

Part Number	Description
729-125-00	Conventional detector base, plug-in, 12/24 VDC 2-wire, 4.0 inches in diameter
729-150-00	Conventional detector base, plug-in, low profile, 12/24 VDC, 2-wire, 6.2 inches in diameter
729-151-00	Conventional detector base, plug-in, low profile, 24 VDC, 4-wire, Form A and C relay contacts, 6.2 inches in diameter
729-097-00	Conventional detector base, plug-in, low profile, 24VDC, 2-wire, current-limiting resistor, 6.2 inches in diameter
729-091-00	Remote LED Annunciator. Fits standard single-gang electrical box (not included)

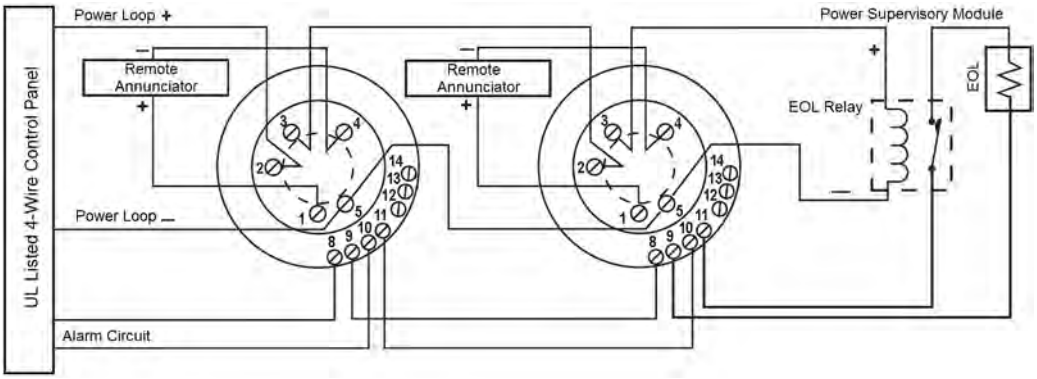
Mounting Diagram



Wiring Diagram - Typical 2-Wire



Wiring Diagram - Typical 4-Wire



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Heat Detector, 135°F Fixed Temperature/Rate-of-Rise

721-123-00

WARNING! For life-safety installations, smoke detectors must be used in lieu of, or in addition to, heat detectors.

Features

- Off-white housing Conventional indoor heat detector
- Suitable for high heat output fire conditions
- Fully electronic operation
- Tamper resistant capability
- Fixed and Rate-of-Rise thermal detection
  - Detector alarm at 135°F Fixed Temperature (restorable)
  - Rate-of-Rise element rated at 15°F (–9.4°C) per minute (restorable)
  - Normally Open (NO) contacts
- Dual red LEDs for 360-degree visibility of alarm
- Functional testing method using heat detector/ sensor tester
- Open-area protection

Specifications

Heat Sensing Element	Thermistor
Detector Type	2- or 4-wire
Contacts	Normally Open (NO)
Nominal Rated Voltage	24 VDC
Rated Voltage 2-Wire	15 to 33 VDC
Rated Voltage 4-Wire	17.7 to 30 VDC
Maximum Voltage	42 VDC
Wave Form	Filtered DC, 5V ripple maximum
Supervisory Current	35µA at 24 VDC
Surge Current	160µA max. at 24 VDC
Maximum Allowable Current	150mA max. at 24 VDC
Minimum, Alarm Trip Current	6mA
Fixed Temperature Rating	135°F (57°C)
Rate-of-Rise Rating	15°F/min. (–9.4°C/min.)
Operating Temperature	14°F to 122°F (–10°C to 50°C)
Storage Temperature	–4°F to 140°F (–20°C to 60°C)
Response Temperature	135°F ±7.5°F
Open Area Protection	30 ft. spacing (assumes a flat, uninterrupted ceiling at a height not exceeding 15 ft./5m)
Mounting Junction Box	4 in. square, or 4 in. octagonal
Dimensions with Mounting Bracket	1.5 in. H x 4 in. OD (38 mm x 101 mm)
Weight	3.1 oz (0.1 kg)
Standards Compliance	NFPA Standard 72
UL	S2966
FM	Approved
State of California	7270-0410:0151

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Ordering Information

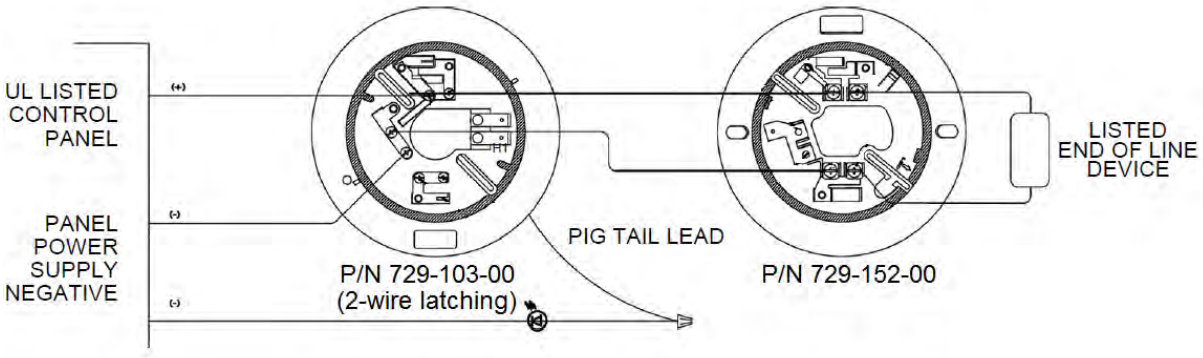
Part Number	Description
721-123-00	Heat Detector, combination 135°F Fixed Temperature (restorable) and 15°F/min. Rate-of-Rise (restorable), indoor, fully electronic with two LEDs, normally open contacts

Associated Parts

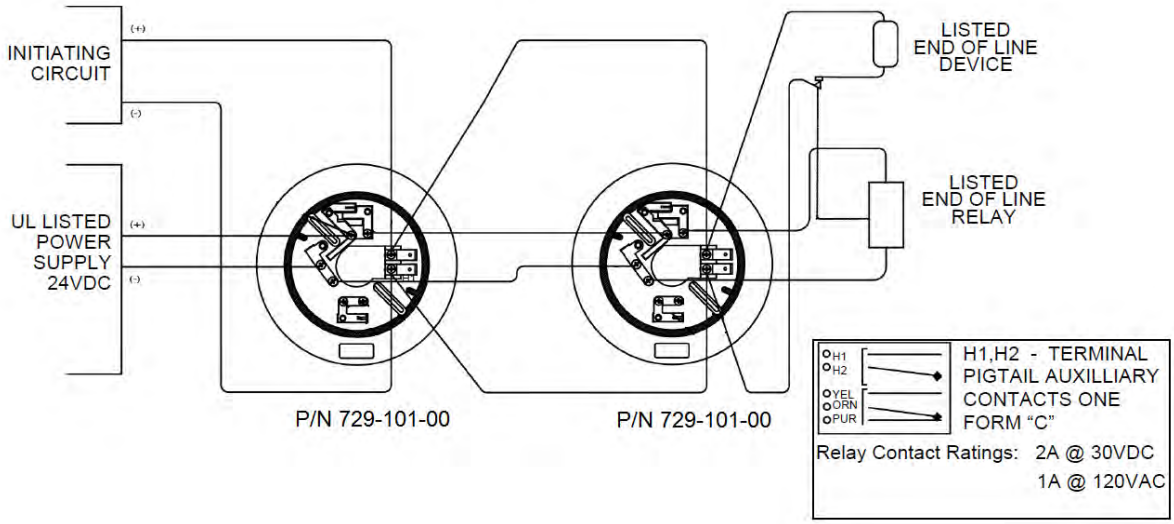
Part Number	Description
729-152-00	Heat Detector Base, Alarm Current 43mA (70mA @ 33V max), 2-wire, 6 in. diameter, resistor included, plastic tamper lock lug
729-101-00	Heat Detector Base, Alarm Current 43mA (58mA @ 30V max), 4-wire, 24 VDC, 6 in. diameter, current limited, plastic tamper lock lug
729-103-00	Heat Detector Base, Alarm Current 43mA (35–42mA @ 24V [54mA max]), 2-wire latching, 6 in. diameter, current limiting resistor

Drawings

2-Wire



4-Wire



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Heat Detector, 135°F Fixed Temperature/Rate Compensation

721-125-00

Specifications

Detector Type	Fixed Temperature Rate Compensation
Contacts	Normally Open (NO)
Contact Specs	6 to 125 VAC, 5A; 6 to 25 VDC, 1A; 125 VDC, 0.5A
Temperature Rating	135°F (57°C)
Open Area Protection	Maximum 2,500 square ft. (assumes a flat, uninterrupted ceiling at a height not exceeding 10 ft./3m)
Vertical Mounting	3.5 in. junction box, or 4 in. octagon junction box
Rod	0.5 in. (13 mm)
Dimensions	4.5 in. L x 3.5 in. W (114 mm x 89 mm)
Standards Compliance:	
ULC	S7619
State of California	7270-0067:0026

WARNING! For life-safety installations, smoke detectors must be used in lieu of, or in addition to, heat detectors.

Features

- Aluminum tubular shell Conventional heat detector
- Shock and corrosion resistant
- Responds only to heat
- 135°F Fixed Temperature/Rate Compensation
  - Slow rate of temperature rise
  - Rapid rate of temperature rise
  - Normally Open (NO) contacts
  - Restorable (control panel reset)
- Incandescent lamp illuminates when in alarm
  - Can also operate one remote indicating lamp (optional)

Ordering Information

Part Number	Description
721-125-00	Heat Detector, rate compensation 135°F Fixed Temperature (restorable), aluminum, 4-wire, contacts normally open, internal lamp

Associated Parts

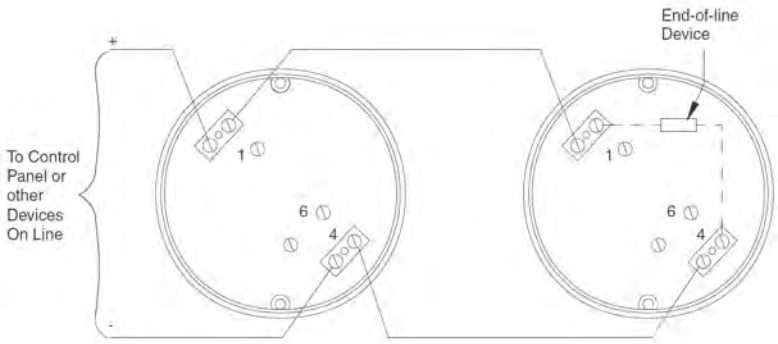
Part Number	Description
729-020-00	Adaptor Plate, white, 4 in. plastic box

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Drawings

Wiring Diagram

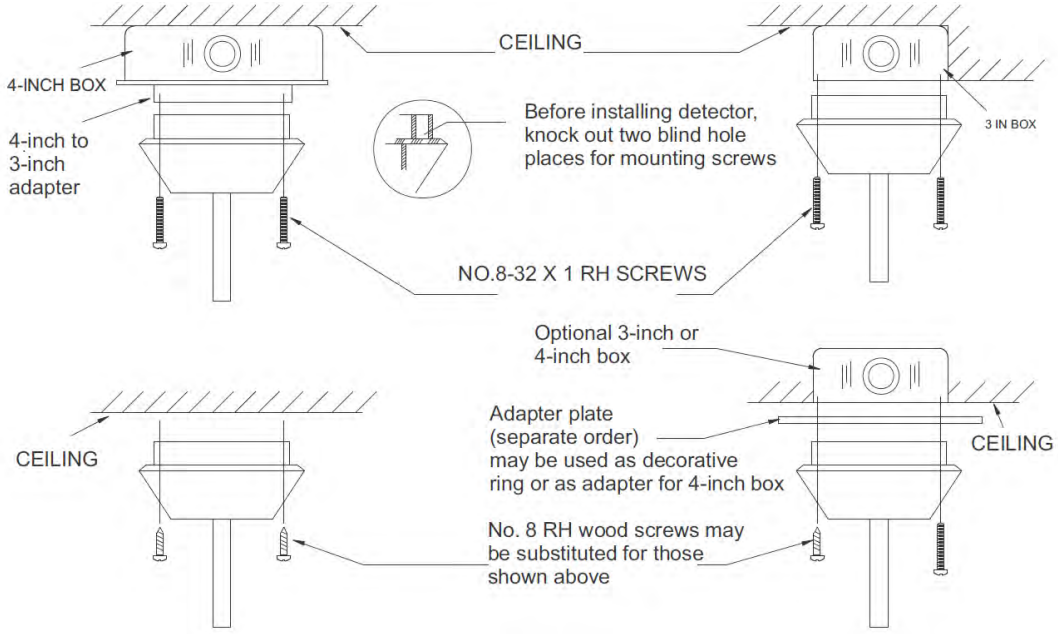


NOTES

Install this detector using #18 AWG thermoplastic wire housed in conduit, or limited energy cable where permitted by local codes

Must be connected to loop powered IDC circuit for internal incandescent light operation.

Mounting Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Conventional Detection Devices

Heat Detector, 135°F Fixed Temperature/Rate-of-Rise

721-127-00

WARNING! For life-safety installations, smoke detectors must be used in lieu of, or in addition to, heat detectors.

Features

- Plain housing, conventional heat detector
- Low profile lock-in-place design
- Reversible mounting bracket for flush- or surface-mount back box
- Fixed and Rate-of-Rise thermal detection
  - Detector alarm at 135°F fixed temperature (non-restorable); when the temperature rises, air within the sealed chamber expands faster than it can escape, depressing the diaphragm, and causing the electrical contact to close the circuit
  - Rate-of-Rise element rated at 15°F (–9.4°C) per minute (restorable); detector contacts close when the temperature rate is reached, causing a fire alarm sequence
  - Sensor testing at device with controlled heat source
  - Normally Open (NO) contacts
- Indicator drops from unit when alarm detector is activated for easy identification
- Detector has RTI rating for installation of ULTRA FAST and SPECIAL (respectively) in accordance with FM 3210
- Open-area protection

Specifications

Operating Voltage/ Contact Ratings (Resistive)	6 to 125 VAC / 3A 6 to 28 VDC / 1A 125 VDC / 0.3A 250 VDC / 0.1A
Detector Type	Single Circuit, mechanical
Contacts	Normally Open (NO)
Installation Temperature	100°F (38°C) max.
Shipping/Storage Temperature	122°F (50°C) max.
Fixed Temperature Rating	135°F (57°C)
Rate-of-Rise Rating	15°F/min. (–9.4°C/min.)
Relative Humidity	5% to 95% non-condensing
Open Area Protection	50 ft. spacing (assumes a flat, uninterrupted ceiling at a height not exceeding 10 ft./3m)
Input Wiring	14 to 22 AWG **NOTE** Required wire gauge based on voltage drop
Mounting (includes reversible mounting bracket)	Single gang back box, or 4 in. square (with plaster ring), or 3.5 in. octagonal back box, or 4 in. octagonal back box
Dimensions with Mounting Bracket	1.69 in. H x 4.57 in. OD (43 mm x 116 mm)
Weight	6 oz (170 g)
Standards Compliance:	
UL/ULC Listed	S2101
FM	Approved
State of California	7270-1653:0167

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

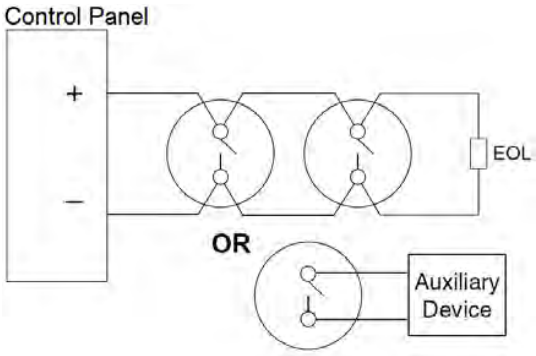
Conventional Detection Devices

Ordering Information

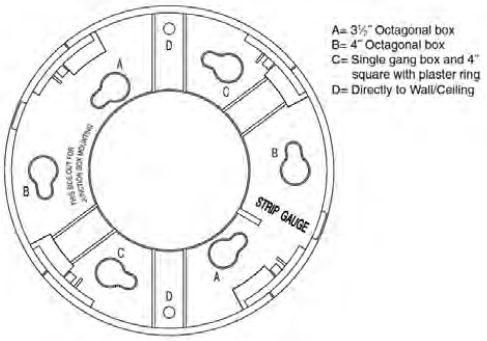
Part Number	Description
721-127-00	Heat Detector, combination 135°F Fixed Temperature (non-restorable) and 15°F/min. Rate-of-Rise (restorable), plain, single circuit, normally open contacts

Drawings

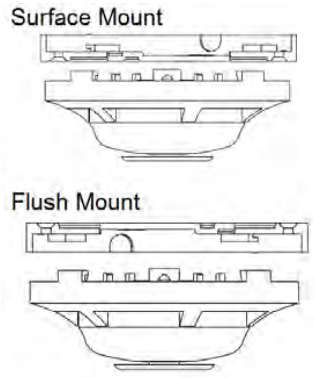
Wiring Diagram - Single Circuit



Reversible Mounting Bracket Mounting Locations



Mounting with Reversible Mounting Bracket



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Heat Detector, 135°F Fixed Temperature/Rate-of-Rise

721-128-00

WARNING! For life-safety installations, smoke detectors must be used instead of, or in addition to, mechanical heat detectors.

Features

- White housing conventional heat detector
- Low profile lock-in-place design
- Reversible mounting bracket for flush- or surface-mount back box
- 135°F Fixed and Rate-of-Rise thermal detection
  - Normally Open (NO) contacts
  - Fixed Temperature is non-restorable; when a fusible alloy reaches melting point, the spring action of a metal contact depresses the diaphragm, causing the electrical contact to close the circuit
  - Rate-of-Rise is restorable, rated at 15°F (–9.4°C) per minute (detector contacts close when temperature rate is reached causing fire alarm sequence)
- Indicator drops from unit when alarm detector is activated for easy identification
- Rate-of-Rise sensor testing at the device with controlled heat source
- Detector has RTI rating for installation of ULTRA FAST and SPECIAL (respectively) in accordance with FM 3210
- Open-area protection

Specifications

Operating Voltage/ Contact Ratings (Resistive)	6 to 125 VAC / 3A 6 to 28 VDC / 1A 125 VDC / 0.3A 250 VDC / 0.1A
Detector Type	Dual Circuit, mechanical
Contacts	Normally Open (NO)
Max. Installation Temperature	100°F (38°C)
Shipping/Storage Temperature	122°F (50°C) max.
Fixed Temperature Rating	135°F (57°C)
Rate-of-Rise Rating	15°F/min. (–9.4°C/min.)
Relative Humidity	5% to 95% non-condensing
Open Area Protection	50 ft. spacing (assumes a flat, uninterrupted ceiling at a height not exceeding 10 ft./3m)
Input Wiring	14 to22 AWG **NOTE** Required wire gauge based on voltage drop
Mounting (includes reversible mounting bracket)	Single gang back box, or 4 in. square (with plaster ring), or 3.5 in. octagonal back box, or 4 in. octagonal back box
Dimensions with Mounting Bracket	1.69 in. H x 4.57 in. OD (43 mm x 116 mm)
Weight	6 oz (170 g)
Standards Compliance	Listed to UL 521 and FM 3210
UL/ULC Listed	S2101/CS630
FM Approved	3016008
State of California	7270-1653:0167

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

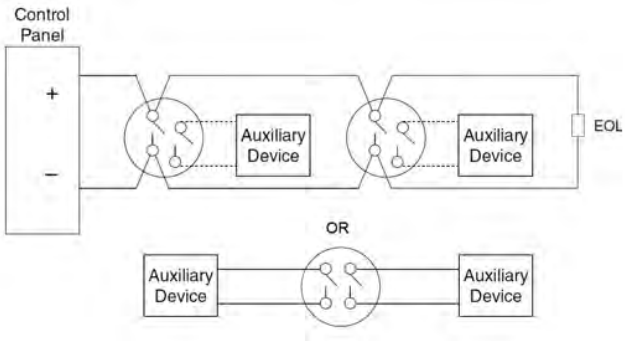
Conventional Detection Devices

Ordering Information

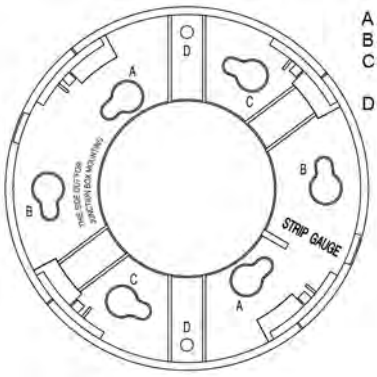
Part Number	Description
721-128-00	Heat Detector, combination 135°F Fixed Temperature (non-restorable) and 15°F/min. Rate-of-Rise (restorable), mechanical dual circuit

Drawings

Wiring Diagram - Dual Circuit



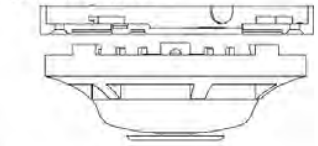
Reversible Mounting Bracket Mounting Locations



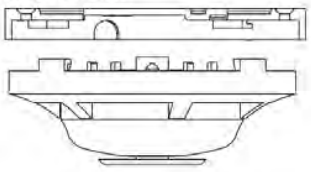
A = 3 1/2" Octagonal box
B = 4" Octagonal box
C = Single gang box and 4" square with plaster ring
D = Directly to Wall/Ceiling

Mounting with Reversible Mounting Bracket

Surface Mount



Flush Mount



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Heat Detector, 194° Fixed Temperature Rate Compensation

721-132-00

WARNING! For life-safety installations, smoke detectors must be used in lieu of, or in addition to, heat detectors.

Features

- Aluminum tubular shell Conventional heat detector
- Shock and corrosion resistant
- Tamper resistant
- Hermetically sealed
- Nonferrous
- 194°F Fixed Temperature Rate Compensation
  - Slow rate of temperature rise
  - Rapid rate of temperature rise
  - Restorable
  - Normally Open (NO) contacts
- Detector automatically resets when ambient temperature drops below rated temperature
- Detector should not respond to momentary temperature fluctuation of less than 50°F (10°C) per minute between 60°F (15.6°C) and 150°F (66°C)
- Two testing options
  - Controlled heat source test at the device, or
  - Sensitivity calibration test performed in a lab
- Detector has RTI rating for installation of V-FAST
- Open-area protection
- Weatherproof

Specifications

Operating Voltage/Current	6 to 125 VAC / 5A 6 to 25 VDC / 1A 125 VDC / 0.5A
Detector Type	Rate Compensation 4-wire Leads, Weatherproof
Contacts	Normally Open (NO)
Temperature Rating	194°F (90°C)
Min. Ambient Air Temperature	–40°F (–40°C)
Max. Ceiling Temperature	150°F to 155°F (66°C to 68°C)
Open Area Protection	Vertical 50 ft. spacing (UL) Vertical 30 ft. spacing (FM) Horizontal 40 ft. spacing (assumes a flat, uninterrupted ceiling at a height not exceeding 10 ft./3m)
Vertical or Horizontal Indoor Mounting	Has plastic hexagonal grip bushing with 0.5 in. conduit threads for attachment to threaded hub cover, tee conduit or any outlet box—hand tighten only
Dimensions with Mounting Bracket	4 in. L x 1 in. OD (105 mm x 51 mm)
Standards Compliance	NFPA Standard 72
UL Listed	S539
FM	Approved
State of California	7270-0021:0001
MEA Acceptance	193-03-E

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

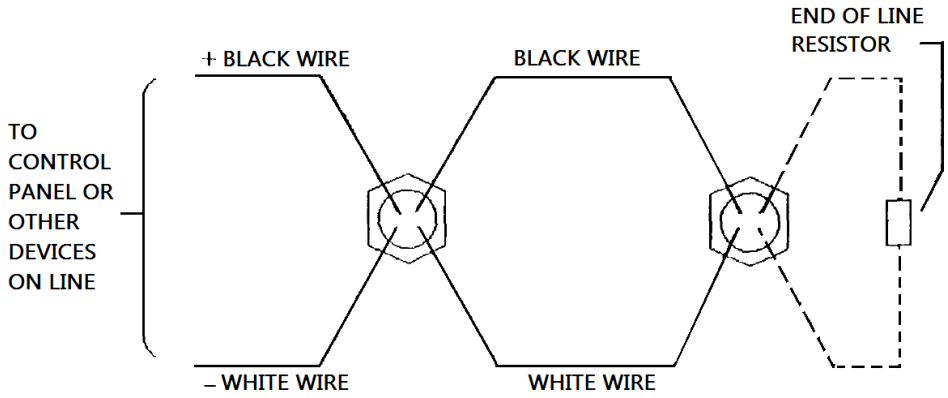
Detect Manage Record

Ordering Information

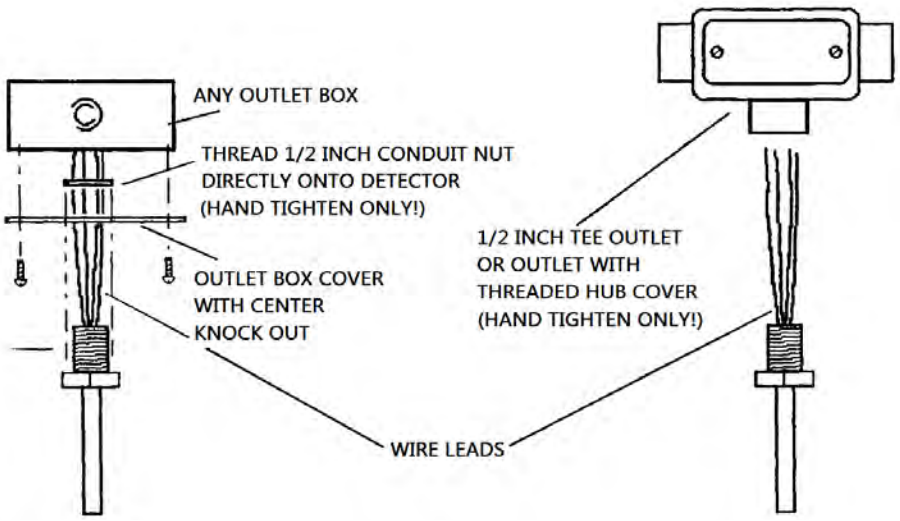
Part Number	Description
721-132-00	Heat Detector, rate compensation 194°F Fixed Temperature, restorable, aluminum with 4-wire leads, contacts normally open, weatherproof

Drawings

Wiring Diagram



Junction Box Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Heat Detector, 135° Fixed Temperature Rate Compensation

721-133-00

WARNING! For life-safety installations, smoke detectors must be used in lieu of, or in addition to, heat detectors.

Features

- Aluminum tubular shell Conventional heat detector
- Shock and corrosion resistant
- Tamper resistant
- Hermetically sealed
- Nonferrous
- 135°F Fixed Temperature Rate Compensation
  - Slow rate of temperature rise
  - Rapid rate of temperature rise
  - Normally Open (NO) contacts
  - Restorable
  - Detector automatically resets when ambient temperature drops below rated temperature
- Detector should not respond to momentary temperature fluctuation of less than 30°F (1.1°C) per minute between 60°F (15.6°C) and 100°F (38°C)
- Two testing options
  - Controlled heat source test at the device, or
  - Sensitivity calibration test performed in a lab
- Detector has RTI rating for installation of QUICK
- Open-area protection
- Weatherproof

Specifications

Operating Voltage/Current	6 to 125 VAC / 5A 6 to 25 VDC / 1A 125 VDC / 0.5A
Detector Type	Rate Compensation 4-Wire Leads, Weatherproof
Contacts	Normally Open (NO)
Temperature Rating	135°F (57°C)
Min. Ambient Air Temperature	–40°F (–40°C)
Max. Ceiling Temperature	115°F (46°C)
Open Area Protection	Vertical 50 ft. spacing (UL) Vertical 20 ft. spacing (FM) Horizontal 40 ft. spacing (assumes a flat, uninterrupted ceiling at a height not exceeding 10 ft./3m)
Vertical or Horizontal Indoor Mounting	Has plastic hexagonal grip bushing with 0.5 in. conduit threads for attachment to threaded hub cover, tee conduit or any outlet box — hand tighten only
Dimensions with Mounting Bracket	4 in. L x 1 in. OD (105 mm x 51 mm)
Standards Compliance	NFPA Standard 72
UL Listed	S539
FM	Approved
State of California	7270-0021:0001
MEA Acceptance	193-03-E

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

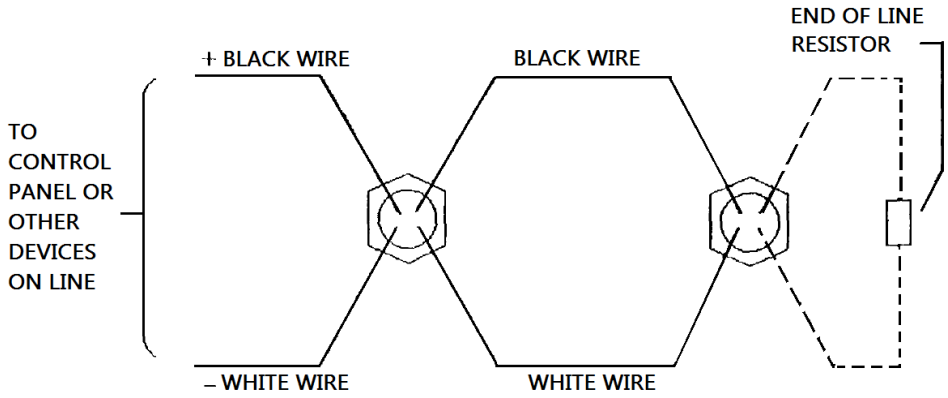
Detect Manage Record

Ordering Information

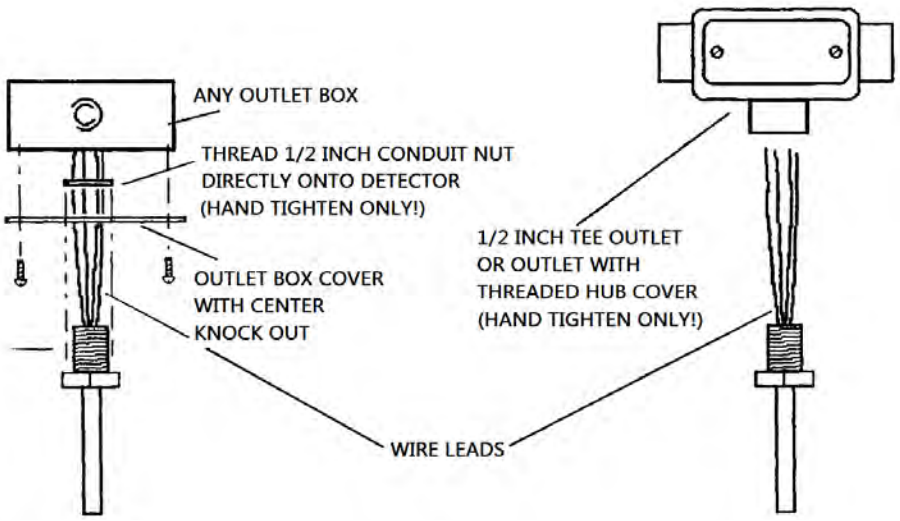
Part Number	Description
721-133-00	Heat Detector, rate compensation 135°F Fixed Temperature (restorable), aluminum with 4-wire leads, contacts normally open, weatherproof

Drawings

Wiring Diagram



Junction Box Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Conventional Detection Devices

Heat Detector, 190°F Fixed Temperature/Rate-of-Rise

721-404-00

WARNING! For life-safety installations, smoke detectors must be used in lieu of, or in addition to, heat detectors.

Features

- Off-white housing Conventional indoor heat detector
- Suitable for high heat output fire conditions
- Fully electronic operation
- Tamper resistant capability
- Fixed and Rate-of-Rise thermal detection
  - Detector alarm at 190°F Fixed Temperature (restorable)
  - Rate-of-Rise element rated at 15°F (–9.4°C) per minute (restorable)
  - Normally Open (NO) contacts
- Dual red LEDs for 360-degree visibility of alarm
- Functional testing method using heat detector/ sensor tester
- Open-area protection

Specifications

Heat Sensing Element	Thermistor
Detector Type	2- or 4-wire
Contacts	Normally Open (NO)
Nominal Rated Voltage	24 VDC
Rated Voltage 2-Wire	15 to 33 VDC
Rated Voltage 4 Wire	17.7 to 30 VDC
Maximum Voltage	42 VDC maximum
Wave Form	Filtered DC, 5V ripple maximum (when using 4-wire base full wave rectified AC can be used)
Supervisory Current	35µA at 24 VDC
Surge Current	160µA max. at 24 VDC
Maximum Allowable Current	150mA max. at 24 VDC
Minimum, Alarm Trip Current	6mA
Temperature Rating	190°F (88°C)
Rate-of-Rise Rating	15°F/min. (–9.4°C/min.)
Operating Temperature	14°F to 122°F (–10°C to 50°C)
Storage Temperature	–4°F to 140°F (–20°C to 60°C)
Response Temperature	190°F ±7.5°F
Open Area Protection	30 ft. spacing (assumes a flat, uninterrupted ceiling at a height not exceeding 15 ft./5 m)
Mounting Junction Box	4 in. square, or 3.5 in. octagonal, or 4 in. octagonal
Dimensions with Mounting Bracket	1.5 in. H x 4 in. OD (38.1 mm x 101.6 mm)
Weight	3.1 oz (0.1 kg)
Standards Compliance	NFPA Standard 72
UL	S2966
FM	Approved
State of California	7270-0410:0151

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Ordering Information

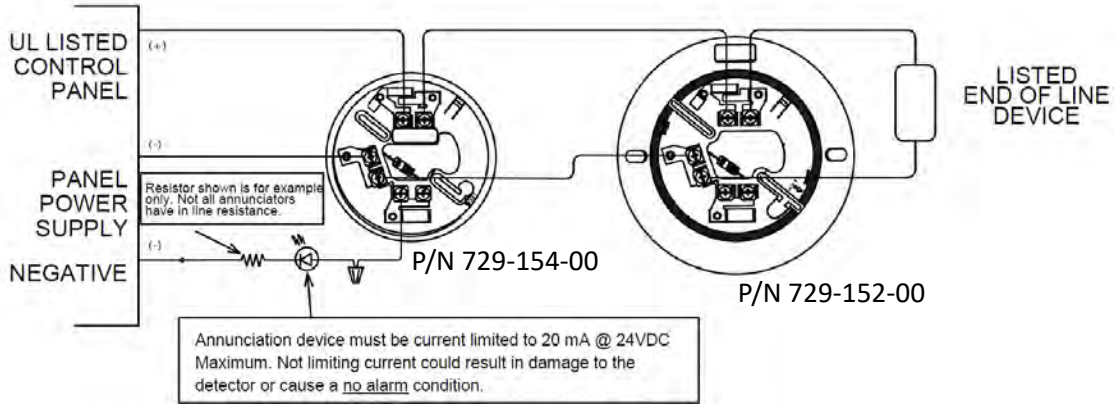
Part Number	Description
721-404-00	Heat Detector, combination 190°F Fixed Temperature (restorable) and 15°F/min. Rate-of-Rise (restorable), indoor, fully electronic with two LEDs, normally open contacts

Associated Parts

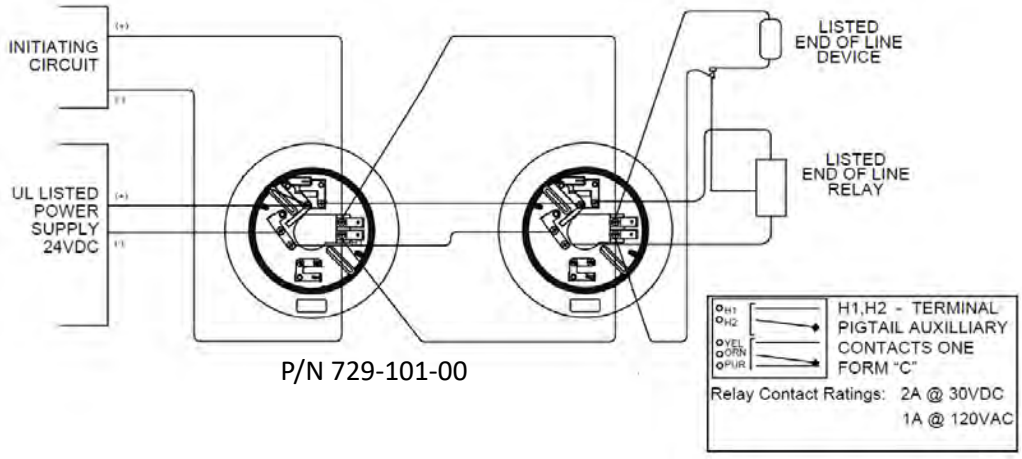
Part Number	Description
729-154-00	Heat Detector Base, Alarm Current 43mA (70mA @ 33V max), 2-Wire, 4 in. diameter, resistor included, plastic tamper lock lug
729-152-00	Heat Detector Base, Alarm Current 43mA (70mA @ 33V max), 2-Wire, 6 in. diameter, resistor included, plastic tamper lock lug
729-101-00	Heat Detector Base, Alarm Current 43mA (58mA @30V max), 4-Wire, 24 VDC, 6 in. diameter, current limited, plastic tamper lock lug

Drawings

2-Wire



4-Wire



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Heat Detector, 200°F Fixed Temperature/Rate Compensation

721-405-00

WARNING! For life-safety installations, smoke detectors must be used in lieu of, or in addition to, heat detectors.

Features

- Aluminum tubular shell Conventional heat detector
- Shock and corrosion resistant
- Responds only to heat
- 200°F Fixed Temperature/Rate Compensation
  - Slow rate of temperature rise
  - Rapid rate of temperature rise
  - Normally Open (NO) Contacts
  - Restorable (control panel reset)
- Incandescent lamp illuminates when in alarm
  - Can also operate one remote indicating lamp (optional)

Specifications

Detector Type	Fixed Temperature/Rate Compensation
Contacts	Normally Open (NO)
Contact Specs	6 to 125 VAC, 5A; 6 to 25 VDC, 1A; 125 VDC, 0.5A
Temperature Rating	200°F (93°C)
Open Area Protection	2,500 square ft. maximum (Assumes a flat, uninterrupted ceiling at a height not exceeding 10 ft./3 m)
Vertical Mounting	3 in. or 4 in. junction box
Rod	0.5 in. (13 mm) across
Dimensions	4.5 in. L x 3.5 in. W (114 mm x 89 mm)
Standards Compliance:	
ULC	S7619
State of California	7270-0067:0026

Ordering Information

Part Number	Description
721-405-00	Heat Detector, rate compensation 200°F Fixed Temperature (restorable), aluminum, 4-wire, contacts normally open, internal lamp

Associated Parts

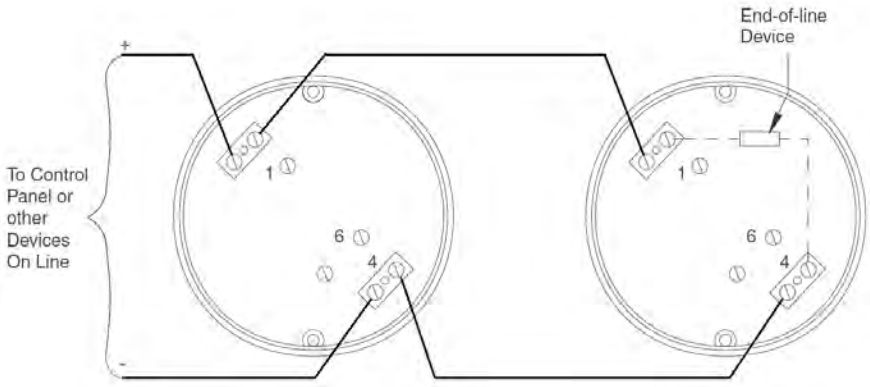
Part Number	Description
729-020-00	Adaptor Plate, white, 4 in. plastic box

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Drawings

Wiring Diagram

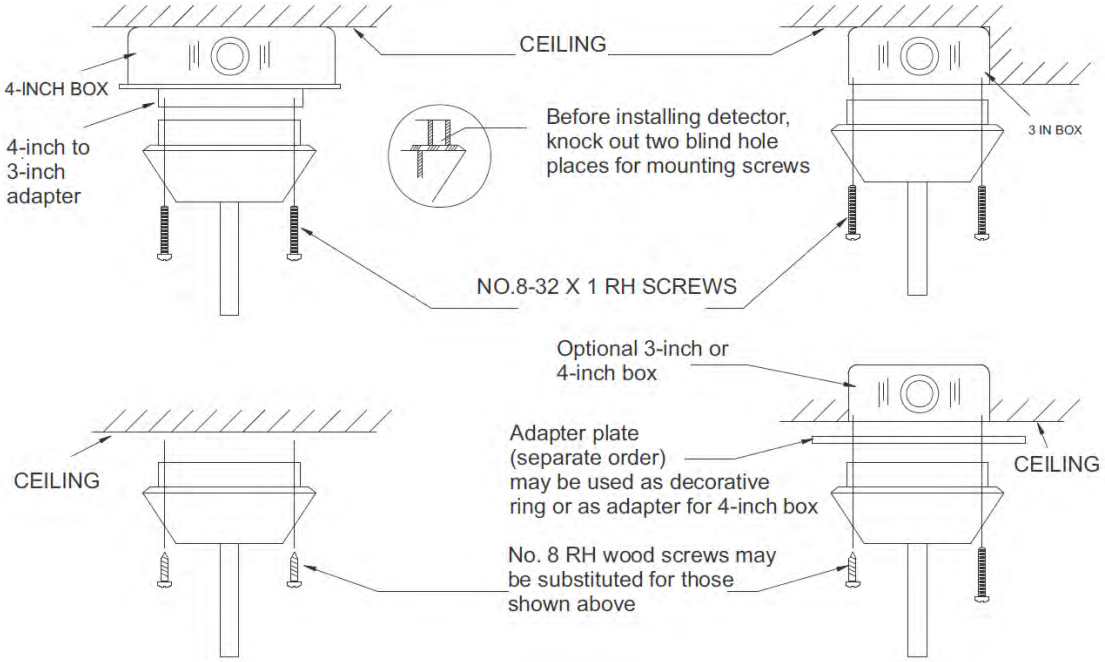


NOTES

Install this detector using #18 AWG thermoplastic wire housed in conduit, or limited energy cable where permitted by local codes

Must be connected to loop powered IDC circuit for internal incandescent light operation.

Mounting Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Conventional Detection Devices

Heat Detector, 194°F Fixed Temperature/Rate-of-Rise

721-407-00

WARNING! For life-safety installations, smoke detectors must be used in lieu of, or in addition to, heat detectors.

Features

- White housing Conventional indoor heat detector
- Low profile lock-in-place design
- Reversible mounting bracket for flush- or surface-mount back box
- Fixed Temperature/Rate-of-Rise thermal detection
  - Detector alarm at 194°F fixed temperature (non-restorable) (when the fusible alloy reaches its melting point, the spring action of a metal contact depresses the diaphragm causing the electrical contact to close the circuit)
  - Rate-of-Rise rated at 15°F (–9.4°C)/min., (restorable) (detector contacts close when temperature rate is reached causing fire alarm sequence)
  - Sensor testing at the device with controlled heat source
  - Normally open (NO) contacts
- Indicator drops from unit when alarm detector is activated for easy identification
- Open-area protection

Specifications

Operating Voltage/ Contact Ratings (Resistive)	6 to 125 VAC / 3A 6 to 28 VDC / 1A 125 VDC / 0.3A 250 VDC / 0.1A
Detector Type	Single Circuit, mechanical
Contacts	Normally Open (NO)
RTI Ratings	Fixed Temperature: SPECIAL Rate-of-Rise: ULTRA FAST
Installation Temperature	150°F (66°C) maximum
Shipping/Storage Temperature	122°F (50°C) maximum
Fixed Temperature Rating	194°F (90°C)
Rate-of-Rise Rating	15°F/min. (–9.4°C/min.)
Relative Humidity	5% to 95% non-condensing
Open Area Protection	50 ft. spacing (assumes a flat, uninterrupted ceiling at a height not exceeding 10 ft./3 m)
Input Wiring	14 to 22 AWG **NOTE** Required wire gauge based on voltage drop.
Mounting (includes reversible mounting bracket)	Single gang back box, or 4 in. square (with plaster ring), or 3.5 in. octagonal back box, or 4 in. octagonal back box
Dimensions with Mounting Bracket	1.69 in. H x 4.57 in. OD (43 mm x 116 mm)
Weight	6 oz (170 g)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

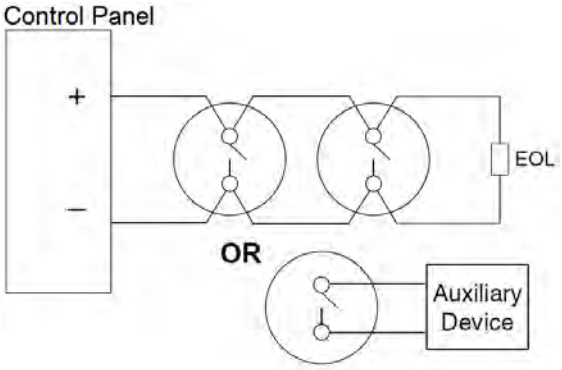
Standards Compliance: Listed to UL 521 and FM 3210
UL/ULC Listed S2101
FM Approved
State of California 7270-1653:0167

Order Information

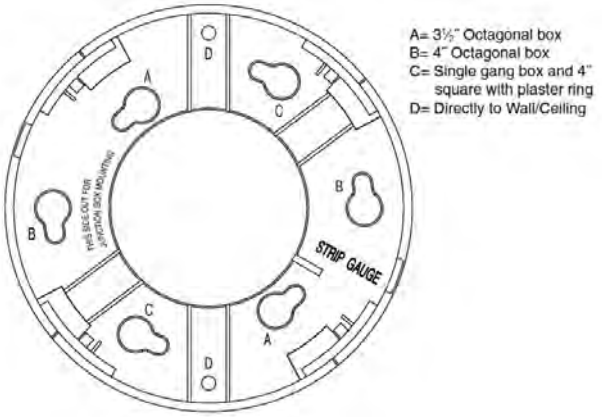
Part Number	Description
721-407-00	Heat Detector, combination 194°F Fixed Temperature (non-restorable) and 15°F/min. Rate-of-Rise (restorable), white, single circuit, normally open contacts

Drawings

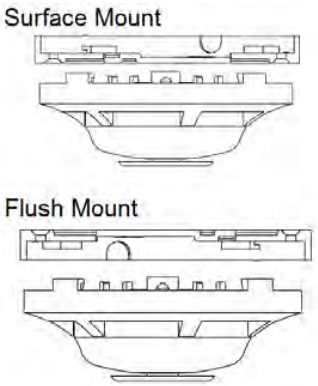
Wiring Diagram - Single Circuit



Reversible Mounting Bracket Mounting Locations



Mounting with Reversible Mounting Bracket



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Heat Detector, 194°F Fixed Temperature/Rate-of-Rise

721-408-00

WARNING! For life-safety installations, smoke detectors must be used instead of, or in addition to, mechanical heat detectors.

Features

- White housing Conventional heat detector
- Low profile lock-in-place design
- Reversible mounting bracket for flush- or surface-mount back box
- 194°F Fixed and Rate-of-Rise thermal detection
  - Normally Open (NO) contacts
  - Fixed Temperature is non-restorable (when a fusible alloy reaches melting point, the spring action of a metal contact depresses the diaphragm causing the electrical contact to close the circuit)
  - Rate-of-Rise is restorable, rated at 15°F (–9.4°C) per minute (detector contacts close when temperature rate is reached causing fire alarm sequence)
- Indicator drops from unit when alarm detector is activated for easy identification
- Rate-of-Rise sensor testing at the device with controlled heat source
- Detector has RTI rating for installation of ULTRA FAST and SPECIAL (respectively) in accordance with FM 3210
- Open-area protection

Specifications

Operating Voltage/ Contact Ratings (Resistive)	6 to 125 VAC / 3A 6 to 28 VDC / 1A 125 VDC / 0.3A 250 VDC / 0.1A
Detector Type	Dual Circuit, mechanical
Contacts	Normally Open (NO)
Installation Temperature	150°F (66°C) max.
Shipping/Storage Temperature	122°F (50°C) max.
Fixed Temperature Rating	194°F (90°C)
Rate-of-Rise Rating	15°F/min. (–9.4°C/min.)
Relative Humidity	5% to 95% non-condensing
Open Area Protection	50 ft. spacing (assumes a flat, uninterrupted ceiling at a height not exceeding 10 ft./3 m)
Input Wiring	14 to 22 AWG **NOTE** Required wire gauge based on voltage drop.
Mounting (includes reversible mounting bracket)	Single gang back box, or 4 in. square (with plaster ring), or 3.5 in. octagonal back box, or 4 in. octagonal back box
Dimensions with Mounting Bracket	1.69 in. H x 4.57 in. OD (43 mm x 116 mm)
Weight	6 oz (170 g)
Standards Compliance	Listed to UL 521 and FM 3210
UL/ULC Listed	S2101/CS630
FM Approved	3016008
State of California	7270-1653:0167

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

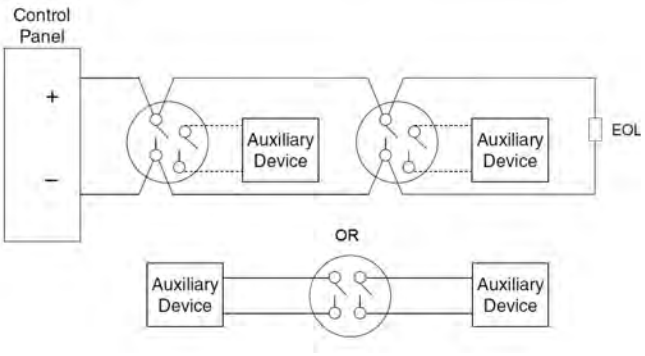
Conventional Detection Devices

Ordering Information

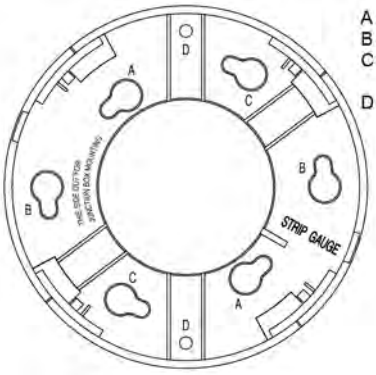
Part Number	Description
721-408-00	Heat Detector, combination 194°F Fixed Temperature (non-restorable) and 15°F/min. Rate-of-Rise (restorable), mechanical dual circuit

Drawings

Wiring Diagram - Dual Circuit



Reversible Mounting Bracket Mounting Locations

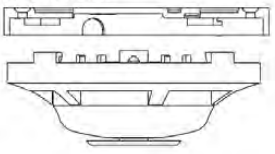


A = 3 1/2" Octagonal box
B = 4" Octagonal box
C = Single gang box and 4" square with plaster ring
D = Directly to Wall/Ceiling

Mounting with Reversible Mounting Bracket

Surface Mount

Flush Mount



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Heat Detector, 135°F Fixed Temperature

722-123-00

WARNING! For life-safety installations, smoke detectors must be used in lieu of, or in addition to, heat detectors.

Features

- White housing Conventional heat detector
- Low profile lock-in-place design
- Reversible mounting bracket for flush- or surface-mount back box
- Fixed thermal detection
  - Detector alarm at 135°F fixed temperature (non-restorable) (When the temperature rises, air within the sealed chamber expands faster than it can escape; the diaphragm depresses and the electrical contact closes the circuit)
- Indicator drops from unit when alarm detector is activated for easy identification
- Open-area protection

Specifications

Operating Voltage/ Contact Ratings (Resistive)	6 to 125 VAC / 3A 6 to 28 VDC / 1A 125 VDC / 0.3A 250 VDC / 0.1A
Detector Type	Single Circuit, mechanical
Contacts	Normally Open (NO)
RTI Rating	SPECIAL
Shipping/Storage Temperature	122°F (50°C) max.
Installation Temperature	100°F (38°C) max.
Alarm Fixed Temperature	135°F (57°C)
Relative Humidity	5% to 95% non-condensing
Open Area Protection	25 ft. spacing (assumes a flat, uninterrupted ceiling at a height not exceeding 10 ft./3m)
Input Wiring	14 to 22 AWG **NOTE** Required wire gauge based on voltage drop.
Mounting (includes reversible mounting bracket)	Single gang back box, or 4 in. square (with plaster ring), or 3.5 in. octagonal back box, or 4 in. octagonal back box
Dimensions with Mounting Bracket	1.69 in. H x 4.57 in. OD (43 mm x 116 mm)
Weight	6 oz (170 g)
Standards Compliance:	Listed to UL 521 and FM 3210
UL	S2101
FM	Approved
State of California	7270-1653:0167

Ordering Information

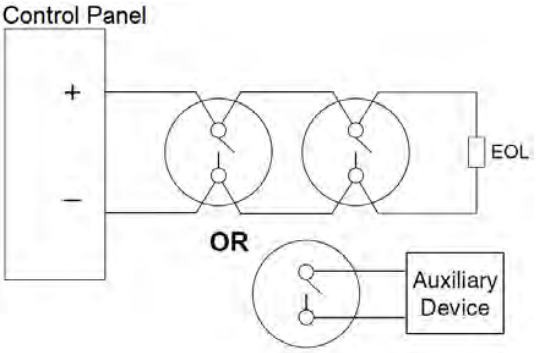
Part Number	Description
722-123-00	Heat Detector, 135°F Fixed Temperature (non-restorable), white, single circuit, normally open contacts

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

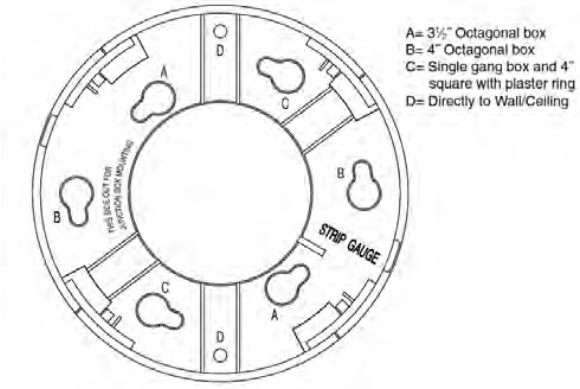
Detect Manage Record

Drawings

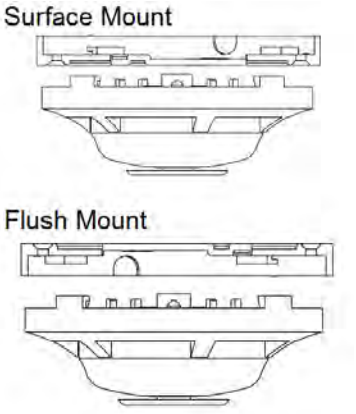
Wiring Diagram - Single Circuit



Reversible Mounting Bracket Mounting Locations



Mounting with Reversible Mounting Bracket



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Heat Detector
722-125-00, 722-409-00

Description

These dual-circuit heat detectors, with fixed temperature detection, protect property where smoke detection is not practical or appropriate.

When the rated heat level melts a fusible alloy, the spring-action metal contact it is holding closes the circuit and depresses a diaphragm that protrudes the visual alarm indicator. This element cannot be reset and therefore cannot be tested.

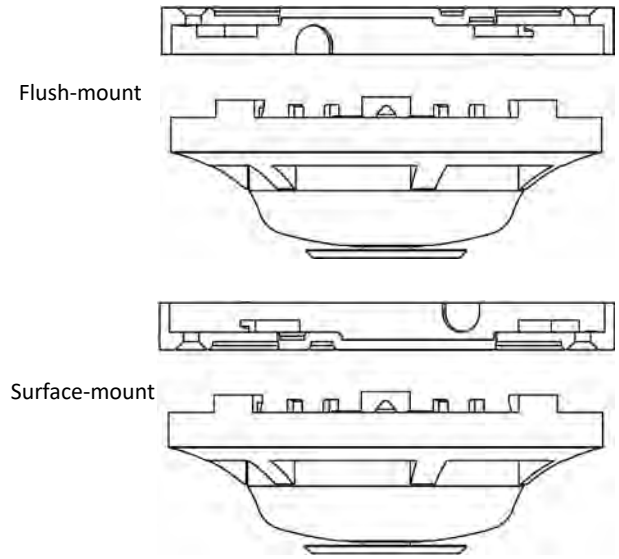
WARNING! For life-safety installations smoke detectors must be used in lieu of, or in addition to, mechanical heat detectors.

Specifications

Operating Voltage/ Contact Ratings (Resistive)	6 to 125 VAC, 3A 6 to 28 VDC, 1A 125 VDC, 0.3A 250 VDC, 0.1A
Wiring	14 to 22 AWG
Installation Temperature	P/N 722-125-00: 100°F (37.8°C) max. P/N 722-409-00: 150°F (65.6°C) max.
Fixed Alarm Temperature	P/N 722-125-00: 135°F (57.2°C) P/N 722-409-00: 194°F (90°C)
Relative Humidity	5% to 95% non-condensing
Dimensions (with Mount Bracket)	1.69 in. H x 4.57 in. OD (4.3 cm x 11.6 cm)
Weight	6 oz (170 g)
RTI Classification	Special

Mounting Options

- Single gang J box
- Octagonal, 3.5 in. or 4 in. J box
- Square 4 in. J box, with plaster ring
- Mounting bracket is reversible.



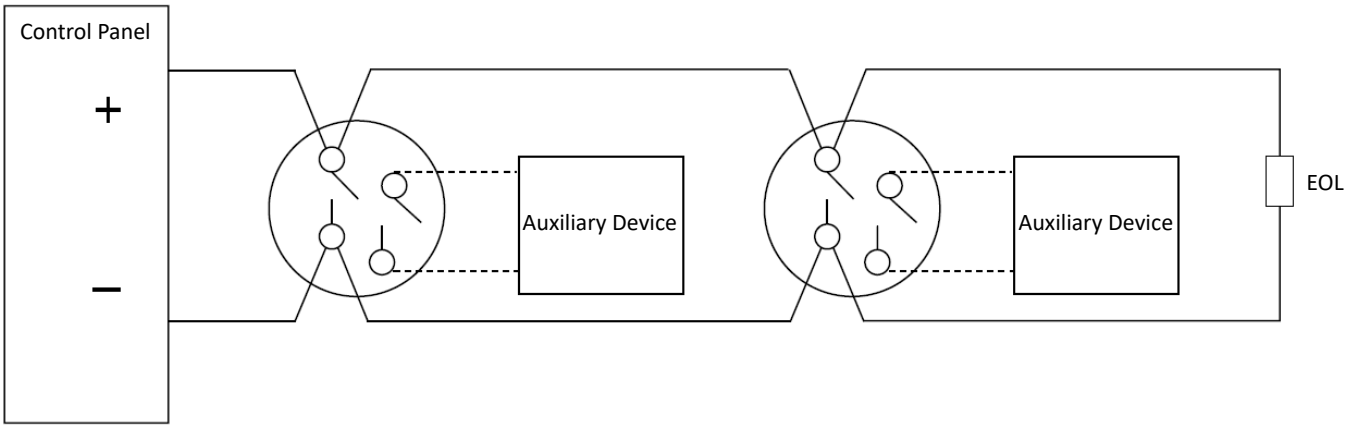
Ordering Information

Part Number	Description
722-125-00	Conventional heat detector, 2-wire, mechanical dual circuit, fixed-temperature 135°F
722-409-00	Conventional heat detector, 2-wire, mechanical dual circuit, fixed-temperature 194°F

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Conventional Detection Devices

Heat Detector 135°F Fixed Temperature

722-127-00

WARNING! For life-safety installations, smoke detectors must be used in lieu of, or in addition to, heat detectors.

Features

- Cast aluminum housing Conventional heat detector
- Low profile mounting flexibility with screw terminals
- 135°F Fixed Temperature Detector Alarm (spring-loaded plunger held in place by eutectic solder that will fuse at specified temperature [non-restorable])
- Two sets of Normally Open (NO) contacts
- Open-area protection

Specifications

Contact Electrical Rating	3A at 125 VAC 1A at 28 VDC 0.3A at 125 VDC 0.1A at 250 VDC
Detector Type	Dual Circuit
Contacts	Normally Open (NO)
Installation Temperature	100°F (38°C) maximum
Operating Temperature	–20°F to 250°F (–29°C to 121°C)
Release Temperature Rating:	Non-restorable, 135°F (57°C)
Fin Dot Color	Black
Input Wiring	18 AWG minimum
Mounting	Mounting plate fits standard octagon box (mounting holes on 3.5 in. centers)
Dimensions with Mounting Bracket	2 in. H x 5.25 in. OD (51 mm x 133 mm)
Weight	0.41 lb (0.19 kg)
Shipping Weight	0.6 lb (0.3 kg)
Standards Compliance	Listed to UL 521, ULC S531
UL/ULC Listed	S2406
State of California	7270-1110:0100

Ordering Information

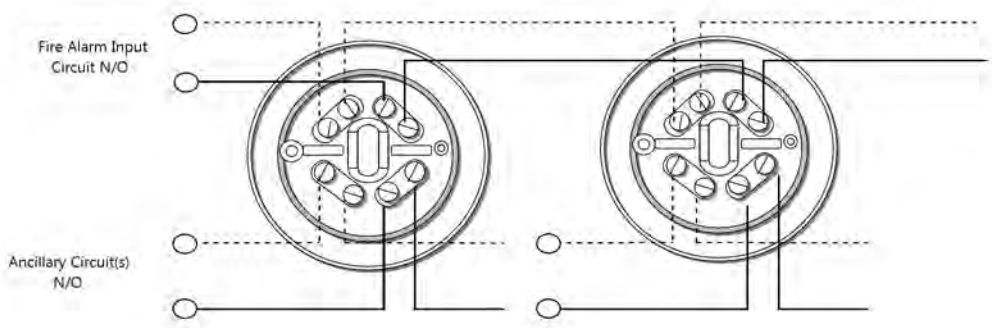
Part Number	Description
722-127-00	Heat Detector, 135°F Fixed Temperature non-restorable, aluminum, two sets of normally open contacts

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Drawings

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Conventional Detection Devices

Heat Detector, 194°F Fixed Temperature

722-408-00

WARNING! For life-safety installations, smoke detectors must be used in lieu of, or in addition to, heat detectors.

Features

- White conventional heat detector
- Low profile lock-in-place design
- Reversible mounting bracket for flush- or surface-mount back box
- Fixed thermal detection, alarm at 194°F (non-restorable)
- Indicator drops from unit when alarm detector is activated for easy identification
- Open-area protection

Specifications

Operating Voltage/ Contact Ratings (Resistive)	6 to 125 VAC / 3A 6 to 28 VDC / 1A 125 VDC / 0.3A 250 VDC / 0.1A
Detector Type	Single Circuit, Mechanical
Contacts	Normally Open (NO)
RTI Rating	SPECIAL
Shipping/Storage Temperature	122°F (50°C) maximum
Installation Temperature	150°F (65.6°C) maximum
Alarm Fixed Temperature	194°F (90°C)
Relative Humidity	5% to 95%, non-condensing
Open Area Protection	25 ft. spacing (assumes a flat, uninterrupted ceiling at a height not exceeding 10 ft./3 m)
Input Wiring	14 to 22 AWG **NOTE** Required wire gauge based on voltage drop.
Mounting (with mounting bracket)	Single-gang back box, or 4 in. square (with plaster ring), or 3.5 in. octagonal back box, or 4 in. octagonal back box
Dimensions with Mounting Bracket	1.69 in. H x 4.57 in. OD (4.3 cm x 11.6 cm)
Weight	6 oz (0.17 kg)
Standards Compliance:	
UL Listed	UL521, File S2101
FM Approval	FM 3210, File 3016008
State of California	7270-1653:0167

Ordering Information

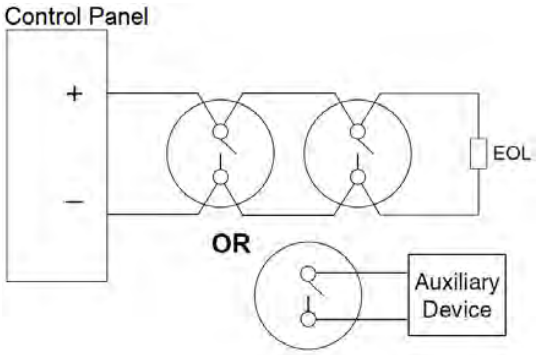
Part Number	Description
722-408-00	Heat Detector, 194°F Fixed Temperature (non-restorable), white, single circuit, NO contacts

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

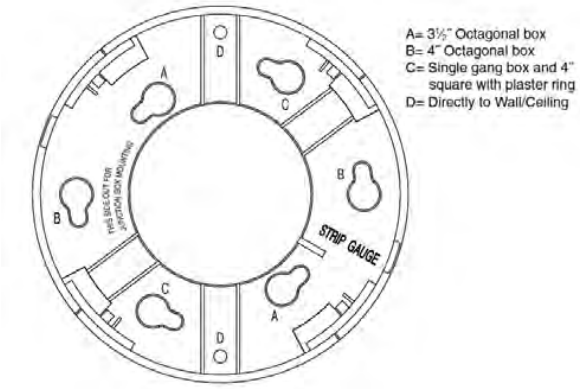
Detect Manage Record

Drawings

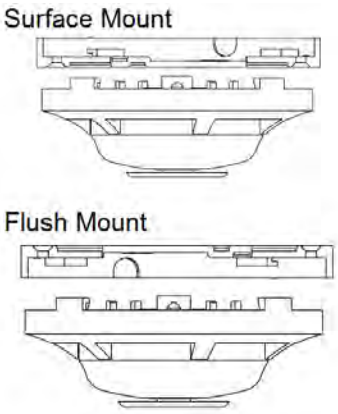
Wiring Diagram - Single Circuit



Reversible Mounting Bracket Mounting Locations



Mounting with Reversible Mounting Bracket



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices Catalog Section 10

Duct Detectors

Duct Smoke Detector, Photoelectric 723-367-00
Duct Smoke Detector. 723-368-00
Duct Smoke Detector, Photoelectric 723-369-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Duct Smoke Detector, Photoelectric

723-367-00

Description

This 4-wire, photoelectric, air-duct smoke detector has a UL listed, watertight, NEMA 4 enclosure providing protection against falling dirt, rain, windblown dust, splashing, and hose-directed water.

MSFM approved

A pivoting housing that fits both square and rectangular footprints mounts to round or rectangular ductwork. The detector also can be mounted to rooftop HVAC equipment or used in other harsh environments. Built-in short-circuit protection guards the unit from wiring errors during installation.

Up to 50 detectors can be interconnected. When one unit senses smoke and goes into alarm, the others will automatically switch their relays to avoid duplicating the same alarm. This allows a system operator to immediately determine the fire's location. The detector's test/reset button is accessible without removing the cover plate, and certain functions can be configured in the field with three DIP switches (cover tamper delay, number of sensors controlled, and shutdown on trouble).

Two form C relay contacts provide reliable performance for the management of fans, blowers, and air conditioning systems.

WARNING! Per NFPA, duct detectors must not be used as a substitute for open area detector protection as a means of life safety. Nor are they a substitute for early warning in the regular fire detection system.

Features

- UV-resistant housing and cover material
- Multifan shutdown
- Telescopic sampling tube installs from front or back
- Plug-in sensor helps eliminate false alarms

Specifications

Power Supply Voltage	24 VDC (20 to 29 VDC) 24 VAC, 50/60 Hz 120 VAC, 50/60 Hz
Maximum Standby Current	24 VDC: 21 mA 24 VAC: 65 mA RMS (60 Hz) 120 VAC: 20 mA RMS (60 Hz)
Maximum Alarm Current	24 VDC: 65 mA 24 VAC: 135 mA RMS (60 Hz) 120 VAC: 35 mA RMS (60 Hz)
Reset Voltage	3 VDC at 24 VDC input 2 VAC at 24 VAC input 10 VAC at 120 VAC input
Signal Wiring	18 AWG, single conductor recommended
Alarm Response Time	15 seconds
Reset Time	Remote test station: 0.03 to 0.3 seconds Power down: 0.6 seconds maximum
Power-up Time	35 seconds maximum
Air Velocity	100 to 4,000 fpm (0.5 to 20.32 m/second)
Operating Temperature	–4°F to 158°F (–20°C to 70°C)
Relative Humidity	0% to 95% non-condensing
Dimensions	Rectangular: 14.38 in. L x 5 in. W x 2.5 in. D (37 cm x 12.7 cm x 6.36 cm) Square: 7.75 in. L x 9 in. W x 2.5 in. D (19.7 cm x 22.9 cm x 6.35 cm)
Weight	2.5 lb (1.14 kg)

NOTES

1. Load of combined accessories: ≤110 mA (aux. output); ≤50 mA (alarm output).
2. To maintain NEMA 4 rating, watertight conduit and fittings must be used.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Ordering Information

Duct Smoke Detector

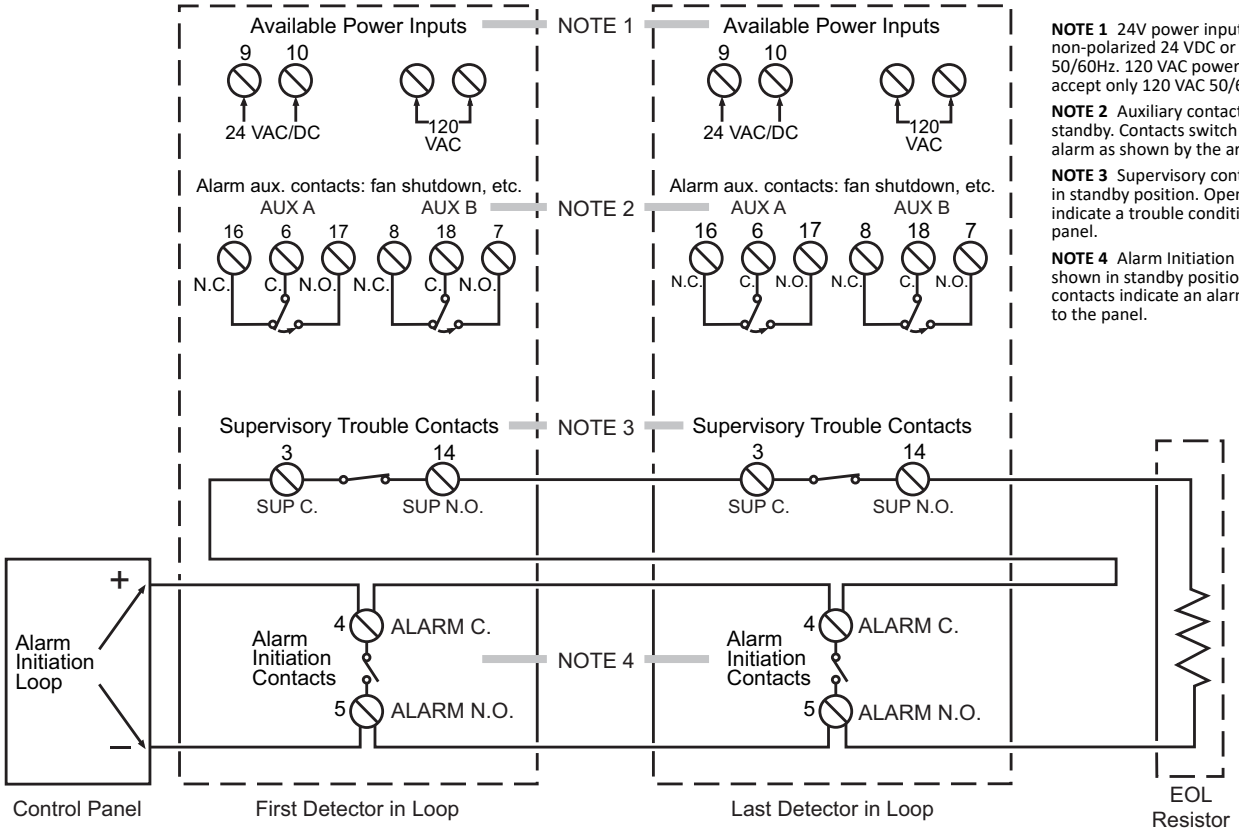
Part Number	Description
723-367-00	Conventional Duct Smoke Detector, photoelectric, 24 VDC/VAC, 120 VAC, 4-wire, NEMA 4

Associated Parts

Part Number	Description
723-372-00	Conventional Duct Smoke Detector, photoelectric replacement head, 4-wire
729-205-00	Duct Smoke Detector, Sampling Tube, 1 to 2 ft.
729-205-01	Duct Smoke Detector, Sampling Tube, 2 to 4 ft.
729-205-02	Duct Smoke Detector, Sampling Tube, 4 to 8 ft.
729-205-03	Duct Smoke Detector, Sampling Tube, 8 to 12 ft.
729-108-00	Remote Test Station with LED for duct or beam smoke detector; requires test coil P/N 729-206-00
729-138-00	Remote Test Station with LED and Key for duct or beam smoke detectors; requires test coil P/N 729-206-00
729-091-00	Remote, Red LED Annunciator, fits standard single-gang electrical box (not included)
729-156-00	Test Magnet with 32-in. telescoping handle

NOTE Detector can be used with the Monaco Analog Addressable Panel (MAAP). Contact Monaco's Product Support Group.

Wiring Diagram



NOTE 1 24V power inputs accept a non-polarized 24 VDC or 24 VAC 50/60Hz. 120 VAC power inputs accept only 120 VAC 50/60 Hz.

NOTE 2 Auxiliary contacts shown in standby. Contacts switch during alarm as shown by the arrows.

NOTE 3 Supervisory contacts shown in standby position. Open contacts indicate a trouble condition to the panel.

NOTE 4 Alarm Initiation contacts shown in standby position. Closed contacts indicate an alarm condition to the panel.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

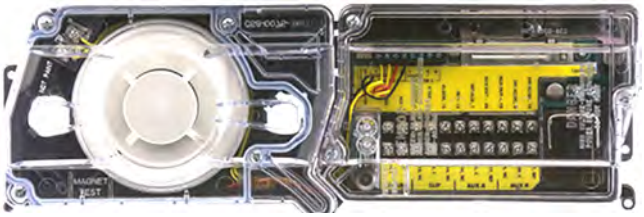
Detect Manage Record

Conventional Detection Devices

Duct Smoke Detector
723-368-00

Description

This 4-wire photoelectric duct smoke detector features a pivoting housing that fits both square and rectangular footprints and mounts to round or rectangular ductwork. It is easy to install, test, and maintain.



Up to 50 of these detectors can be interconnected. When one unit senses smoke and goes into alarm, the others automatically switch their relays to avoid duplicating the same alarm. This allows a system operator to immediately determine the fire's location.

The detector's test/reset button is accessible without removing the cover plate. Certain functions can be configured in the field via three DIP switches: cover tamper delay, number of sensors controlled, and shut-down on trouble. Each power board has two LEDs to indicate the status of connected sensors and a quick reference on the cover to explain LED indications (standby, maintenance, trouble, and alarm).

WARNING! Duct smoke detectors are NOT a substitute for open-area smoke detectors; NOT a substitute for early warning detection; NOT a replacement for a building's regular fire detection system. Refer to NFPA Standards 72 and 90A for additional information.

NOTE Detector can be used with Monaco's Analog Addressable Fire Alarm Control Panel (FACP). For more information, contact Monaco's Product Support Group.

NOTE Monaco recommends installing a Current In-rush Limiter (P/N 176-257-00) on a duct detector circuit with two or more detectors connected to AUX Power of an M-series Fire Alarm Control Panel (FACP). Do NOT connect more than seven duct detectors through the limiter.

Features

- Square or rectangular mounting options
- Multifan shutdown
- Telescopic sampling tube installs from front or back of the detector
- Built-in short-circuit protection from wiring errors
- Two Double Pole Double Throw (DPDT) Form C relays manage fans, blowers, and air-conditioning systems
- Built-in test/reset button
- Outside mounting tabs
- Field-selectable configuration settings
- Plug-in sensor assists in eliminating false alarms (sold separately)

Specifications

Operating Voltage	20 to 29 VDC 24/120 VAC, 50 to 60 Hz
Max. Standby Current	21 mA at 24 VDC 65 mA RMS at 24 VAC, 60 Hz 20 mA RMS at 120 VAC, 60 Hz
Max. Alarm Current	65 mA at 24 VDC 135 mA RMS at 24 VAC, 60 Hz 35 mA RMS at 120 VAC, 60 Hz
Contact Ratings	Alarm Initiation Contacts (SPST): 2A at 30 VDC (resistive) Alarm Auxiliary Contacts (DPDT): 10A at 30 VDC (resistive) 10A at 250 VAC (resistive) Supervisory Contacts (SPDT): 2A at 30 VDC (resistive) 2A at 125 VAC (resistive)
Air Velocity	100 to 4,000 fpm (0.5 to 20.3 m/second)
Input Wiring	12 to 18 AWG
Reset Time (Power Down)	0.6 seconds maximum
Start-Up Time	35 seconds maximum
Alarm Response Time	15 seconds
Remote Test Station Current Drain	P/Ns 729-108-00 and 729-138-00: 0 mA in Standby; 12 mA in Alarm
Operating Temperature	–4°F to 158°F (–20°C to 70°C)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Relative Humidity	0% to 95% non-condensing
Dimensions	Rectangular: 14.38 in. L x 5 in. W x 2.5 in. D (37 cm x 12.7 cm x 6.35 cm) Square: 7.75 in. L x 9 in. W x 2.5 in. D (19.7 cm x 22.9 cm x 6.35 cm)
Weight	2.5 lb (1.14 kg)
Standards Compliance:	
UL Listed	UL268, File S911
FM Approved	3033744
State of California	3242-1653:0207

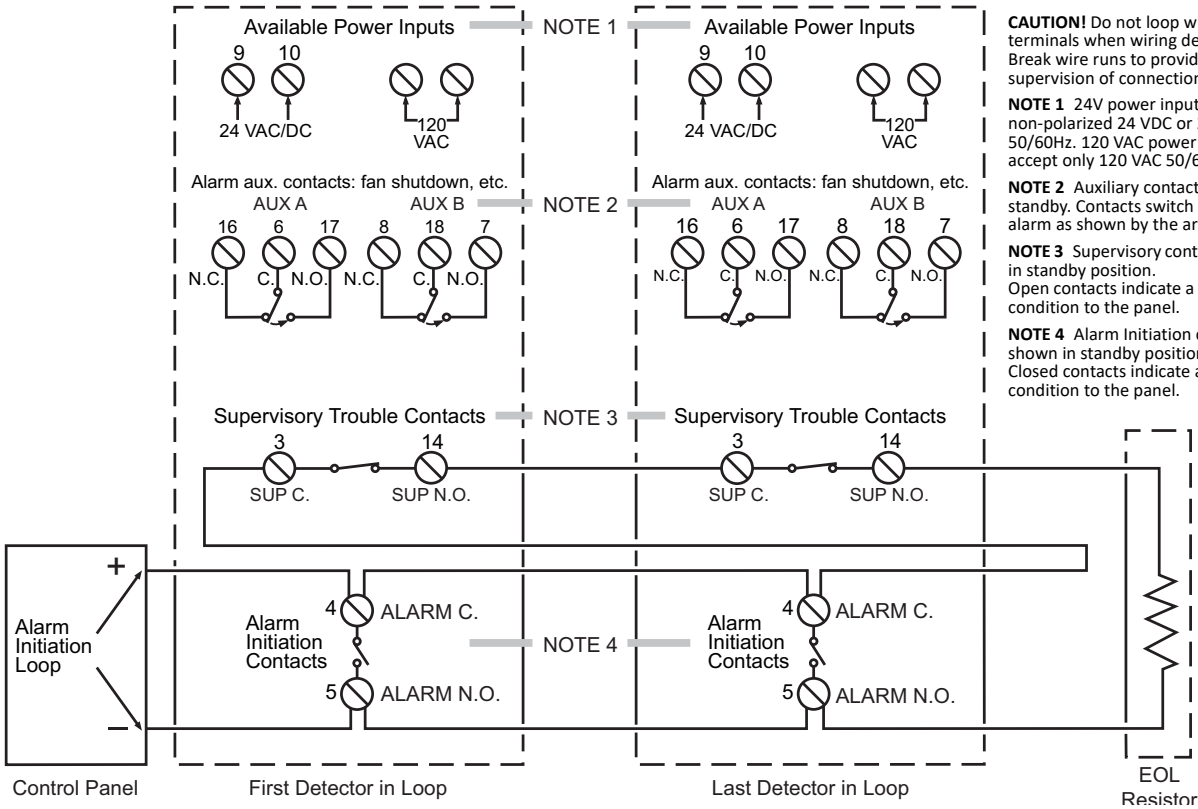
Ordering Information

Part Number	Description
723-368-00	Duct Smoke Detector, photoelectric, 24 VDC, 24/120 VAC, 4-wire

Associated Parts

Part Number	Description
723-372-00	Conventional duct smoke detector, photoelectric replacement head, 4-wire
729-205-00	Duct Smoke Detector, Sampling Tube, 1 to 2 ft.
729-205-01	Duct Smoke Detector, Sampling Tube, 2 to 4 ft.
729-205-02	Duct Smoke Detector, Sampling Tube, 4 to 8 ft.
729-205-03	Duct Smoke Detector, Sampling Tube, 8 to 12 ft.
729-108-00	Remote Test Station with LED for duct or beam smoke detector; requires test coil P/N 729-206-00
729-138-00	Remote Test Station with LED and Key for duct or beam smoke detectors; requires test coil P/N 729-206-00
176-257-00	Current In-rush Limiter, ≤2.5A DC
729-156-00	Test Magnet with 32-in. telescoping handle

Wiring Diagram



CAUTION! Do not loop wire under terminals when wiring detectors. Break wire runs to provide system supervision of connections.

NOTE 1 24V power inputs accept a non-polarized 24 VDC or 24 VAC 50/60Hz. 120 VAC power inputs accept only 120 VAC 50/60 Hz.

NOTE 2 Auxiliary contacts shown in standby. Contacts switch during alarm as shown by the arrows.

NOTE 3 Supervisory contacts shown in standby position. Open contacts indicate a trouble condition to the panel.

NOTE 4 Alarm Initiation contacts shown in standby position. Closed contacts indicate an alarm condition to the panel.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Duct Smoke Detector, Photoelectric
723-369-00

Description

The detector contains a plug-in sensor head that limits false alarm conditions, and has broad operating temperature and humidity ranges. The detector senses airflow speeds in a range of 100–4000 fpm.

Mounting is available for round or rectangular duct work. Detector maintenance is simplified with the addition of a 3/4-in. conduit knockout and the ability to replace sampling tubes through the front or back of the unit.

The detector can be tested remotely and will provide notification when the unit's cover is tampered or improperly installed.

WARNING! Duct smoke detectors are NOT a substitute for open-area smoke detectors; NOT a substitute for early-warning detection; NOT a replacement for a building's regular fire detection system. Refer to NFPA 72 and 90A for additional information.

Features

- Square or rectangular mounting options
- Plug-in sensor
- Sampling tube installs from the front or the back of the detector with no tools required
- Tamper feature indicates a trouble condition for a removed or improperly installed detector cover
- Remote test capability
- Improved LED status
- Designed to prevent false alarms

Specifications

Power Supply	8.5–35 VDC
Input Capacitance	0.1 µF maximum
Peak Standby Current	120 µA
Average Standby Current	60 µA
Max. Alarm Current	130 mA
Reset Voltage	2.5 VDC minimum
Reset Time (Power Down)	0.3 seconds maximum
Power-up Time	35 seconds maximum
Air Duct Velocity	100 to 4,000 fpm (0.5–20.32 m/second)
Alarm Response Time	15 seconds
Operating Temperature	–4°F to 158°F (–20°C to 70°C)
Relative Humidity	0% to 93% non-condensing
Dimensions	Rectangular: 14.38 in. L x 5 in. W x 2.5 in. D (37 cm x 12.7 cm x 6.36 cm) Square: 7.75 in. L x 9 in. W x 2.5 in. D (19.7 cm x 22.9 cm x 6.36 cm)
Weight	1.8 lb

Ordering Information

Part Number	Description
723-369-00*	Duct Smoke Detector, includes photoelectric low profile detector, 24V, 2-wire
***Requires duct smoke sample tube.**	

Associated Parts

Part Number	Description
723-002-00	Conventional Duct Smoke Detector, photoelectric, low profile, 2-wire/4-wire (replacement spare part)
729-205-00	Duct Smoke Detector, sampling tube, 1 to 2 ft.
729-205-01	Duct Smoke Detector, sampling tube, 2 to 4 ft.
729-205-02	Duct Smoke Detector, sampling tube, 4 to 8 ft.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

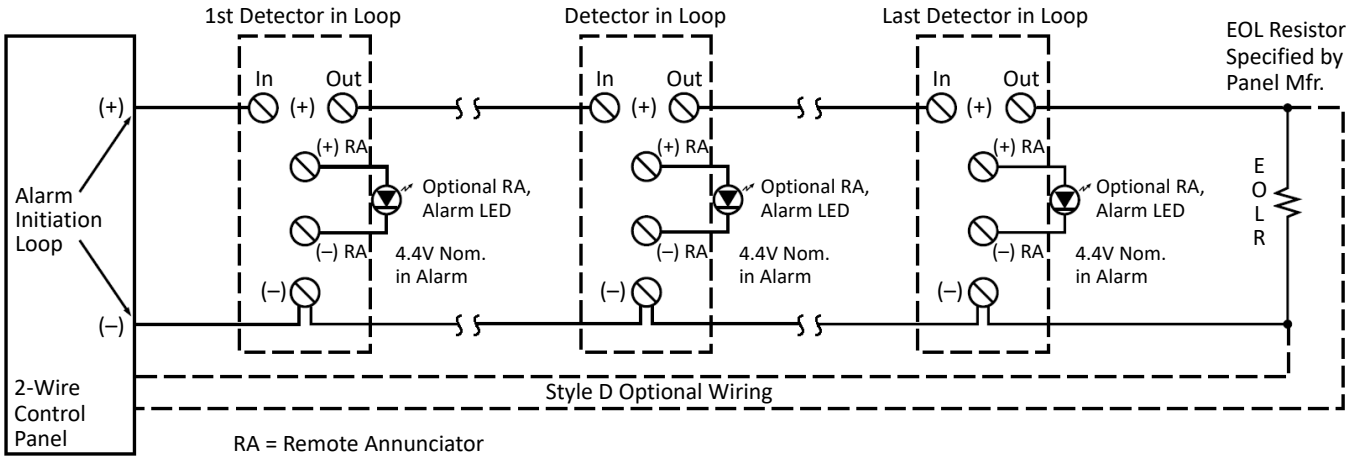
Detect Manage Record

Conventional Detection Devices

Part Number	Description
729-205-03	Duct Smoke Detector, sampling tube, 8 to 12 ft.
729-108-00	Remote Test Station with LED for duct or beam smoke detector; requires test coil P/N 729-206-00
729-138-00	Remote Test Station with LED and Key for duct or beam smoke detectors; requires test coil P/N 729-206-00
729-206-00	Remote test coil, for use with P/Ns 729-108-00 and 729-138-00
729-091-00	Remote LED Annunciator

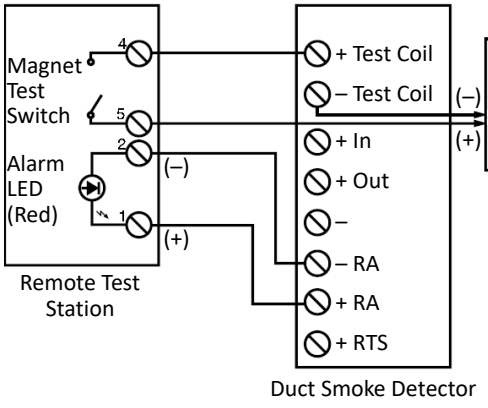
Wiring Diagrams

2-Wire Smoke Detector System (IDC Powered)

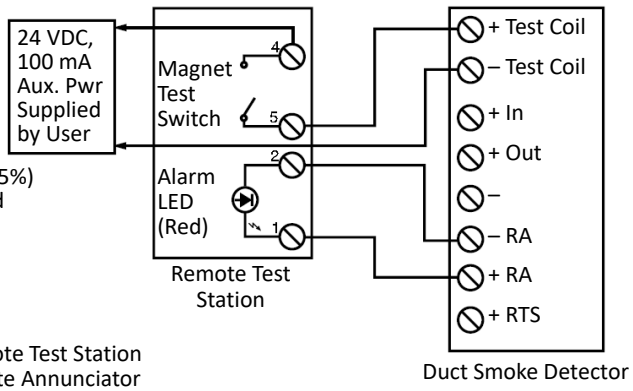


2-Wire Smoke Detector with Test Station

Method 1: Aux. Power Located at Duct Detector



Method 2: Aux. Power Located at Test Station



24 VAC (+10%/–15%) full-wave rectified unfiltered power may be used.

RTS = Remote Test Station
RA = Remote Annunciator

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Flame Detectors – Reserved

Click to go back to “Table of Contents - Index by Product Name”

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Conventional Detection Devices Catalog Section 10

Pull Stations

Pull Station, Dual Action/Single Action Fire Alarm, NEMA 4X 708-015-01, 708-015-03
Pull Station, Single Action. 708-022-00
Pull Station, Single Action. 708-025-01
Pull Station, Single Action. 708-025-03
Pull Station, Dual Action 708-026-01
Pull Station, Dual/Single Action 708-031-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

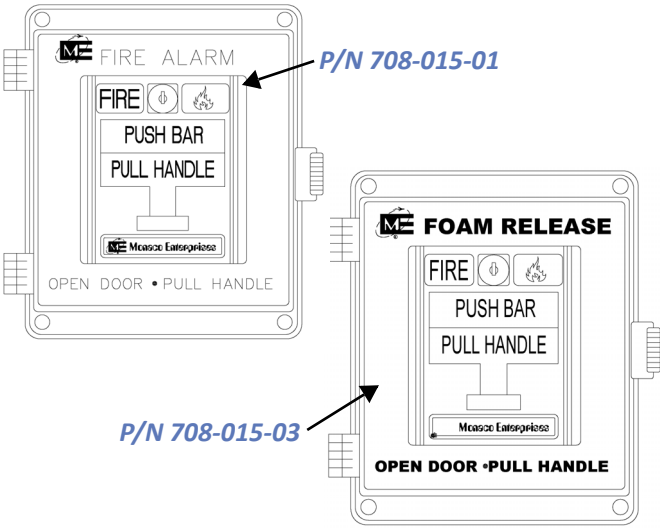
Pull Station, Dual Action/Single Action Fire Alarm, NEMA 4X

708-015-01, 708-015-03

Description

Monaco offers a manual Dual Action/Single Action Fire Alarm Pull Station that sits inside a weatherproof enclosure.

When configured for Dual Action, the pull stations can be activated by releasing the latch on the enclosure, pressing the Push Bar, and then pulling down on the Pull Handle. The pull stations can be converted to Single Action by removing the Push Bar.



UL FM APPROVED MEA approved

Features

- Dual or Single Action Fire Alarm Pull Station
- Gold-plated, corrosion resistant, normally open Single Pole Single Throw (SPST-NO) contacts
- Terminal strip connections
- Plastic break rod
- Key reset
- Listed for outdoor applications
- Meets ADA 5 lb maximum manual force requirements

Specifications

Type	Dual or Single Action Pull Station
Contact Rating	1A at 30 VDC, 0.1A at 125 VAC
Key	CAT30 lock and keys
Input Wiring	12 AWG
Material	Die cast metal
Enclosure	NEMA 4X, fiberglass
Operating Temperature	–30°F to 150°F (–35°C to 66°C)
Dimensions	Enclosure: 8 in. H x 6 in. W x 5 in. D (20.3 cm x 15.2 cm x 12.7 cm) Pull Station: 4.9 in. H x 3.5 in. W x 2 in. D (12.45 cm x 8.9 cm x 5.1 cm)
Color	Red enamel finish with black raised lettering on a white background
Standards Compliance:	
UL Listed	Enclosure: UL508A, File E61997 Pull Station: UL38, File S7005
FM Approved	Pull Station: Approved
State of California	Pull Station: 7150-1477:0128
MEA Approved	Pull Station: 313-97-E

Ordering Information

Part Number	Description
708-015-01	Manual Fire Alarm Pull Station, Dual Action, non-coded, SPST-NO, terminal strip, red, break rod, key reset, weatherproof red enclosure **NOTE** Can be converted to a Single Action pull station by removing Push Bar
708-015-03	Manual Foam Release Fire Alarm Pull Station, Dual Action, SPST-NO, terminal strip, red, break rod, key reset, weatherproof yellow enclosure **NOTE** Can be converted to a Single Action pull station by removing Push Bar

Associated Parts

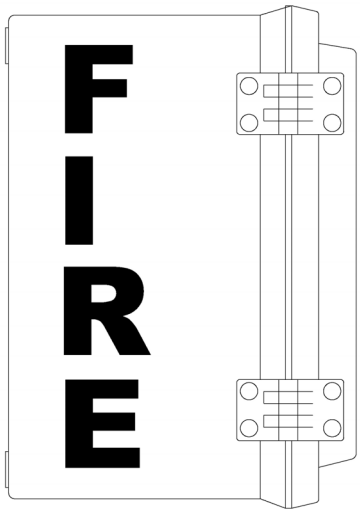
Part Number	Description
729-218-00	Intelligent Mini-monitor Module, AP/CLIP, white, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

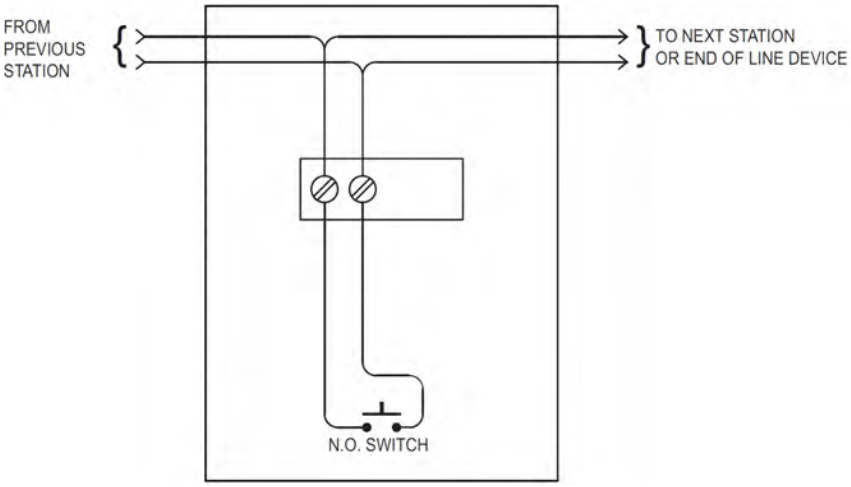
Detect Manage Record

Drawings

Enclosure Side View



Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Conventional Detection Devices

Pull Station, Single Action

708-022-00

Features

- Monaco Single Action Pull Station, red housing
- Non-coded with glass break rod
- Die cast metal alloy construction
- Recessed pull lever
- Keyed with Monaco Enterprises panels
- Normally open Single Pole Single Throw (SPST-NO) switch

Specifications

Power	120 VAC at 3A
Material	Die cast metal alloy
Weight	1.25 lb (0.6 kg)
Dimensions	5.25 in. H x 3.75 in. W x 1.625 in. D (13.34 cm x 9.53 cm x 4.13 cm)
Standards Compliance:	
UL Listed	File S2984
State of California	7150-0512:0006

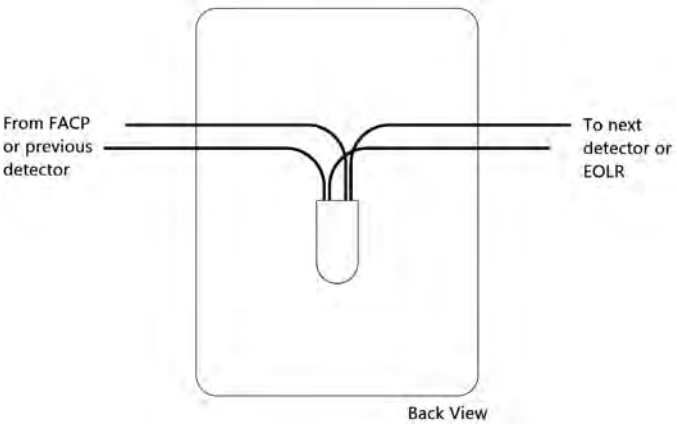
Ordering Information

Part Number	Description
708-022-00	Pull Station, Single Action, SPST-NO, wire leads, red, non-coded, glass break rod, key reset; uses same key as Monaco Fire Alarm Control Panels

Associated Parts

Part Number	Description
709-026-00	Back Box, surface-mount
709-029-00	Weatherproof Back Box, dust and rain-tight
729-218-00	Intelligent Mini-monitor Module, AP/CLIP, white, Type II

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Conventional Detection Devices

Pull Station, Single Action

708-025-01

Specifications

Contact Rating	120 VAC at 3A
Material	Die cast metal alloy
Weight	1.25 lb (0.6 kg)
Dimensions	5.2 in. H x 3.75 in. W x 3.5 in. D (13.18 cm x 9.53 cm x 8.9 cm)
Mounting	Mounts to single-gang ring on electrical junction box
Standards Compliance:	
UL Listed	File S2984
State of California	7150-0512:0006

Features

- Monaco Single Action Pull Station, red housing
- Non-coded with glass break rod
- Die cast metal alloy construction
- Recessed pull lever
- Terminal block field connections
- Keyed with Monaco Enterprises panels
- Normally open Single Pole Single Throw (SPST-NO) contacts
- Complies with Americans with Disability Act (ADA) 5 lb maximum pull force requirements

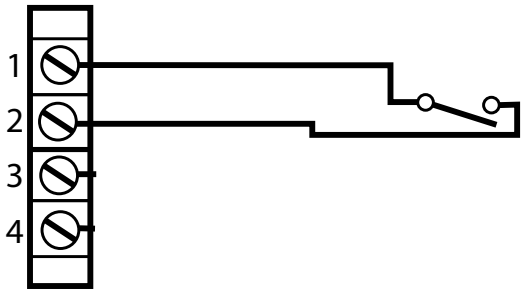
Ordering Information

Part Number	Description
708-025-01	Pull Station, Single Action, SPST-NO, terminal block, red, non-coded, glass break rod, key reset; uses same key as Monaco Fire Alarm Control Panels

Associated Parts

Part Number	Description
709-026-00	Back Box, surface-mount
709-029-00	Weatherproof Back Box, dust and rain-tight
729-218-00	Intelligent Mini-monitor Module, AP/CLIP, white, Type II

Wiring



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Pull Station, Single Action

708-025-03

Specifications

Contact Rating	120 VAC at 3A
Material	Die cast metal alloy
Weight	1.25 lb (0.6 kg)
Dimensions	5.2 in. H x 3.75 in. W x 3.5 in. D (13.18 cm x 9.53 cm x 8.9 cm)
Mounting	Mounts to single-gang ring on electrical junction box
Standards Compliance:	
UL Listed	File S2984
State of California	7150-0512:0006

Features

- Monaco Single Action Pull Station, red housing
- Non-coded with glass break rod
- Die cast metal alloy construction
- Recessed pull lever
- Terminal block field connections
- Keyed with Monaco Enterprises panels
- Normally open Double Pole Single Throw (DPST-NO) contacts
- Complies with Americans with Disability Act (ADA) 5 lb maximum pull force requirements

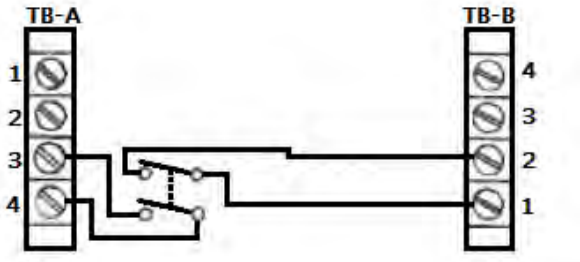
Ordering Information

Part Number	Description
708-025-03	Pull Station, Single Action, DPST-NO, terminal block, red, non-coded, glass break rod, key reset; uses same key as Monaco Fire Alarm Control Panels

Associated Parts

Part Number	Description
709-026-00	Back Box, surface-mount
709-029-00	Weatherproof Back Box, dust and rain-tight
729-218-00	Intelligent Mini-monitor Module, AP/CLIP, white, Type II

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Pull Station, Dual Action

708-026-01

Description

This Dual Action Pull Station is configured with normally open Single Pole Single Throw (SPST-NO) contacts and screw terminals for connection to an initiating circuit.

Features

- Monaco Dual Action Pull Station, red housing
- Non-coded, non-break glass station
- Polycarbonate construction
- Operating instructions and Braille text in handle
- Keyed with Monaco Enterprises panels
- Complies with Americans with Disability Act (ADA) 5 lb maximum pull force requirements
- Shock and vibration resistant

Specifications

Contact Rating	0.25A at 30 VAC/VDC (resistive)
Material	Lexan® polycarbonate
Operating Temperature	60°F to 80°F (15°C to 27°C)
Relative Humidity	10% to 93% ±2%, non-condensing
Dimensions	5.625 in. H x 4.25 in. W x 1.25 in. D (14 cm x 10.1 cm x 3.2 cm)
Mounting	Surface- or semi-flush-mount on standard double-gang or 4 in. square electrical box
Standards Compliance:	
UL Listed	UL864, File S2465
FM Approved	3023594
State of California	7150-1703:0109
MEA Approved	67-02-E Vol. 7

Ordering Information

Part Number	Description
708-026-01	Pull Station, Dual Action, SPST-NO, terminal block, red, non-coded, non-break glass, key reset; uses same key as Monaco Fire Alarm Control Panels

Associated Parts

Part Number	Description
588-102-00	Surface-mount Back Box for manual pull-station, indoor/outdoor, red, (Lexan®) polycarbonate
709-034-00	Trim Ring for semi-flush-mount, plastic
729-218-00	Intelligent Mini-monitor Module, AP/CLIP, white, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Pull Station, Dual/Single Action

708-031-00

Description

This Dual Action Pull Station is made of high quality die cast metal and is configured with normally open Single Pole Single Throw (SPST-NO) contacts and terminal block connections for easy installation.

When configured for Dual Action, the station can be activated by pressing the Push Bar and then pulling down the Pull Handle. The station is reset by completely opening the station with the key, placing the handle in its normal position, and locking the station. The pull station can be converted to Single Action by removing the Push Bar.

Features

- Monaco Dual or Single Action Fire Alarm Pull Station
- Keyed with Monaco Enterprises panels
- Terminal block connections
- Gold-plated, corrosion resistant SPST-NO contacts
- Optional auxiliary contacts
- Plastic break rod
- Complies with Americans with Disability Act (ADA) 5 lb maximum pull force requirement

Specifications

Contact Ratings	1A at 30 VDC; 0.1A at 125 VAC
Input Wiring	12 AWG maximum
Material	Die cast metal
Operating Temperature	–30°F to 150°F (–35°C to 66°C)
Relative Humidity	85% ± 5% at 86°F ± 3.6°F (30°C ± 2°C)
Pull Station Dimensions	4.9 in. H × 3.5 in. W × 2 in. D (12.4 cm × 8.9 cm × 5.1 cm)
Indoor Back Box Dimensions	5 in. H × 3.6 in. W × 2 in. D (12.7 × 9.1 × 5.1 cm)
Weatherproof Back Box Dimensions	5 in. H × 3.6 in. W × 2.2 in. D (12.7 × 9.1 × 5.6 cm)
Finish	High-gloss enamel
Color	Red with black raised lettering on a white background
Standards Compliance:	
UL Listed	File S7005
FM Approved	3062622
State of California	7150-1477:128
MEA Approved	313-97-E

UL FM APPROVED MEA approved

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

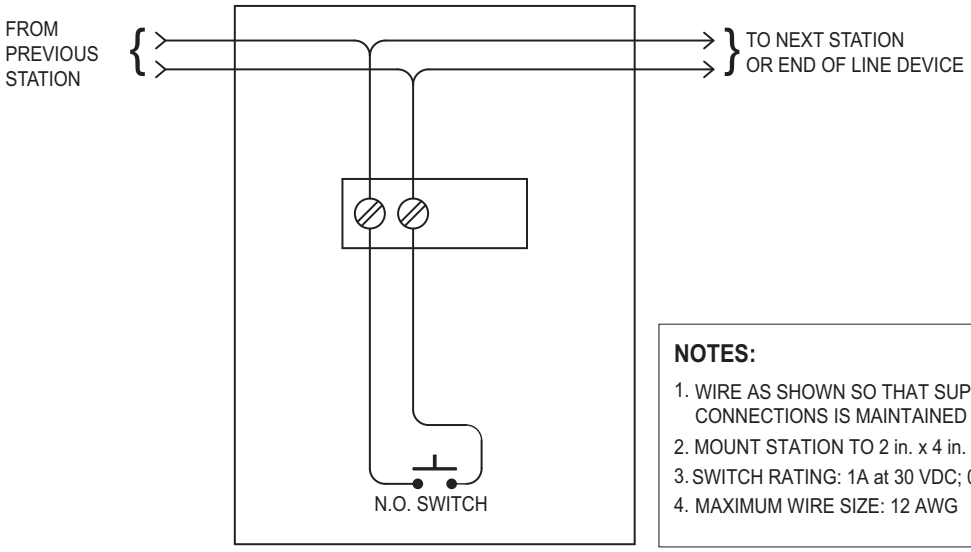
Ordering Information

Part Number	Description
708-031-00	Pull Station, Dual or Single Action, SPST-NO, terminal block, red, non-coded, plastic break rod, key reset; uses the same key as the Monaco Fire Alarm Control Panels **NOTE** Can be converted to a Single Action pull station by removing Push Bar

Associated Parts

Part Number	Description
588-082-00	Indoor Back Box, surface-mount, red
588-083-00	Weatherproof Back Box, surface-mount, red
709-046-00	Plastic Break Rod (package of 12)
729-218-00	Intelligent Mini-monitor Module, AP/CLIP, white, Type II

Wiring Diagram



NOTES:

1. WIRE AS SHOWN SO THAT SUPERVISION OF CONNECTIONS IS MAINTAINED
2. MOUNT STATION TO 2 in. x 4 in. x 2.25 in. OUTLET BOX
3. SWITCH RATING: 1A at 30 VDC; 0.1A at 125 VAC
4. MAXIMUM WIRE SIZE: 12 AWG

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Flow Switches

Conventional Detection Devices Catalog Section 10

Flow Switches

Pressure-Type Waterflow Switch 514-001-00
Pressure-Type Supervisory Switch 514-003-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Pressure-Type Waterflow Switch

514-001-00

Specifications

Enclosure	NEMA 4/IP66 Rated Enclosure; indoor or outdoor when used with NEMA 4 conduit fittings Cover: Weather/UV/Flame Resistant High Impact Composite Base: Die Cast
Pressure Connection	Nylon 1/2 in. NPT male
Factory Setting	Factory set at 4 to 8 PSI (0.27 to 0.55 BAR)
Pressure Range	Adjustable between 4 and 15 PSI (0.27 and 1.03 BAR)
Differential	2 PSI (0.13 BAR) Typical
Maximum System Pressure	300 PSI (20.68 BAR)
Contact Ratings	One SPDT (Form C) Contact: 10.1A at 125/250 VAC and 2A at 30 VDC
Operating Temperature	–40°F to 140°F (–40°C to 60°C)
Dimensions	3.78 in. W x 3.2 in. D x 4.22 in. H (9.6 cm x 8.1 cm x 10.7 cm)
Standards Compliance:	
UL Listed	S309
FM Approved	Approved
State of California	7770-0328:0001
MEA Approved	299-91-E Vol.12
CE Marked	Fire Alarm Equipment 354L

Features

- Maximum service pressure rating of 300 PSI
- Pressure range 4 to 8 PSI
- 1/2 in. male NPT fitting
- Cover attaches with one tamper resistant screw
- Two 1/2 in. knockouts for dual voltage application
- May be used for indoor or outdoor applications
- One Single Pole Double Throw (SPDT) Form C contact

Ordering Information

Part Number	Description
514-001-00	Pressure-Type Waterflow Switch, one SPDT, 10.1A 125/250 VAC, 2A 30 VDC, 4 to 8 PSI factory setting

Associated Parts

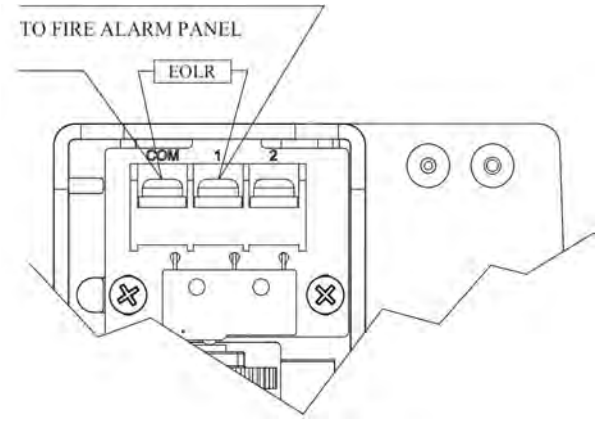
Part Number	Description
729-218-00	Intelligent Mini-monitor Module, AP/CLIP, white, Type II
729-217-00	Intelligent Monitor Module, AP/CLIP, white, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

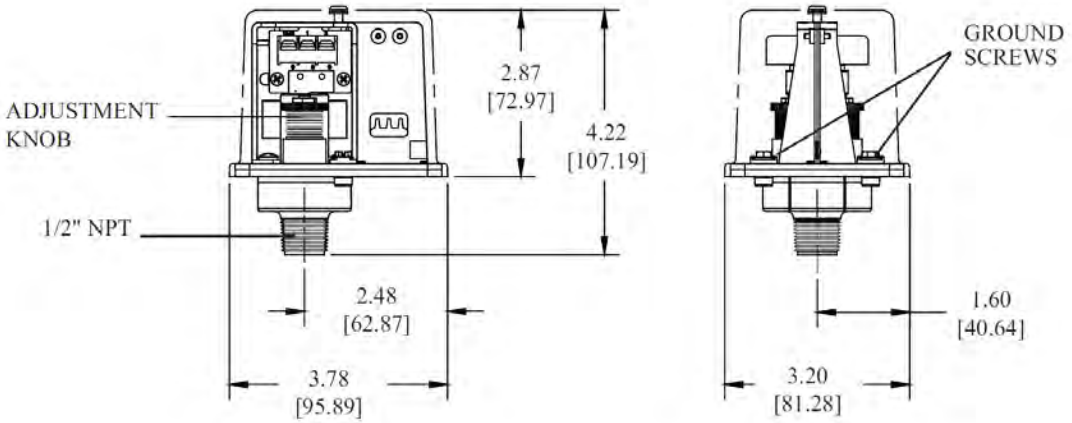
Detect Manage Record

Drawings

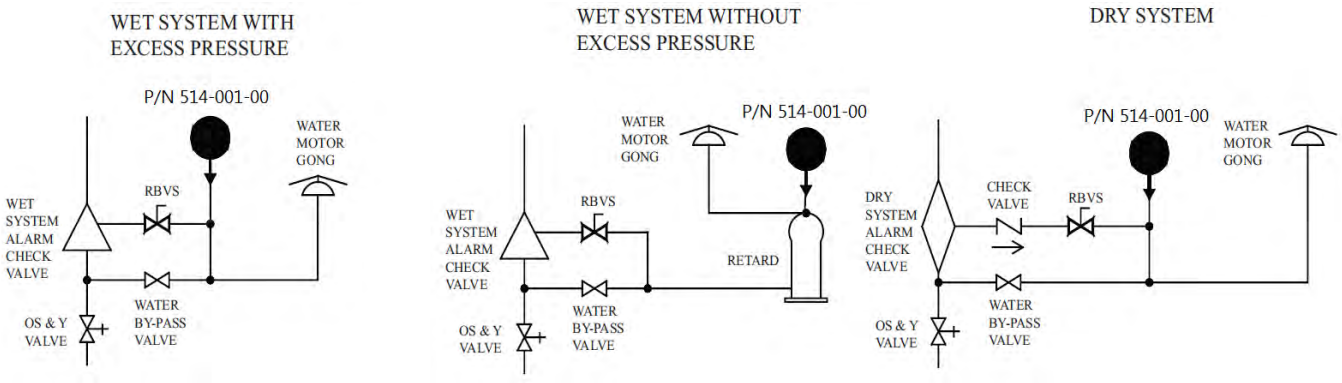
Wiring Diagram



Dimensions



Applications



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Pressure-Type Supervisory Switch

514-003-00

Specifications

Dimensions	3.78 in. W x 3.20 in. D x 4.22 in. H (9.6 cm x 8.1 cm x 10.7 cm)
Enclosure	NEMA 4/IP66 Rated Enclosure— indoor or outdoor when used with NEMA 4 conduit fittings *Cover*: Die-Cast with textured red powder coat finish, single cover screw and rain lip *Base*: Die-cast
Pressure Connection	Nylon 1/2 in. NPT male
Factory Setting	Factory set at 40 PSI (2.8 BAR) Switch marked LOW set to operate at pressure decrease of 10 PSI (0.7 BAR) at 30 PSI (2.1 BAR) Switch marked HIGH set to operate at pressure increase of 10 PSI (0.7 BAR) at 50 PSI (3.5 BAR)
Pressure Range	Adjustable from 10–60 PSI (0.7–4.1 BAR)
Differential	Typical 1 lb at 10 PSI (0.07 at 0.7 BAR) 4 lb at 60 PSI (0.28 at 4.1 BAR)
Maximum System Pressure	300 PSI (20.68 BAR)
Switch Contacts	Two SPDT (Form C) contacts, rated at 10.1A at 125/250VAC and 2A at 30VDC
Operating Temperature	–40°F to 140°F (–40°C to 60°C)
Standards Compliance:	
UL	S309
FM	Approved
State of California	7770-0328:0010
MEA Acceptance	299-91-E Vol.12
CE	Marked - Fire Alarm Equipment 354L
LPCB	125a/08

Features

- Detects 10 PSI increase/decrease from normal system pressure in automatic fire sprinkler systems
- 300 PSI system pressure rated
- Pressure range 10–60 PSI
- 0.5 in. male NPT fitting
- Cover attaches with one tamper resistant screw
- Two 0.5 in. knockouts for dual voltage application
- Separate isolated wiring chambers
- May be used for indoor or outdoor applications
- Independent adjustment and operation for each Single Pole Double Throw (SPDT) switch

Ordering Information

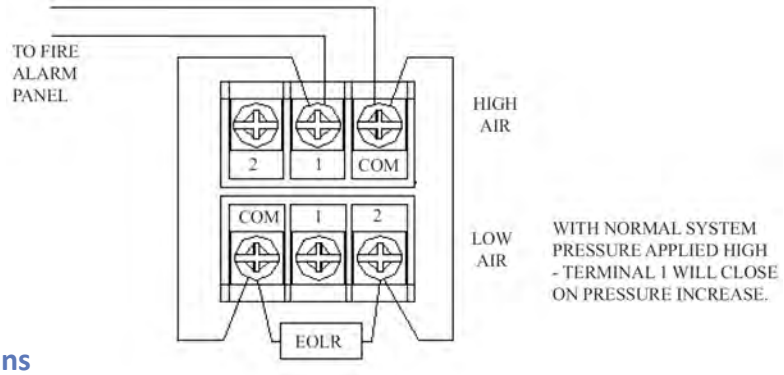
Part Number	Description
514-003-00	Pressure-Type Supervisory Switch, 2 SPDT, 10A, 125 VAC, 10–60 PSI

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

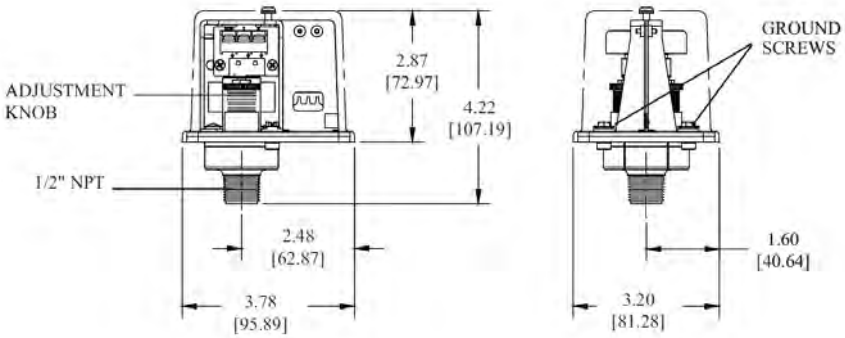
Detect Manage Record

Drawings

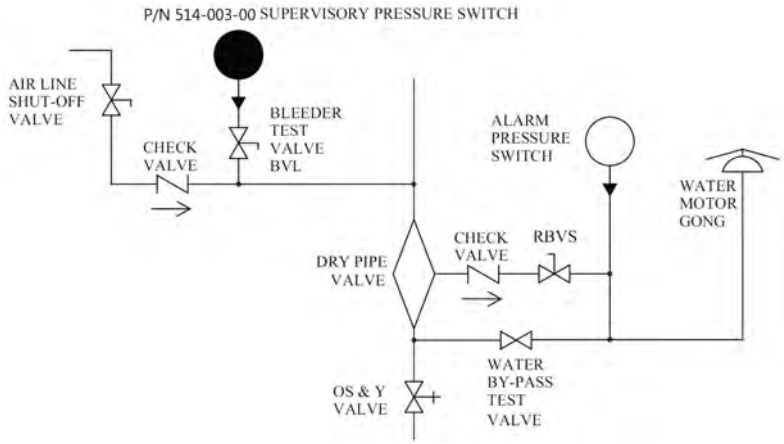
Wiring Diagram



Dimensions



Application



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices Catalog Section 10

Tamper Switches

Outside Screw & Yoke Valve Supervisory/Tamper Switch 514-000-00, 514-000-01

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Outside Screw & Yoke Valve Supervisory/Tamper Switch

514-000-00, 514-000-01

Specifications

Pressure Connection	Nylon 1/2 in. NPT male
Contact Ratings	10A at 125/250 VAC 2A at 30 VDC resistive 10 mA minimum at 24 VDC
Conduit Entrances	Two knockouts for 1/2 in. conduit
Operating Temperature	–40°F to 140°F (–40°C to 60°C)
Enclosure	NEMA 4X (IP65) and NEMA 6P (IP67), indoor or outdoor, die cast material
Finish	Cover: Red Powder Coat Base: Black Powder Coat All parts have corrosion resistant finish
Dimensions	6.19 in. W x 3.05 in. D x 5.69 in. H (15.7 cm x 7.7 cm x 14.4 cm)
Weight	1.6 lb (0.73 kg)
Standards Compliance:	
UL Listed	S309
FM Approval	Approved
State of California	7770-0328:0010

Ordering Information

Part Number	Description
514-000-00	Valve Supervisory/Tamper Switch (OS&Y gate valve switch) one SPDT Form C contact, 10A, 125/250 VAC
514-000-01	Valve Supervisory/Tamper Switch (OS&Y gate valve switch) two SPDT Form C contacts, 10A, 125/250 VAC

Associated Parts

Part Number	Description
729-218-00	Intelligent Mini-monitor Module, AP/CLIP, white, Type II

Features

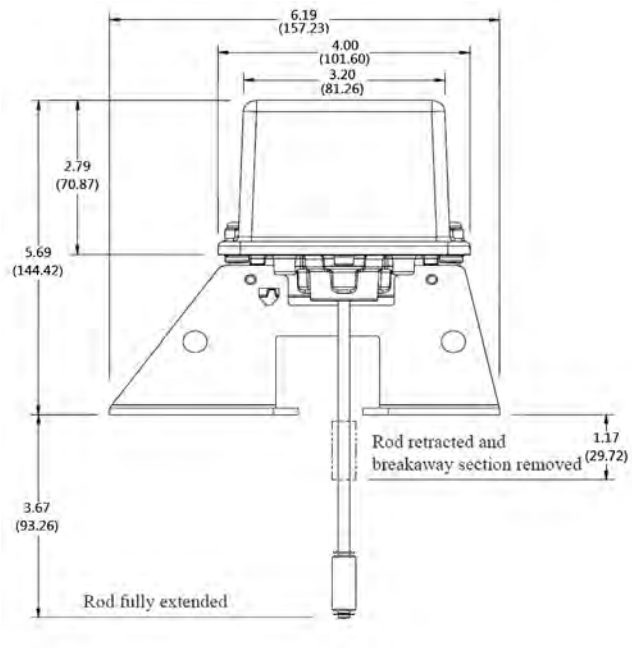
- Monitors the open position of an outside screw and yoke (OS&Y) type gate valve
- Three position switch detects tampering and valve closure
- Mounts to most gate valves between 2 in. and 12 in.
- Visual switch indicators
- Two tamper resistant screws hold cover in place
- May be used for indoor or outdoor applications
- Single Pole Double Throw (SPDT) switch

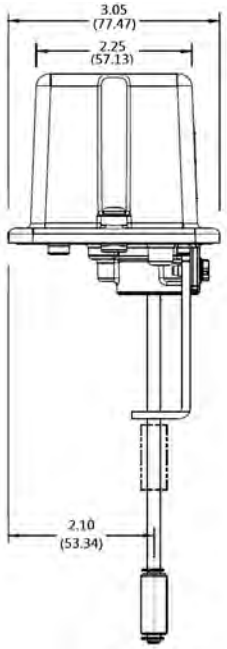
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Drawings

Dimensions

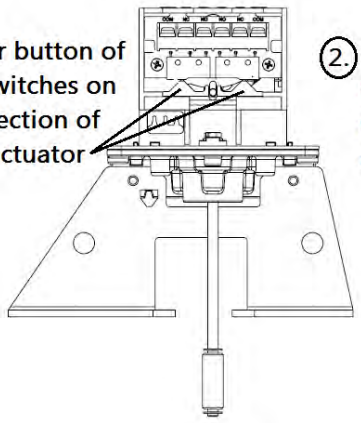




Visual Indicators

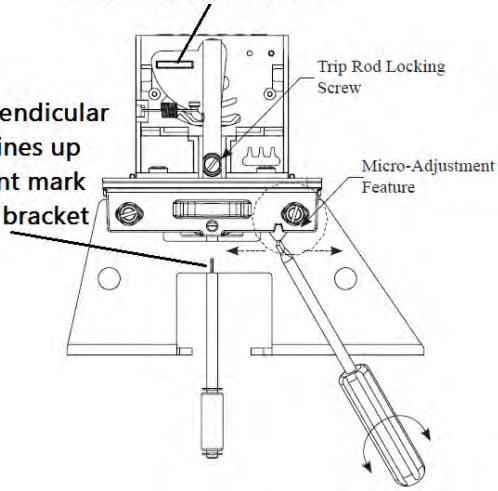
There are three visual indicators to determine the status of the switches:

1. Actuator button of micro switches on raised section of switch actuator



2. Trip rod perpendicular to base and lines up with alignment mark on mounting bracket

3. White, visual indicator, is visible through window on back of switch actuator

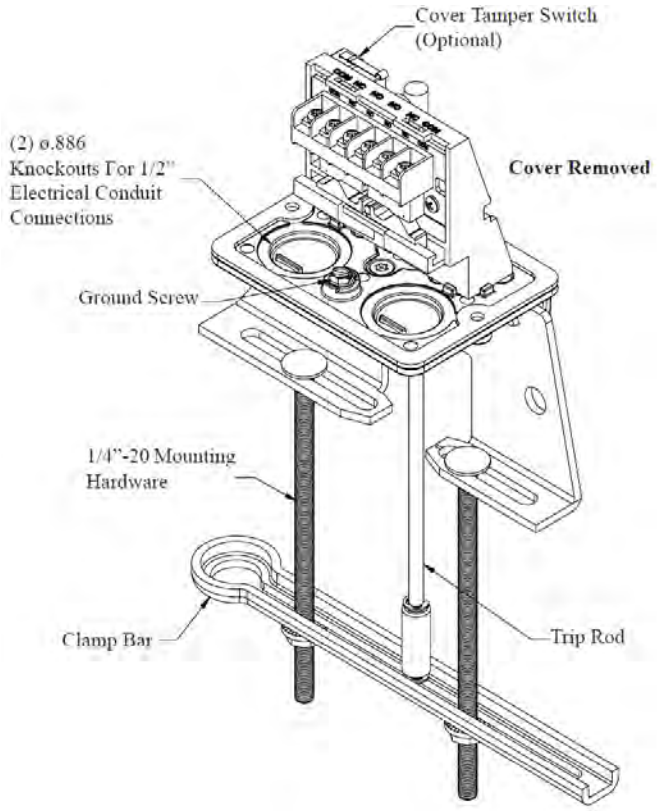


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

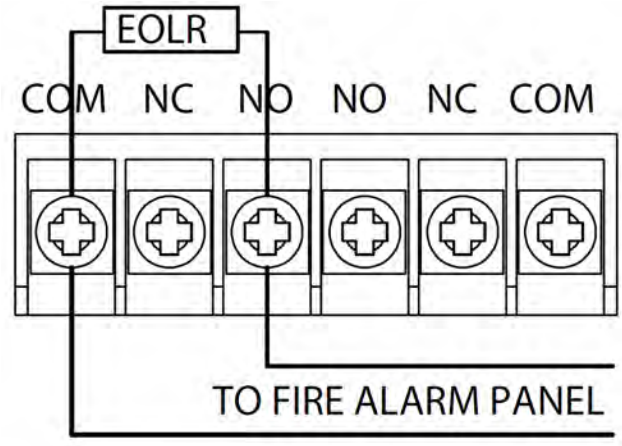
Detect
Manage
Record

Conventional Detection Devices

Detail Drawing



Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Carbon Monoxide Detectors

Conventional Detection Devices Catalog Section 10

Carbon Monoxide Detectors

Carbon Monoxide Detector 725-602-00, 725-602-01

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Carbon Monoxide Detector
725-602-00, 725-602-01

Description

These conventional four-wire detectors use a highly accurate and reliable electromechanical sensing cell to give early warning of dangerous carbon monoxide (CO) levels.

(P/N 725-602-00)

(P/N 725-602-01)

Hush/Alarm Silence The audible alarm can be silenced for 5 minutes by pushing the "Test/Hush" button. The red alarm LED will continue to blink in Temporal 4 pattern. If CO is still present after the 5-minute hush period, the audible alarm will sound. Hush will not operate at levels above 350 ppm CO.

RealTest® Alarm Silence After spraying canned CO into the detector as a test, the alarm automatically silences after about 20 seconds. The alarm automatically resets after CO has cleared from the sensor.

Trouble When sensor supervision is in a trouble condition, the detector sends a trouble signal to the panel. The detector must then be replaced. **There is no local audible signal when the detector is in trouble!**

End of Life Timer When the detector has reached the end of its life, the trouble contact will open signaling the panel. This indicates that the CO sensor must be replaced. The detector's lifespan is about six years from the date of manufacture (check the "Replace by" sticker located under the detector cover).

Features

- Local sounder
- Low current draw
- Alarm relay, Form C
- Trouble relay, Form A
- Dual LEDs
- Test/Hush button

Specifications

Operating Voltage	12/24 VDC nominal (range 10 to 33V)
Current	Standby: 20 mA average Alarm: 40 mA maximum
Contact Rating	Alarm: 0.5A at 30 VDC Trouble: 0.5A at 30 VDC
LED Notification	Green: 1 blink/minute Red: Temporal 4 pattern
Audible Signal (Temporal 4)	85 dBa minimum in alarm
Wiring	14 to 22 AWG
Operating Temperature	32°F to 104°F (0°C to 40°C)
Relative Humidity	22 to 90%
Dimensions	P/N 725-602-00: 5.1 in. L x 3.3 in. W x 1.25 in. H (12.95 cm x 8.38 cm x 3.18 cm) P/N 725-602-01: 1.25 in. H x 6 in. OD (3.18 cm x 15.24 cm)
Weight	P/N 725-602-00: 7 oz P/N 725-602-01: 11 oz
Detector Life Span	≈6 years from date of manufacture
Standards Compliance:	
UL Listed	File E307195
State of California	E304075

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Alarm Thresholds

Parts per Million	Detector Response Time
30, ±3	No alarm within 30 days
70, ±3	60 to 240 minutes
150, ±3	10 to 50 minutes
400, ±3	4 to 15 minutes

Mounting

Ceiling- or wall-mounting:

- Single gang J box
- Direct-mount using drywall fasteners
- Co-plate (replacement plate) mounting accessory (P/N 588-076-00)

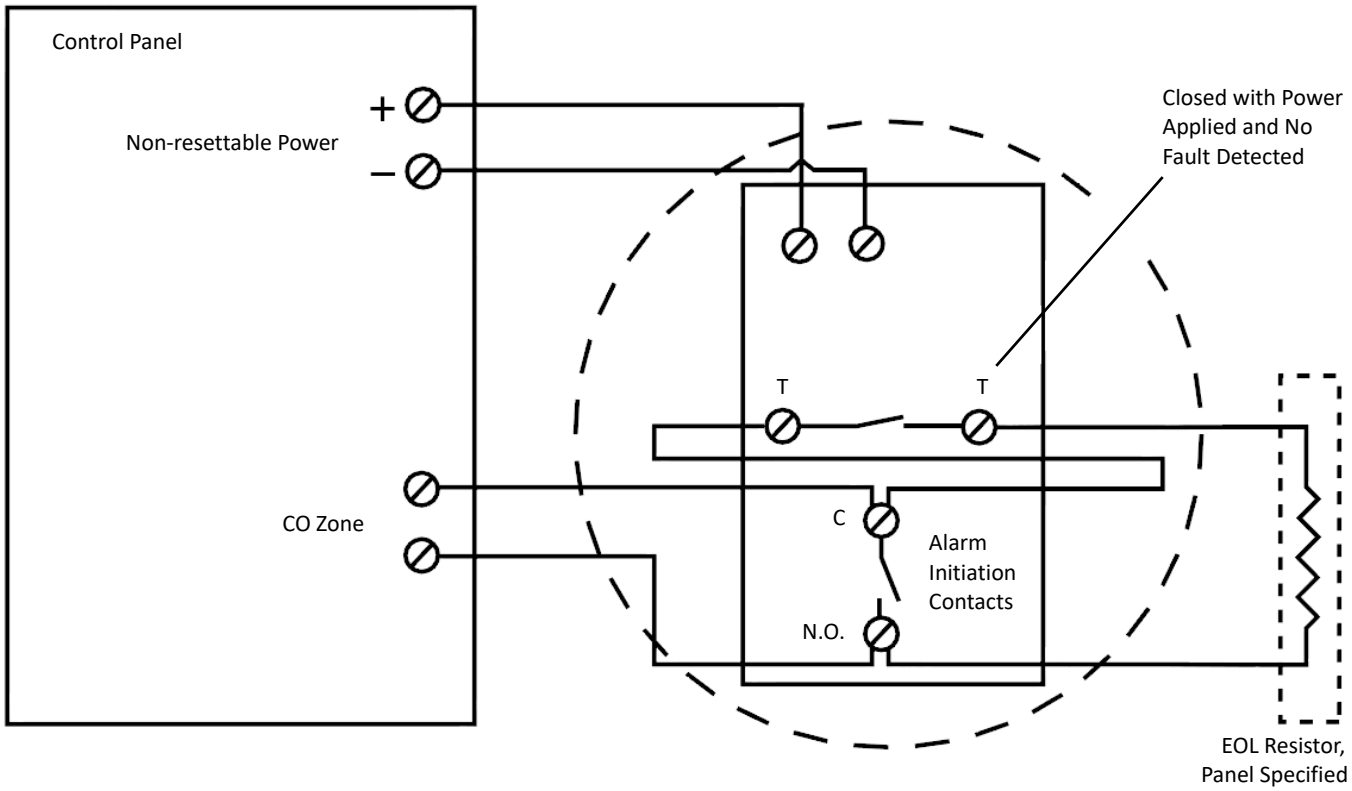
Ordering Information

Part Number	Description
725-602-00	Conventional Carbon Monoxide Detector, 12/24 VDC, rectangular, 4-wire
725-602-01	Conventional Carbon Monoxide Detector, 12/24 VDC, circular, 4-wire

Associated Parts

Part Number	Description
588-076-00	Co-plate (replacement plate) Mounting Accessory for P/N 725-602-00

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices Catalog Section 10

Bases

Detector Base, Plug-in, 2-Wire 729-097-00
Detector Base, Plug-in, 2-Wire 729-150-00
Detector Base, Plug-in, 4-Wire 729-151-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Device

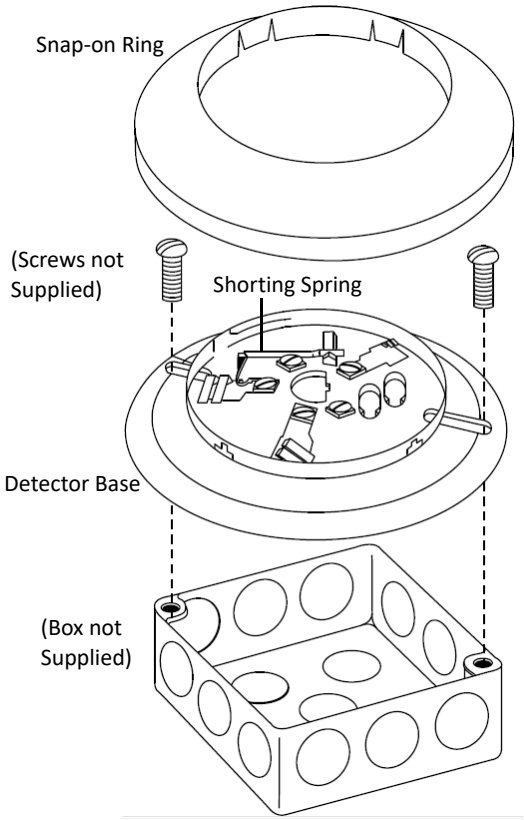
Detector Base, Plug-in, 2-Wire

729-097-00

Description

This plug-in base is used with ionization and photoelectronic detector heads. Plug-in heads are more versatile than direct-wired units.

The base is intended for two-wire (loop-powered) systems. Screw terminals connect power, ground, and remote annunciation. The base also contains a resistor for current-limiting in the alarm state and features a tamper-resistant tab.



Mounting

Base mounts directly to 3.5 in. and 4 in. octagon boxes, and 4 in. square boxes with or without plaster rings.

Specifications

Base

Dimensions	0.95 in. H x 6.2 in. OD (24 mm x 157 mm)
Weight	0.3 lb (136.1 g)
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing

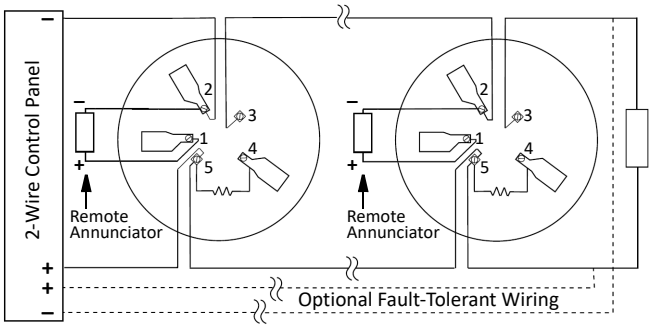
Base and Detector

Start-up Time	34 seconds maximum
System Voltage	24 VDC, 4V P-P maximum ripple
Standby Ratings	Base: 17 VDC min., 32 VDC maximum Detector: 120 µA maximum
Wiring	Up to 12 AWG, twisted pair, in separate grounded conduit
Alarm Ratings	10.5 VDC at 10 mA minimum 32 VDC at 62 mA maximum
Rating	MSFM Approved

Wiring Diagram

2-Wire System

For system supervision, do not loop wire under terminals 2, 3, 5. Break wire run to ensure system supervision of connectors.



Ordering Information

Part Number	Description
729-097-00	Conventional Detector Base, plug-in, 24 VDC with current limiting resistor, 2-wire

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Device

Detector Base, Plug-in, 2-Wire

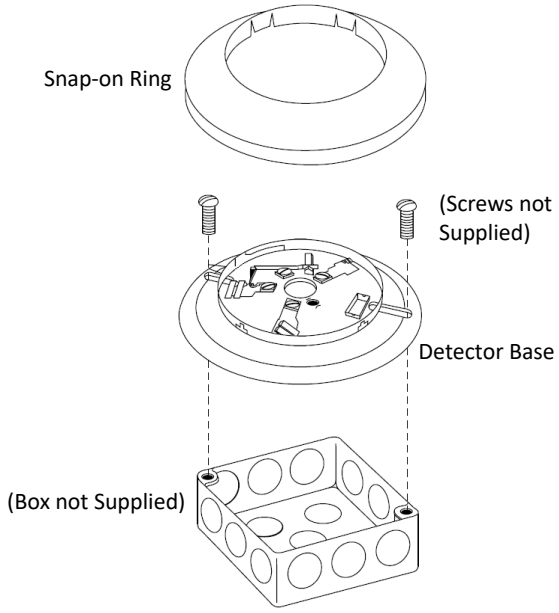
729-150-00

Description

This plug-in base is used with ionization and photoelectronic detector heads. The base is intended for 2-wire systems. Screw terminals connect power, ground, and optional remote annunciation. The base features a tamper-resistant tab.

Mounting

Base mounts directly to 3.5 in. and 4 in. octagon boxes, and 4 in. square boxes with or without plaster rings.



Specifications

Base

Dimensions	0.95 in. H x 6.2 in OD (24 mm x 157 mm)
Weight	0.3 lb (136.1 g)
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing

Base and Detector

Start-up Time	34 seconds maximum
System Voltage	24 VDC, 4V P-P maximum ripple
Standby Ratings	Base: 20 VDC min., 29 VDC maximum Detector: 120 µA maximum
Wiring	18 AWG min., signal line Up to 12 AWG, base clamping plate
Alarm Ratings	10 mA, minimum 100 mA, maximum
Contact Ratings	Form A: 2A at 30 VAC/DC Form C: 0.6A at 110 VDC 1A at 125 VAC 2A at 30 VAC/VDC

Ordering Information

Part Number	Description
729-150-00	Conventional Detector Base, plug-in, 2-wire, 12/24 VDC

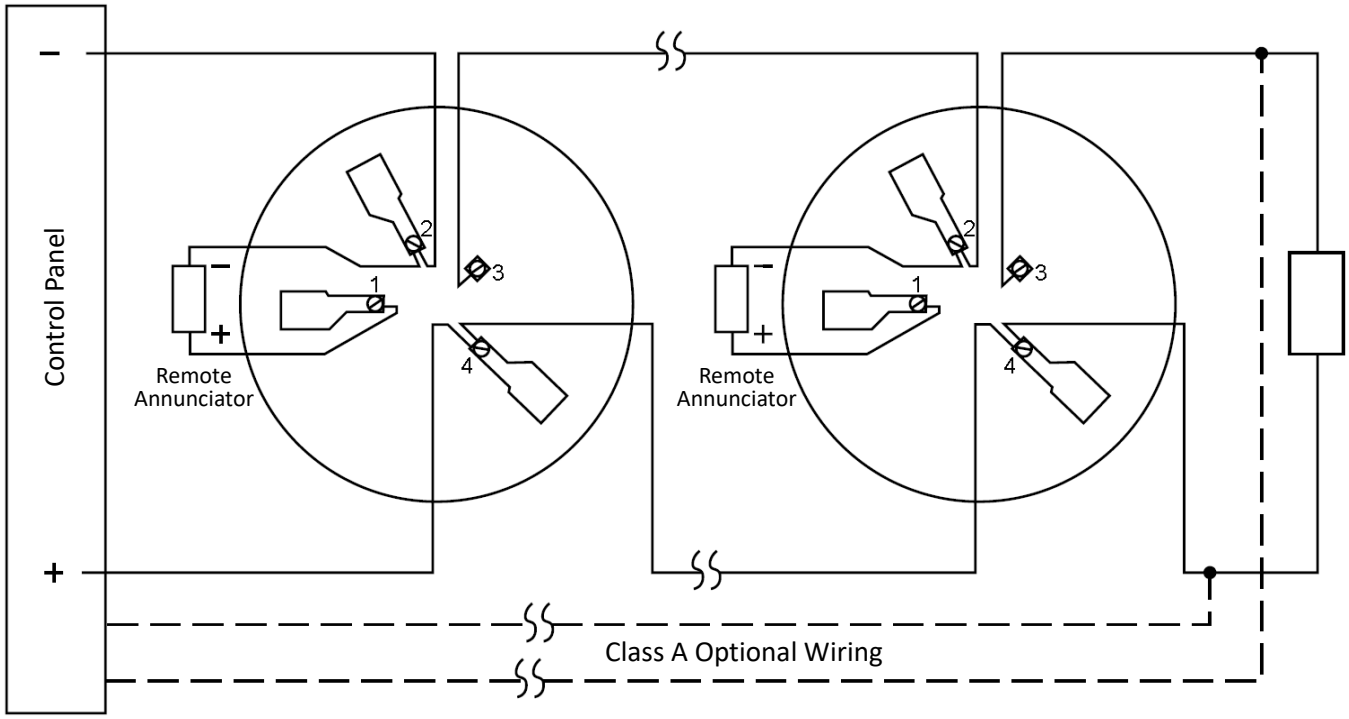
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Device

Wiring Diagram

Typical 2-wire detector system.



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Conventional Detection Devices

Detector Base, Plug-in, 4-Wire

729-151-00

Description

This plug-in base, used with ionization and photoelectronic detector heads, is for 4-wire systems. Screw terminals connect power, ground, and optional remote annunciation. The base features Form A and C contacts, shorting spring, and a tamper-resistant tab.

Specifications

Base

Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Dimensions	0.95 in. H x 6.2 in. OD (2.4 cm x 15.7 cm)
Weight	0.3 lb (0.136 kg)

Base and Detector

Operating Voltage	24 VDC, 4V P-P maximum ripple
Standby Ratings	Base: 20 VDC minimum, 29 VDC maximum Detector: 120 µA maximum
Input Wiring	18 AWG minimum signal line 12 AWG maximum base clamping plate
Alarm Ratings	17 mA minimum; 36 mA maximum
Contact Ratings	Form A: 2A at 30 VAC/ VDC Form C: 0.6A at 110 VDC 1A at 125 VAC 2A at 30 VAC/VDC
Start-up Time	34 seconds maximum
Mounting	3.5 in. octagon and 4 in. square boxes with or without plaster rings; minimum depth for both is 1.5 in.
Standards Compliance:	
UL Listed	S911
FM Approved	3025009
State of California	7300-1653:0109

Ordering Information

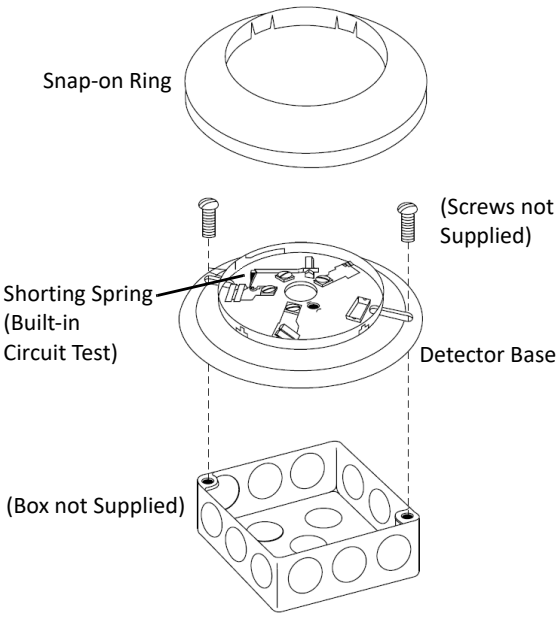
Part Number	Description
729-151-00	Conventional Detector Base, plug-in, 24 VDC, 4-wire, Form A and C contacts

Associated Parts

Part Number	Description
790-012-00	End-of-Line Power Supervision Relay Module, polarized, 9 to 40 VDC

Diagrams

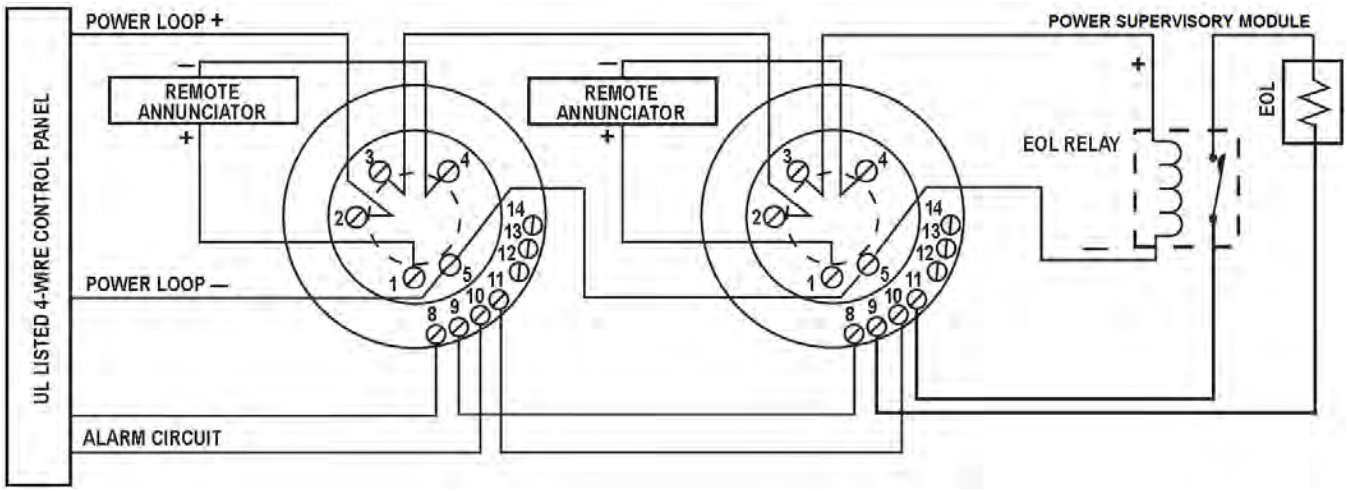
Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Typical Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices Catalog Section 10

Accessories

Remote Test Station 729-108-00
Remote Test Station with Key 729-138-00

End-of-Line Supervision Relays

End-of-Line Power Supervision Relay Module 790-012-00
End-of-line Power Supervision Relay Module 790-013-01

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Remote Test Station
729-108-00

Description

This Remote Test Station is an automatic fire detection accessory that tests a remotely located 2- or 4-wire duct/beam smoke detector. The unit can reset certain detectors (per the detector's documentation).

Specifications

Power Requirements	Alarm LED (Red): 2.8 to 32 VDC, 12mA maximum Coil Current: 95mA maximum Total Current: 105mA maximum
Test Switch	10 VA at 32 VDC
LED Indicator	Off = Normal; Red = Alarm
Alarm Response	40 seconds maximum
Input Wiring	14 to 18 AWG
Operating Temperature	14°F to 140°F (–10°C to 60°C)
Relative Humidity	0% to 95% non-condensing
Dimensions	4.6 in. H x 2.75 in. W x 1.8 in. D (11.7 cm x 7 cm x 4.6 cm)
Weight	0.16 lb (0.07 kg)
Mounting	Single gang box (2.5 in. depth minimum) or mounts directly to wall or ceiling
Standards Compliance:	
UL Listed	File S2522
FM Approved	3034401
State of California	7300-1653:0212

Features

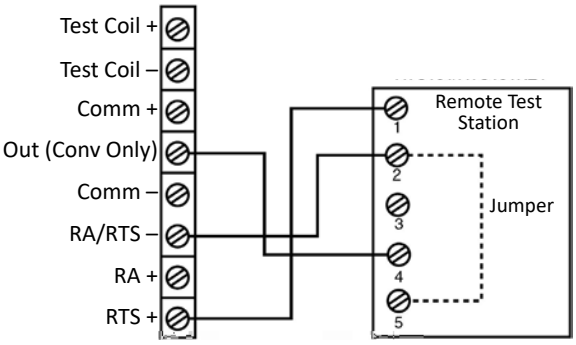
- The single red LED is off during normal operation and turns on during test/alarm
- Test is performed with a supplied test magnet
- The unit mounts to a single gang box or directly to a wall or ceiling

Ordering Information

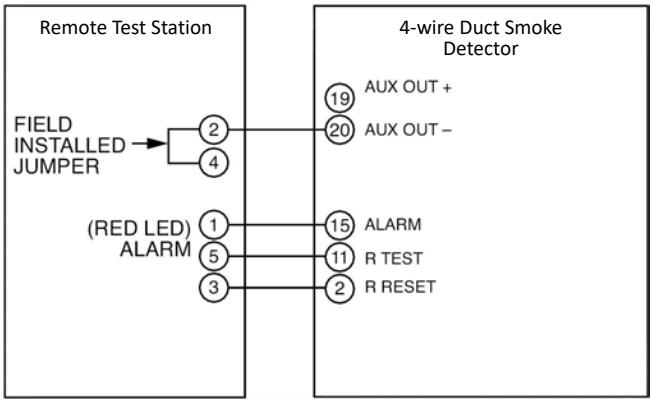
Part Number	Description
729-108-00	Remote Test Station with LED for duct or beam smoke detector; requires test coil P/N 729-206-00

Wiring Examples

2-wire



4-wire



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

Remote Test Station with Key

729-138-00

Description

This Remote Test Station with Key is a fire detection accessory that tests a remotely located 2- or 4-wire duct/beam smoke detector. The unit can also reset certain detector models (per the detector's documentation).

Specifications

Power Requirements	Power LED (Green): 14 to 35 VDC, 12 mA maximum Alarm LED (Red): 2.8 to 32 VDC, 12 mA maximum Total Current: 105 mA maximum
Test Switch	10 VA at 32 VDC
LED Indicator	Red = Alarm; Green = Power
Alarm Response	40 seconds maximum
Wire Gauge	14 to 18 AWG
Operating Temperature	14°F to 140°F (–10°C to 60°C)
Relative Humidity	0% to 95% non-condensing
Dimensions	4.6 in. H x 2.75 in. W x 1.8 in. D (11.7 cm x 7 cm x 4.6 cm)
Weight	0.24 lb (0.11 kg)
Mounting	Single gang box (2.5 in. depth minimum) or mounts directly to wall or ceiling
Standards Compliance:	
UL Listed	File S2522
FM Approved	3034401
State of California	7300-1653:0212

Features

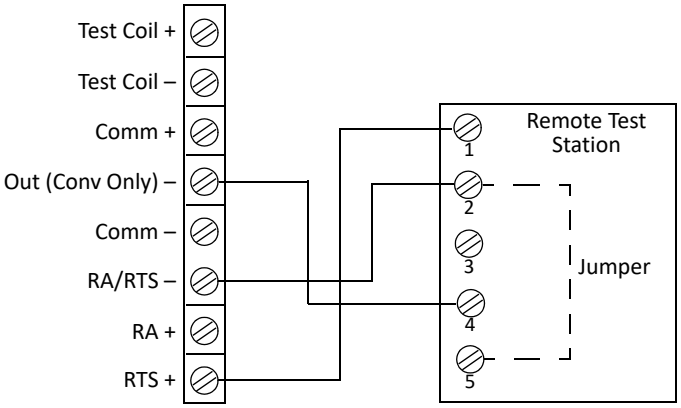
- For 4-wire detectors, the single multi-colored LED is red during test/alarm or green to indicate power
  - for 2-wire detectors, the LED will only illuminate red for alarm/test
- The key operates the test and reset functions

Ordering Information

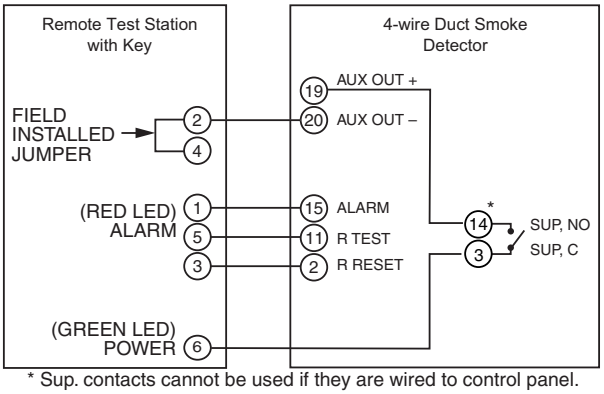
Part Number	Description
729-138-00	Remote Test Station with LED and Key for duct or beam smoke detectors; requires test coil P/N 729-206-00

Wiring Examples

2-wire



4-wire



* Sup. contacts cannot be used if they are wired to control panel.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

End-of-Line Supervision Relays

Conventional Detection Devices Catalog Section 10

End-of-Line Supervision Relays

End-of-Line Power Supervision Relay Module. 790-012-00
End-of-line Power Supervision Relay Module 790-013-01

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

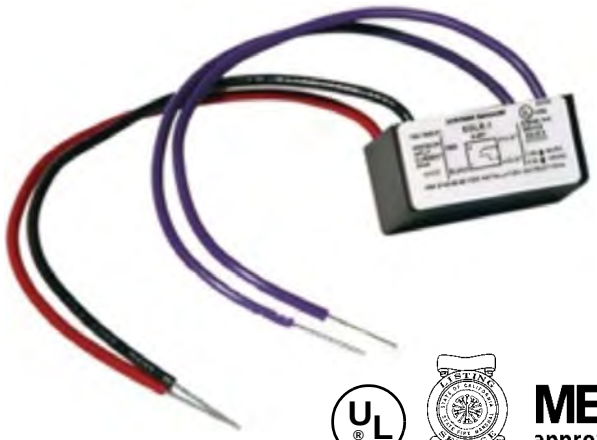
Detect Manage Record

Conventional Detection Devices

End-of-Line Power Supervision Relay Module
790-012-00

Description

This is a multivoltage, SPST, epoxy-encapsulated, normally open, polarized relay for end-of-line power supervision.

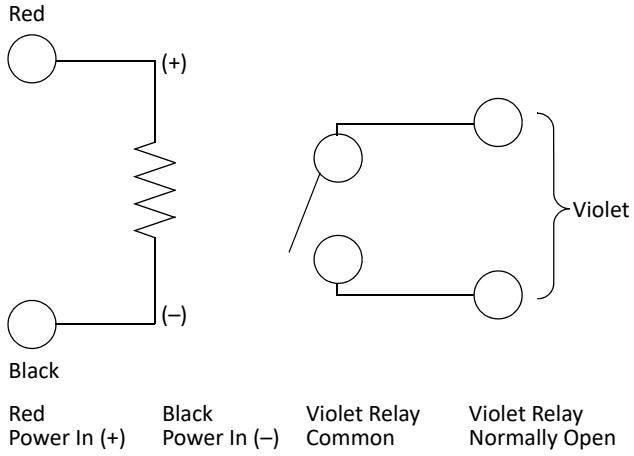


MEA approved

Ordering Information

Part Number	Description
790-012-00	End-of-Line Power Supervision Relay Module, polarized, 9 to 40 VDC

Wiring Diagram



Specifications

Operating Voltage	9 to 40 VDC 9 to 35 VRMS unfiltered FWR
Operating Current	20 mA maximum
Contact Ratings	120 VAC, 0.5A maximum (resistive load) 30 VDC, 3A maximum (resistive load)
Operating Temperature	–22°F to 140°F (–30°C to 60°C)
Relative Humidity	10% to 93%, non-condensing
Wire Length	8 in. minimum (203 mm)
Dimensions	0.91 in. H x 1.65 in. W x 1.22 in. D (23 mm x 42 mm x 31 mm)
Mounting	Attach to equipment or inside an enclosure using the provided mounting screw or double-sided tape
Standards Compliance:	
UL Listed	UL864, File S3705
State of California	7300-1653:0103
MEA	319-03-E

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Conventional Detection Devices

End-of-line Power Supervision Relay Module
790-013-01

Description

This End-of-Line (EOL) Power Supervision Relay Module is non-polarized and has a 47 kohm EOL resistor and a set of contacts that are normally open (NO) during a de-energized state; when power is applied, the module's contacts are normally closed (NC).

The 47 kohm EOL resistor contacts are used with Monaco addressable monitor modules that require a 47 kohm EOL resistor while the (NC) contacts can be used with any value EOL resistor. The EOL Power Supervision Relay Module is used to monitor 24 VDC auxiliary power for non-loop-powered devices such as 4-wire smoke detectors.

This module is good for applications in which you need to reverse voltage to a device to turn on an internal built-in sounder. The module will remain energized for both polarities so that no false power supervision trouble is annunciated. If power is lost, a power supervision trouble will be annunciated.

This small module easily fits into junction boxes behind pull station or smoke detectors.

Specifications

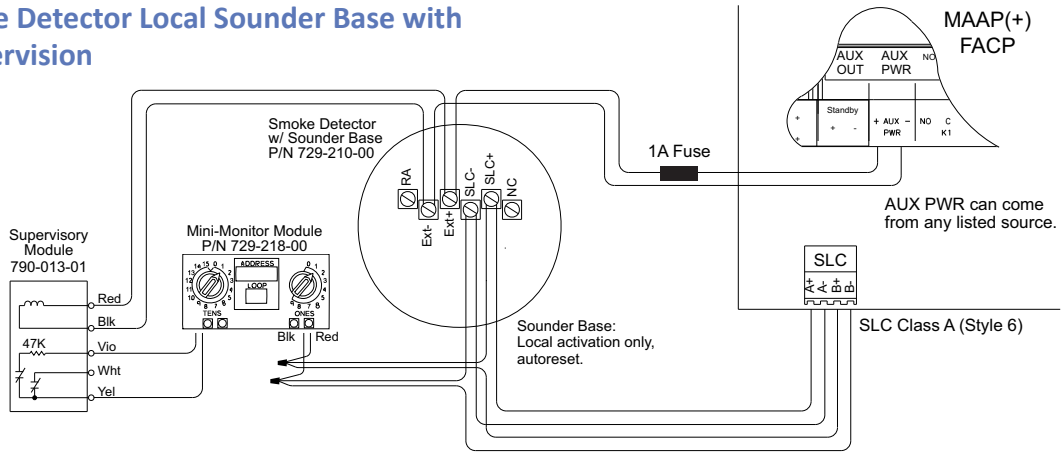
Operating Voltage	20 to 30 VDC
Current	10 mA nominal
Contact Ratings	**NO:** (white and yellow wires) 30 VDC, 1A **47 kohm:** (violet and yellow wires) 47 kohm, 1W for direct connection to Monaco addressable monitor modules
Operating Temperature	–22°F to 140°F (–30°C to 60°C)
Dimensions	1 in. W x 1.5 in. H x 0.25 in. D (2.54 cm x 3.81 cm x 0.64 cm)

Ordering Information

Part Number	Description
790-013-01	End-of-Line Power Supervision Relay Module, non-polarized, 20–30 VDC, with built-in 47 kohm EOL resistor and a set of NC dry contacts

Wiring Diagrams

Addressable Detector Local Sounder Base with Power Supervision

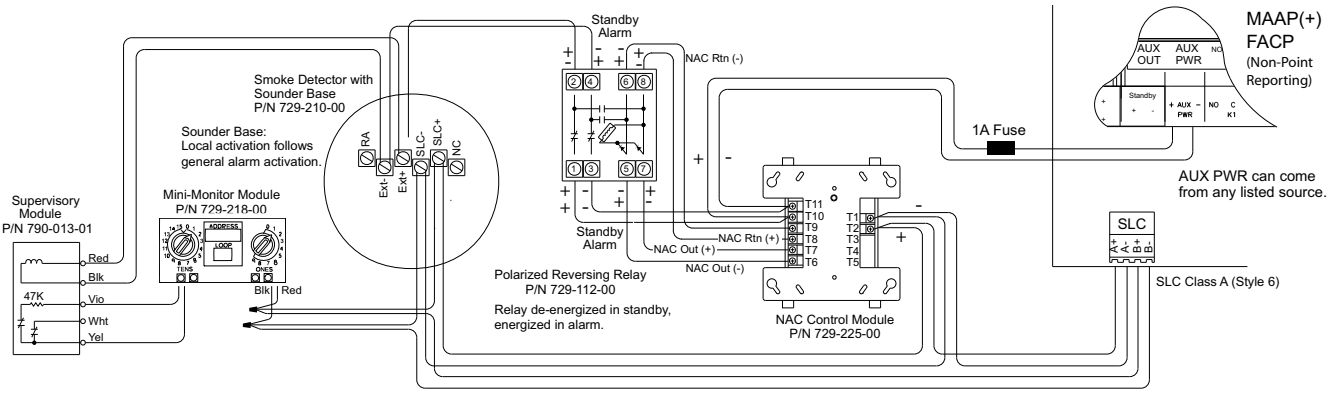


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

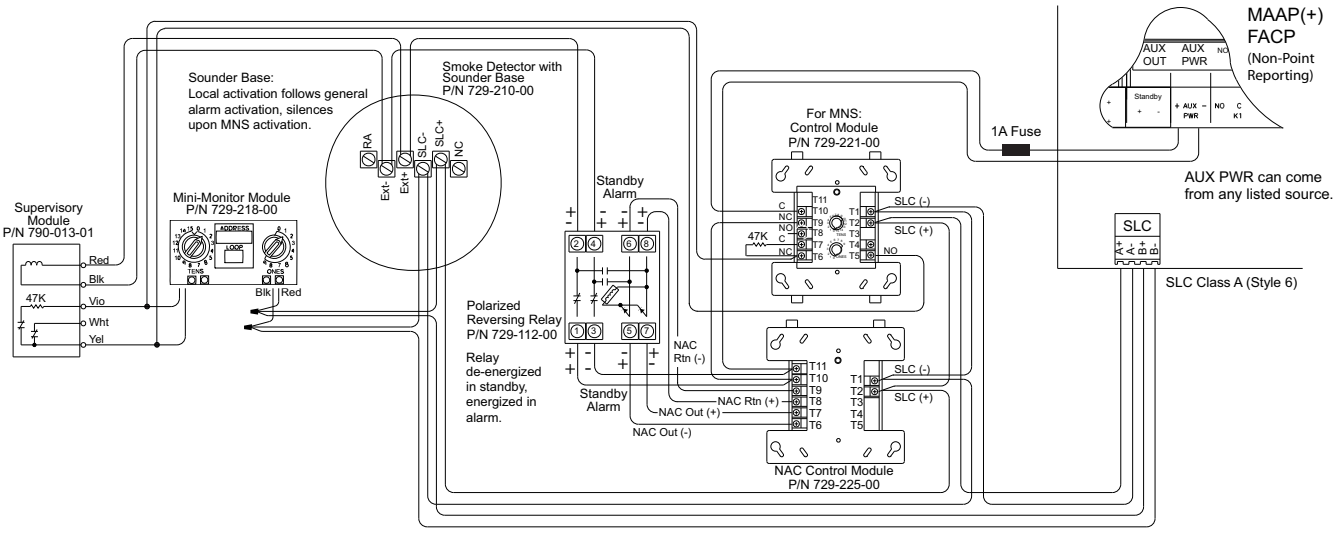
Detect
Manage
Record

Conventional Detection Devices

Addressable Detector Local Sounder Base(s) and Added Secondary Sounder Control by Reverse Voltage



Addressable Detector Local Sounder Base(s) and Added Secondary Sounder Control by Reverse Voltage with MNS Shut-off Control

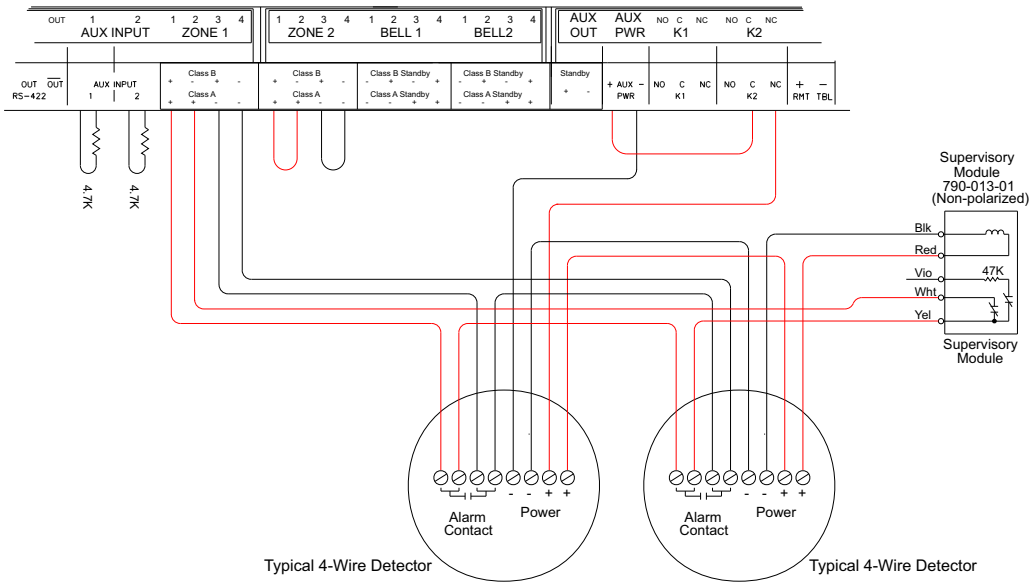


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

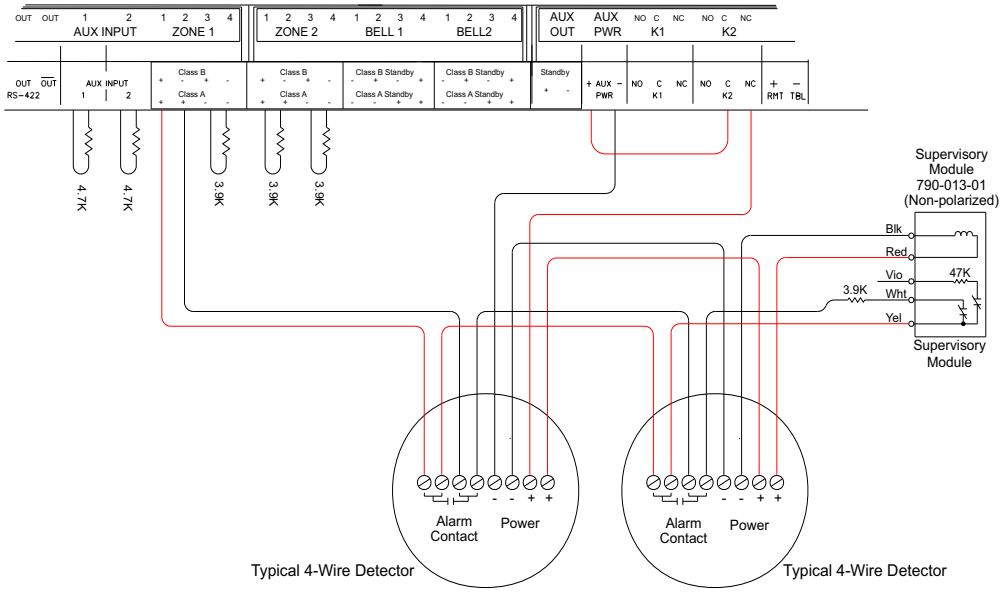
4-Wire Detector to Class A On-board Zone IDC, K2 Programmed as Smoke Power

"M" Integrated Transceiver/FACP



4-Wire Detector to Class B On-board Zone IDC, K2 Programmed as Smoke Power

"M" Integrated Transceiver/FACP

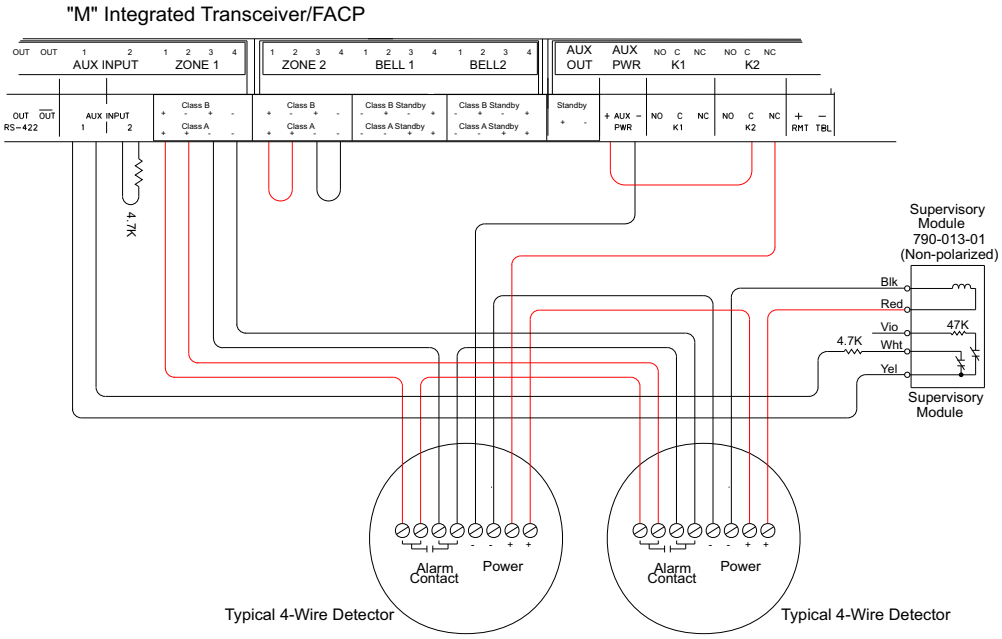


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

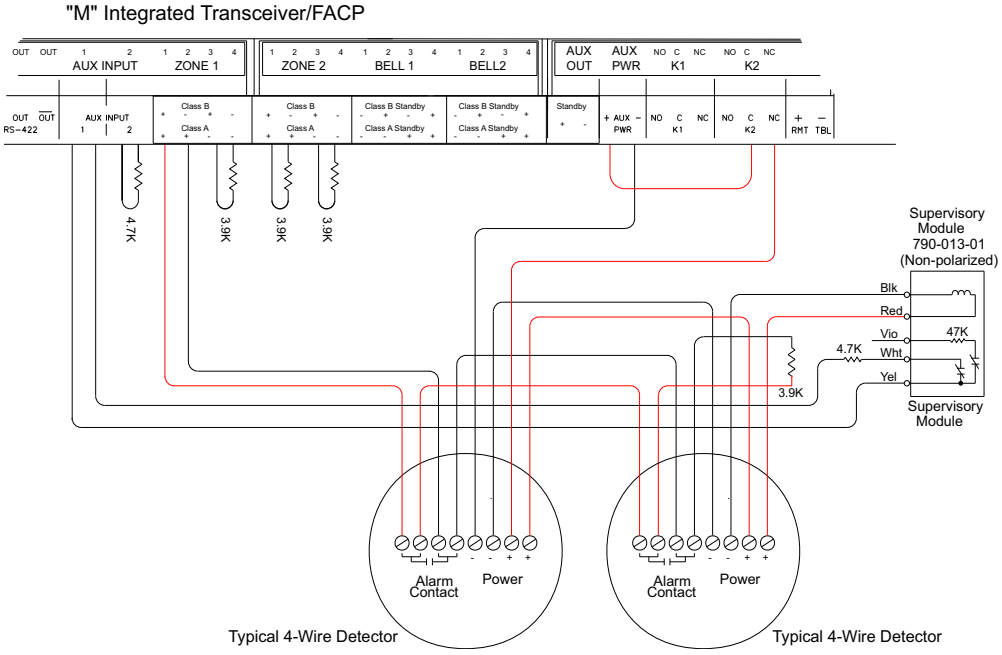
Detect Manage Record

Conventional Detection Devices

4-Wire Detector Class A with Aux Input IDC as Supervision, K2 Programmed as Smoke Power



4-Wire Detector Class B with Aux Input IDC as Supervision, K2 Programmed as Smoke Power



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices Catalog Section 11

Section 11. Notification Appliance Devices

Horns

Outdoor Horn, Red, Wall-mount, Type I 585-067-01
Indoor Mini-Horn, Wall-mount, Type I 585-081-00
Indoor Horn, Red, Wall-mount, Type I 585-100-00
Indoor Horn, White, Wall-mount, Type I 585-104-00
Explosion-proof Horn 585-110-00

Strobes

Explosion-proof Strobe Light for Hazardous Locations 367-033-00
Outdoor Strobe, Wall-mount, Red, Type II 367-050-00
Indoor/Outdoor Strobe, White, Wall-mount, Type II 367-050-10
Indoor Strobe, Wall-mount, White, Type II. 367-057-00
Indoor Strobe, Ceiling-mount, White, Type II. 367-058-00
Indoor Strobe, Ceiling-mount, White, Type II. 367-059-00, 367-064-00
Outdoor Strobe, Red, Wall-mount, Type I. 367-066-00
Outdoor Strobe, White, Wall-mount, Type I 367-066-01
Outdoor Strobe, White, Wall-mount, Type I 367-066-02
Outdoor Strobe, White, High Candela, Wall-mount, Type I 367-066-03
Indoor Strobe, Multi-Candela, White, Wall-mount, Type II 367-075-00
Strobe, Hazardous Locations, 285 Candela, Explosion Proof 367-088-00
Indoor Strobe, 115/177 Candela, Ceiling-mount, White, Type II 367-089-00
Indoor Strobe, Multi-Candela, Ceiling-mount, Red, Type II. 367-090-00
Indoor Strobe Ceiling-mount, White, Type II 367-091-00
Indoor Strobe, Wall-mount, Red, Type II 367-092-00
Weatherproof Strobe, Wall-mount, Amber 367-096-00
Indoor Strobe, Red, Wall-mount, Type I 367-097-00
Indoor Strobe, White, Wall-mount, Type I 367-098-00
Indoor Strobe, White, Wall-mount, Type I 367-099-00
Indoor Strobe, White, Wall-mount, Type I 367-100-00
Indoor Strobe, White, Wall-mount, Type I 367-101-00
Indoor Strobe, Red, Ceiling-mount, Type I 367-102-00
Indoor Strobe, White, Ceiling-mount, Type I 367-103-00
Indoor Strobe, Red, Wall-mount, Type I 367-104-00
Indoor Strobe, White, Ceiling-mount, Type I 367-105-00

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Horn Strobes

Indoor Horn Strobe, Multitone, Wall-mount, Type II 585-018-00
Outdoor Horn Strobe, Multitone, Wall-mount, Red, Type II 585-059-00
Indoor Horn Strobe, Multitone, Wall-mount, Red, Type II. 585-065-00
Outdoor Horn Strobe, 4-Wire, Red, Wall-mount, Type I 585-068-00
Outdoor Horn Strobe, Red, Wall-mount, Type I 585-069-00
Outdoor Horn Strobe, White, High Candela, Wall-mount, Type I 585-097-00
Outdoor Horn Strobe, Red, High Candela, Wall-mount, Type I 585-097-01
Indoor Horn Strobe, Red, Wall-mount, Type I 585-098-00
Indoor Horn Strobe, Red, Ceiling-mount, Type I 585-099-00
Indoor Horn Strobe, Red, Wall-mount, Type I 585-101-00
Indoor Horn Strobe, White, Wall-mount, Type I. 585-102-00
Indoor Horn Strobe, White, Wall-mount, Type I. 585-103-00
Indoor Horn Strobe, White, Ceiling-mount, Type I. 585-105-00
Indoor Horn Strobe, 4-Wire, White, Wall-mount, Type I 585-106-00
Indoor Horn Strobe, 4-Wire, Red, Wall-mount, Type I. 585-107-00
Indoor Horn Strobe, 4-Wire, White, Ceiling-mount, Type I 585-108-00
Indoor Horn Strobe, 4-Wire, Red, Ceiling-mount, Type I. 585-109-00
Explosion-proof Horn Strobe, Hazardous Locations, Grey. 585-111-00

Speakers

Weatherproof Horn Speaker, Grey, Surface-mount. 124-042-00
Cluster Speakers, 2-, 3-, or 4-Horn Speaker System 124-050-00, 124-051-00, 124-052-00
Outdoor Speaker, White, Square, Weatherproof, Type II 124-069-00
Outdoor Speaker, White, Wall-mount, Type I. 124-072-00
Outdoor Speaker, Red, Wall-mount, Type I 124-072-50
Indoor Speaker, White, Wall-mount, Type I 124-091-00
Indoor Speaker, Red, Wall-mount, Type I. 124-092-00
Indoor Speaker, Red, Ceiling-mount, Type I. 124-093-00
Indoor Speaker, White, Ceiling-mount, Type I 124-094-00
Indoor Speaker, White, Ceiling-mount, Type I 124-095-00
Explosion-proof Speaker 124-097-00
Selectable Output Speaker, Outdoor, Ceiling-mount, Type I 124-098-00

Speaker Strobes

Indoor Speaker Strobe, Wall-mount, White, Type II. 580-05x-xx, 580-06x-00, 580-07x-00, 580-081-00
Speaker Strobe, White, Ceiling-mount, Indoor, Type II 580-062-00
Indoor Speaker Strobe, Ceiling-mount, White, Type II. 580-064-00
Indoor Speaker Strobe, MC, Wall-mount, White, Type II 580-068-00
Indoor Speaker Strobe, 8 in., Ceiling-mount, White, Type II 580-074-00
Outdoor Speaker Strobe, 180cd, Wall-mount, White, Type II 580-075-00
Indoor Speaker Strobe, White, Ceiling-mount, Type II. 580-077-00
Outdoor Speaker Strobe, 180cd, Wall-mount, White, Type II 580-078-00
Indoor Speaker Strobe, Self-Amp, Ceiling-mount, Type II. 580-079-00
Indoor Speaker Strobe, Wall-mount, White, Type II, ... 580-081-00

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Outdoor Speaker Strobe, White, Wall-mount, Type I 580-087-00
Outdoor Speaker Strobe, Red, Wall-mount, Type I. 580-088-00
Indoor Speaker Strobe, 8 in., Ceiling-mount, White, Type II 580-099-00
Outdoor Speaker Strobe, White, Ceiling-mount, Type I 580-104-00
Outdoor Speaker Strobe, White, Wall-mount, Type I 580-105-00
Outdoor Speaker Strobe, White, Ceiling-mount, Type I 580-106-00
Indoor Speaker Strobe, Red, Wall-mount, Type I 580-107-00
Indoor Speaker Strobe, White, Wall-mount, Type I 580-108-00
Indoor Speaker Strobe, White, Wall-mount, Type I 580-110-00
Indoor Speaker Strobe, White, Wall-mount, Type I 580-111-00
Indoor Speaker Strobe, White, Ceiling-mount, Type I 580-112-00
Indoor Speaker Strobe, White, Ceiling-mount, Type I 580-113-00
Indoor Speaker Strobe, White, Wall-mount, Type I 580-114-00
Indoor Speaker Strobe, Red, Wall-mount, Type I 580-115-00
Speaker Strobe for Hazardous Locations. 580-117-00
Speaker Strobe LED for Hazardous Locations 580-117-01, 580-117-02, 580-117-03
Indoor Speaker Strobe, White, Ceiling-mount, Type I 580-118-00
Drop-in Speaker Strobe, Tile, White, Ceiling-mount, Type I 580-119-00
Indoor Speaker Strobe, White, Ceiling-mount, Type II. 580-120-00

Bells

Motorized Vibrating Alarm Bell 581-422-00, 581-473-00
Vibrating Alarm Bell, Explosion-proof 581-423-00, 581-451-00

Chimes

Indoor Chime, Red, Wall-mount, Type I. 587-009-00

Chime Strobes

Indoor Chime Strobe, Red, Wall-mount, Type I 587-008-00

MNS Wide Area

MNS Driver Amplifier with Speaker Arrays - Reserved

Bases – Reserved

Accessories

Sync Module, Type I 367-047-00
Sync Module, Type II 367-036-00
Indoor Strobe Plate, Wall-mount, Red, Type II. 367-049-00
Universal Expander Plate, Indoor, White, Wall-mount, Type I 369-036-00
Universal Expander Plate, Indoor, White, Wall-mount, Type I 369-037-00
Universal Expander Plate Back Box Skirt 588-101-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices Catalog Section 11

Horns

Outdoor Horn, Red, Wall-mount, Type I. 585-067-01
Indoor Mini-Horn, Wall-mount, Type I. 585-081-00
Indoor Horn, Red, Wall-mount, Type I 585-100-00
Indoor Horn, White, Wall-mount, Type I 585-104-00
Explosion-proof Horn 585-110-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Notification Appliance Devices

Outdoor Horn, Red, Wall-mount, Type I

585-067-01

Specifications

Nominal Voltage	Regulated 12 VDC or Regulated 24 VDC
Operating Voltage (includes fire alarm panels with built-in sync)	8 to 17.5V (12V nominal) or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	8.5 to 17.5V (12V nominal) or 16.5 to 33V (24V nominal)
Mounting	Universal Mounting Plate mounts to Weatherproof Back Box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Horn Dimensions	5.6 in. L x 4.7 in. W x 1.3 in. D (142 mm x 119 mm x 33 mm)
Weatherproof Back Box Dimensions	5.7 in. L x 5.1 in. W x 2 in. D (145 mm x 130 mm x 51 mm)
Standards Compliance:	
UL Listing	UL464, File S4011
FM Approved	3023572
State of California	7125-1653:189
MEA Approved	MEA452-05-E

Features

- Red housing with no lettering
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Universal mounting plate with an onboard shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch for horn tone and three volume selections
- Weatherproof per NEMA 4X, IP56
- Plastic weatherproof back box included

Sound Output (dBA)

Sound Pattern and Volume	16–33 VDC	24 VDC Nominal	
		Reverberant	Anechoic
Temporal High	84	88	99
Temporal Medium	80	86	96
Temporal Low	76	83	94
Non-Temporal High	88	93	100
Non-Temporal Medium	85	90	98
Non-Temporal Low	81	88	96
Coded High	88	93	101
Coded Medium	85	90	97
Coded Low	81	88	96

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Maximum Current Draw (mA RMS)

Sound Pattern and Volume	16–33 VDC
Temporal High	69
Temporal Medium	58
Temporal Low	44
Non-Temporal High	69
Non-Temporal Medium	60
Non-Temporal Low	50
Coded High	69
Coded Medium	56
Coded Low	52

Ordering Information

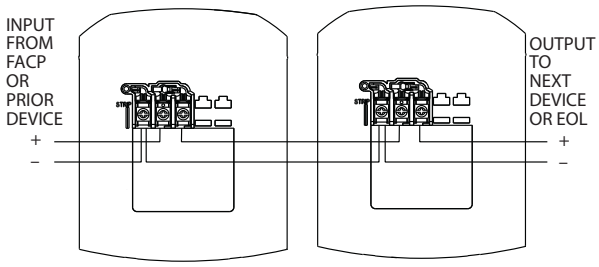
Part Number	Description
585-067-01	Horn, Red, Type I, Wall-mount, Outdoor, 12V or 24V, no lettering, NEMA 4X rating, includes plastic weatherproof back box

Associated Parts

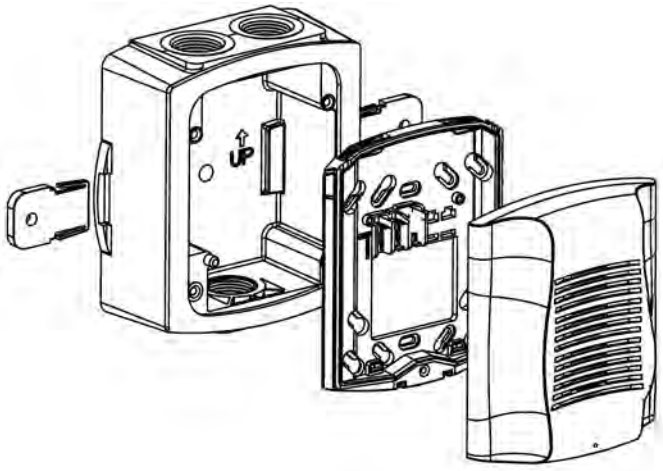
Part Number	Description
589-005-00	White Decals, wall-mount: AGENT, EVAC, ALERT, or FIRE **NOTE** Order two per device
588-059-50	Trim Ring, wall-mount, red
588-038-00	Back Box, metal option, outdoor, weatherproof, wall-mount, red, 2 in. deep, NEMA 4X
367-047-00	Sync Module, Type I

Drawings

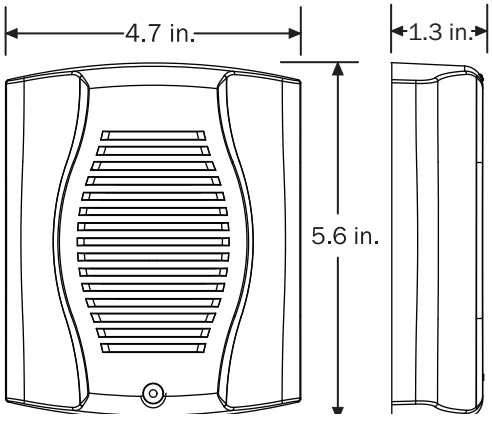
Wiring Diagram



Weatherproof Back Box for Mounting Horn



Wall-mount Horn



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Mini-Horn, Wall-mount, Type I

585-081-00

Specifications

Nominal Voltage	Regulated 12 VDC/FWR or regulated 24 VDC/FWR
Voltage Range	8 to 33 VDC; 8.5 to 33 VDC with sync module
Wire Gauge	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Dimensions	4.6 in. L × 2.9 in. W × 0.45 in. D (117 mm x 74 mm x 11.5 mm)
Weight	2.67 oz
Mounting	2.5 in. deep single gang back box
Standards Compliance:	Listed to UL 464
UL	S4011
FM	Approved
CSFM	7135-1653-0196

Horn Current Draw and Sound Output

Position	Horn Tones		Current Draw (mA RMS) 16–33 VDC	Sound Output Reverberant (dBA @ 10 ft.) 16–33 VDC
1	Temporal	High	17	78
2	Temporal	Low	14	76
3	Nontemporal	High	29	80
4	Nontemporal	Low	21	78

Features

- Red housing no lettering
- High and low volume settings
- Temporal or non temporal tones
- Synchronization with sync module (P/N 367-047-00)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

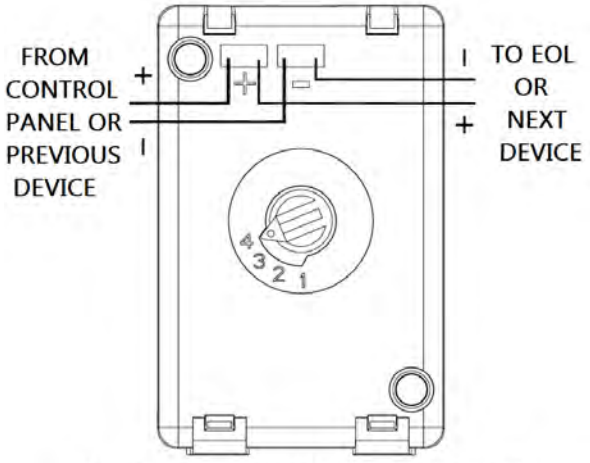
Ordering Information

Part Number	Description
585-081-00	Indoor mini-horn, 12/24 VDC, wall-mount, red

Associated Parts

Part Number	Description
367-047-00	Sync Module, Type I

Wiring Diagram



NOTE SHOWN WITH CONTROL PANEL IN ALARM. PANEL POLARITY REVERSED IN SUPERVISOR CONDITION.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Horn, Red, Wall-mount, Type I

585-100-00

Specifications

Nominal Voltage	Regulated 12 VDC Regulated 24 DC/FWR
Operating Voltage Range	8 to 17.5V (12V nominal), or 16 to 33V (24 V nominal)
Operating Voltage Range with Type I Sync Module	8.5 to 17.5V (12V nominal), or 16.5 to 33V (24V Nominal)
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in., or 4 in. octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Wall-mount Dimensions Horn	5.6 in. L 4.7 in. W x 1.25 in. D (143 mm x 119 mm x 32 mm)
Standards Compliance	Listed to ANSI/UL 464
UL Listed	S4011
FM Approved	3057383 3057072
State of California	7125-1653:0504 7135-0653:0503

Features

- Red housing with no lettering
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch for horn tone and two volume selections

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Horn Tones, Current Draw (mA RMS) and Sound Output (dBA @ 10 ft.) at 16–33 VDC

Pos	Horn Tones	Volume	Maximum Current Draw	Sound Output Reverberant
1	Temporal	High	44	89
2	Temporal	Low	32	83
3	Non-Temporal	High	47	90
4	Non-Temporal	Low	32	84
5	3.1 KHz Temporal	High	41	88
6	3.1 KHz Temporal	Low	32	82
7	3.1 KHz Non-Temporal	High	43	89
8	3.1 KHz Non-Temporal	Low	29	83
9	Coded	High	47	90
10	3.1 KHz Coded	High	43	89

Ordering Information

Part Number	Description
585-100-00	Horn, Red, Type I, Wall-mount, Indoor, 12V or 24V, no Lettering

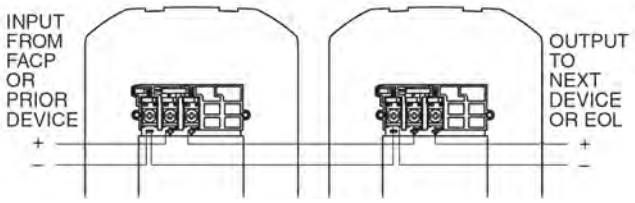
Associated Parts

Part Number	Description
589-042-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White AGENT lettering, order one per device
589-043-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White ALERT lettering, order one per device
589-044-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White EVAC lettering, order one per device
589-045-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White FIRE lettering, order one per device
588-098-00	Trim Ring, Red, Type I, Wall-mount, Universal, 8.2 in. x 6.3 in. x 0.4 in.
588-090-00	Back Box, Wall-surface-mount, Red, Type I, Strobe, Horn Strobe; Chime Strobe; Chime; Horn, 4.82 in. x 5.78 in. x 1.85 in.

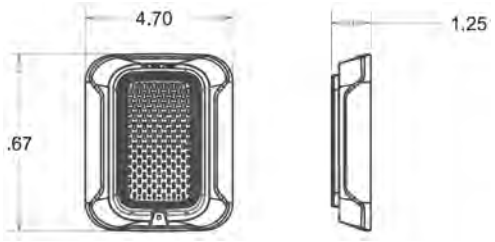
Part Number	Description
367-047-00	Sync Module, Type I

Drawings

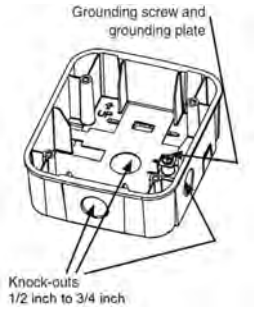
Wiring Diagram



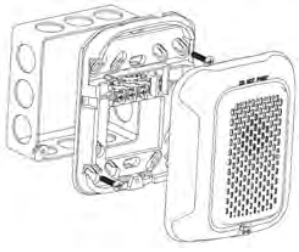
Wall-mount Horn



Back Box, Surface-mount



Junction Box for Flush-mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Horn, White, Wall-mount, Type I

585-104-00

Specifications

Nominal Voltage	Regulated 12 VDC Regulated 24 DC/FWR
Operating Voltage Range	8 to 17.5V (12V nominal) or 16 to 33V (24V nominal)
Operating Voltage Range with Type I Sync Module	8.5 to 17.5V (12V nominal) or 16.5 to 33V (24V nominal)
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in., or 4 in. octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Wall-mount Dimensions Horn	5.6 in. L x 4.7 in. W x 1.25 in. D (143 mm x 119 mm x 32 mm)
Standards Compliance	Listed to ANSI/UL 464
UL Listed	S4011
FM Approved	3057383 3057072
State of California	7125-1653:0504 7135-0653:0503

Features

- White housing with no lettering
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch for horn tone and two volume selections

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Horn Tones, Current Draw, and Sound Output at 16–33 VDC

Pos	Horn Tones	Volume	Maximum Current Draw	Sound Output Reverberant (dBA @ 10 ft.)
1	Temporal	High	44	89
2	Temporal	Low	32	83
3	Non-Temporal	High	47	90
4	Non-Temporal	Low	32	84
5	3.1 KHz Temporal	High	41	88
6	3.1 KHz Temporal	Low	32	82
7	3.1 KHz Non-Temporal	High	43	89
8	3.1 KHz Non-Temporal	Low	29	83
9	Coded	High	47	90
10	3.1 KHz Coded	High	43	89

Ordering Information

Part Number	Description
585-104-00	Horn, White, Type I, Wall-mount, Indoor, 12V or 24V, no lettering

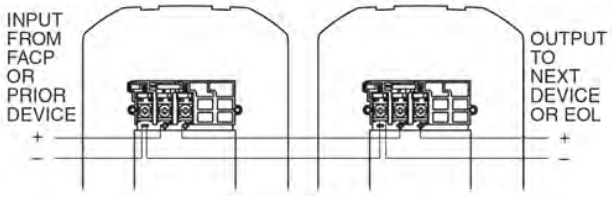
Associated Parts

Part Number	Description
589-037-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, Red AGENT lettering, order one per device
589-038-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, Red ALERT lettering, order one per device
589-039-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, Red EVAC lettering, order one per device
589-040-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, Red FIRE lettering, order one per device
588-099-00	Trim Ring, White, Type I, Wall-mount, Universal, 8.2 in. H X 6.3 in. W X 0.4 in. D
588-091-00	Back Box, Wall-surface-mount, White, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, 4.82 in. W X 5.78 in. H X 1.85 in. D

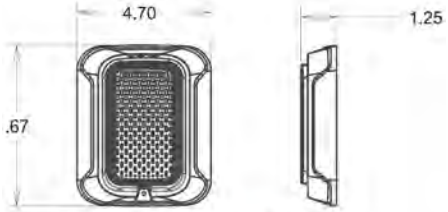
Part Number	Description
367-047-00	Sync Module, Type I

Drawings

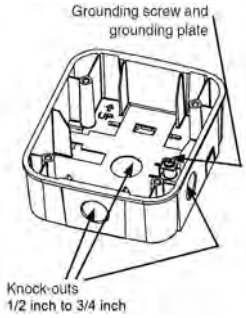
Wiring Diagram



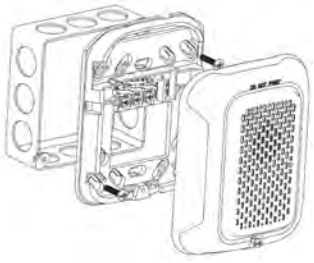
Wall-mount Horn



Back Box, Surface-mount



Junction Box for Flush-mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Explosion-proof Horn
585-110-00

Description

The Monaco explosion-proof horn is a diode-polarized unit rated for indoor and outdoor use.

This lightweight explosion-proof horn has been designed with a high waterproof rating to cope with harsh environmental conditions. New electronic circuitry allows the 585-110-00 to be switched between two selectable tones by either reversing supply polarity or connecting a second voltage supply.

Features

- UL Listed for
  Class I, Division 1, (Groups C and D);
  Class I, Zone 1
- ATEX approved
- NEMA 4X, IP66
- Certified temperature:
  –13°F to 158°F
  –25°C to 70°C
- 4 wire diode monitored connection for operation in supervisory mode
- NFPA 72 compliant
- Up to 103 dBA output at 10 ft
- Marine grade alloy
- 12 VDC, 24 VDC and 48 VDC
- 27 output tones, user selectable
  Tones can be selected remotely
- Any two tones may be switched via the external voltage supply
- Three 1/2 in. NPT conduit entries (left, right, bottom)

Specifications

Operating Voltage	24 VDC
Input Current	250 mA
dBA Rating @10 ft.	93 ± 3 dBA
Operating Temperatures	–13°F to 158°F (–25°C to 70°C)
Mounting	Wall-mount
Dimensions	6 11/16 in. OD x 6 19/32 in. D
Weight	7.7 lb (3.5 kg)
Finish	Epoxy Paint
Standards Compliance:	
UL	UL E187688 UL Listed Class I, Div. 1, Groups C and D Class I, Zone 1

Ordering Information

Part Number	Description
585-110-00	Explosion-proof Horn, vibrating, 24 VDC, three 1/2 in. NPT

Tone Selection Table

Tone	Tone Frequency
1	Alt tones 800/970 Hz at 1/4 sec
2	Sweeping 800/970 Hz at 7 Hz
3	Sweeping 800/970 Hz at 1 Hz
4	Continuous at 2850 Hz
5	Sweeping 2400–2850 Hz at 7 Hz
6	Sweeping 2400–2850 Hz at 1 Hz
7	Slow Whoop
8	Sweep 1200–500 Hz at 1 Hz
9	Alt tones 2400/2850 Hz at 2 Hz

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Tone	Tone Frequency
10	Int tones of 970 Hz at 1 Hz
11	Alt tones 800/970 Hz at 7/8 Hz
12	Int tone at 2850 Hz at 1 Hz
13	970 Hz at 1/4 sec on 1 sec off
14	Continuous at 970 Hz
15	554 Hz for 0.1 S/440 Hz for 0.1 sec
16	Int 660 Hz 150 mS on 150 mS off
17	Int 660 Hz 1.8 sec on 1.8 sec off
18	Int 660 Hz 6.5 sec on 13 sec off
19	Continuous 660 Hz
20	Alt 554/440 Hz at 1 Hz
21	Int 660 Hz at 7/8 Hz
22	Int 2850 Hz 150 mS on 100 mS off
23	Sweep 800–970 Hz at 50 Hz
24	Sweep 2400-2850 Hz at 50 Hz
25	3x970 Hz pulses 0.5 sec off, 1.5 sec off
26	3x2850 Hz pulses 0.5 sec on/0.5 sec off, 1.5 sec off
27	Int 3100 Hz 0.3 sec on 0.7 sec off

Application Notes

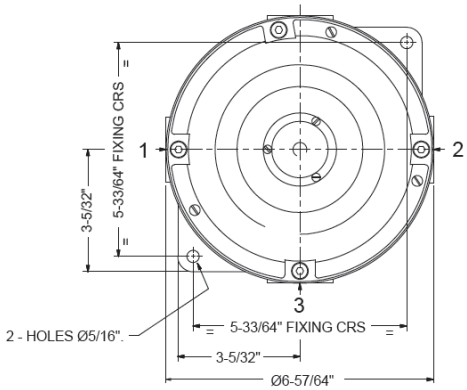
Signals selected for hazardous locations should be UL Listed and marked for at least the Hazardous Location Classifications dictated by the application. The signal should be 10 dB higher than the ambient noise level and as different from the background noise as possible.

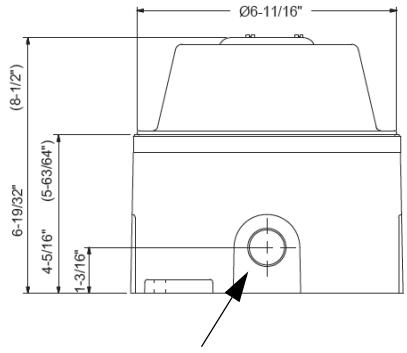
The National Electric Code has created three classes of hazardous locations: Class I Hazardous Gases; Class II Hazardous Dusts; Class III Hazardous Fibers.

Functioning electromechanical devices (e.g., bells, explosion-proof horns) can generate electrical noise on the wires to which they are connected. This noise can cause random troubles on fire alarm panels and booster power supplies and electronic signals that could cause strobes to not flash properly. Wiring for electromechanical devices should be separated from electronic devices, such as strobes, as much as possible to prevent noise induction—they should be on their own NACs and the wiring should not share the same conduit or junction boxes. If a protected area within a building requires both a horn and a strobe, the two should not be mounted close to each other.

Drawings

Horn Dimensions





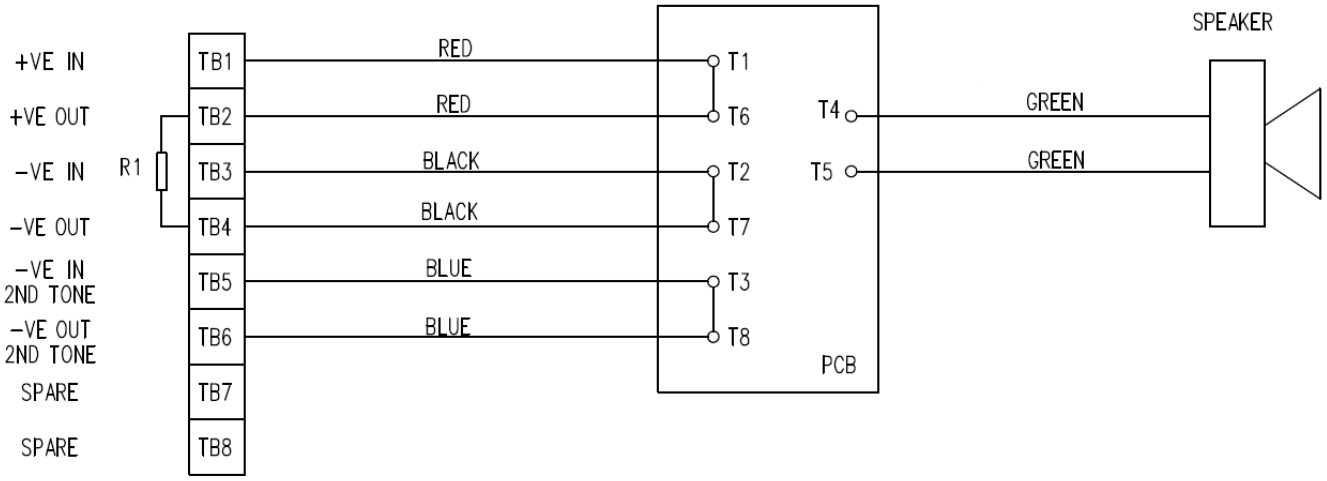
3 ea. 1/2 in. NPT, left, right, bottom

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices Catalog Section 11

Strobes

Explosion-proof Strobe Light for Hazardous Locations 367-033-00
Outdoor Strobe, Wall-mount, Red, Type II 367-050-00
Indoor/Outdoor Strobe, White, Wall-mount, Type II 367-050-10
Indoor Strobe, Wall-mount, White, Type II. 367-057-00
Indoor Strobe, Ceiling-mount, White, Type II. 367-058-00
Indoor Strobe, Ceiling-mount, White, Type II. 367-059-00, 367-064-00
Outdoor Strobe, Red, Wall-mount, Type I. 367-066-00
Outdoor Strobe, White, Wall-mount, Type I 367-066-01
Outdoor Strobe, White, Wall-mount, Type I 367-066-02
Outdoor Strobe, White, High Candela, Wall-mount, Type I 367-066-03
Indoor Strobe, Multi-Candela, White, Wall-mount, Type II 367-075-00
Strobe, Hazardous Locations, 285 Candela, Explosion Proof 367-088-00
Indoor Strobe, 115/177 Candela, Ceiling-mount, White, Type II 367-089-00
Indoor Strobe, Multi-Candela, Ceiling-mount, Red, Type II. 367-090-00
Indoor Strobe Ceiling-mount, White, Type II 367-091-00
Indoor Strobe, Wall-mount, Red, Type II 367-092-00
Weatherproof Strobe, Wall-mount, Amber 367-096-00
Indoor Strobe, Red, Wall-mount, Type I 367-097-00
Indoor Strobe, White, Wall-mount, Type I 367-098-00
Indoor Strobe, White, Wall-mount, Type I 367-099-00
Indoor Strobe, White, Wall-mount, Type I 367-100-00
Indoor Strobe, White, Wall-mount, Type I 367-101-00
Indoor Strobe, Red, Ceiling-mount, Type I 367-102-00
Indoor Strobe, White, Ceiling-mount, Type I 367-103-00
Indoor Strobe, Red, Wall-mount, Type I 367-104-00
Indoor Strobe, White, Ceiling-mount, Type I 367-105-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Explosion-proof Strobe Light for Hazardous Locations
367-033-00

Description

The Monaco Hazardous Location Strobe Light is an explosion-proof strobe light intended for indoor use for applications requiring supervision of signaling circuit field wiring. The strobe flashes a 360 degree beam of light approximately 65 times per minute. This strobe light is UL Listed for Class I, Division 1 (Groups C and D) and Division 2 (Groups A, B, C and D); Class II, Division 1 (Groups E, F and G) and Division 2 (Groups F and G); Class III, Division 1 and 2 locations. The strobe is also UL 1971 listed for visual signaling use for the hearing impaired in non-sleeping areas.

The National Electric Code has created three classes of hazardous locations: Class I is for Hazardous Gases, Class II is for Hazardous Dusts, and Class III is for Hazardous Fibers.

Features

- UL 1971 listed for indoor visual signaling for the hearing impaired in non-sleeping areas
- UL Listed for Class I, Division 1 (Groups C and D) and Division 2 (Groups A, B, C and D); Class II, Division 1 (Groups E, F and G) and Division 2 (Groups F and G); Class III, Division 1 and 2 locations
- 65 flashes per minute
- Diode polarized
- Pendant mount
- Explosion-proof
- High-impact glass dome
- Epoxy powder coat for corrosion protection

Specifications

Enclosure	NEMA Type 3R and Type 4X
Operating Voltage Range	16 to 33 VDC/FWR
Operating Current	0.505A @ 24 VDC (regulated) 0.683A @ 24 VDC/FWR
Operating Temperature	UL: –31°F to 150°F (–35°C to 66°C) ULC: –40°F to 150°F (–40°C to 66°C)
Strobe Flash Rate	65 times per minute
Lens Color	Clear
Strobe Type	Xenon, clear/nominal white flash
Candela Rating	Ceiling: 125cd (without guard) 86cd (with guard) Wall: 60cd (without guard) 51cd (with guard)
Standards Compliance	UL 1971, Listing E212475

Ordering Information

Part Number	Description
367-033-00	Explosion-proof Strobe Light with clear lens, for hazardous locations, 125cd ceiling rating, 60cd wall rating, 24 VDC operation (mounting brackets required)

Associated Parts

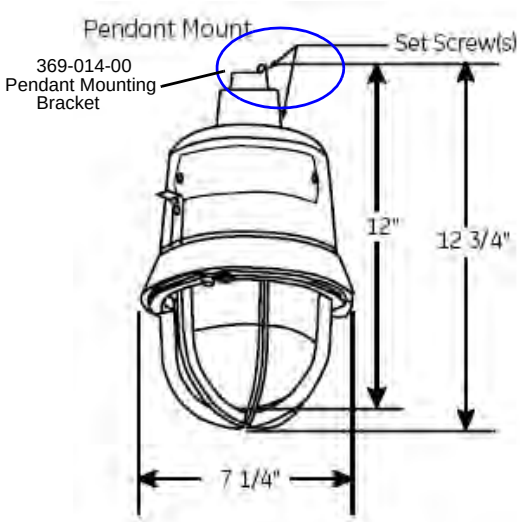
Part Number	Description
369-014-00	Pendant Mounting Bracket (3/4 in. conduit entry)
369-017-00	Stanchion Mounting Bracket
369-018-00	Ceiling Mounting Bracket
369-019-00	Wall-mount 90 degree elbow (must be used with P/N 369-018-00 Ceiling-mount Bracket)

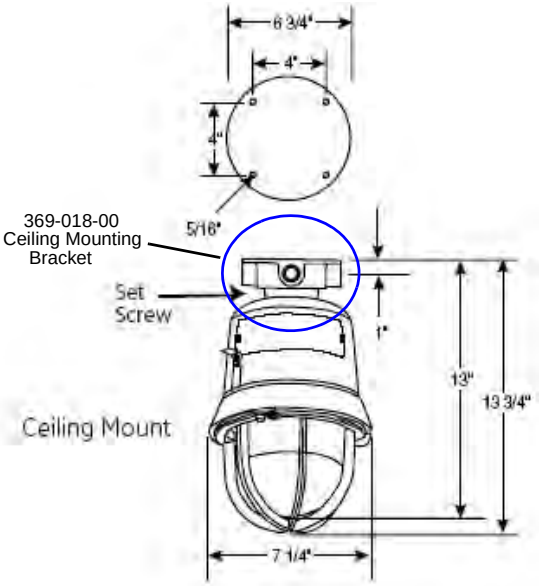
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

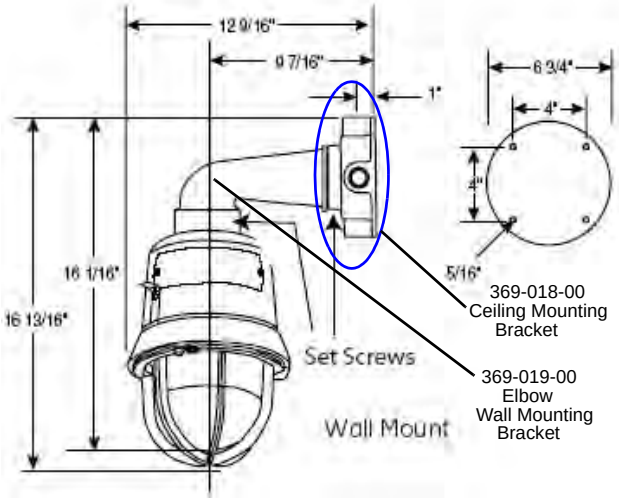
Detect Manage Record

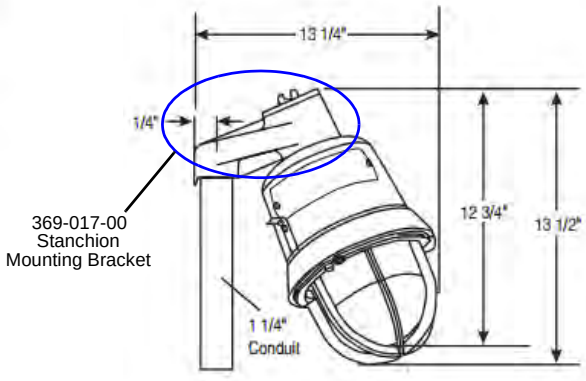
Drawings

Dimensions/Mounting Options









Stanchion-mount

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Outdoor Strobe, Wall-mount, Red, Type II

367-050-00

Specifications

Flash Rate	1 flash per second
Operating Voltage	24 VDC with new UL "Regulated" voltage range: 16 to 33 VDC
Maximum Current	0.138A DC–RMs (Amps)
Strobe Candela	180cd at 77°F 75cd at –31°F
Input Terminals	12 to 18 AWG
Operating Temperature	–40°F to 150°F (–40°C to 66°C)
Maximum Humidity	95% non-condensing
Dimensions	4.8 in. H x 4.8 in. W x 3.05 in. D

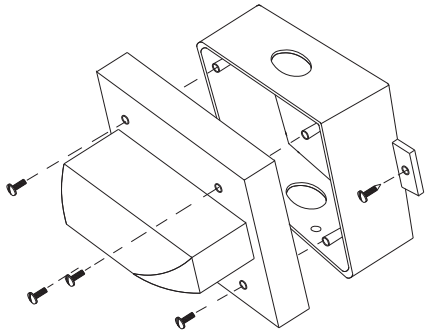
Features

- Meets Indoor/Outdoor UL1638 Listing, UL464, and Americans with Disabilities Act requirements; FM Approval pending
- Suitable for severe environment applications
- Uses a xenon flash tube with solid-state circuitry in a rugged lens
- Low current draw
- Compatible with Type II sync module (P/N 367-036-00)

Mounting Options

Use 5 3/16 in. H x 5 3/16 in. W x 1 11/16 in. D weatherproof, surface-mounted back box.

Weatherproof Surface-mount



Ordering Information

Strobe

Part Number	Description
367-050-00	Outdoor Strobe, 24 VDC, 2-wire, weatherproof, extended temperature range –31°F to 150°F, wall-mount, red, clear lens, FIRE lettering, 75cd

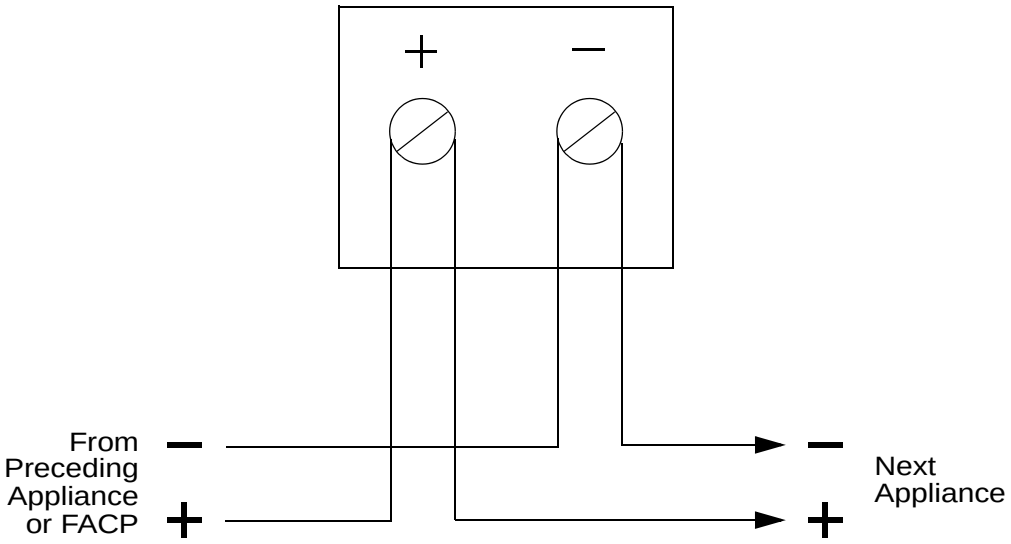
Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
588-026-00	Weatherproof Back Box, surface-mount
404-119-00	NAC Power Extender, 115 VAC 60 Hz, 12/24 VDC, 8A, 4 Class B or 2 Class A, use with Type II strobes
NOTE P/N 404-119-00 requires 2 ea. 12 V/7.7 Ah batteries (P/N 400-704-00) for 24-hour battery backup, or 2 ea. 12V/12 Ah batteries (P/N 400-713-00) for 72-hour battery backup	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor/Outdoor Strobe, White, Wall-mount, Type II

367-050-10

Features

- White housing with FIRE lettering and clear lens
- Synchronized or non-synchronized strobe signal
- Polarized inputs
- Xenon flash tube in a polycarbonate lens for maximum visibility and reliability
- Low current draw
- Rated for 75cd at –31°F (–35°C)

Specifications

Nominal Voltage	24 VDC
Operating Voltage	16 to 33 VDC
Strobe Candela	75cd at –31°F (–35°C) 180cd at 77°F (25°C)
Strobe Flash Rate	1 flash per second over regulated voltage range
Mounting	Indoor: standard 4 in. or 2 in. single gang electrical box Outdoor: weatherproof (NEMA 3R rated) back box with weatherproof rated conduit fitting on all back box knockouts
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–31°F to 150°F (–35°C to 66°C)
Relative Humidity	93% ±2% non-condensing
Dimensions	4.8 in. H x 4.8 in. W x 0.602 in. D (12.2 cm x 12.2 cm x 1.5 cm)
Standards Compliance:	
UL Listed	UL1638, UL464, and UL1971, File S5391
FM	Approved
State of California	7300-0785-0154

Ordering Information

Part Number	Description
367-050-10	Strobe, White, Type II, Wall-mount, Indoor/Outdoor, 24 VDC, 2-wire, red FIRE lettering, clear lens, weatherproof, extended temperature range –31°F to 150°F, 75cd **NOTE** Requires weatherproof back box for outdoor use.

Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
588-026-01	Weatherproof Back Box, surface-mount, white
404-119-00	Type II NAC Distributed Power Extender emulates synchronization signals compatible with sync module (P/N 367-036-00) **NOTE** P/N 404-119-00 needs two 7.7 Ah batteries (P/N 400-704-00) for 24 hour battery backup, or two 12 Ah batteries (P/N 400-713-00) for 72 hour battery backup

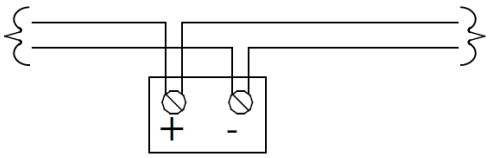
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

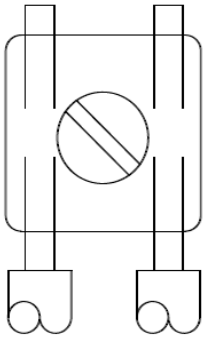
Detect Manage Record

Notification Appliance Devices

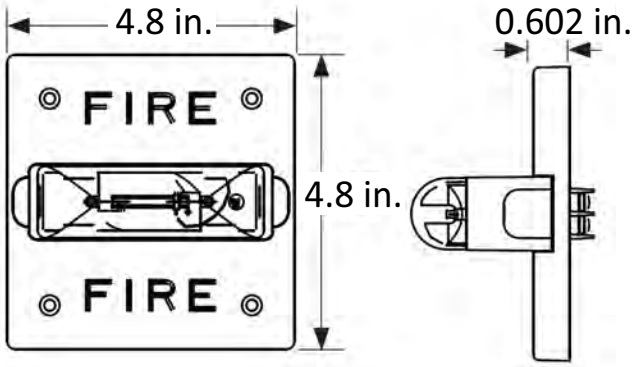
Diagrams

Wiring Diagram

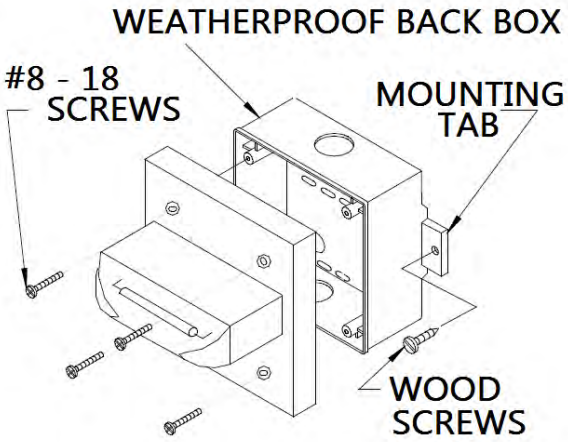
STROBES	FROM PRECEDING APPLIANCE, FACP OR SYNC MODULE  TO NEXT SIGNAL OR END OF LINE RESISTOR (EOLR)



Dimensions



Mounting Diagram



MAXIMUM NUMBER OF CONDUCTORS

AWG#18	AWG#16	AWG#14	AWG#12
4	4	4	4

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

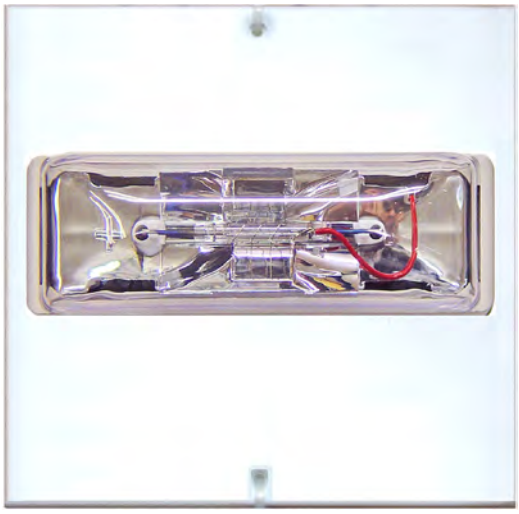
Notification Appliance Devices

Indoor Strobe, Wall-mount, White, Type II

367-057-00

Description

This in-building strobe uses a xenon flashtube with solid-state circuitry enclosed in a rugged Lexan® lens to provide maximum visibility and reliability for effective signaling. All inputs are polarized for compatibility with standard reverse-polarity supervision of circuit wiring by a fire alarm control panel (FACP).



The strobe can be used as a nonsynchronized strobe appliance when connected directly to an FACP or can be used as a synchronized appliance when used with the Type II sync module or Type II distributed power extender.

Back Box Mounting Options

- Surface- or flush-mounting
- Standard single- or double-gang, 4-in. square, 3.5 in. octagonal

Features

- Field-selectable candela settings, tamper resistant
- Clear lens
- Low current draw allows more devices per loop
- Synchronizable with Type II sync module (P/N 367-036-00)

Specifications

Voltage	24 VDC filtered/FWR unfiltered
Voltage Range	16 to 33 VDC
Candela	Standard: 15, 30, 75, 110cd
Flash Rate	1 flash per second
Wiring	12 to 18 AWG
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	93% non-condensing
Dimensions	See “Drawings”

Current Draw

Candela (cd)	16–33 VDC UL Max. Current (mA)
15	60
30	92
75	165
110	220

Ordering Information

Strobe

Part Number	Description
367-057-00	Indoor Strobe, 24 VDC, 2-wire, Wall-mount, White, no lettering, clear lens, standard candela: 15, 30, 75, 110cd

Associated Parts

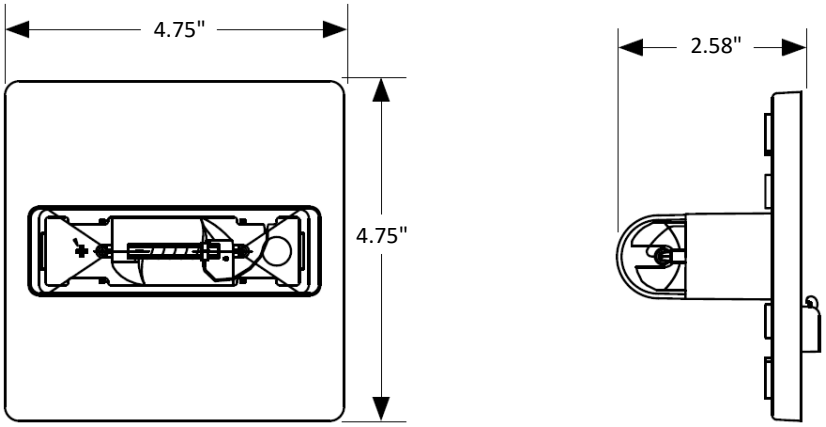
Part Number	Description
367-036-00	Sync Module, Type II
404-119-00	NAC Power Extender, 115 VAC 60 Hz, 12/24 VDC, 8A, four Class B or two Class A, use with Type II strobes

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

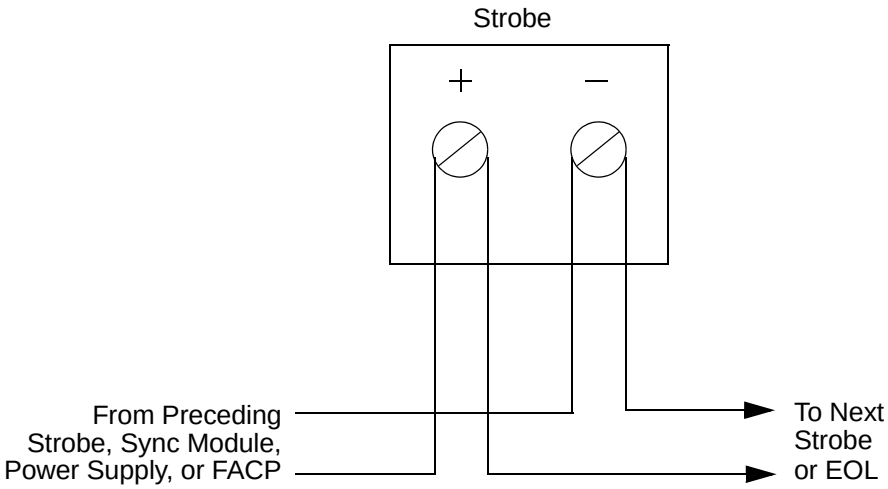
Detect Manage Record

Drawings

Dimensions



Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Strobe, Ceiling-mount, White, Type II
367-058-00

Description

The Within-Building Strobes use a Xenon flashtube with solid state circuitry enclosed in a rugged Lexan® lens to provide maximum visibility and reliability for effective signaling. All inputs are polarized for compatibility with standard reserve polarity supervision of circuit wiring by a Fire Alarm Control Panel (FACP).

Strobes can operate in a synchronized and non-synchronized mode. To operate a strobe in a synchronized mode, you must connect the strobe to an FACP/MNS NAC that is capable of Type II synchronization. If the FACP/MNS NAC is not capable of Type II synchrnoization, use an external Type II sync module (P/N 367-036-00).

Features

- Meets UL 1971, Americans with Disabilities Act requirements, FM Approved
- Field-selectable candela settings
- Amber, green, blue, and clear strobe lens options
- Low current draw allows more devices per loop
- Can be synchronized with P/N 367-036-00
- Low profile design

Specifications

Flash Rate	1 flash per second
Voltage	24 VDC and FWR unfiltered
Voltage Range	16 to 33V
Candela	15, 30, 75, 95cd
Input Terminals	12 AWG to 18 AWG
Operating Temperature Range	32°F to 120°F (0°C to 49°C)
Maximum Humidity	93% ± 28
Dimension	7.38 in. OD

Ordering Information

Ceiling-mount

Part Number	Description
367-058-00	Indoor Strobe, 24 VDC, 2-wire, round ceiling-mount, white, no lettering, clear lens, candela: 15, 30, 75, 95

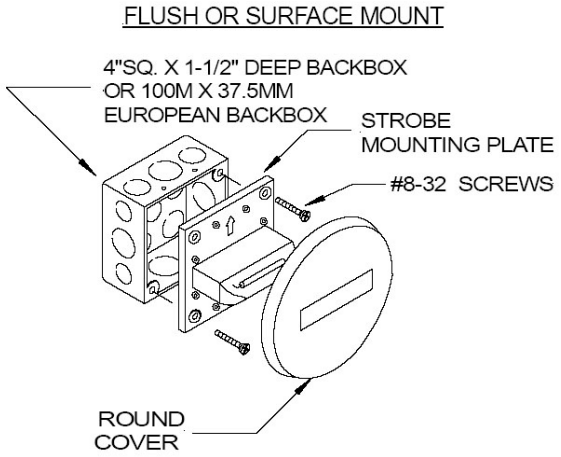
Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
404-119-00	NAC Power Extender, 115 VAC 60 Hz, 12/24 VDC, 8A, four Class B or two Class A, use with Type II strobes

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Mounting Diagram



Current Ratings

Maximum RMS Current Draw					
	Voltage	**15cd**	**30cd**	**75cd**	**95cd**
DC	20 VDC	0.065	0.105	0.189	0.249
DC	24 VDC	0.045	0.070	0.119	0.159
DC	31 VDC	0.035	0.052	0.089	0.110

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Strobe, Ceiling-mount, White, Type II

367-059-00, 367-064-00

Description

These strobes use a Xenon flash tube with solid-state circuitry enclosed in a rugged Lexan® lens to provide maximum visibility and reliability for effective signaling. All inputs are polarized for compatibility with standard reverse-polarity supervision of circuit wiring by a fire alarm control panel (FACP).

Amber Lens Shown (P/N 367-059-00)

The strobe can be used as a non-synchronized strobe appliance when connected directly to an FACP or can be used as a synchronized appliance when used with the Type II sync module or Type II distributed power extender.

Features

- Field-selectable candela settings
- Amber and blue lens options
- Synchronizable (Type II sync module P/N 367-036-00)

Specifications

Voltage	24 VDC and FWR unfiltered
Voltage Range	16 to 33 VDC
Candela	15, 30, 75, and 95cd
Flash Rate	1 flash per second
Input Terminals	12 to 18 AWG
Mounting Options	• Surface- or flush-mount • Standard single- or double-gang, 4 in. square, 3.5 in. octagonal
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	93% ±2% non-condensing
Dimensions	4.8 in. H × 4.8 in. W x 2.6 in. D (12.07 cm × 12.07 cm x 6.6 cm)
Standards Compliance:	
UL Listed	File S5391

UL Maximum Current Draw (mA)

Candela Setting	DC Input	Current Draw
15	16 to 33 VDC	65
30		105
75		189
95		249

Ordering Information

Part Number	Description
367-059-00	Indoor Strobe, 24 VDC, 2-wire, square ceiling-mount, white, no lettering, amber lens, 15, 30, 75, 95cd
367-064-00	Indoor Strobe, 24 VDC, 2-wire, square ceiling-mount, white, no lettering, blue lens, 15, 30, 75, 95cd

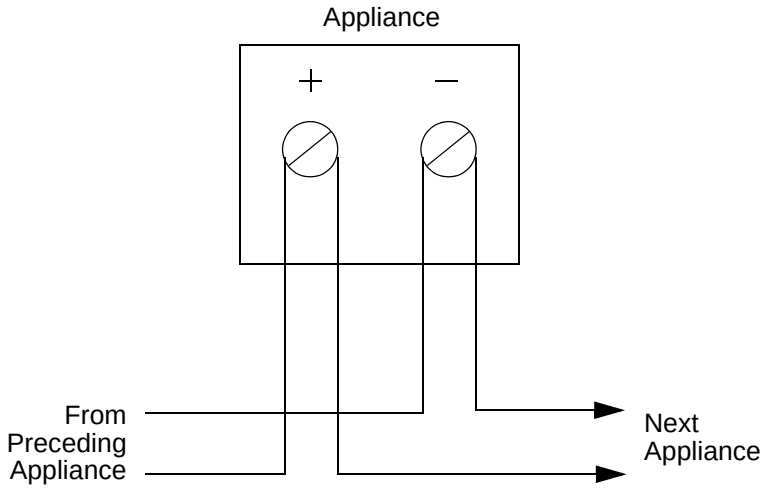
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
404-119-00	NAC Power Extender, 115 VAC, 60 Hz, 12/24 VDC, 8A, four Class B or two Class A, use with Type II strobes

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Outdoor Strobe, Red, Wall-mount, Type I

367-066-00

Specifications

Nominal Voltage	Regulated 12 VDC/FWR or Regulated 24 VDC/FWR
Operating Voltage (Includes fire alarm panels with built-in sync)	8 to 17.5V (12V nominal or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	8.5 to 17.5V (12V nominal) or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 15/75cd 24 VDC: 15, 15/75, 30, 75, 95, 110 and 115cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to Weatherproof Back Box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Strobe Dimensions with Lens	5.6 in. L x 4.7 in. W x 2.5 in. D (142 mm x 119 mm x 64 mm)
Weatherproof Back Box Dimensions	5.7 in. L x 5.1 in. W x 2 in. D (145 mm x 130 mm x 51 mm)
Standards Compliance:	
UL Listed	UL1638, File S3593
FM Approved	3023572
State of California	7300-1653:187
MEA Approved	MEA452-05-E

Features

- Red housing with white FIRE lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12V or 24V operation
  NOTE 12V operation only supports 15 and 15/75cd settings.
- Field-selectable candela settings:
  12V: 15 and 15/75cd
  24V: 15, 15/75, 30, 75, 95, 110, and 115cd
- Universal mounting plate with an onboard shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Weatherproof NEMA 4X, IP56
- Plastic weatherproof back box included

Maximum Current Draw (mA RMS)

DC Input	16–33 VDC						
Candela Setting	**15cd**	**15/75cd**	**30cd**	**75cd**	**95cd**	**110cd**	**115cd**
Current Draw	66	77	94	158	181	202	210

Low Temperature Candela Derating (@ –40°F)

Candela Setting	75cd	95cd	110cd	115cd
Derated Candela	44cd	70cd	110cd	115cd
NOTE Do not use the 15, 15/75, and 30cd settings below 32°F.				

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ordering Information

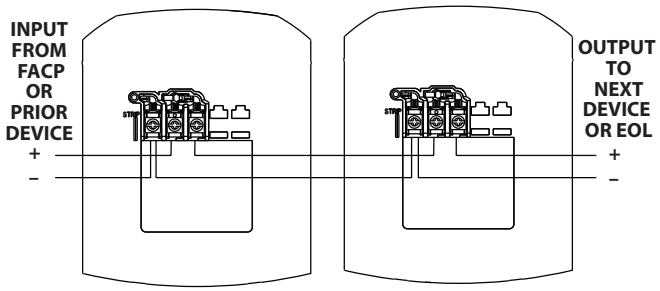
Part Number	Description
367-066-00	Strobe, Red, Type I, Wall-mount, Outdoor, 12V or 24V, white FIRE lettering, clear lens, 15, 15/75, 30, 75, 95, 110, and 115cd, includes plastic weatherproof back box

Associated Parts

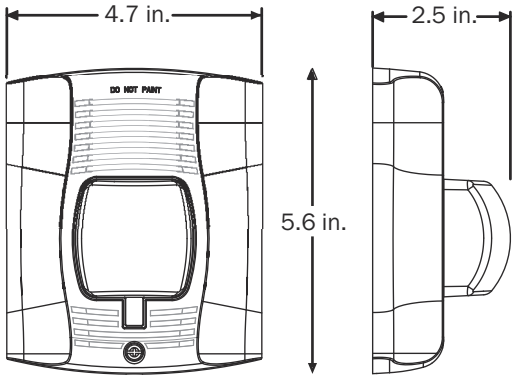
Part Number	Description
588-059-50	Trim Ring, wall-mount, red
588-038-00	Back Box, metal option, outdoor, weatherproof, wall-mount, red, 2 in. deep, NEMA 4X
367-047-00	Sync Module, Type I

Drawings

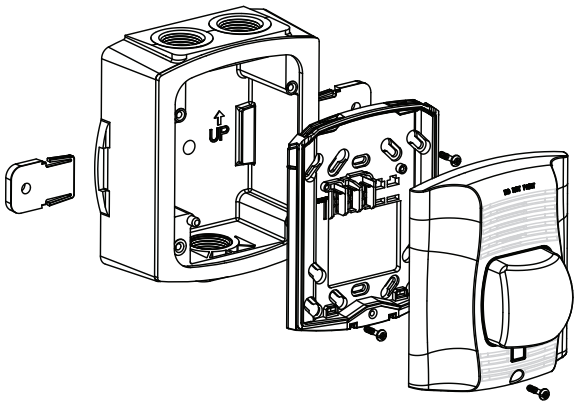
Wiring Diagram



Outdoor Wall-mount Strobe



Weatherproof Back Box for Mounting Strobe



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Outdoor Strobe, White, Wall-mount, Type I

367-066-01

Features

- White housing with clear lens and no lettering
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 15/75cd settings.
- Field-selectable candela settings:
  12V: 15 and 15/75cd
  24V: 15, 15/75, 30, 75, 95, 110, and 115cd
- Universal mounting plate with an onboard shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Weatherproof NEMA 4X, IP56
- Plastic weatherproof back box included

Specifications

Nominal Voltage	Regulated 12 VDC/FWR or Regulated 24 VDC/FWR
Operating Voltage (Includes fire alarm panels with built-in sync)	8 to 17.5V (12V nominal) or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	8.5 to 17.5V (12V nominal) or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 15/75cd 24 VDC: 15, 15/75, 30, 75, 95, 110, and 115cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to weatherproof back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Strobe Dimensions With Lens	5.6 in. L x 4.7 in. W x 2.5 in. D (142 mm x 119 mm x 64 mm)
Weatherproof Back Box Dimensions	5.7 in. L x 5.1 in. W x 2 in. D (145 mm x 130 mm x 51 mm)
Standards Compliance:	
UL Listed	File S3593
FM Approved	3023572
State of California	7300-1653:187
MEA Approved	MEA452-05-E

Maximum Current Draw (mA RMS)

DC Input	16–33 VDC						
Candela Setting	**15cd**	**15/75cd**	**30cd**	**75cd**	**95cd**	**110cd**	**115cd**
Current Draw	66	77	94	158	181	202	210

Low Temperature Candela Derating (@ –40°F)

Candela Setting	75cd	95cd	110cd	115cd
Derated Candela	44cd	70cd	110cd	115cd

NOTE Do not use the 15, 15/75, and 30cd settings below 32°F.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ordering Information

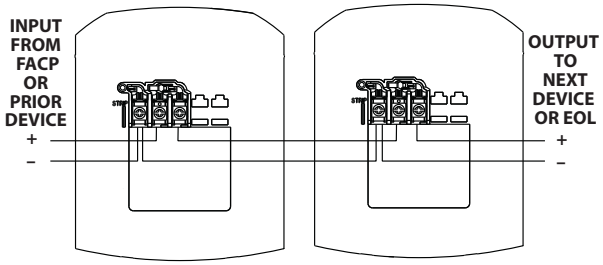
Part Number	Description
367-066-01	Strobe, White, Type I, Wall-mount, Outdoor, 12V or 24V, no lettering, clear lens, 15, 15/75, 30, 75, 95, 110, and 115cd, includes plastic weatherproof back box

Associated Parts

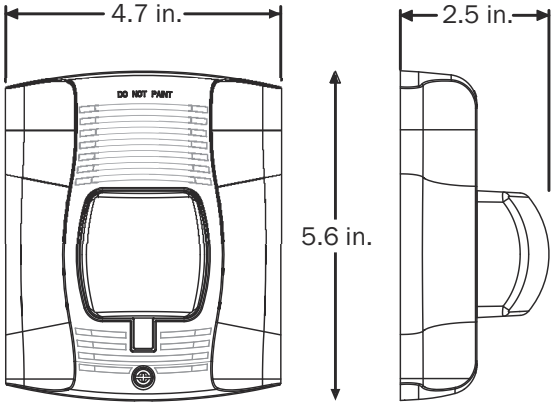
Part Number	Description
589-003-00	Red Decals, wall-mount: AGENT, EVAC, ALERT, or FIRE **NOTE** Order two per device.
369-023-00	Strobe Attachment, amber lens for wall-mount device; used for indoor and outdoor application
369-025-01	Blue lens option for wall-mount device
369-026-01	Red lens option for wall-mount device
369-027-01	Green lens option for wall-mount device
588-059-00	Trim Ring, wall-mount, white
588-077-00	Back Box, outdoor weatherproof, wall-mount, white, 2 in. deep, required for NEMA 4X
367-047-00	Sync Module, Type I

Drawings

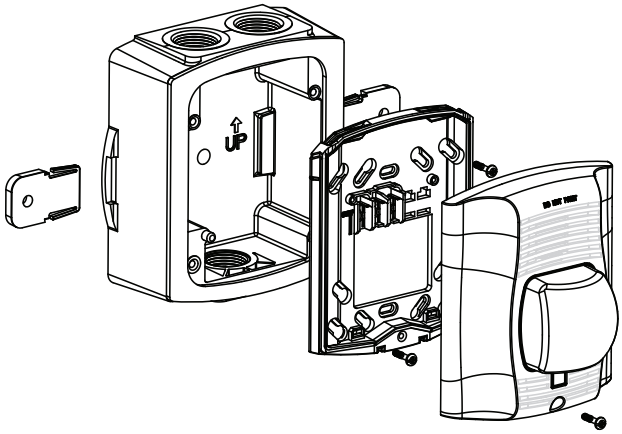
Wiring Diagram



Outdoor Wall-mount Strobe



Weatherproof Back Box for Mounting Strobe



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Outdoor Strobe, White, Wall-mount, Type I

367-066-02

Specifications

Nominal Voltage	Regulated 12 VDC/FWR or Regulated 24 VDC/FWR
Operating Voltage (Includes fire alarm panels with built-in sync)	8 to 17.5V (12V nominal) or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	8.5 to 17.5V (12V nominal) or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 15/75cd 24 VDC: 15, 15/75, 30, 75, 95, 110, and 115cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to weatherproof back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Strobe Dimensions with Lens	5.6 in. L x 4.7 in. W x 2.5 in. D (142 mm x 119 mm x 64 mm)
Weatherproof Back Box Dimensions	5.7 in. L x 5.1 in. W x 2 in. D (145 mm x 130 mm x 51 mm)
Standards Compliance:	
UL Listed	UL1638, File S3593
FM Approved	3023572
State of California	7300-1653:187
MEA Approved	MEA452-05-E

Features

- White housing with red FIRE lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 15/75cd settings.
- Field-selectable candela settings:
  12V: 15 and 15/75cd
  24V: 15, 15/75, 30, 75, 95, 110, and 115cd
- Universal mounting plate with an onboard shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Weatherproof NEMA 4X, IP56
- Plastic weatherproof back box included

Maximum Current Draw (mA RMS)

DC Input	16–33 VDC						
Candela Setting	**15cd**	**15/75cd**	**30cd**	**75cd**	**95cd**	**110cd**	**115cd**
Current Draw	66	77	94	158	181	202	210

Low Temperature Candela Derating (@ –40°F)

Candela Setting	75cd	95cd	110cd	115cd
Derated Candela	44cd	70cd	110cd	115cd
NOTE Do not use the 15, 15/75, and 30cd settings below 32°F.				

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ordering Information

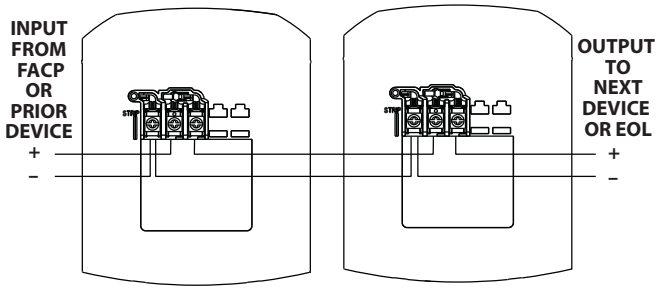
Part Number	Description
367-066-02	Strobe, White, Type I, Wall-mount, Outdoor, 12V or 24V, red FIRE lettering, clear lens, 15, 15/75, 30, 75, 95, 110, and 115cd, NEMA 4X rating, includes plastic weatherproof back box

Associated Parts

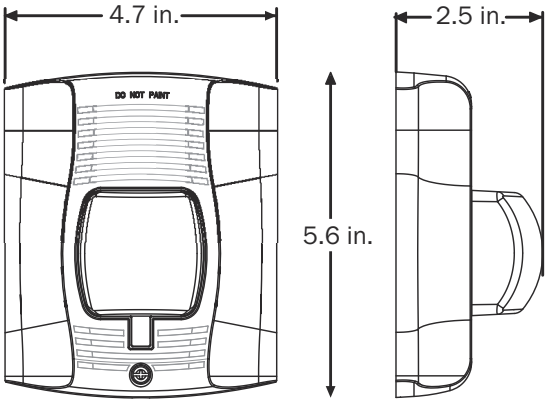
Part Number	Description
588-059-00	Trim Ring, wall-mount, white
588-077-00	Back Box, metal option, outdoor, weatherproof, wall-mount, white, NEMA 4X
367-047-00	Sync Module, Type I

Drawings

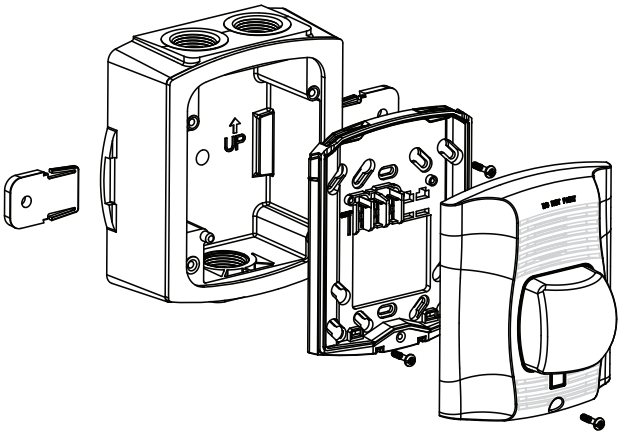
Wiring Diagram



Outdoor Wall-mount Strobe



Weatherproof Back Box for Mounting Strobe



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Outdoor Strobe, White, High Candela, Wall-mount, Type I

367-066-03

Specifications

Nominal Voltage	Regulated 24 VDC
Operating Voltage Range (Includes fire alarm panels with built-in sync)	16 to 33V
Operating Voltage Range with Type I Sync Module	16.5 to 33V
High Candela	135, 150, 177, and 185cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to weatherproof back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Strobe Dimensions with Lens	5.6 in. L x 4.7 in. W x 2.5 in. D (142 mm x 119 mm x 64 mm)
Weatherproof Back Box Dimensions	5.7 in. L x 5.1 in. W x 2 in. D (145 mm x 130 mm x 51 mm)
Standards Compliance:	
UL Listed	File S3593
FM Approved	3023572
State of California	7300-1653:187
MEA Approved	MEA452-05-E

Features

- White housing with clear lens and no lettering
- Plug-in design with a single captured screw for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 24V operation
- Field-selectable high candela settings: 135, 150, 177, and 185cd
- Universal mounting plate with an onboard shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Weatherproof per NEMA 4X, IP56
- Plastic weatherproof back box included

Maximum Current Draw (mA RMS)

DC Input	16 to 33 VDC			
High Candela Setting	135cd	150cd	177cd	185cd
Current Draw	228	246	281	286

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ordering Information

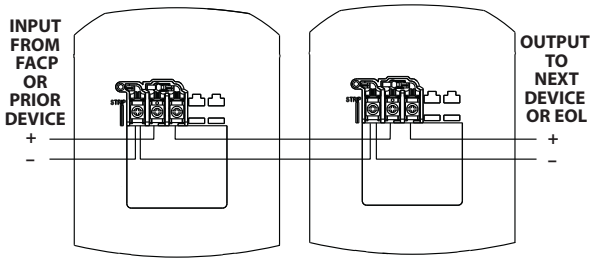
Part Number	Description
367-066-03	Strobe, White, Type I, Wall-mount, Outdoor, 24V, no lettering, clear lens, 135, 150, 177, and 185 high candela, NEMA 4X rating, includes plastic weatherproof back box

Associated Parts

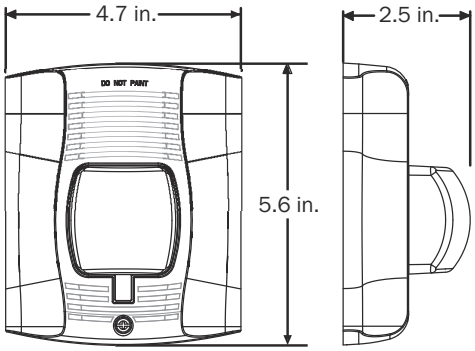
Part Number	Description
588-059-00	Trim Ring, wall-mount, white
588-077-00	Back Box, outdoor, weatherproof, wall-mount, white, 2 in. D, NEMA 4X
367-047-00	Sync Module, Type I

Drawings

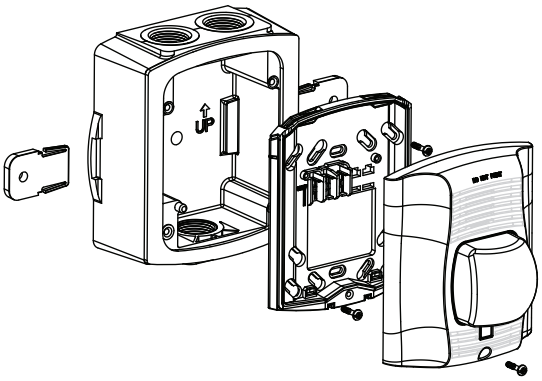
Wiring Diagram



Outdoor Wall-mount Strobe



Weatherproof Back Box for Mounting Strobe



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Strobe, Multi-Candela, White, Wall-mount, Type II

367-075-00

Features

- Indoor Strobe, white square housing with ALERT lettering and amber lens
- Synchronized or non-synchronized strobe signal
- Polarized inputs
- Xenon flashtube in a polycarbonate lens for maximum visibility and reliability
- Field selectable candela setings:
  24V: 15, 30, 75, and 110cd

Specifications

Voltage	Regulated 24 VDC/Vrms
Operating Voltage	16 to 33 VDC (filtered or FWR voltage)
Candela Settings	15, 30, 75, and 110cd
Strobe Flash Rate	1 flash per second over regulated voltage range
Mounting to back box with Strobe Mounting Plate	Flush-mount to single-gang, Flush or surface mount to double-gang, 4 in. (10.2 cm) European, or Shallow surface (P/N 588-021-00)
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	85%
Dimensions	4.75 in. W x 4.75 in. H x 2.58 in. D
Standards Compliance	Listed UL 1638 general signaling and UL 1971 amber lens light distribution

Ordering Information

Part Number	Description
367-075-00	Strobe, Square, White, Type II, Wall-mount, Indoor, 24 VDC, ALERT lettering, Amber lens, 15, 30, 75, 110cd

Associated Parts

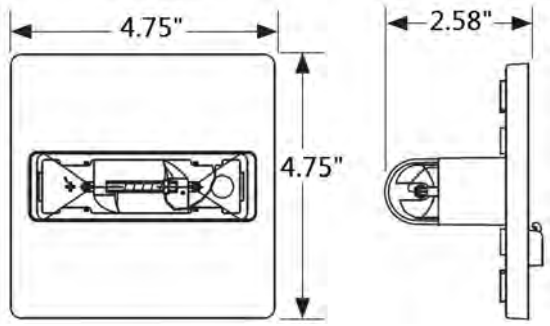
Part Number	Description
367-036-00	Sync Module, Type II
588-021-00	Back Box, square, surface mount, red
404-119-00	NAC Power Extender, 115 VAC 60 Hz, 12/24 VDC, 8A, four Class B or two Class A, use with Type II strobes **NOTE** P/N 404-119-00 requires two 12V/8Ah batteries (P/N 400-704-00) for 24-hour battery backup OR two 12V/12Ah batteries (P/N 400-713-00) for 72 hour battery backup.

Amber Strobe Current Draw

	UL Maximum Current Ratings (Maximum RMS Current Draw)			
	15cd	30cd	75cd	110cd
	derated for Amber Lens:			
Voltage	**11cd**	**22cd**	**56cd**	**82cd**
16–33 VDC	0.060	0.092	0.165	0.220

Drawings

Dimensions



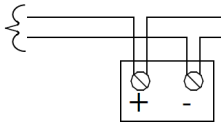
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

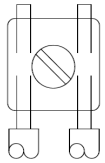
Detect Manage Record

Notification Appliance Devices

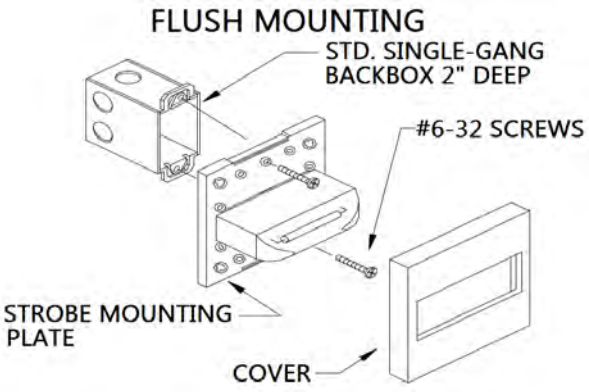
Wiring Diagram

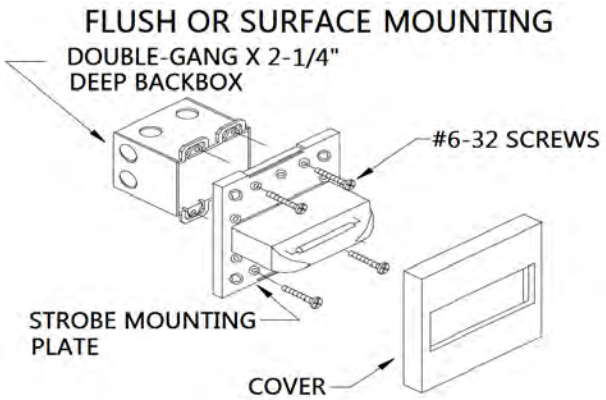
STROBES	FROM PRECEDING APPLIANCE, FACP OR SYNC MODULE	TO NEXT SIGNAL OR END OF LINE RESISTOR (EOLR)

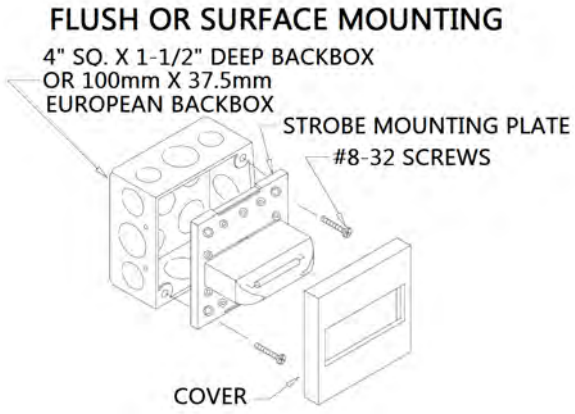


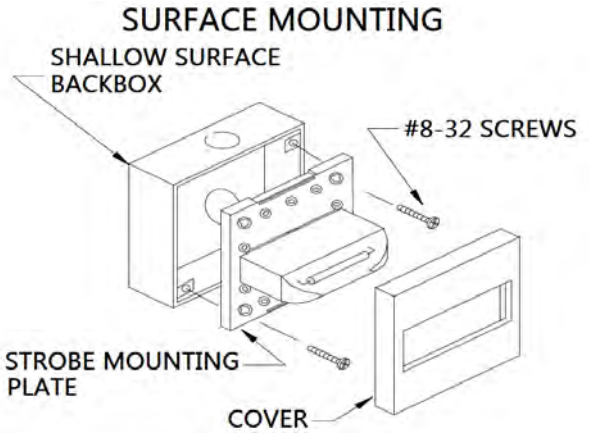


Mounting









Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Strobe, Hazardous Locations, 285 Candela, Explosion Proof
367-088-00

UL 1971 On-axis Output	15cd
Mounting	Standard 1 in. x 0.75 in. NPT pipe-mount
Input Wiring	8 x 14 AWG **NOTE** Required wire gauge based on voltage drop.
Certified Temperature	–67°F to 158°F (–55°C to 70°C)
Weight	2.2 lb (1 kg)
Standards Compliance	UL LIsted 1638 for indoor/outdoor use UL Listed 1971 for hearing impaired
UL and ULc	E251185
State of California	7300-1691:0103

Ordering Information

Part Number	Description
367-088-00	Strobe for Hazardous Locations, Indoor/Outdoor, Clear Lens, 285cd, 24 VDC, Class 1, Div 2, Groups A, B, C, and D, Class 2, Div 2, Groups F and G, Explosion-Proof

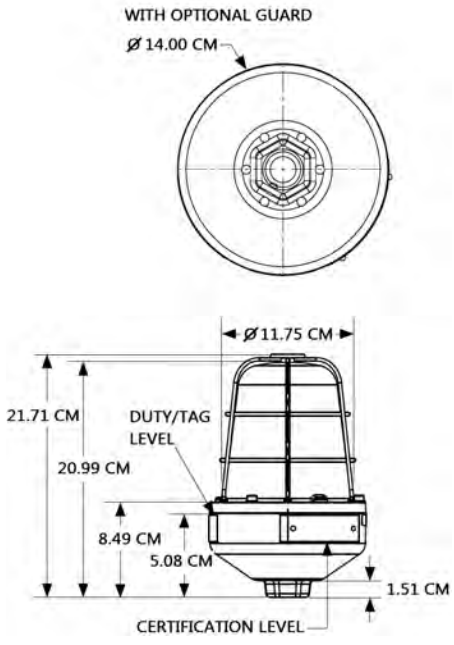
Features

- Indoor/outdoor strobe with glass reinforced polyester (GRP) housing
- UV stable glass reinforced polycarbonate lens
- For use in potentially explosive atmospheres and harsh environmental conditions
- UL Listed for hazardous locations
  Class I, Division 2, Groups A, B, C, and D
  Class 2, Division 2, Groups F and G
- Polarization diode and four-wire leads
- Optional lens guard
- Corrosion free
- Meets NEMA 4X, NEMA 6, IP 66 and IP 67 environmental requirements

Specifications

Voltage	24 VDC
Current	890 mA
Flash	1 Hz with 285cd per flash

Dimensions



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Strobe, 115/177 Candela, Ceiling-mount, White, Type II
367-089-00

Features

- Indoor Strobe, white square housing with amber lens and no lettering
- Synchronized or non-synchronized strobe signal
- Polarized inputs
- Xenon flashtube in a polycarbonate lens for maximum visibility and reliability
- Field selectable high intensity candela settings: 24V: 115/177cd

Specifications

Voltage	Regulated 24 VDC/Vrms
Operating Voltage Range	16–33 VDC (filtered or FWR voltage)
Candela Settings	115 and 177cd
Strobe Flash Rate	1 flash per second over regulated voltage range
Mounting	Flush mount single-gang, Flush or surface mount double-gang, 4 in. square (European) Surface mount shallow surface (P/N 588-021-00) back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temp.	32°F to 120°F (0°C to 49°C)
Relative Humidity	85%
Dimensions	4.75 in. W x 4.75 in. H x 2.58 in. D
Standards Compliance	Listed UL 1638 general signaling and UL 1971 amber lens light distribution
UL	S5391
FM	Approved
State of California	7125-0785:0141

Ordering Information

Part Number	Description
367-089-00	Strobe, Square, White, Type II, Ceiling-mount, Indoor, 24 VDC, no lettering, amber lens, 115, 177cd

Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
588-021-00	Back Box, square, surface-mount
404-119-00	NAC power extender, 115 VAC 60 Hz, 12/24 VDC, 8A, four Class B or two Class A, use with Type II strobes **NOTE** P/N 404-119-00 requires two 12V/8Ah batteries (P/N 400-704-00) for 24-hour battery backup OR two 12V/12Ah batteries (P/N 400-713-00) for 72 hour battery backup

Amber Strobe Current Draw

	Maximum DC, RMS Current Draw 115cd | 177cd with derated amber lens:	
Voltage	**86.25cd**	**132.25cd**
16–33 VDC	0.300	0.420

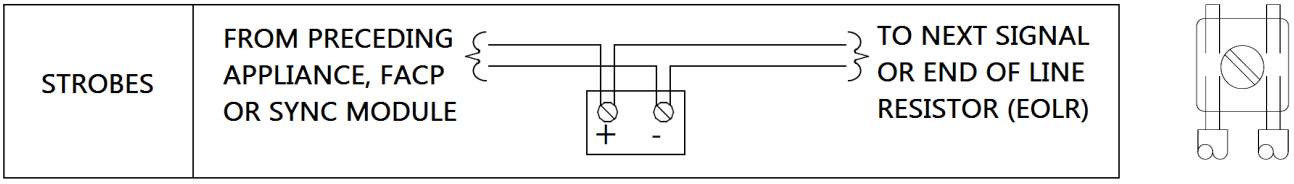
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

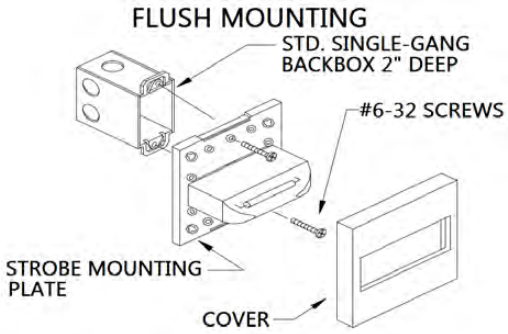
Notification Appliance Devices

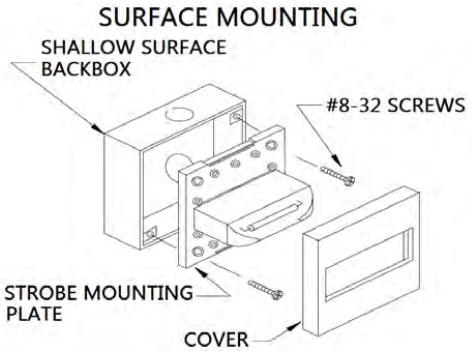
Diagrams

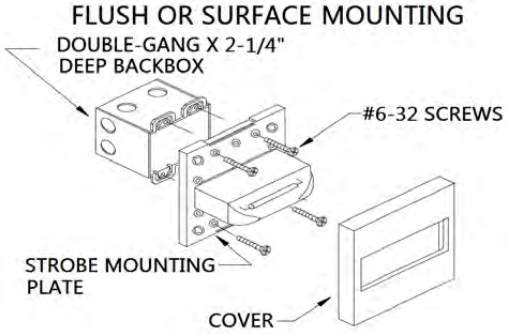
Wiring Diagram

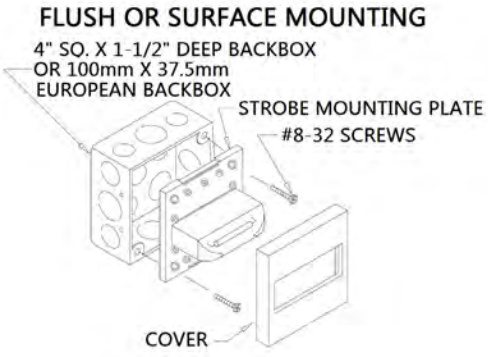


Mounting



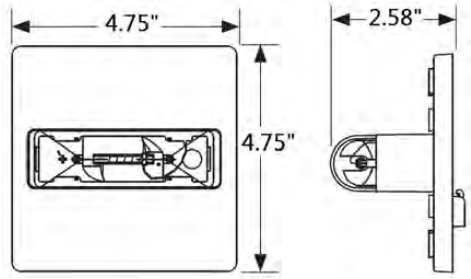




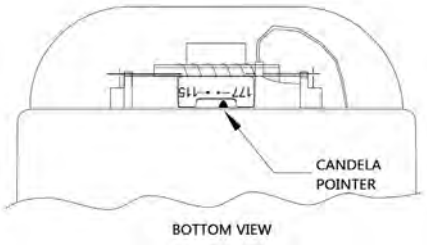


NOTE Maximum number of conductors is 4 for AWG#12 - AWG#18

Dimensions



Candela



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Strobe, Multi-Candela, Ceiling-mount, Red, Type II
367-090-00

Features

- Red square housing with FIRE lettering and clear lens
- Synchronized or non-synchronized strobe signal
- Polarized inputs
- Xenon flashtube in a polycarbonate lens for maximum visibility and reliability
- Low current draw
- Field selectable candela settings: 24V: 15/30/75/95cd
- Tamper Resistant selector switch
- In/out screw terminals for fast installation

Specifications

Voltage	Regulated 24 VDC/Vrms
Operating Voltage Range	16–33 (24V nominal)
Candela Settings	15 / 30 / 75 / 95cd
Strobe Flash Rate	1 flash per second over regulated voltage range
Mounting	Flush mount single-gang, Flush or surface mount double-gang, Surface mount shallow surface (P/N 588-021-00) back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temp.	32°F to 120°F (10°C to 49°C)
Relative Humidity	93% ±2%
Dimensions	4.75 in. W x 4.75 in. H x 2.58 in. D
Weight	0.4 lb (0.181 kg)
Standards Compliance	NFPA 72, OSHA 29 Part 1910.16 Strobe Output Rating to UL 1971
UL	S5391
FM	Approved
State of California	7125-0785:0141

Ordering Information

Part Number	Description
367-090-00	Strobe, Square, Red, Type II, Ceiling-mount, Indoor, 24 VDC, red FIRE lettering on white lens cover, clear lens, 15, 30, 75, 95cd

Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
588-021-00	Back box, square, surface mount, red
404-119-00	NAC Power Extender, 115 VAC 60 Hz, 12/24 VDC, 8A, 4 Class B or 2 Class A, use with Type II strobes **NOTE** P/N 404-119-00 requires two 12V/8Ah batteries (P/N 400-704-00) for 24-hour battery backup OR two 12V/12Ah batteries (P/N 400-713-00) for 72 hour battery backup

Ceiling-mount Strobe Current Draw

Maximum Current Draw 16 - 33 VDC			
15cd	**30cd**	**75cd**	**95cd**
0.65	0.105	0.189	0.249

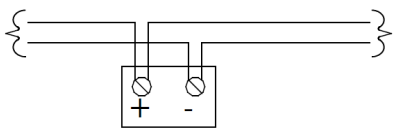
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

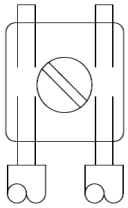
Detect Manage Record

Notification Appliance Devices

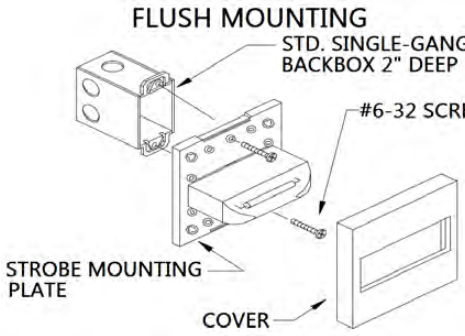
Diagrams

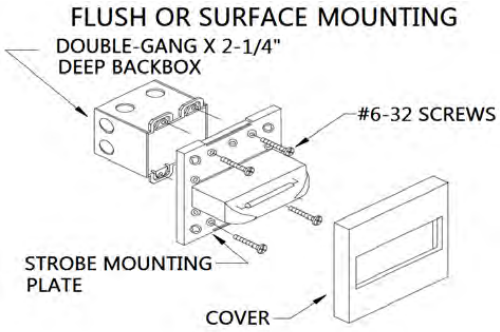
Wiring Diagram

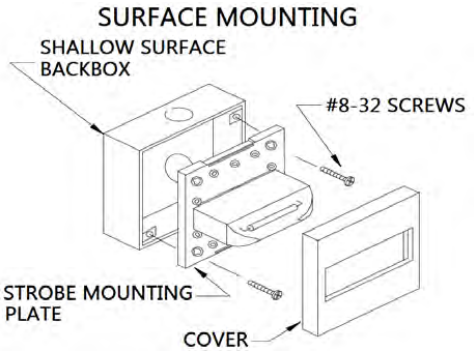
STROBES	FROM PRECEDING APPLIANCE, FACP OR SYNC MODULE  TO NEXT SIGNAL OR END OF LINE RESISTOR (EOLR)



Mounting

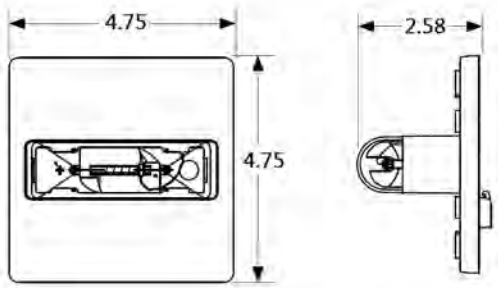




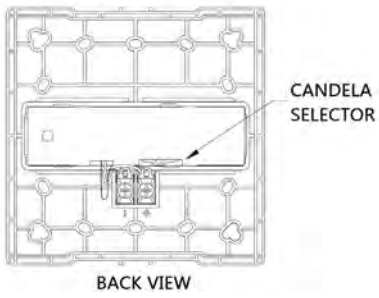


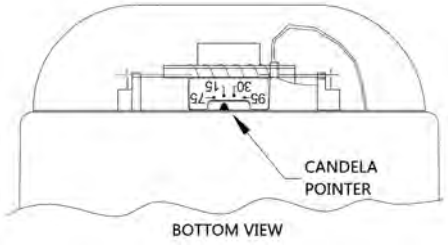
NOTE Maximum number of conductors is 4 for AWG#12 - AWG#18

Dimensions



Candela





Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Strobe Ceiling-mount, White, Type II

367-091-00

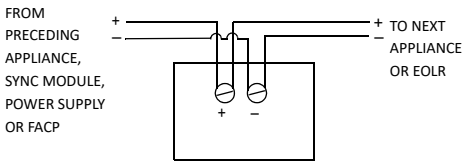
Specifications

Flash Rate	1 flash per second
Operating Voltage	24 VDC with new UL "Regulated" voltage range: 16 to 33 VDC
Maximum Current	16-33 DC–RMS (amps) 115cd @0.300A 177cd @ 0.420A
Strobe Candela	115, 177
Input Terminals	12–18 AWG
Operating Temperature	32 to 120°F (0 to 49°C)
Relative Humidity	95%

Features

- Meets Americans with Disabilities Act requirements
- Low current draw
- Compatible with Type II sync module (P/N 367-036-00)
- Can be mounted to a single gang, double gang, 4" square, or standard 4" back box
- Fast installation with IN/OUT screw terminals
- High candela, field selectable

Wiring Diagram



Ordering Information

Strobe

Part Number	Description
367-091-00	Indoor strobe, 24 VDC, 2-wire, ceiling-mount, white with FIRE lettering, clear lens, high candela: 115, 177

Associated Parts

Part Number	Description
367-036-00	Sync module, Type II

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Strobe, Wall-mount, Red, Type II

367-092-00

Features

- Low current draw
- Compliance: UL listed 1971, UL 464, California State Fire Marshall (CSFM), and ULC
- Eight candela settings, three audible settings
- Finger-slide switches
- Voltage test points for troubleshooting and inspection
- Includes polarized contact cover for protection
- Includes universal mounting base:
  - 1-gang
  - 2-gang
  - 4 in. square
  - 3.5 in. octagonal
  - 4 in. octagonal

Specifications

Nominal Voltage	Regulated 12/24 VDC
Strobe Flash Rate	1 per second
Operating Temperature	32°F to 120° F (0°C to 49° C)
Maximum Humidity	93% (± 2%)
Dimensions	5.24 in. H x 4.58 in. W x 2.19 in. D
Mounting	Universal mounting base: 1-gang, 2-gang, 4 in. square, 3.5 in. octagonal, 4 in. octagonal

Ordering Information

Strobe

Part Number	Description
367-092-00	Indoor Strobe: • 12/24 VDC • 2-wire • Wall-mount • Red • White FIRE lettering • Multi-candela: 15, 15/75, 30, 75, 95, 110, 135, 185cd • Includes universal mounting base • Adjustable dB speaker; 90, 95, 99 dB

Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II

Current draw (mA)

Candela	12V		24V	
Standard	**DC**	**FWR**	**DC**	**FWR**
15	0.110		0.057	
15/75	0.140		0.070	
30	N/A		0.085	
75	N/A		0.135	
95	N/A		0.163	
110	N/A		0.182	
135	N/A		0.205	
185	N/A		0.253	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Weatherproof Strobe, Wall-mount, Amber

367-096-00

S5391

FM APPROVED

Features

- White housing with amber lens and red ALERT lettering
- Lens is tested to meet UL1971 light distribution standards
- Standard electrical box mount
- Weatherproof model
- Compatible with reverse polarity supervision circuits

Specifications

Nominal Voltage	24 VDC
Voltage Range	16 to 33 VDC
Candela	56cd
Flash Rate	1 flash per second
Operating Temperature	–31°F to 150°F (–35°C to 66°C)
Humidity	95% maximum
Standards Compliance:	
UL Listed	UL1638 and UL464, File S5391
FM	Approved
State of California	7300-0785:0154

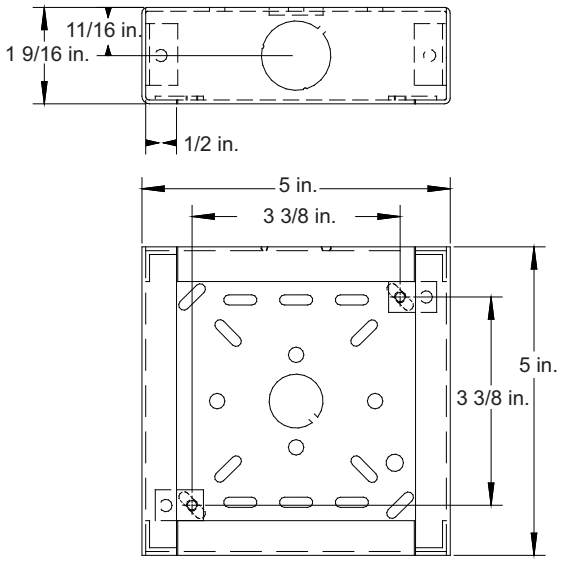
Ordering Information

Part Number	Description
367-096-00	Strobe, White, Wall-mount, weatherproof, 24VDC, red ALERT lettering, amber lens, 56cd

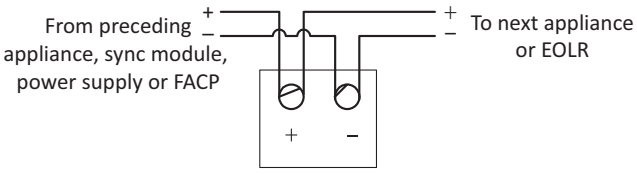
Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
588-026-01	Weatherproof Back Box, surface-mount, white
404-119-00	Type II NAC Distributed Power Extender, emulates synchronization signals compatible with sync module (P/N 367-036-00)

Back Box Diagram



Wiring



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Strobe, Red, Wall-mount, Type I

367-097-00

Specifications

Nominal Voltage	Regulated 12 VDC/FWR Regulated 24 VDC/FWR
Operating Voltage	8 to 17.5V (12V nominal) or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	8.5 to 17.5V (12V nominal) or 16.5 to 33V (24V nominal)
Candela Settings	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 110, 135, 185cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting plate with on-board shorting spring 4 in. x 4 in. x 1.5 in. back box, or 4 in. octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Wall-mount Dimensions with Lens	5.6 in. L x 4.7 in. W x 1.25 in. D (143 mm x 119 mm x 32 mm)
Standards Compliance:	
UL Listed	Listed to UL 1971 S5512 S4011
FM Approved	3057383 3057072
State of California	7125-1653:0504 7135-1653:0503

Features

- Red housing, white FIRE lettering, and clear lens
- Plug in design with minimal intrusion into the back box
- Tamper-resistant construction
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on wall units:
  12 V: 15, 30cd
  24 V: 15, 30, 75, 95, 110, 135, and 185cd
- Mounting plate shorting spring checks wiring continuity before device installation

Wall-mount Strobe Current Draw (mA)

Maximum Current Draw 16–33 VDC						
15cd	**30cd**	**75cd**	**95cd**	**110cd**	**135cd**	**185cd**
43	63	107	121	148	172	222

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ordering Information

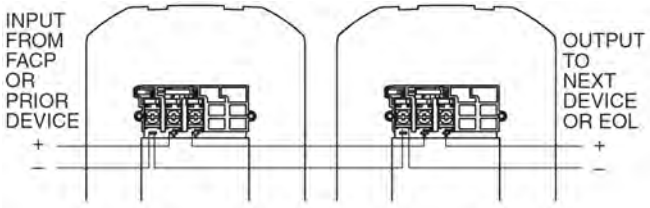
Part Number	Description
367-097-00	Strobe, Red, Type I, Wall-mount, Indoor, 12 V or 24V, White FIRE Lettering, Clear Lens, 15, 30, 75, 95, 110, 135, and 185cd

Associated Parts

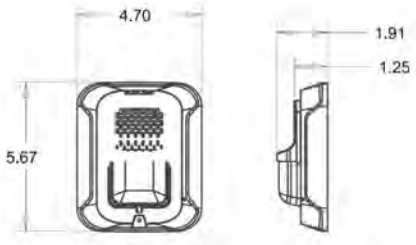
Part Number	Description
589-046-00	Bezel, Red, Wall-mount, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, no lettering, order one per device
588-098-00	Trim Ring, Red, Wall-mount, Type I, Universal, 8.2 in. H x 6.3 in. W x 0.4 in. D
588-090-00	Back Box, Wall-Surface-mount, Red, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, 4.82 in. W x 5.78 in. H x 1.85 in. D
367-047-00	Sync Module, Type I

Drawings

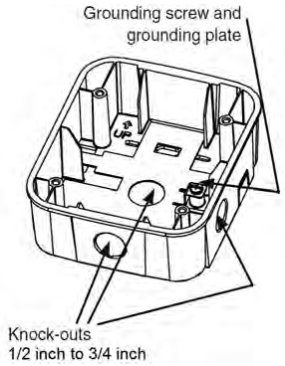
Wiring Diagram



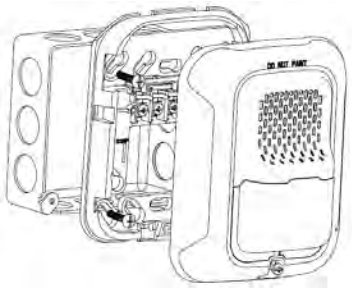
Strobe



Back Box, Surface-mount



Junction Box, Flush-mount



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Strobe, White, Wall-mount, Type I

367-098-00

Features

- White housing with red ALERT lettering and amber lens
- Plug-in design for simplified installation and troubleshooting
- Tamper resistant Torx head screw
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on wall units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 110, 135, and 185cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rated from 32°F to 120°F (indoor devices)

Specifications

Nominal Voltage	Regulated 12 VDC/FWR Regulated 24 VDC/FWR
Operating Voltage	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	8.5 to 17.5V (12V nominal), or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 110, 135, 185cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in. back box, or 4 in. octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Wall-mount Dimensions with Lens	5.6 in. L x 4.7 in. W x 1.25 in. D (143 mm x 119 mm x 32 mm)
Standards Compliance:	
UL	Listed to ANSI/UL 1638
State of California	7125-1653:0504

Wall-mount Strobe Current Draw (mA)

Maximum Current Draw 16–33 VDC						
15cd	**30cd**	**75cd**	**95cd**	**110cd**	**135cd**	**185cd**
41	63	111	134	148	172	222

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ordering Information

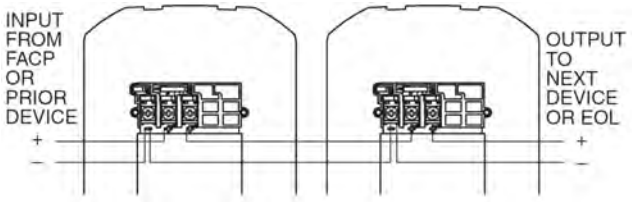
Part Number	Description
367-098-00	Strobe, White, Type I, Wall-mount, Indoor, 12 V or 24 V, Red ALERT Lettering, Amber Lens, 15, 30, 75, 95, 110, 135, and 185cd

Associated Parts

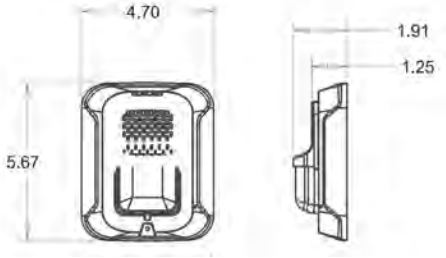
Part Number	Description
589-041-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, no lettering, order one per device
588-099-00	Trim Ring, White, Type I, Wall-mount, Universal, 8.2 in. H x 6.3 in. W x 0.4 in. D
588-091-00	Back Box, Wall-Surface-mount, White, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, 4.82 in. W x 5.78 in. H x 1.85 in. D
367-047-00	Sync Module, Type I

Drawings

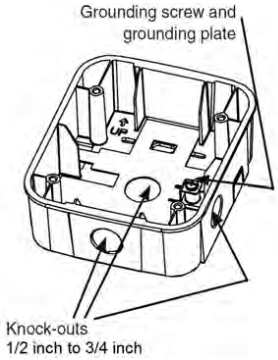
Wiring Drawing



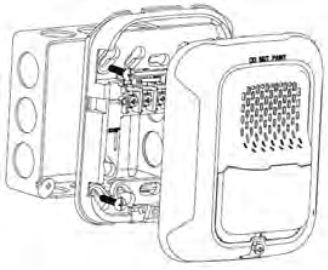
Wall-mount Strobe



Back Box, Surface-mount



Junction Box for Flush Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Strobe, White, Wall-mount, Type I

367-099-00

Features

- White housing with red Alert lettering and Clear lens
- Plug in design with minimal intrusion into the back box
- Tamper-resistant construction
- Automatic selection of 12V or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on wall units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 110, 135, and 185cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed

Specifications

Nominal Voltage	Regulated 12 VDC/FWR Regulated 24 VDC/FWR
Operating Voltage	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	8.5 to 17.5V (12V nominal), or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 110, 135, 185cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in. back box, or 4 in. octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Wall-mount Dimensions with lens	5.6 in. L x 4.7 in. W x 1.25 in. D (143 mm x 119 mm x 32 mm)
Standards Compliance:	
UL Listed	Listed to UL 1971 S5512 S4011
State of California	7125-1653:0504 7135-1653:0503

Wall-mount Strobe Current Draw (mA)

Maximum Current Draw 16–33 VDC						
15cd	**30cd**	**75cd**	**95cd**	**110cd**	**135cd**	**185cd**
43	63	107	121	148	172	222

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ordering Information

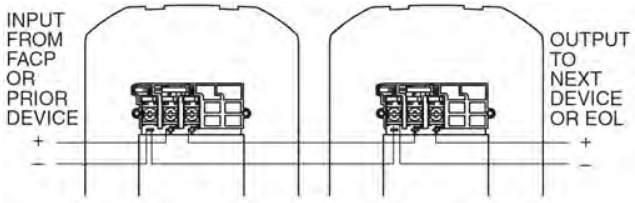
Part Number	Description
367-099-00	Strobe, White, Type I, Wall-mount, Indoor, 12V or 24V, Red ALERT Lettering, Clear Lens, 15, 30, 75, 95, 110, 135, and 185cd

Associated Parts

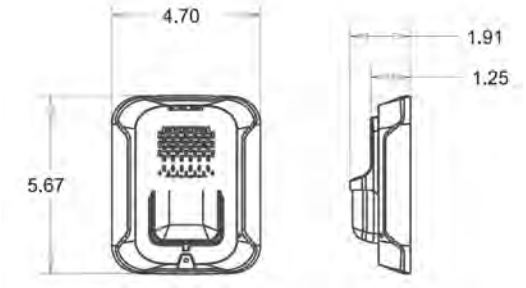
Part Number	Description
589-041-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, no lettering, order one per device
588-099-00	Trim Ring, White, Type I, Wall-mount, Universal, 8.2 in. H x 6.3 in. W x 0.4 in. D
588-091-00	Back Box, Wall-Surface-mount, White, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, 4.82 in. W x 5.78 in. H x 1.85 in. D
367-047-00	Sync Module, Type I

Drawings

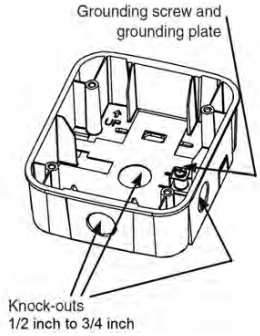
Wiring Drawing



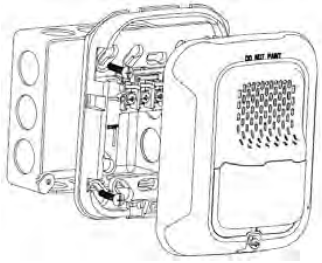
Wall-mount Strobe



Back Box, Surface-mount



Junction Box for Flush Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Strobe, White, Wall-mount, Type I

367-100-00

Features

- White housing with red FIRE lettering and clear lens
- Plug in design with minimal intrusion into the back box
- Tamper-resistant construction
- Automatic selection of 12V or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on wall units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 110, 135, and 185cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed

Specifications

Nominal Voltage	Regulated 12 VDC/FWR Regulated 24 VDC/FWR
Operating Voltage Range	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage Range with Type I Sync Module	8.5 to 17.5V (12V nominal), or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 110, 135, 185cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in. back box, or 4 in. octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Wall-mount Dimensions with lens	5.6 in. L x 4.7 in. W x 1.25 in. D (143 mm x 119 mm x 32 mm)
Standards Compliance:	
UL Listed	Listed to UL 1971 S5512 S4011
FM Approved	3057383 3057072
State of California	7125-1653:0504 7135-1653:0503

Wall-mount Strobe Current Draw (mA)

Maximum Current Draw 16–33 VDC						
15cd	**30cd**	**75cd**	**95cd**	**110cd**	**135cd**	**185cd**
43	63	107	121	148	172	222

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ordering Information

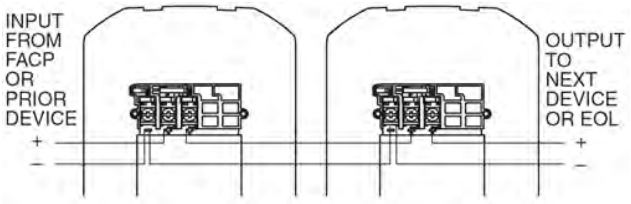
Part Number	Description
367-100-00	Strobe, White, Type I, Wall-mount, Indoor, 12V or 24V, Red FIRE Lettering, Clear Lens, 15, 30, 75, 95, 110, 135, and 185cd

Associated Parts

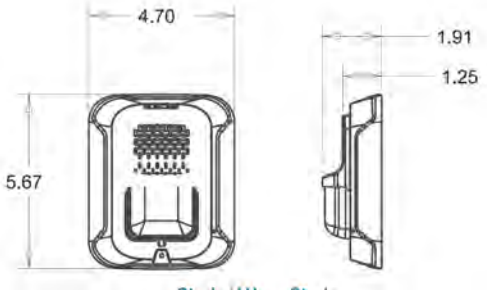
Part Number	Description
589-041-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, no lettering, order one per device
588-099-00	Trim Ring, White, Type I, Wall-mount, Universal, 8.2 in. H x 6.3 in. W x 0.4 in. D
588-091-00	Back Box, Wall-Surface-mount, White, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, 4.82 in. W x 5.78 in. H x 1.85 in. D
367-047-00	Sync Module, Type I

Drawings

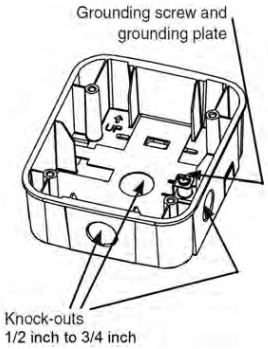
Wiring Diagram



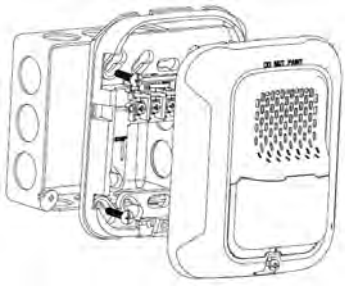
Wall-mount Strobe



Back Box, Surface-mount



Junction Box for Flush Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Strobe, White, Wall-mount, Type I

367-101-00

Features

- White housing with clear lens and no lettering
- Plug in design with minimal intrusion into the back box
- Tamper-resistant construction
- Automatic selection of 12V or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on wall units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 110, 135, and 185cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed

Specifications

Nominal Voltage	Regulated 12 VDC/FWR Regulated 24 VDC/FWR
Operating Voltage Range	8 to 17.5V (12V nominal), or 16 to 33V (24 V nominal)
Operating Voltage Range with Type I Sync Module	8.5 to 17.5V (12V nominal), or 16.5 to 33V (24 V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 110, 135, 185cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in. back box, or 4 in. octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Wall-mount Dimensions with lens	5.6 in. L x 4.7 in. W x 1.25 in. D (143 mm x 119 mm x 32 mm)
Standards Compliance:	
UL Listed	Listed to UL 1971 S5512 S4011
FM Approved	3057383 3057072
State of California	7125-1653:0504 7135-1653:0503

Wall-mount Strobe Current Draw (mA)

Maximum Current Draw 16–33 VDC						
15cd	**30cd**	**75cd**	**95cd**	**110cd**	**135cd**	**185cd**
43	63	107	121	148	172	222

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ordering Information

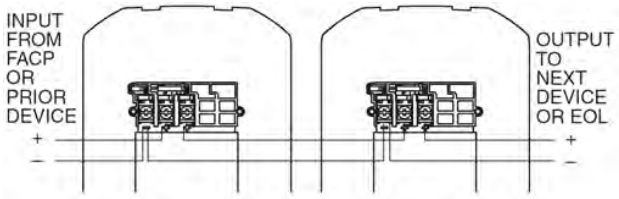
Part Number	Description
367-101-00	Strobe, White, Type I, Wall-mount, Indoor, 12V or 24V, no lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd

Associated Parts

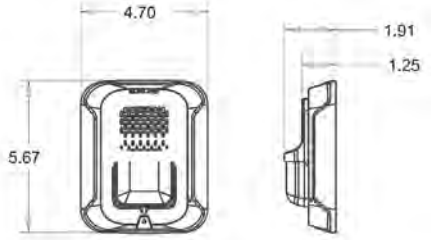
Part Number	Description
589-037-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, Red AGENT lettering, order one per device
589-038-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, Red ALERT lettering, order one per device
589-039-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, Red EVAC lettering, order one per device
589-040-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, Red FIRE lettering, order one per device
365-012-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Amber, order one per device to **change** color of clear lens
365-014-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Blue, order one per device to **change** color of clear lens
365-015-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Green, order one per device to **change** color of clear lens
365-016-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Red, order one per device to **change** color of clear lens
588-099-00	Trim Ring, White, Type I Wall-mount, Universal, 8.2 in. H x 6.3 in. W x 0.4 in. D
588-091-00	Back Box, Wall-Surface-mount, White, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, 4.82 in. W x 5.78 in. H x 1.85 in. D
367-047-00	Sync Module, Type I

Drawings

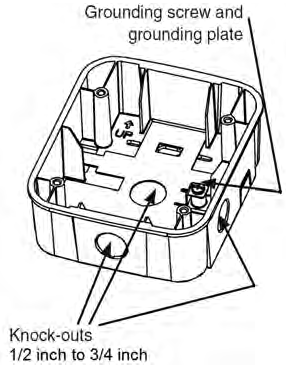
Wiring Diagram



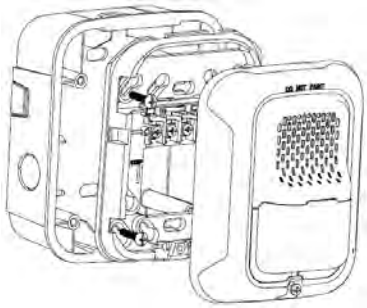
Wall-mount Strobe



Back Box, Surface-mount



Junction Box for Flush Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Strobe, Red, Ceiling-mount, Type I

367-102-00

Specifications

Nominal Voltage	Regulated 12 VDC/FWR, or Regulated 24 VDC/FWR
Operating Voltage	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	8.5 to 17.5V (12V nominal), or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 115, 150, 177cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in. back box, or 4 in. octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Ceiling-mount Dimensions with lens	6.8 in. OD x 2.5 in. D (173 mm x 64 mm)
Standards Compliance:	
UL Listed	Listed to UL 1638 and UL 1971 S5512 S4011
FM Approved	3057383
State of California	7125-1653:0504 7135-1653:0503

Features

- Red housing with white FIRE lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12V or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on ceiling units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 115, 150, and 177cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed

Ceiling-mount Strobe Current Draw (mA)

Maximum Current Draw 16–33 VDC						
15cd	**30cd**	**75cd**	**95cd**	**115cd**	**150cd**	**177cd**
41	63	111	134	158	189	226

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ordering Information

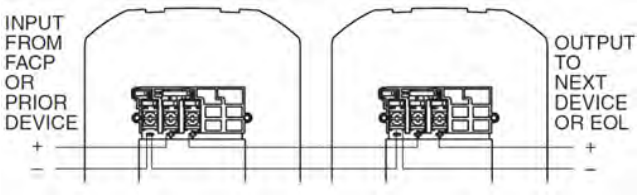
Part Number	Description
367-102-00	Strobe, Red, Type I, Ceiling-mount, Indoor, 12V or 24V, White FIRE lettering, clear lens, 15, 30, 75, 95, 115, 150, and 177cd

Associated Parts

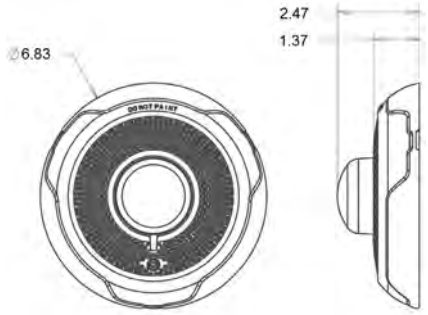
Part Number	Description
589-007-00	Bezel, Red, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, White AGENT lettering, order one per device
589-009-00	Bezel, Red, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, White ALERT lettering, order one per device
589-010-00	Bezel, Red, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, White EVAC lettering, order one per device
589-012-00	Bezel, Red, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, no lettering, order one per device
365-013-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Amber, order one per device to **change** color of clear lens
365-017-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Blue, order one per device to **change** color of clear lens
365-018-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Green, order one per device to **change** color of clear lens
365-019-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Red, order one per device to **change** color of clear lens
588-096-00	Trim Ring, Red, Type I, Ceiling-mount, Universal, 8.5 in. OD x 0.4 in. D
588-097-00	Back Box, Ceiling-surface-mount, Red, Type I, Strobe; Speaker; Speaker Strobe; Horn Strobe; Chime Strobe, 6.9 in. OD x 2.5 in. D
367-047-00	Sync Module, Type I

Drawings

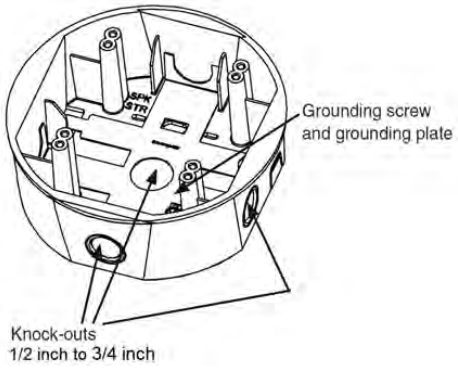
Wiring Diagram



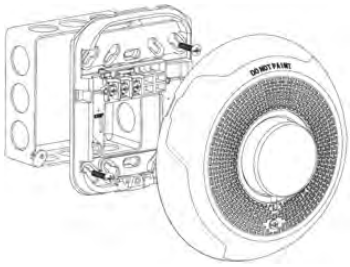
Ceiling-mount Strobe



Back Box, Surface-mount



Junction Box for Flush Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Strobe, White, Ceiling-mount, Type I

367-103-00

Specifications

Nominal Voltage	Regulated 12 VDC/FWR, or Regulated 24 VDC/FWR
Operating Voltage Range	8 to 17.5V (12V nominal), or 16 to 33V (24 V nominal)
Operating Voltage Range with Type I Sync Module	8.5 to 17.5V (12V nominal, or 16.5 to 33V (24 V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 115, 150, 177cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in. back box, or 4 in. octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Ceiling-mount Dimensions with Lens	6.8 in. OD x 2.5 in. D (173 mm x 64 mm)
Standards Compliance:	
UL Listed	Listed to UL 1638 and UL 1971 S5512 S4011
FM Approved	3057383
State of California	7125-1653:0504 7135-1653:0503

Features

- White housing with red FIRE lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12V or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on ceiling units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 115, 150, and 177cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed

Ceiling-mount Strobe Current Draw (mA)

Maximum Current Draw 16–33 VDC						
15cd	**30cd**	**75cd**	**95cd**	**115cd**	**150cd**	**177cd**
41	63	111	134	158	189	226

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ordering Information

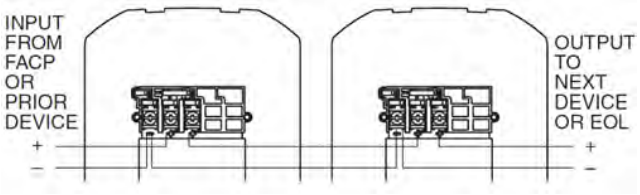
Part Number	Description
367-103-00	Strobe, White, Type I, Ceiling-mount, Indoor, 12V or 24 V, Red FIRE Lettering, clear lens, 15, 30, 75, 95, 115, 150, and 177cd

Associated Parts

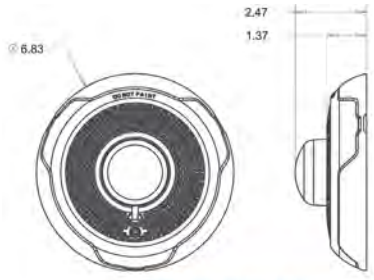
Part Number	Description
589-008-00	Bezel, White, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, no lettering, order one per device
589-013-00	Bezel, White, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, Red AGENT lettering, order one per device
589-014-00	Bezel, White, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, Red ALERT lettering, order one per device
589-015-00	Bezel, White, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, Red EVAC lettering, order one per device
365-013-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Amber, order one per device to **change** color of clear lens
365-017-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Blue, order one per device to **change** color of clear lens
365-018-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Green, order one per device to **change** color of clear lens
365-019-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Red, order one per device to **change** color of clear lens
588-095-00	Trim ring, White, Type I, Ceiling-mount, Universal, 8.5 in. OD x 0.4 in. D
588-094-00	Back Box, Ceiling-Surface-mount, White, Type I, Strobe; Speaker; Speaker Strobe; Horn Strobe; Chime Strobe, 6.9 in. OD x 2.5 in. D
367-047-00	Sync Module, Type I

Drawings

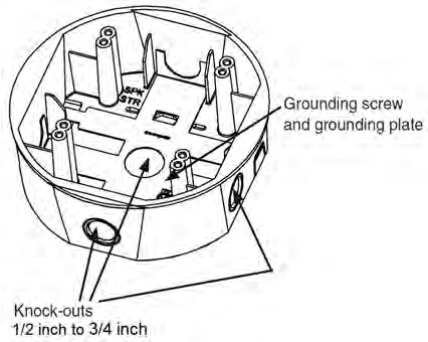
Wiring Diagram



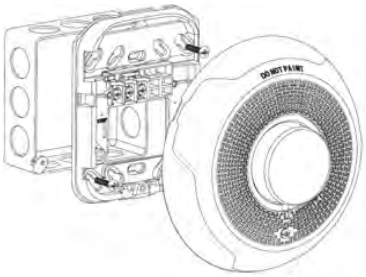
Ceiling-mount Strobe



Back Box, Surface-mount



Junction Box for Flush Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Strobe, Red, Wall-mount, Type I

367-104-00

Features

- Red housing with clear lens and no lettering
- Plug in design with minimal intrusion into the back box
- Tamper-resistant construction
- Automatic selection of 12V or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on wall units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 110, 135, and 185cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed

Specifications

Nominal Voltage	Regulated 12 VDC/FWR Regulated 24 VDC/FWR
Operating Voltage Range	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage Range with Type I Sync Module	8.5 to 17.5V (12V nominal), or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 110, 135, 185cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in. back box, or 4 in. octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Wall-mount Dimensions with Lens	5.6 in. L x 4.7 in. W x 1.25 in. D (143 mm x 119 mm x 32 mm)
Standards Compliance:	
UL Listed	Listed to UL 1971 S5512 S4011
FM Approved	3057383 3057072
State of California	7125 - 1653.0504 7135 - 1653.0503

Wall-mount Strobe Current Draw (mA)

Maximum Current Draw 16 - 33 VDC						
15cd	**30cd**	**75cd**	**95cd**	**110cd**	**135cd**	**185cd**
43	63	107	121	148	172	222

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ordering Information

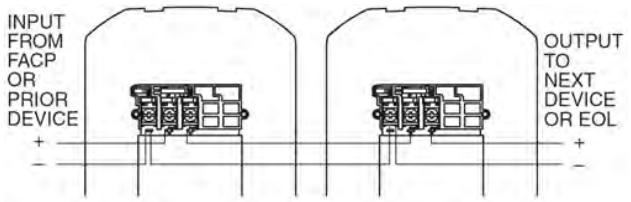
Part Number	Description
367-104-00	Strobe, Red, Wall-mount, Type I, Indoor, 12V or 24V, no lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd

Associated Parts

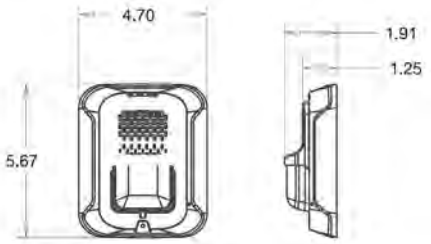
Part Number	Description
589-042-00	Bezel, Red, Wall-mount, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White AGENT lettering, order one per device
589-043-00	Bezel, Red, Wall-mount, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White ALERT lettering, order one per device
589-044-00	Bezel, Red, Wall-mount, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White EVAC lettering, order one per device
589-045-00	Bezel, Red, Wall-mount, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White FIRE lettering, order one per device
365-012-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Amber, order one per device to **change** color of clear lens
365-014-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Blue, order one per device to **change** color of clear lens
365-015-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Green, order one per device to **change** color of clear lens
365-016-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Red, order one per device to **change** color of clear lens
588-098-00	Trim Ring, Red, Wall-mount, Type I, Universal, 8.2 in. H x 6.3 in. W x 0.4 in. D
588-090-00	Back Box, Wall-Surface-mount, Red, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, 4.82 in. W x 5.78 in. H x 1.85 in. D
367-047-00	Sync Module, Type I

Drawings

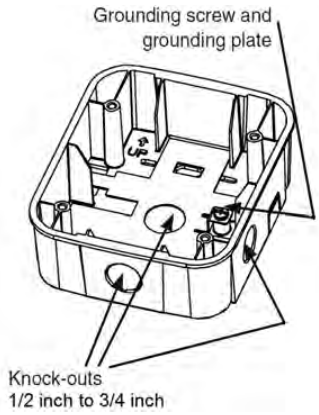
Wiring Diagram



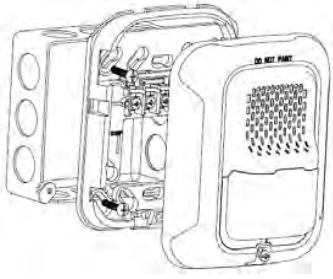
Wall-mount Strobe



Back Box, Surface-mount



Junction Box for Flush Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Strobe, White, Ceiling-mount, Type I

367-105-00

Features

- White housing with red ALERT lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on ceiling strobes:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 115, 150, and 177cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed

Specifications

Nominal Voltage	Regulated 12 VDC/FWR Regulated 24 VDC/FWR
Operating Voltage	8 to 17.5V (12V nominal) or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	8.5 to 17.5V (12V nominal), or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 115, 150, 177cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in. back box, or 4 in. octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Ceiling-mount Dimensions with Lens	6.8 in. OD x 2.5 in. D (173 mm x 64 mm)
Surface-mount Back Box Skirt	6.9 in. OD x 3.4 in. D (175 mm x 86 mm)
Standards Compliance:	
UL Listed	Listed to UL 1971 S5512 S4011
State of California	7125-1653:0504 7135-1653:0503

Ceiling-mount Strobe Current Draw (mA)

Maximum Current Draw 16 - 33 VDC						
15cd	**30cd**	**75cd**	**95cd**	**115cd**	**150cd**	**177cd**
41	63	111	134	158	189	226

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ordering Information

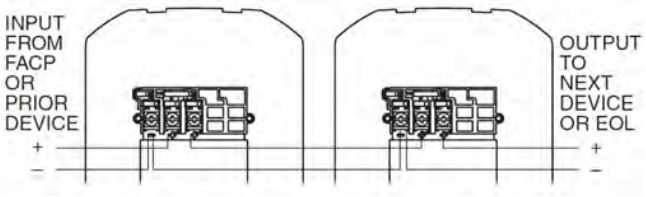
Part Number	Description
367-105-00	Strobe, White, Type I, Ceiling-mount, Indoor, 12V or 24V, Red ALERT lettering, clear lens, 15, 30, 75, 95, 115, 150, and 177cd

Associated Parts

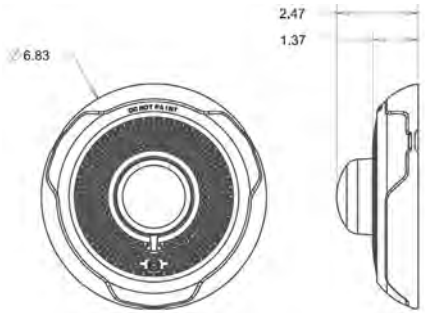
Part Number	Description
589-008-00	Bezel, White, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, no lettering, order one per device
589-013-00	Bezel, White, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, Red AGENT lettering, order one per device
589-014-00	Bezel, White, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, Red ALERT lettering, order one per device
589-015-00	Bezel, White, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, Red EVAC lettering, order one per device
589-016-00	Bezel, White, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, Red FIRE lettering, order one per device
365-013-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Amber, order one per device to **change** color of lens
365-017-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Blue, order one per device to **change** color of lens
365-018-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Green, order one per device to **change** color of lens
365-019-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Red, order one per device to **change** color of lens
588-095-00	Trim Ring, White, Type I, Ceiling-mount, Universal, 8.5 in. OD x 0.4 D
588-094-00	Back Box, Ceiling-Surface-mount, White, Type I, Strobe; Speaker; Speaker Strobe; Horn Strobe; Chime Strobe, 6.9 in. OD x 2.5 in. D
367-047-00	Sync Module, Type I

Drawings

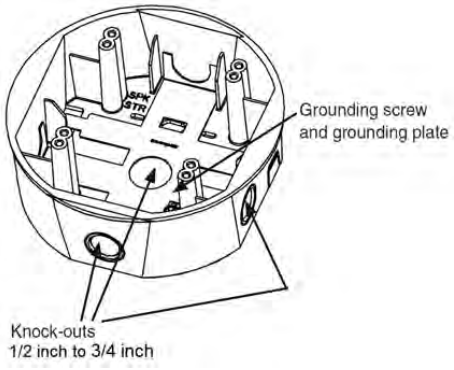
Wiring Diagram



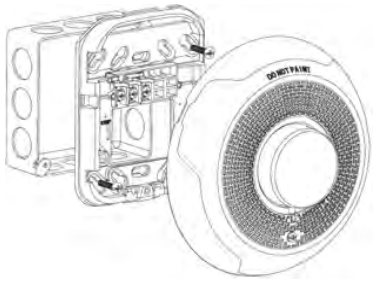
Ceiling-mount Strobe



Back Box, Surface-mount



Junction Box for Flush Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices Catalog Section 11

Horn Strobes

Indoor Horn Strobe, Multitone, Wall-mount, Type II 585-018-00
Outdoor Horn Strobe, Multitone, Wall-mount, Red, Type II 585-059-00
Indoor Horn Strobe, Multitone, Wall-mount, Red, Type II. 585-065-00
Outdoor Horn Strobe, 4-Wire, Red, Wall-mount, Type I 585-068-00
Outdoor Horn Strobe, Red, Wall-mount, Type I 585-069-00
Outdoor Horn Strobe, White, High Candela, Wall-mount, Type I 585-097-00
Outdoor Horn Strobe, Red, High Candela, Wall-mount, Type I 585-097-01
Indoor Horn Strobe, Red, Wall-mount, Type I 585-098-00
Indoor Horn Strobe, Red, Ceiling-mount, Type I 585-099-00
Indoor Horn Strobe, Red, Wall-mount, Type I 585-101-00
Indoor Horn Strobe, White, Wall-mount, Type I. 585-102-00
Indoor Horn Strobe, White, Wall-mount, Type I. 585-103-00
Indoor Horn Strobe, White, Ceiling-mount, Type I. 585-105-00
Indoor Horn Strobe, 4-Wire, White, Wall-mount, Type I 585-106-00
Indoor Horn Strobe, 4-Wire, Red, Wall-mount, Type I. 585-107-00
Indoor Horn Strobe, 4-Wire, White, Ceiling-mount, Type I 585-108-00
Indoor Horn Strobe, 4-Wire, Red, Ceiling-mount, Type I. 585-109-00
Explosion-proof Horn Strobe, Hazardous Locations, Grey 585-111-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Notification Appliance Devices

Indoor Horn Strobe, Multitone, Wall-mount, Type II

585-018-00

MEA approved

Features

- Eight selectable signals: horn, bell, march-time horn, code-3 tone, code-3 horn, slow-whoop, siren, hi/lo tone
- Code-3 horn and tone meet ANSI/NFPA temporal pattern requirements for standard emergency evacuation signaling
- Horn and strobe can operate from a single Notification Appliance Circuit with any of the eight sounds
- Standard dBA and high dBA field-selectable sound output levels
- Strobe features xenon flash tube with solid-state circuitry in a rugged lens
- Inputs polarized for compatibility with standard reverse polarity supervision

Specifications

Flash Rate	1 flash per second
Input Voltage	120 VAC
Rated Candela	15cd
Wiring	12 to 18 AWG
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	95% non-condensing

Current and dBA Ratings for Audible

	RMS Current (Amps)		dBA at 10 ft. (UL Reverberant)	
	High Output	Standard Output	High Output	Standard Output
	UL Max.	UL Max.		
Horn	0.050	0.042	88	82
Bell	0.041	0.039	82	75
March-Time Horn	0.050	0.040	85	79
Code-3 Horn	0.050	0.042	85	75
Code-3 Tone	0.042	0.040	79	75
Slow Whoop	0.050	0.042	88	82
Siren	0.045	0.041	85	82
HI/LO	0.042	0.039	82	79

Mounting

- Horn strobe mounts to 4 in. square or double-gang J box
- Flush- or surface-mounting
- No trim plate required for flush-mounting

Ordering Information

Horn Strobe

Part Number	Description
585-018-00	Indoor Horn Strobe, 8-tone, 120 VAC, 4-wire, wall-mount, red, clear lens, 15cd

Associated Parts

Part Number	Description
404-119-00	NAC Power Extender, 115 VAC 60 Hz, 12/24 VDC, 8A, four Class B or two Class A, use with Type II strobes*
***NOTE** P/N 404-119-00 needs two 7.7 Ah batteries (P/N 400-704-00) for 24-hour battery backup, or two 12 Ah batteries (P/N 400-713-00) for 72-hour battery backup.	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Outdoor Horn Strobe, Multitone, Wall-mount, Red, Type II

585-059-00

Shown with back box P/N 588-014-00

Specifications

Strobe Flash Rate	1 per second
Input Voltage	Nominal 24 VDC
Rated Candela	75cd at –31°F (–35°C) 180cd at 77°F (25°C)
Strobe Current (180cd), RMS	24 VDC: 0.094A UL maximum: 0.138A
Input Wiring	12 to 18 AWG
Operating Temperature	–31°F to 150°F (–35°C to 66°C)
Relative Humidity	95% non-condensing
Mounting	Indoor/outdoor surface-mount back box
Standards Compliance:	
UL/ULC Listed	File E5946
FM	Approved
MEA Approved	File 151-92-E
State of California	7125-0785: 156

Features

- Standard dBA and high dBA field-selectable tone output levels
- Eight selectable signals: horn, bell, march-time horn, code-3 tone, code-3 horn, slow-whoop, siren, hi/lo tone

  NOTE *Code-3 horn and code-3 tone meet ANSI/NFPA temporal pattern requirements for standard emergency evacuation signaling.*
- Horn and strobe can operate from a single notification appliance circuit (NAC) with any of the eight tones
- Strobe features Xenon flash tube with solid-state circuitry in a rugged lens
- Inputs polarized for compatibility with standard reverse polarity supervision
- Synchronizable strobe
- Weatherproof

Horn Current Draw and Output

	RMS Current (Amps) UL Maximum		dBA at 10 ft. UL Reverberant	
	High Output	**Standard Output**	**High Output**	**Standard Output**
Horn	0.108	0.044	92	87
Bell	0.053	0.024	86	80
March-Time Horn	0.104	0.038	89	84
Code-3 Horn	0.091	0.035	88	83
Code-3 Tone	0.075	0.035	85	80
Slow Whoop	0.098	0.037	90	89
Siren	0.104	0.036	89	84
Hi/Lo	0.057	0.026	86	81

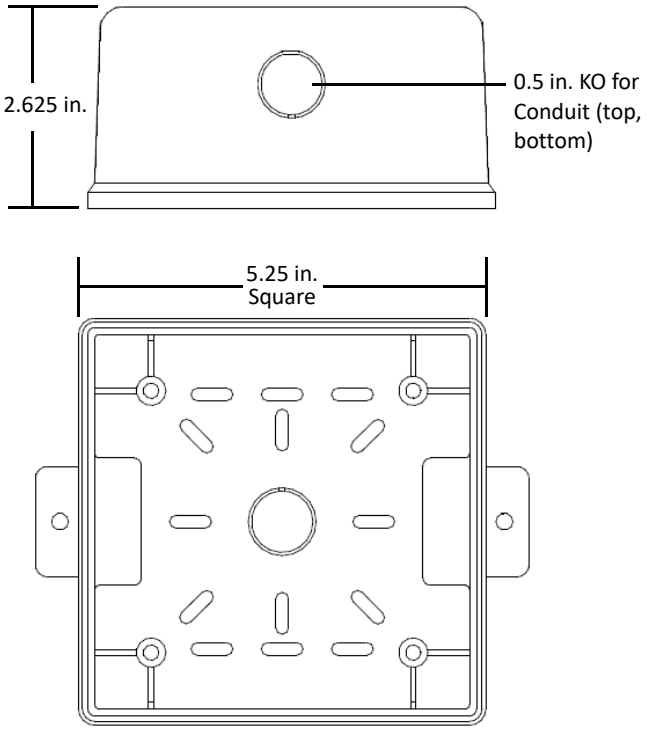
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Mounting

P/N 588-014-00



Ordering Information

Part Number	Description
585-059-00	Outdoor Horn Strobe, 8-tone, 24 VDC, 4-wire, weatherproof, wall-mount, red, clear lens, 180cd

Associated Parts

Part Number	Description
588-014-00	Back Box, indoor/outdoor, surface-mount, red, use with P/N 585-059-00
367-036-00	Sync Module, Type II
404-119-00	NAC Power Extender, 115 VAC 60 Hz, 12/24 VDC, 8A, four Class B or two Class A, use with Type II strobes*
***NOTE** P/N 404-119-00 needs two 7.7 Ah batteries (P/N 400-704-00) for 24-hour battery backup, or two 12 Ah batteries (P/N 400-713-00) for 72-hour battery backup	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Horn Strobe, Multitone, Wall-mount, Red, Type II

585-065-00

Specifications

Strobe Flash Rate	1 per second
Input Voltage	Nominal 24 VDC
Rated Candela	15, 30, 75, and 110cd
Input Wiring	12 to 18 AWG
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	93% ±2% non-condensing
Mounting Options:	
Indoor	Surface or semi-flush-mount back box (P/N 588-005-00)
Indoor/Outdoor	Surface-mount back box (P/N 588-014-00)
Standards Compliance:	
UL Listed	UL1971, UL464, and UL1638 File E5346
FM Approved	Class 3150
MEA Approved	151-92-E
State of California	7125-0785:0155

Features

- Standard dBa and high dBa field selectable tone output levels
- Eight selectable tones: horn, bell, march-time horn, code-3 horn, code-3 tone, slow whoop, siren, and hi/lo

  NOTE *Code-3 horn and code-3 tone meet ANSI/NFPA temporal pattern requirements for standard emergency evacuation signaling.*
- Horn and strobe can operate from a single Notification Appliance Circuit with any of the eight tones
- Strobe features Xenon flash tube with solid-state circuitry in a rugged lens
- Four field selectable candela settings at 15, 30, 75, and 110cd
- Inputs polarized for compatibility with standard reverse polarity supervision
- Synchronizable strobe

Horn Current Draw and Output

	RMS Current (Amps) UL Max.		dBa at 10 ft. UL Reverberant	
	High Output	**Standard Output**	**High Output**	**Standard Output**
Horn	0.108	0.044	92	87
Bell	0.053	0.024	86	80
March-Time Horn	0.104	0.038	89	84
Code-3 Horn	0.091	0.035	88	83
Code-3 Tone	0.075	0.035	85	80
Slow Whoop	0.098	0.037	90	89
Siren	0.104	0.036	89	84
Hi/Lo	0.057	0.026	86	81

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Strobe Current Draw and Output

RMS Current (Amps)				
Candela	15cd	30cd	75cd	110cd
at 24 VDC	0.041	0.063	0.109	0.140
UL Max.	0.060	0.092	0.165	0.220

NOTE If the strobe and horn operate on the same circuit, add the strobe current from "Strobe Current Draw and Output" table to the horn current from "Horn Current Draw and Output" table.

Ordering Information

Indoor Horn Strobe

Part Number	Description
585-065-00	Indoor Horn Strobe, 8-tone, Wall-mount, Red, 4-wire, 24 VDC, white FIRE lettering, clear lens, 15, 30, 75, and 110cd

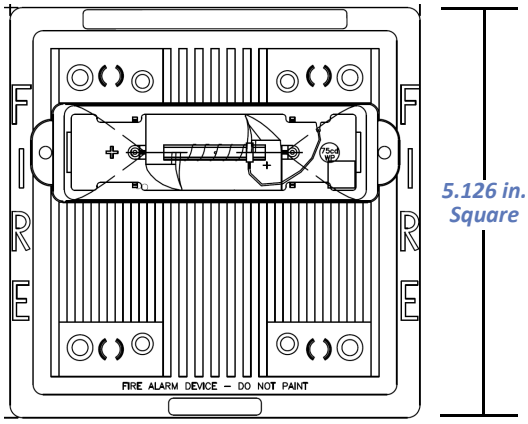
Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
588-005-00	Back Box, Indoor, Surface or Semi-Flush-mount, Red, 4 in. x 4 in. x 1.5 in. deep
588-014-00	Back Box, Indoor/Outdoor, Surface-mount, Red, 5.25 in. x 5.25 in.
404-119-00	NAC Power Extender, 115 VAC, 60 Hz, 12/24 VDC, 8A, four Class B or two Class A, use with Type II strobes See **NOTE.**
NOTE P/N 404-119-00 needs two 7.7 Ah batteries (P/N 400-704-00) for 24-hour battery backup, or two 12 Ah batteries (P/N 400-713-00) for 72-hour battery backup	

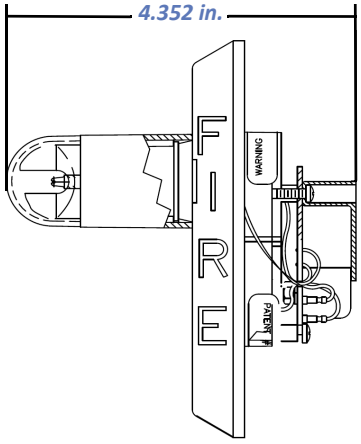
Diagrams

Horn Strobe Dimensions

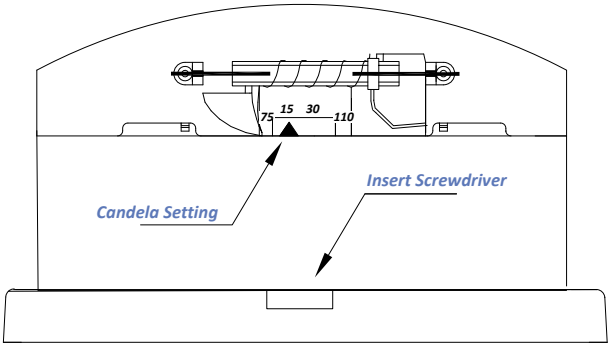
Front View



Side View



Candela Setting Selection



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Outdoor Horn Strobe, 4-Wire, Red, Wall-mount, Type I

585-068-00

Features

- Red housing with white FIRE lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12 or 24V operation
  NOTE *12V operation only supports 15 and 15/75cd settings*.
- Field-selectable candela settings:
  12V: 15 and 15/75cd
  24V: 15, 15/75, 30, 75, 95, 110, and 115cd
- Universal mounting plate with an onboard shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch for horn tone and three volume selections
- Weatherproof per NEMA 4X, IP56
- Plastic weatherproof back box included

Specifications

Nominal Voltage	Regulated 12 VDC or Regulated 24 VDC
Operating Voltage (includes fire alarm panels with built-in sync)	8 to 17.5V (12V nominal) or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	8.5 to 17.5V (12V nominal) or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 15/75cd 24 VDC: 15, 15/75, 30, 75, 95, 110, and 115cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to Weatherproof Back Box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Horn Strobe Dimensions With Lens	5.6 in. L x 4.7 in. W x 2.5 in. D (142 mm x 119 mm x 64 mm)
Weatherproof Back Box Dimensions	5.7 in. L x 5.1 in. W x 2 in. D (145 mm x 130 mm x 51 mm)
Standards Compliance:	
UL Listed	UL464, File S4011
FM Approved	3023572
MEA Approved	MEA 452-05-E
State of California	7125-1653:188

Sound Output (dBA)

Sound Pattern	16–33 VDC	24 VDC Nominal	
		Reverberant	Anechoic
Temporal High	84	88	99
Temporal Medium	80	86	96
Temporal Low	76	83	94
Non-Temporal High	88	93	100
Non-Temporal Medium	85	90	98
Non-Temporal Low	81	88	96
Coded High	88	93	101
Coded Medium	85	90	97
Coded Low	81	88	96

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Low Temperature Candela Derating (@ –40°F)

Candela Setting	75cd	95cd	110cd	115cd
Derated Candela	44cd	70cd	110cd	115cd

NOTE Do not use the 15, 15/75, and 30cd settings below 32°F.

Total Current Draw

To determine the total current draw, add the strobe current draw to the horn current draw, which can be found in the following tables:

Strobe Current Draw (mA)

DC Input	16–33 VDC						
Candela Setting	15cd	15/75cd	30cd	75cd	95cd	110cd	115cd
Current Draw	66	77	94	158	181	202	210

Horn Current Draw (mA)

Position	Sound Pattern	Current Draw
1	Temporal High	69
2	Temporal Medium	58
3	Temporal Low	44
4	Non-Temporal High	69
5	Non-Temporal Medium	60
6	Non-Temporal Low	50
7	Coded High	69
8	Coded Medium	56
9	Coded Low	52

NOTE For positions 7, 8, and 9, temporal coding must be provided by the NAC. If the NAC voltage is held constant, the horn output will remain constantly on.

Ordering Information

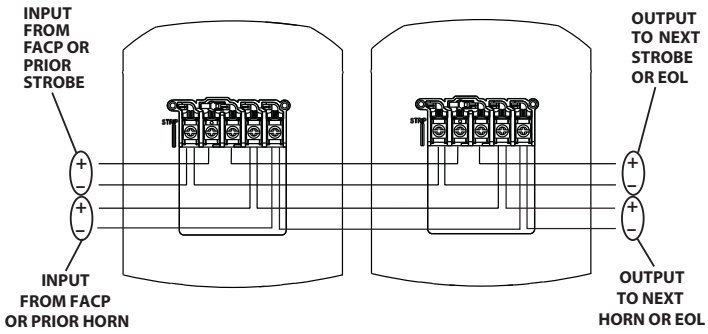
Part Number	Description
585-068-00	Horn Strobe, Red, Type I, Wall-mount, 4-wire, Outdoor, 12V or 24V, white FIRE lettering, clear lens, 15, 15/75, 30, 75, 95, 110, and 115cd, weatherproof per NEMA 4X, IP56, includes plastic weatherproof back box

Associated Parts

Part Number	Description
589-005-00	White Decals, wall-mount: AGENT, EVAC, ALERT, or FIRE **NOTE** Order two per device.
369-023-00	Strobe Attachment, amber lens for wall-mount device; used for indoor and outdoor applications
369-025-01	Blue lens option for wall-mount device
369-026-01	Red lens option for wall-mount device
369-027-01	Green lens for wall-mount device
588-059-50	Trim Ring, wall-mount, red
588-038-00	Back Box, outdoor weatherproof, wall-mount, red, required for NEMA 4X
367-047-00	Sync Module, Type I

Drawings

Wiring Diagram

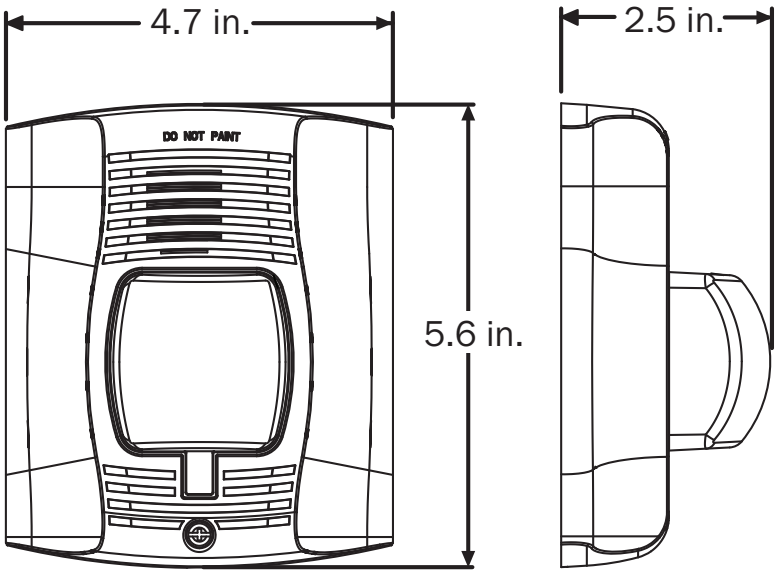


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

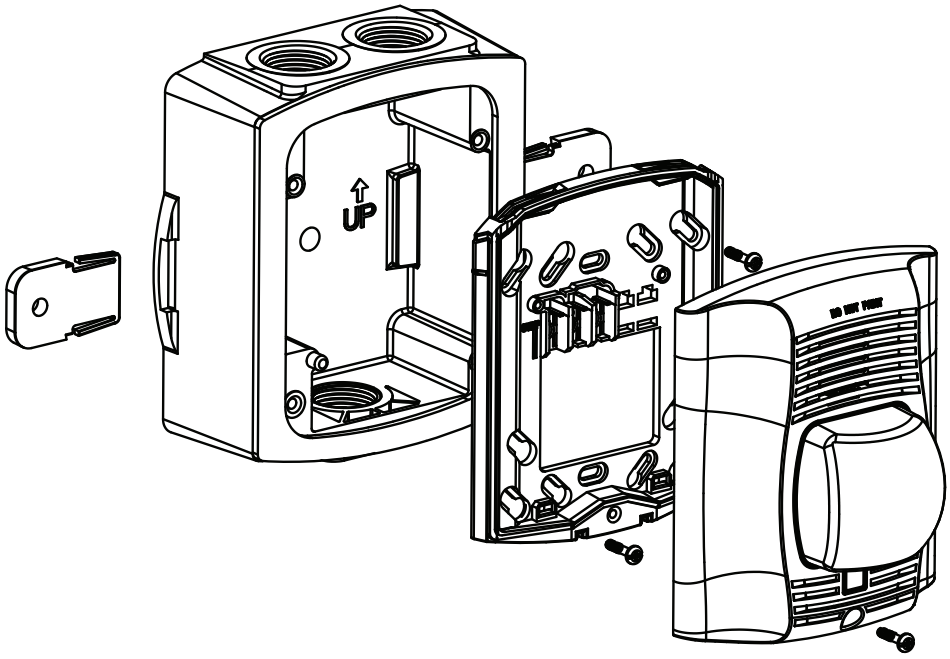
Detect Manage Record

Notification Appliance Devices

Outdoor Wall-mount Horn Strobe



Weatherproof Back Box for Mounting Horn Strobe



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Outdoor Horn Strobe, Red, Wall-mount, Type I

585-069-00

Features

- Red housing with white FIRE lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12V or 24V operation
  NOTE 12V operation only supports 15 and 15/75cd settings.
- Field-selectable candela settings:
  12V: 15 and 15/75cd
  24V: 15, 15/75, 30, 75, 95, 110, and 115cd
- Universal mounting plate with an onboard shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch for horn tone and three volume selections
- Weatherproof per NEMA 4X, IP56
- Plastic weatherproof back box included

Specifications

Nominal Voltage	Regulated 12 VDC/FWR or Regulated 24 VDC/FWR
Operating Voltage (includes fire alarm panels with built in sync)	8 to 17.5V (12V nominal) or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	8.5 to 17.5V (12V nominal) or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 15/75cd 24 VDC: 15, 15/75, 30, 75, 95, 110, and 115cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to Weatherproof Back Box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Horn Strobe Dimensions with Lens	5.6 in. L x 4.7 in. W x 2.5 in. D (142 mm x 119 mm x 64 mm)
Weatherproof Back Box Dimensions	5.7 in. L × 5.1 in. W × 2 in. D (145 mm × 130 mm × 51 mm)
Standards Compliance:	
UL Listed	UL464, File S4011
FM Approved	3023572
MEA Approved	MEA 452-05-E
State of California	7125-1653:188

Sound Output (dBA)

Sound Pattern and Volume	16–33 VDC	24 VDC Nominal	
		Reverberant	Anechoic
Temporal High	84	88	99
Temporal Medium	80	86	96
Temporal Low	76	83	94
Non-Temporal High	88	93	100
Non-Temporal Medium	85	90	98
Non-Temporal Low	81	88	96

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Maximum Current Draw (mA RMS)

Sound Pattern and Volume	16–33 VDC Candela Settings						
	15cd	15/75cd	30cd	75cd	95cd	110cd	115cd
Temporal High	79	90	107	176	194	212	218
Temporal Medium	69	80	97	157	182	201	210
Temporal Low	66	77	93	154	179	198	207
Non-Temporal High	91	100	116	176	201	221	229
Non-Temporal Medium	75	85	102	163	187	207	216
Non-Temporal Low	68	79	96	156	182	201	210

Low Temperature Candela Derating (@ –40°F)

Candela Setting	75cd	95cd	110cd	115cd
Actual Candela	44cd	77cd	110cd	115cd
NOTE Do not use the 15, 15/75, and 30cd settings below 32°F.				

Ordering Information

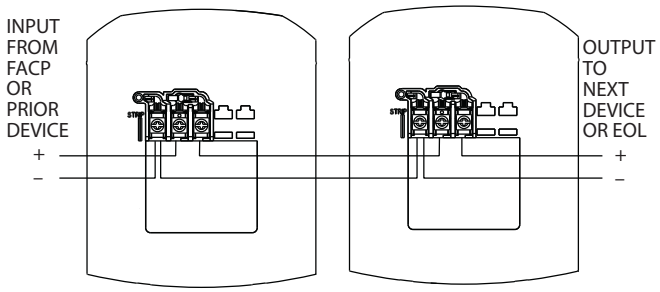
Part Number	Description
585-069-00	Horn Strobe, Red, Type I, Wall-mount, 2-wire, Outdoor, 12V or 24V, white FIRE lettering, clear lens, 15, 15/75, 30, 75, 95, 110, and 115cd, NEMA 4X rating, includes plastic weatherproof back box

Associated Parts

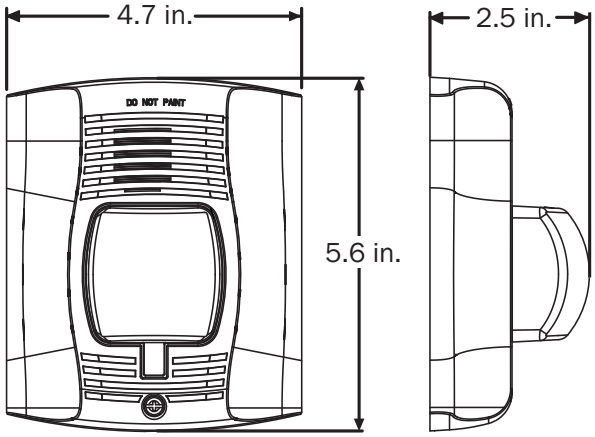
Part Number	Description
588-059-50	Trim Ring, wall-mount, red
588-038-00	Back Box, metal option, outdoor, weatherproof, wall-mount, red, 2 in. deep, NEMA 4X
367-047-00	Sync Module, Type I

Drawings

Wiring Diagram



Outdoor Wall-mount Horn Strobe

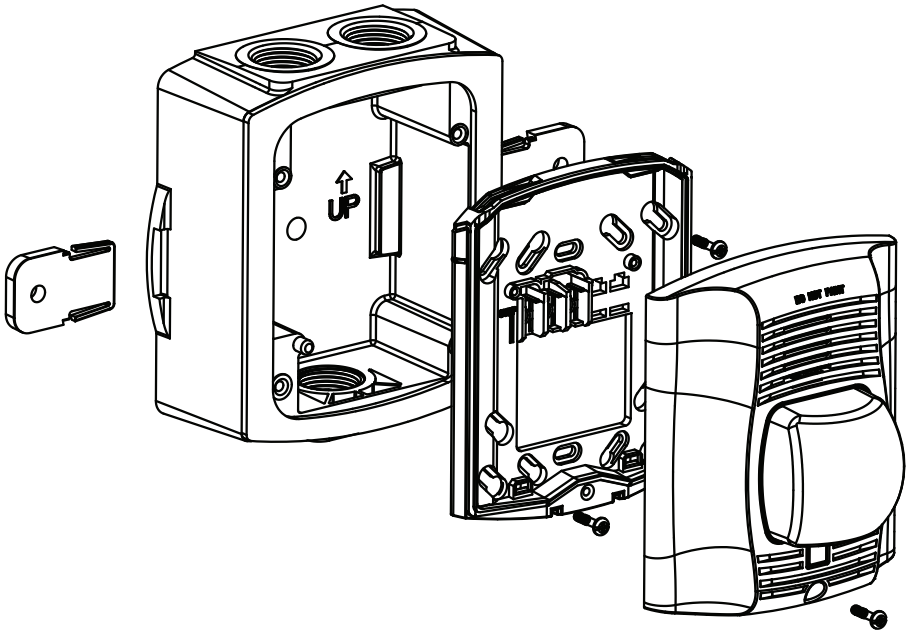


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Weatherproof Back Box for Mounting Horn Strobe



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Outdoor Horn Strobe, White, High Candela, Wall-mount, Type I

585-097-00

Specifications

Nominal Voltage	Regulated 24 VDC/FWR
Operating Voltage (includes fire alarm panels with built-in sync)	16 to 33V
Operating Voltage with Type I Sync Module	16.5 to 33V
High Candela	135, 150, 177, and 185cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to Weatherproof Back Box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Horn Strobe Dimensions with Lens	5.6 in. L x 4.7 in. W x 2.5 in. D (142 mm x 119 mm x 64 mm)
Weatherproof Back Box Dimensions	5.7 in. L x 5.1 in. W x 2 in. D (145 mm x 130 mm x 51 mm)
Standards Compliance:	
UL Listed	UL464, File S4011
FM Approved	3023572
MEA Approved	MEA 452-05-E
State of California	7125-1653:188

Features

- White housing with red FIRE lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Field-selectable high candela settings: 135, 150, 177, and 185cd
- Universal mounting plate with an onboard shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch for horn tone and three volume selections
- Weatherproof per NEMA 4X, IP56
- Plastic weatherproof back box included

Sound Output (dBA)

Sound Pattern and Volume	16–33 VDC	24 VDC Nominal	
		Reverberant	Anechoic
Temporal High	84	88	99
Temporal Medium	80	86	96
Temporal Low	76	83	94
Non-Temporal High	88	93	100
Non-Temporal Medium	85	90	98
Non-Temporal Low	81	88	96

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Maximum Current Draw (mA RMS)

Sound Pattern and Volume	16–33 VDC High Candela Settings			
	135cd	150cd	177cd	185cd
Temporal High	245	259	290	297
Temporal Medium	235	253	288	297
Temporal Low	232	251	282	292
Non-Temporal High	255	270	303	309
Non-Temporal Medium	242	259	293	299
Non-Temporal Low	238	254	291	295

Ordering Information

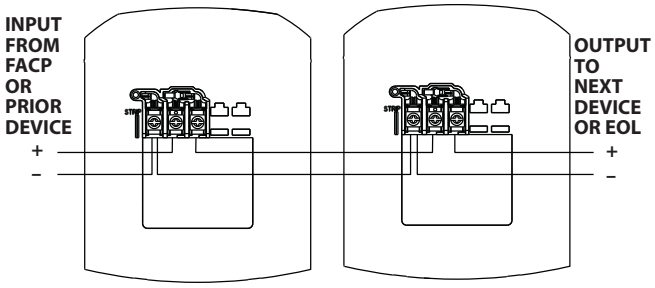
Part Number	Description
585-097-00	Horn Strobe, White, Type I, Wall-mount, 2-wire, Outdoor, Weatherproof, 24V, red FIRE lettering, clear lens, 135, 150, 177, and 185 high candela, NEMA 4X rating, includes plastic weatherproof back box

Associated Parts

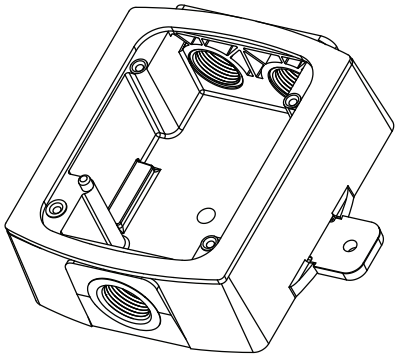
Part Number	Description
588-059-00	Trim Ring, wall-mount, white
588-077-00	Back Box, metal option, outdoor, weatherproof, wall-mount, white, 2 in. deep, NEMA 4X
367-047-00	Sync Module, Type I

Drawings

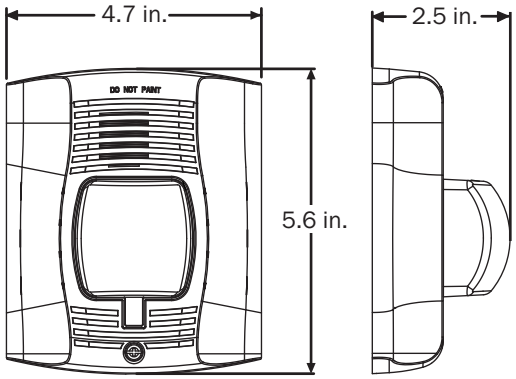
Wiring Diagram



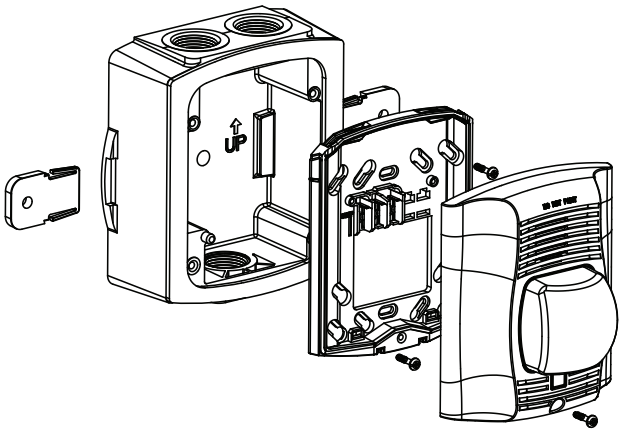
Weatherproof Back Box, Surface-mount



Outdoor Wall-mount Horn Strobe



Weatherproof Back Box for Mounting Outdoor Horn Strobe



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Outdoor Horn Strobe, Red, High Candela, Wall-mount, Type I

585-097-01

Specifications

Nominal Voltage	Regulated 24 VDC
Operating Voltage	16 to 33V
Operating Voltage with Type I Sync Module	16.5 to 33V
High Candela	135, 150, 177, and 185cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to Weatherproof Back Box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Horn Strobe Dimensions with Lens	5.6 in. L x 4.7 in. W x 2.5 in. D (142 mm x 119 mm x 64 mm)
Weatherproof Back Box Dimensions	5.7 in. L x 5.1 in. W x 2 in. D (145 mm x 130 mm x 51 mm)
Standards Compliance:	
UL Listing	UL464, File S4011
FM Approved	3023572
State of California	7125-1653:188
MEA Approved	MEA 452-05-E

Features

- Red housing with white FIRE lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Field-selectable high candela settings: 135, 150, 177, and 185cd
- Universal mounting plate with an onboard shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch for horn tone and three volume selections
- Weatherproof per NEMA 4X, IP56
- Plastic weatherproof back box included

Sound Output (dBA)

Sound Pattern and Volume	16–33 VDC	24 VDC Nominal	
		Reverberant	Anechoic
Temporal High	84	88	99
Temporal Medium	80	86	96
Temporal Low	76	83	94
Non-Temporal High	88	93	100
Non-Temporal Medium	85	90	98
Non-Temporal Low	81	88	96

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Maximum Current Draw (mA RMS)

Sound Pattern and Volume	16–33 VDC High Candela Settings			
	135cd	150cd	177cd	185cd
Temporal High	245	259	290	297
Temporal Medium	235	253	288	297
Temporal Low	232	251	282	292
Non-Temporal High	255	270	303	309
Non-Temporal Medium	242	259	293	299
Non-Temporal Low	238	254	291	295

Ordering Information

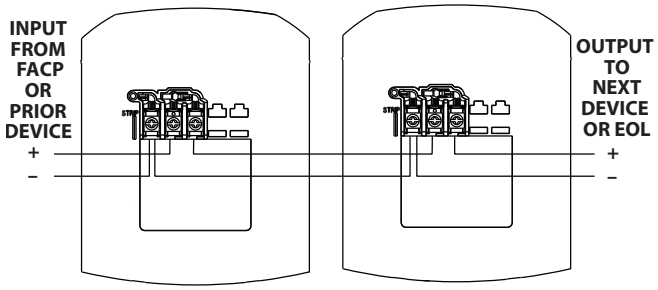
Part Number	Description
585-097-01	Horn Strobe, Red, Type I, Wall-mount, Outdoor, Weatherproof, 24V, white FIRE lettering, clear lens, 135, 150, 177, and 185 high candela, NEMA 4X rating, includes plastic weatherproof back box

Associated Parts

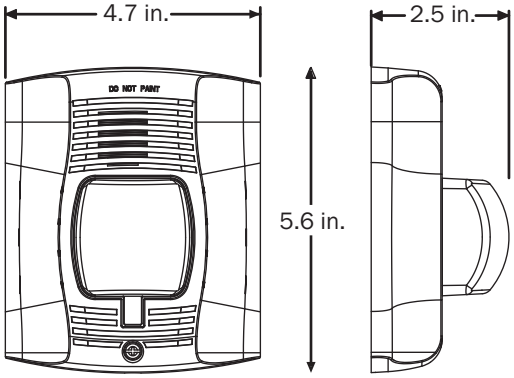
Part Number	Description
588-059-50	Trim Ring, wall-mount, red
588-038-00	Back Box, metal option, outdoor, weatherproof, wall-mount, red, 2 in. deep, NEMA 4X
367-047-00	Sync Module, Type I

Drawings

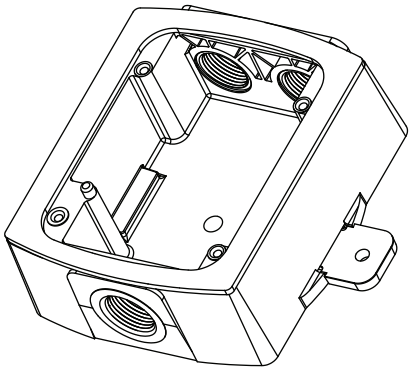
Wiring Diagram



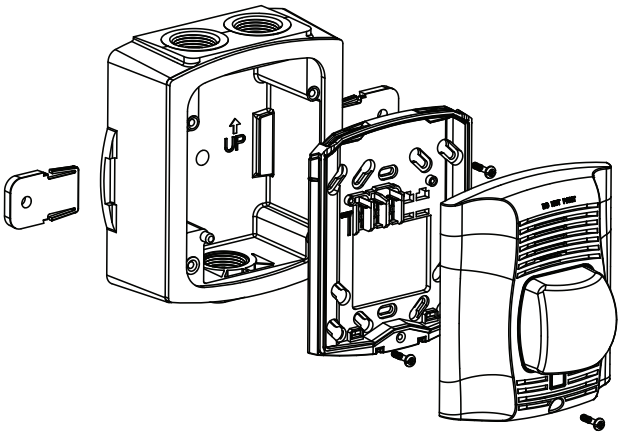
Outdoor Wall-mount Horn Strobe



Weatherproof Back Box, Surface-mount



Weatherproof Back Box for Mounting Horn Strobe



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Horn Strobe, Red, Wall-mount, Type I

585-098-00

Features

- Red housing with white FIRE lettering and clear lens
- Plug in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field-selectable candela settings on wall units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 110, 135, and 185cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch for horn tone and two volume selections

Specifications

Nominal Voltage	Regulated 12 VDC/FWR Regulated 24 VDC/FWR
Operating Voltage Range	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage Range with Type I Sync Module	8.5 to 17.5V (12V nominal), or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 110, 135, 185cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in. back box, or 4 in. octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Wall-mount Dimensions	5.6 in. L x 4.7 in. W x 1.25 in. D (142 mm x 119 mm x 32 mm)
Wall-mount Dimensions with lens	5.6 in. L x 4.7 in. W x 1.91 in. D (142 mm x 119 mm x 43 mm)
Standards Compliance:	
UL Listed	Listed to UL 1971 and UL 464 S4011
FM Approved	3057383 3057072
State of California	7125-1653:0504 7135-1653:0503

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Wall-mount Horn Strobe Current Draw (mA) and Sound Output - Reverberant (dBA)

Pos	Tone	Volume Setting	Maximum Current Draw 16–33 VDC							Sound Output Reverberant (dBA at 10 ft.) 16–33 VDC
			15cd	30cd	75cd	95cd	110cd	135cd	185cd	
1	Temporal	High	54	74	121	142	162	196	245	89
2	Temporal	Low	44	65	111	133	157	184	235	83
3	Non-Temporal	High	73	94	139	160	182	211	262	90
4	Non-Temporal	Low	51	71	119	139	162	190	239	84
5	3.1 KHz Temporal	High	53	73	119	140	164	190	242	88
6	3.1 KHz Temporal	Low	45	66	112	133	160	185	235	82
7	3.1 KHz Non-Temporal	High	69	90	135	157	175	208	261	89
8	3.1 KHz Non-Temporal	Low	52	72	119	138	162	192	242	83

Ordering Information

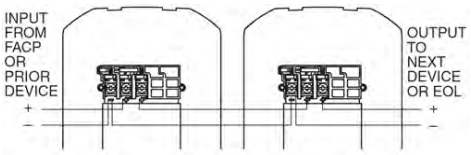
Part Number	Description
585-098-00	Horn Strobe, Red, Type I, Wall-mount, 2-Wire, Indoor, 12V or 24V, White FIRE Lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd

Associated Parts

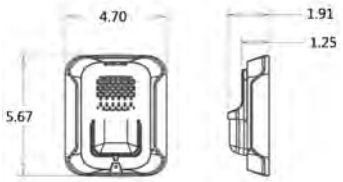
Part Number	Description
589-046-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, no lettering, order one per device
588-098-00	Trim Ring, Red, Type I, Wall-mount, Universal, 8.2 in. H x 6.3 in. W x 0.4 in. D
588-090-00	Back Box, Wall-Surface-mount, Red, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, 4.82 in. W x 5.78 in. H x 1.85 in. D
367-047-00	Sync Module, Type I

Drawings

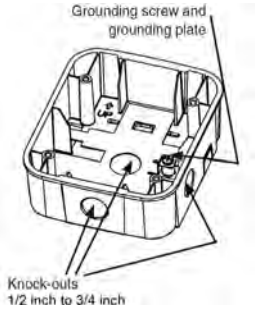
Wiring Diagram



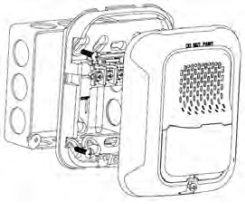
Wall-mount Horn Strobe



Back Box, Surface-mount



Junction Box for Flush Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Horn Strobe, Red, Ceiling-mount, Type I

585-099-00

Specifications

Nominal Voltage	Regulated 12 VDC/FWR or Regulated 24 VDC/FWR
Operating Voltage Range	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage Range with Type I Sync Module	8.5 to 17.5V (12V nominal), or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 115, 150, 177cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in. back box, or 4 in. octagon back box, or Double-gang back box Single-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Ceiling-mount Dimensions with lens	6.8 in. OD x 2.5 in. D (173 mm x 64 mm)
Standards Compliance:	
UL Listed	Listed to UL 1971 and UL 464 S4011
FM Approved	3057383
State of California	7125-1653:0504 7135-1653:0503

Features

- Red housing, white FIRE lettering, and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper resistant construction
- Automatic selection of 12 or 24V operation.
  NOTE 12V operation only supports 15 and 30cd settings
- Field selectable candela settings on ceiling units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 115, 150, and 177cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch for horn tone and two volume selections

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Ceiling-mount Horn Strobe Current Draw (mA) and Sound Output - Reverberant (dBA)

Pos	Tone	Volume Settings	Maximum Current Draw 16–33 VDC							Sound Output Reverberant (dBA at 10 ft.) 16–33 VDC
			15cd	30cd	75cd	95cd	115cd	150cd	177cd	
1	Temporal	High	71	90	143	165	187	217	254	89
2	Temporal	Low	54	71	137	161	185	211	249	83
3	Non-Temporal	High	71	90	141	165	187	230	273	90
4	Non-Temporal	Low	54	71	124	161	170	216	258	84
5	3.1 kHz Temporal	High	69	94	147	163	184	229	257	88
6	3.1 kHz Temporal	Low	54	88	143	155	185	212	252	82
7	3.1 kHz Non-Temporal	High	69	94	144	164	202	229	271	89
8	3.1 kHz Non-Temporal	Low	54	88	131	155	187	217	259	83

Ordering Information

Part Number	Description
585-099-00	Horn Strobe, Red, Type I, Ceiling-mount, 2-Wire, Indoor, 12V or 24V, white FIRE lettering, clear lens, 15, 30, 75, 95, 115, 150, and 177cd

Associated Parts

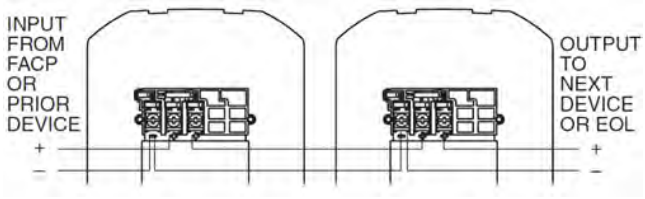
Part Number	Description
589-007-00	Bezel, Red, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, White AGENT lettering, order one per device
589-009-00	Bezel, Red, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, White ALERT lettering, order one per device
589-010-00	Bezel, Red, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, White EVAC lettering, order one per device
589-012-00	Bezel, Red, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, no lettering, order one per device
365-013-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Amber, order one per device to **change** color of clear lens
365-017-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Blue, order one per device to **change** color of clear lens
365-018-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Green, order one per device to **change** color of clear lens
365-019-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Red, order one per device to **change** color of clear lens.
588-096-00	Trim Ring, Red, Type I, Ceiling-mount, Universal, 8.5 in. OD x 0.4 in. D
588-097-00	Back Box, Ceiling-Surface-mount, Red, Type I, Strobe; Speaker; Speaker Strobe; Horn Strobe; Chime Strobe, 6.9 in. OD x 2.5 in. D
367-047-00	Sync Module, Type I

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

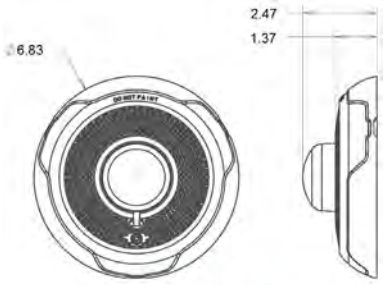
Detect Manage Record

Drawings

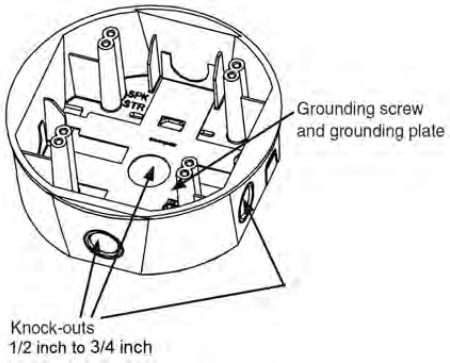
Wiring Diagram



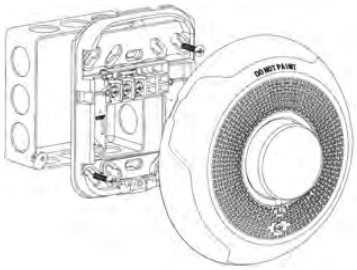
Ceiling-mount Horn Strobe



Back Box, Surface-mount



Junction Box for Flush Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Horn Strobe, Red, Wall-mount, Type I

585-101-00

Features

- Red housing with clear lens and no lettering
- Plug in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12 or 24V operation.
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on wall units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 110, 135, and 185cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch for horn tone and two volume selections

Specifications

Nominal Voltage	Regulated 12 VDC/FWR Regulated 24 VDC/FWR
Operating Voltage Range	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage Range with Type I Sync Module	8.5 to 17.5V (12V nominal), or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 110, 135, 185cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in. back box, or 4 in. octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Wall-mount Dimensions with lens	5.6 in. L x 4.7 in. W x 2.5 in. D (143 mm x 119 mm x 64 mm)
Standards Compliance:	
UL Listed	Listed to UL 1971 and UL 464 S4011
FM Approved	3057383 3057072
State of California	7125-1653:0504 7135-1653:0503

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Wall-mount Horn Strobe Current Draw (mA) and Sound Output - Reverberant (dBA)

Pos	Tone	Volume Setting	Maximum Current Draw 16–33 VDC							Sound Output Reverberant (dBA at 10 ft.) 16–33 VDC
			15cd	30cd	75cd	95cd	110cd	135cd	185cd	
1	Temporal	High	54	74	121	142	162	196	245	89
2	Temporal	Low	44	65	111	133	157	184	235	83
3	Non-Temporal	High	73	94	139	160	182	211	262	90
4	Non-Temporal	Low	51	71	119	139	162	190	239	84
5	3.1 KHz Temporal	High	53	73	119	140	164	190	242	88
6	3.1 KHz Temporal	Low	45	66	112	133	160	185	235	82
7	3.1 KHz Non-Temporal	High	69	90	135	157	175	208	261	89
8	3.1 KHz Non-Temporal	Low	52	72	119	138	162	192	242	83

Ordering Information

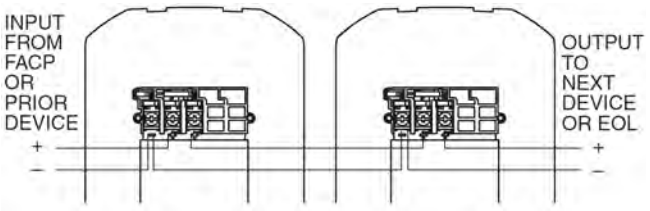
Part Number	Description
585-101-00	Horn Strobe, Red, Type I, Wall-mount, 2-Wire, Indoor, 12V or 24V, no lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd

Associated Parts

Part Number	Description
589-042-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White AGENT lettering, order one per device
589-043-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White ALERT lettering, order one per device
589-044-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White EVAC lettering, order one per device
589-045-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White FIRE lettering, order one per device
365-012-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Amber, order one per device to **change** color of clear lens
365-014-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Blue, order one per device to **change** color of clear lens
365-015-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Green, order one per device to **change** color of clear lens
365-016-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Red, order one per device to **change** color of clear lens
588-098-00	Trim Ring, Red, Type I, Wall-mount, Universal, 8.2 in. H x 6.3 in. W x 0.4 in. D
588-090-00	Back Box, Wall-Surface-mount, Red, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, 4.82 in. W x 5.78 in. H x 1.85 in. D
367-047-00	Sync Module, Type I

Drawings

Wiring Diagram

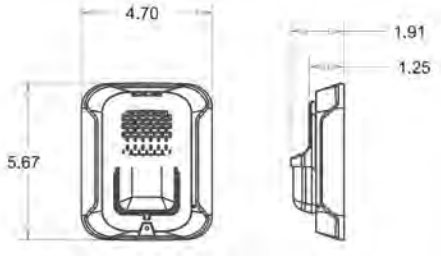


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

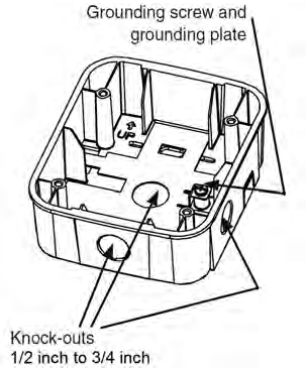
Detect Manage Record

Notification Appliance Devices

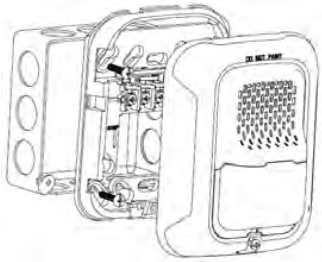
Wall-mount Horn Strobe



Back Box, Surface-mount



Junction Box for Flush Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Horn Strobe, White, Wall-mount, Type I

585-102-00

Features

- White housing, red FIRE lettering, and clear lens
- Plug in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on wall units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 110, 135, and 185cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch for horn tone and two volume selections

Specifications

Nominal Voltage	Regulated 12 VDC/FWR Regulated 24 VDC/FWR
Operating Voltage Range	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage Range with Type I Sync Module	8.5 to 17.5V (12V nominal), or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 30 24 VDC: 15, 30, 75, 95, 110, 135, 185
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in. back box, or 4 in. octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Wall-mount Dimensions	5.6 in. L x 4.7 in. W x 2.5 in. D (143 mm x 119 mm x 64 mm)
Standards Compliance:	
UL Listed	Listed to UL 1971 and UL 464 S4011
FM Approved	3057383 3057072
State of California	7125-1653:0504 7135-1653:0503

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Wall-mount Horn Strobe Current Draw (mA) and Sound Output - Reverberant (dBA)

Pos	Tone	Volume Setting	Maximum Current Draw 16–33 VDC							Sound Output Reverberant (dBA at 10 ft.) 16–33 VDC
			15cd	30cd	75cd	95cd	110cd	135cd	185cd	
1	Temporal	High	54	74	121	142	162	196	245	89
2	Temporal	Low	44	65	111	133	157	184	235	83
3	Non-Temporal	High	73	94	139	160	182	211	262	90
4	Non-Temporal	Low	51	71	119	139	162	190	239	84
5	3.1 KHz Temporal	High	53	73	119	140	164	190	242	88
6	3.1 KHz Temporal	Low	45	66	112	133	160	185	235	82
7	3.1 KHz Non-Temporal	High	69	90	135	157	175	208	261	89
8	3.1 KHz Non-Temporal	Low	52	72	119	138	162	192	242	83

Ordering Information

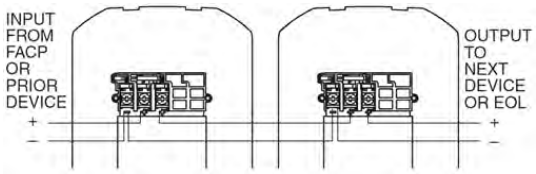
Part Number	Description
585-102-00	Horn Strobe, White, Type I, Wall-mount, 2-Wire, Indoor, 12V or 24V, red FIRE lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd

Associated Parts

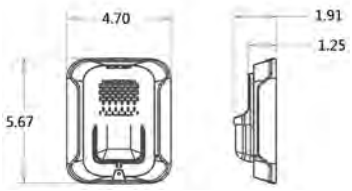
Part Number	Description
589-041-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, no lettering, order one per device
588-099-00	Trim Ring, White, Type I, Wall-mount, Universal, 8.2 in. H x 6.3 in. W x 0.4 in. D
588-091-00	Back Box, Wall-Surface-mount, White, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, 4.82 in. W x 5.78 in. H x 1.85 in. D
367-047-00	Sync Module, Type I

Drawings

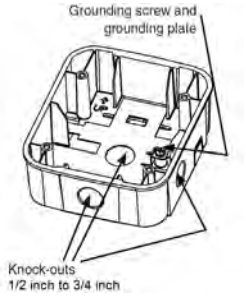
Wiring Diagram



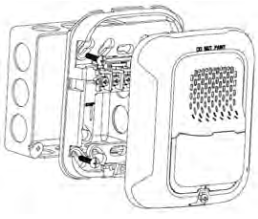
Wall-mount Horn Strobe



Back Box, Surface-mount



Junction Box for Flush Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Horn Strobe, White, Wall-mount, Type I

585-103-00

Features

- White housing with clear lens and no lettering
- Plug in design with minimal intrusion into the back box
- Tamper-resistant construction
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on wall units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 110, 135, and 185cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch for horn tone and two volume selections

Specifications

Nominal Voltage	Regulated 12 VDC/FWR Regulated 24 VDC/FWR
Operating Voltage Range	8 to 17.5V (12V nominal), or 16 to 33V (24 V nominal)
Operating Voltage Range with Type I Sync Module	8.5 to 17.5V (12V nominal), or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 110, 135, 185cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in. back box, or 4 in. octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Wall-mount Dimensions with lens	5.6 in. L x 4.7 in. W x 2.5 in. D (143 mm x 119 mm x 64 mm)
Standards Compliance:	
UL Listed	Listed to UL 1971 and UL 464 S4011
FM Approved	3057383 3057072
State of California	7125-1653:0504 7135-1653:0503

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Wall-mount Horn Strobe Current Draw (mA) and Sound Output - Reverberant (dBA)

Pos	Tone	Volume Setting	Maximum Current Draw 16–33 VDC							Sound Output Reverberant (dBA at 10 ft.) 16–33 VDC
			15cd	30cd	75cd	95cd	110cd	135cd	185cd	
1	Temporal	High	54	74	121	142	162	196	245	89
2	Temporal	Low	44	65	111	133	157	184	235	83
3	Non-Temporal	High	73	94	139	160	182	211	262	90
4	Non-Temporal	Low	51	71	119	139	162	190	239	84
5	3.1 KHz Temporal	High	53	73	119	140	164	190	242	88
6	3.1 KHz Temporal	Low	45	66	112	133	160	185	235	82
7	3.1 KHz Non-Temporal	High	69	90	135	157	175	208	261	89
8	3.1 KHz Non-Temporal	Low	52	72	119	138	162	192	242	83

Ordering Information

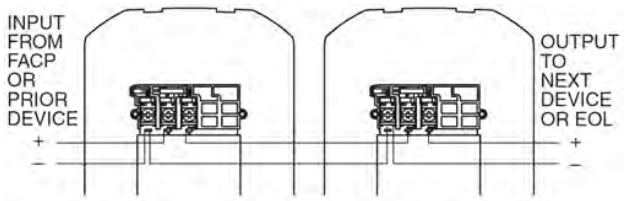
Part Number	Description
585-103-00	Horn Strobe, White, Type I, Wall-mount, 2-Wire, Indoor, 12V or 24V, no lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd

Associated Parts

Part Number	Description
589-037-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, Red AGENT lettering, order one per device
589-038-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, Red ALERT lettering, order one per device
589-039-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, Red EVAC lettering, order one per device
589-040-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, Red FIRE lettering, order one per device
365-012-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Amber, order one per device to **change** color of clear lens
365-014-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Blue, order one per device to **change** color of clear lens
365-015-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Green, order one per device to **change** color of clear lens
365-016-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Red, order one per device to **change** color of clear lens
588-099-00	Trim Ring, White, Type I, Wall-mount, Universal, 8.2 in. H x 6.3 in. W x 0.4 in. D
588-091-00	Back Box, Wall-Surface-mount, White, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, 4.82 in. W x 5.78 in. H x 1.85 in. D
367-047-00	Sync Module, Type I

Drawings

Wiring Diagram

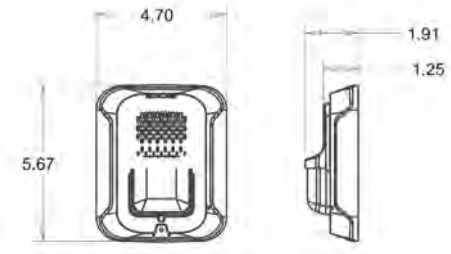


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

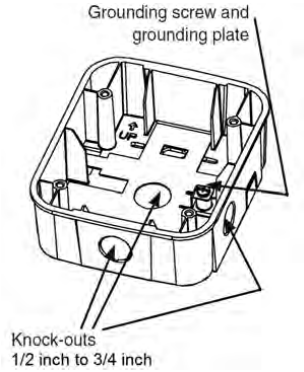
Detect
Manage
Record

Notification Appliance Devices

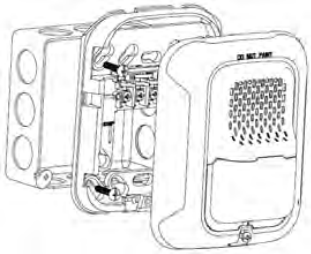
Wall-mount Horn Strobe



Back Box, Surface-mount



Junction Box for Flush Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Horn Strobe, White, Ceiling-mount, Type I

585-105-00

Features

- White housing with red FIRE lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper resistant construction
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on ceiling units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 115, 150, and 177cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch for horn tone and two volume selections

Specifications

Nominal Voltage	Regulated 12 VDC/FWR or Regulated 24 VDC/FWR
Operating Voltage Range	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage Range with Type I Sync Module	8.5 to 17.5V (12V nominal), or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 115, 150, 177cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in. back box, or 4 in. octagon back box, or Double-gang back box Single-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Ceiling-mount Dimensions with lens	6.8 in. OD x 2.5 in. D (173 mm x 64 mm)
Standards Compliance:	
UL Listed	Listed to UL 1971 and UL 464 S4011
FM Approved	3057383
State of California	7125-1653:0504 7135-1653:0503

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Ceiling-mount Horn Strobe Current Draw (mA) and Sound Output - Reverberant (dBA)

Pos	Tone	Volume Settings	Maximum Current Draw 16–33 VDC							Sound Output Reverberant (dBA at 10 ft.) 16–33 VDC
			15cd	30cd	75cd	95cd	115cd	150cd	177cd	
1	Temporal	High	71	90	143	165	187	217	254	89
2	Temporal	Low	54	71	137	161	185	211	249	83
3	Non-Temporal	High	71	90	141	165	187	230	273	90
4	Non-Temporal	Low	54	71	124	161	170	216	258	84
5	3.1 kHz Temporal	High	69	94	147	163	184	229	257	88
6	3.1 kHz Temporal	Low	54	88	143	155	185	212	252	82
7	3.1 kHz Non-Temporal	High	69	94	144	164	202	229	271	89
8	3.1 kHz Non-Temporal	Low	54	88	131	155	187	217	259	83

Ordering Information

Part Number	Description
585-105-00	Horn Strobe, White, Type I, Ceiling-mount, 2-Wire, Indoor, 12 V or 24 V, Red FIRE lettering, Clear lens, 15, 30, 75, 95, 115, 150, and 177cd

Associated Parts

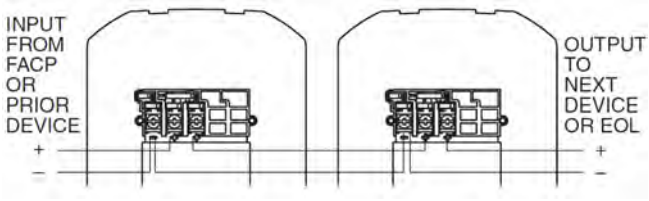
Part Number	Description
589-008-00	Bezel, White, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, no lettering, order one per device
589-013-00	Bezel, White, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, Red AGENT lettering, order one per device
589-014-00	Bezel, White, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, Red ALERT lettering, order one per device
589-015-00	Bezel, White, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, Red EVAC lettering, order one per device
365-013-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Amber, order one per device to **change** color of clear lens
365-017-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Blue, order one per device to **change** color of clear lens
365-018-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Green, order one per device to **change** color of clear lens
365-019-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Red, order one per device to **change** color of clear lens
588-095-00	Trim Ring, White, Type I, Ceiling-mount, Universal, 8.5 in. OD x 0.4 in. D
588-094-00	Back Box, Ceiling-Surface-mount, White, Type I, Strobe; Speaker; Speaker Strobe; Horn Strobe; Chime Strobe, 6.9 in. OD X 2.5 in. D
367-047-00	Sync Module, Type I

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

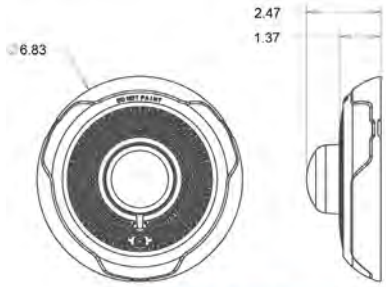
Detect Manage Record

Drawings

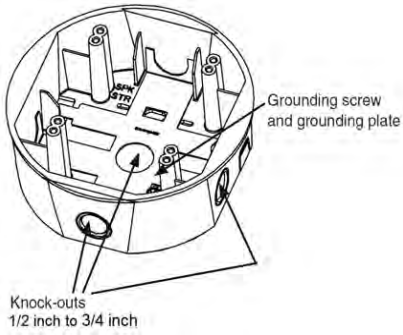
Wiring Diagram



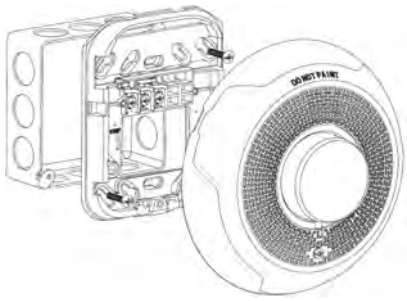
Ceiling-mount Horn Strobe



Back Box, Surface-mount



Junction Box for Flush Mounting



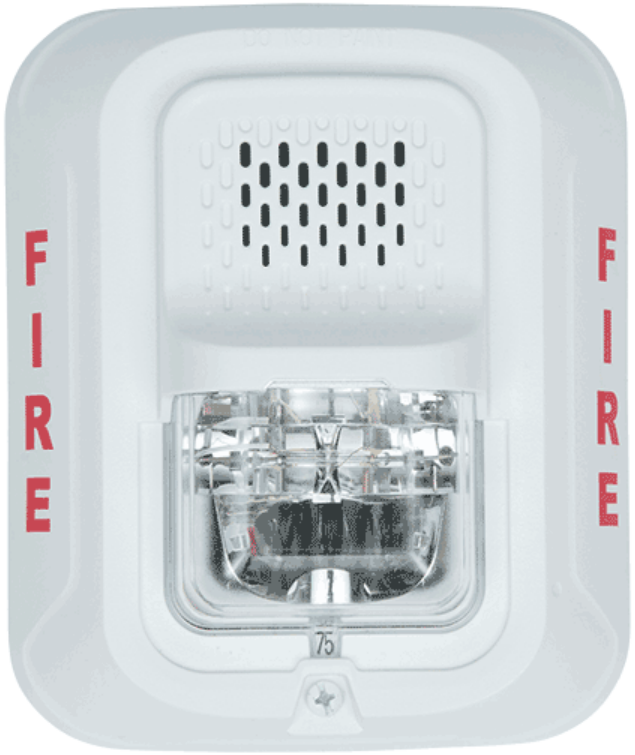
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Horn Strobe, 4-Wire, White, Wall-mount, Type I

585-106-00



Features

- White housing with red FIRE lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on wall units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 110, 135, and 185cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch for horn tone and two volume selections

Specifications

Nominal Voltage	Regulated 12 VDC/FWR Regulated 24 VDC/FWR
Operating Voltage Range	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage Range with Type I Sync Module	8.5 to 17.5V (12V nominal), or 16.5 to 33V (24V nominal)
Standard Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 110, 135, 185cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in. back box, or 4 in. octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Relative Humidity	10% to 93% non-condensing
Wall-mount Dimensions with lens	5.6 in. L x 4.7 in. W x 2.5 in. D (142 mm x 119 mm x 64 mm)
Standards Compliance:	
UL Listed	Listed to UL 1971 and UL 464 S4011
FM Approved	3057383 3057072
State of California	7125-1653:0504 7135-1653:0503

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Wall-mount Horn Strobe Current Draw (mA) and Sound Output - Reverberant (dBA)

Tone	Volume Setting	Maximum Current Draw 16–33 VDC							Sound Output Reverberant (dBA at 10 ft.) 16–33V
		15cd	30cd	75cd	95cd	110cd	135cd	185cd	
Temporal	High	54	74	121	142	162	196	245	89
Temporal	Low	44	65	111	133	157	184	235	83
Non-Temporal	High	73	94	139	160	182	211	262	90
Non-Temporal	Low	51	71	119	139	162	190	239	84
3.1 kHz Temporal	High	53	73	119	140	164	190	242	88
3.1 kHz Temporal	Low	45	66	112	133	160	185	235	82
3.1 kHz Non-Temporal	High	69	90	135	157	175	208	261	89
3.1 kHz Non-Temporal	Low	52	72	119	138	162	192	242	83

Ordering Information

Part Number	Description
585-106-00	Horn Strobe, White, Type I, Wall-mount, 4-Wire, Indoor, 12V or 24V, Red FIRE Lettering, Clear Lens, 15, 30, 75, 95, 110, 135, and 185cd, Horn 88+ dBA

Associated Parts

Part Number	Description
589-037-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, Red AGENT lettering, order one per device
589-038-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, Red ALERT lettering, order one per device
589-039-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, Red EVAC lettering, order one per device
589-041-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, no lettering, order one per device
365-012-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Amber, order one per device to **change** color of clear lens
365-014-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Blue, order one per device to **change** color of clear lens
365-016-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Red, order one per device to **change** color of clear lens
365-015-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Green, order one per device to **change** color of clear lens
588-099-00	Trim Ring, White, Type I, Wall-mount, Universal, 8.2 in. H x 6.3 in. W x 0.4 in. D
588-091-00	Back Box, Wall-Surface-mount, White, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, 4.82 in. W x 5.78 in. H x in. 1.85 in. D
367-047-00	Sync Module, Type I

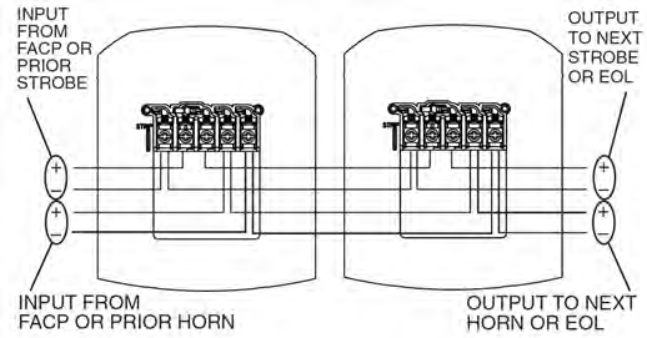
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

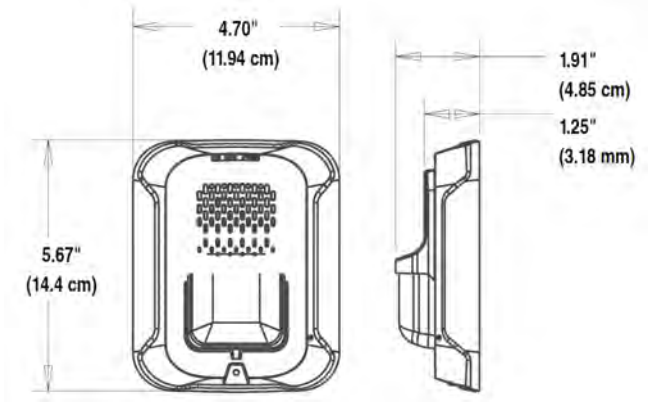
Notification Appliance Devices

Diagrams

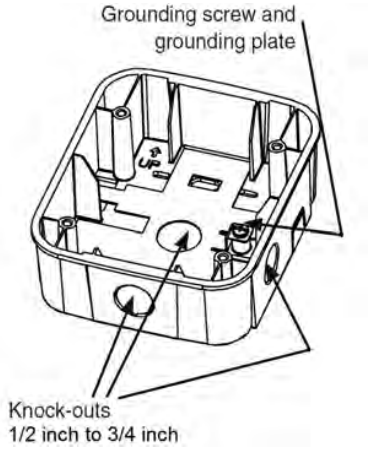
Wiring Diagram



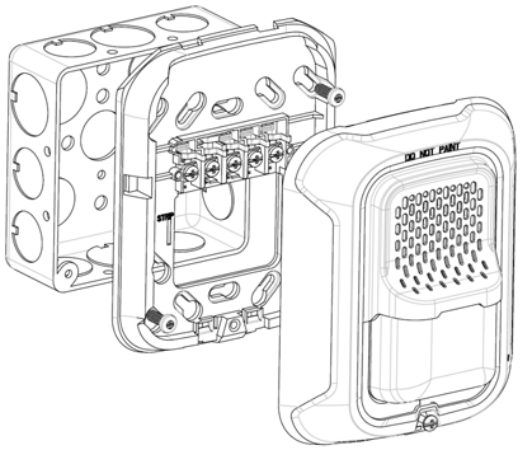
Wall-mount Horn Strobe



Back Box, Wall-mount Surface-mount



Junction Box, Wall-mount Flush-mount



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Horn Strobe, 4-Wire, Red, Wall-mount, Type I

585-107-00

Features

- Red housing with white FIRE lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12 or 24 volt operation
  NOTE 12V operation only supports 15 and 30cd settings
- Field selectable candela settings on wall units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 110, 135, and 185cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch for horn tone and two volume selections

Specifications

Nominal Voltage	Regulated 12 VDC/FWR Regulated 24 VDC/FWR
Operating Voltage Range	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage Range with Type I Sync Module	8.5 to 17.5V (12V nominal), or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 110, 135, 185cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in. back box, or 4 in. octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Relative Humidity	10% to 93% non-condensing
Wall-mount Dimensions with lens	5.6 in. L x 4.7 in. W x 2.5 in. D (143 mm x 119 mm x 64 mm)
Standards Compliance:	
UL Listed	Listed to UL 1971 and UL 464 S4011
FM Approved	3057383 3057072
State of California	7125-1653:0504 7135-1653:0503

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Wall-mount Horn Strobe Current Draw (mA) and Sound Output - Reverberant (dBA)

Tone	Volume Setting	Maximum Current Draw 16–33 VDC							Sound Output Reverberant (dBA at 10 ft.) 16–33VDC
		15cd	30cd	75cd	95cd	110cd	135cd	185cd	
Temporal	High	54	74	121	142	162	196	245	89
Temporal	Low	44	65	111	133	157	184	235	83
Non-Temporal	High	73	94	139	160	182	211	262	90
Non-Temporal	Low	51	71	119	139	162	190	239	84
3.1 kHz Temporal	High	53	73	119	140	164	190	242	88
3.1 kHz Temporal	Low	45	66	112	133	160	185	235	82
3.1 kHz Non-Temporal	High	69	90	135	157	175	208	261	89
3.1 kHz Non-Temporal	Low	52	72	119	138	162	192	242	83

Ordering Information

Part Number	Description
585-107-00	Horn Strobe, Red, Type I, Wall-mount, 4-Wire, Indoor, 12V or 24V, White FIRE lettering, Clear Lens, 15, 30, 75, 95, 110, 135, and 185cd, Horn 88+ dBA

Associated Parts

Part Number	Description
589-042-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White AGENT lettering, order one per device
589-043-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White ALERT lettering, order one per device
589-044-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White EVAC lettering, order one per device
589-046-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, no lettering, order one per device
365-012-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Amber, order one per device to **change** color of clear lens
365-014-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Blue, order one per device to **change** color of clear lens
365-016-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Red, order one per device to **change** color of clear lens
365-015-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Green, order one per device to **change** color of clear lens
588-098-00	Trim Ring, Red, Type I, Wall-mount, Universal, 8.2 in. H x 6.3 in. W x 0.4 in. D
588-090-00	Back Box, Wall-Surface-mount, Red, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, 4.82 in. W x 5.78 in. H x 1.85 in. D
367-047-00	Sync Module Type I

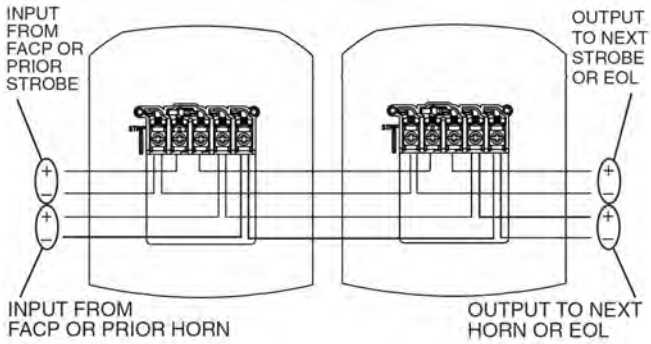
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

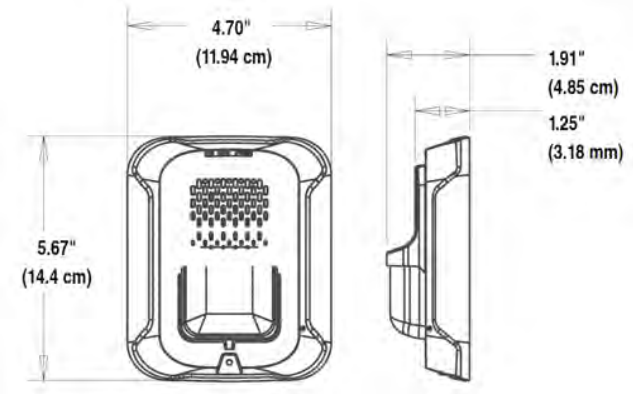
Notification Appliance Devices

Drawings

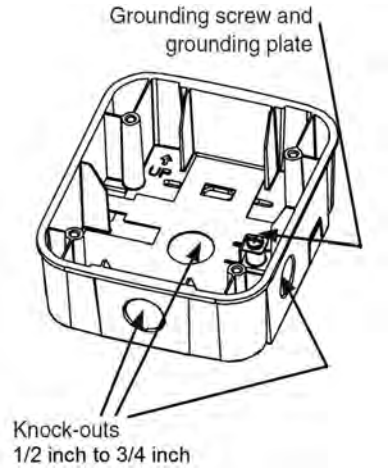
Wiring Diagram



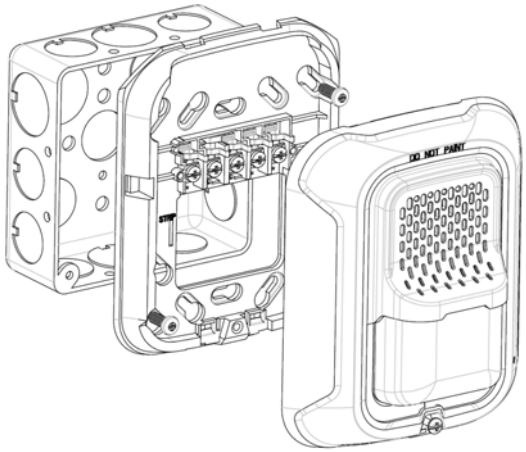
Wall-mount Horn Strobe



Back Box, Wall-mount Surface-mount



Junction Box, Wall-mount Flush-mount



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Horn Strobe, 4-Wire, White, Ceiling-mount, Type I

585-108-00

UL FM APPROVED

Features

- White housing with red FIRE lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on ceiling units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 115, 150, and 177cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch for horn tone and two volume selections

Specifications

Nominal Voltage	Regulated 12 VDC/FWR or Regulated 24 VDC/FWR
Operating Voltage Range	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage Range with Type I Sync Module	8.5 to 17.5V (12V nominal), or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 115, 150, 177cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in. back box, or 4 in. octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Relative Humidity	10% to 93% non-condensing
Ceiling-mount Dimensions with lens	6.8 in. OD x 2.5 in. D (173 mm x 64 mm)
Standards Compliance:	
UL Listed	Listed to UL 1971 and UL 464 S4011
FM Approved	3057383
State of California	7125-1653:0504 7135-1653:0503

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ceiling-mount Horn Strobe Current Draw (mA) and Sound Output - Reverberant (dBA)

Tone	Volume Setting	Maximum Current Draw 16–33 VDC							Sound Output Reverberant (dBA at 10 ft.) 16–33 VDC
		15cd	30cd	75cd	95cd	115cd	150cd	177cd	
Temporal	High	71	90	143	165	187	217	254	89
Temporal	Low	54	71	137	161	185	211	249	83
Non-Temporal	High	71	90	141	165	187	230	273	90
Non-Temporal	Low	54	71	124	161	170	216	258	84
3.1 kHz Temporal	High	69	94	147	163	184	229	257	88
3.1 kHz Temporal	Low	54	88	143	155	185	212	252	82
3.1 kHz Non-Temporal	High	69	94	144	164	202	229	271	89
3.1 kHz Non-Temporal	Low	54	88	131	155	187	217	259	83

Ordering Information

Part Number	Description
585-108-00	Horn Strobe, White, Type I, Ceiling-mount, 4-Wire, Indoor, 12 V or 24 V, Red FIRE lettering, Clear Lens, 15, 30, 75, 95, 115, 150, and 177cd, Horn 88+ dBA

Associated Parts

Part Number	Description
589-008-00	Bezel, White, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, no lettering, order one per device
589-013-00	Bezel, White, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, Red AGENT lettering, order one per device
589-014-00	Bezel, White, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, Red ALERT lettering, order one per device
589-015-00	Bezel, White, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, Red EVAC lettering, order one per device
365-013-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Amber, order one per device to **change** color of clear lens
365-017-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Blue, order one per device to **change** color of lens
365-018-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Green, order one per device to **change** color of lens
365-019-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Red, order one per device to **change** color of lens
588-095-00	Trim Ring, White, Type I, Ceiling-mount, Universal, 8.5 in. OD x 0.4 in. D
588-094-00	Back Box, Ceiling-Surface-mount, White, Type I, Strobe; Speaker; Speaker Strobe; Horn Strobe; Chime Strobe, 6.9 in. OD X 2.5 in. D
367-047-00	Sync Module, Type I

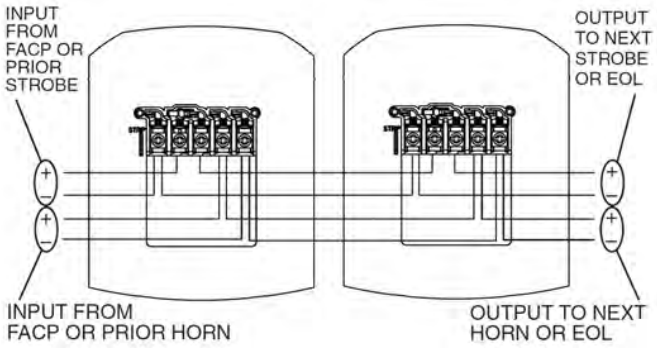
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

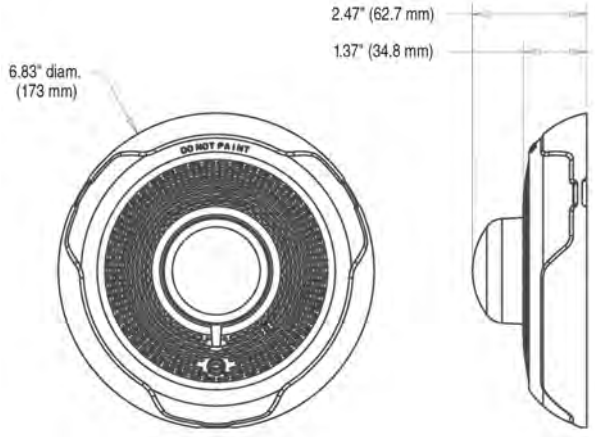
Notification Appliance Devices

Drawings

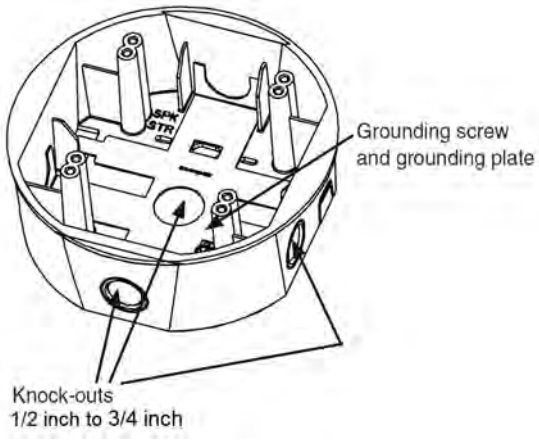
Wiring Diagram



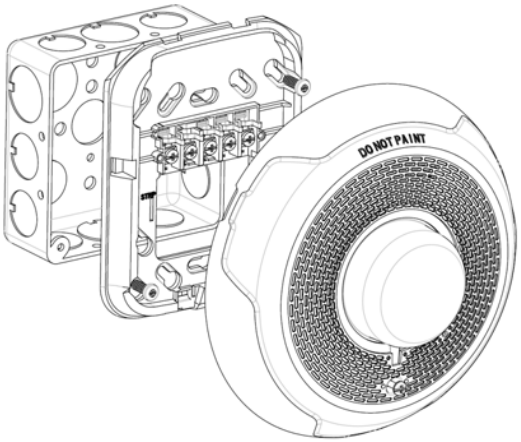
Ceiling-mount Horn Strobe



Back Box, Ceiling-mount Surface-mount



Junction Box, Ceiling-mount Flush-mount



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Horn Strobe, 4-Wire, Red, Ceiling-mount, Type I

585-109-00

- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch for horn tone and two volume selections

Features

- Red housing with white FIRE lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings
- Field selectable candela settings on ceiling units:
  12 V: 15, 30cd
  24 V: 15, 30, 75, 95, 115, 150, and 177cd

Specifications

Nominal Voltage	Regulated 12 VDC/FWR or Regulated 24 VDC/FWR
Operating Voltage Range	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage Range with Type I Sync Module	8.5 to 17.5V (12V nominal), or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 115, 150, 177cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in. back box, or 4 in. octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Relative Humidity	10% to 93% non-condensing
Ceiling-mount Dimensions with lens	6.8 in. OD x 2.5 in. D (173 mm x 64 mm)
Standards Compliance:	
UL Listed	Listed to UL 1971 and UL 464 S4011
FM Approved	3057383
State of California	7125-1653:0504 7135-1653:0503

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Ceiling-mount Horn Strobe Current Draw (mA) and Sound Output - Reverberant (dBA)

Tone	Volume Setting	Maximum Current Draw 16–33 VDC							Sound Output Reverberant (dBA at 10 ft.) 16–33 VDC
		15cd	30cd	75cd	95cd	115cd	150cd	177cd	
Temporal	High	71	90	143	165	187	217	254	89
Temporal	Low	54	71	137	161	185	211	249	83
Non-Temporal	High	71	90	141	165	187	230	273	90
Non-Temporal	Low	54	71	124	161	170	216	258	84
3.1 kHz Temporal	High	69	94	147	163	184	229	257	88
3.1 kHz Temporal	Low	54	88	143	155	185	212	252	82
3.1 kHz Non-Temporal	High	69	94	144	164	202	229	271	89
3.1 kHz Non-Temporal	Low	54	88	131	155	187	217	259	83

Ordering Information

Part Number	Description
585-109-00	Horn Strobe, Red, Type I, Ceiling-mount, 4-Wire, Indoor, 12V or 24V, White FIRE lettering, Clear Lens, 15, 30, 75, 95, 115, 150, and 177cd, Horn 88+ dBA

Associated Parts

Part Number	Description
589-007-00	Bezel, Red, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, White AGENT lettering, order one per device
589-009-00	Bezel, Red, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, White ALERT lettering, order one per device
589-010-00	Bezel, Red, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, White EVAC lettering, order one per device
589-012-00	Bezel, Red, Type I, Ceiling-mount, Strobe; Horn Strobe; Chime Strobe, no lettering, order one per device
365-013-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Amber, order one per device to **change** color of clear lens
365-017-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Blue, order one per device to **change** color of lens
365-018-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Green, order one per device to **change** color of lens
365-019-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Red, order one per device to **change** color of lens
588-096-00	Trim Ring, Red, Type I, Ceiling-mount, Universal, 8.5 in. OD x 0.4 in. D
588-097-00	Back Box, Ceiling-Surface-mount, Red, Type I, Strobe; Speaker; Speaker Strobe; Horn Strobe; Chime Strobe, 6.9 in. OD x 2.5 in. D
367-047-00	Sync Module, Type I

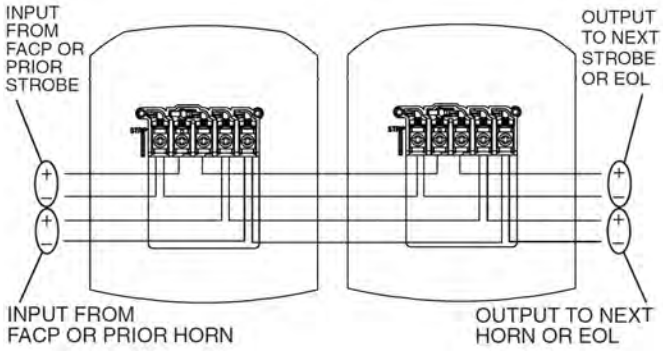
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

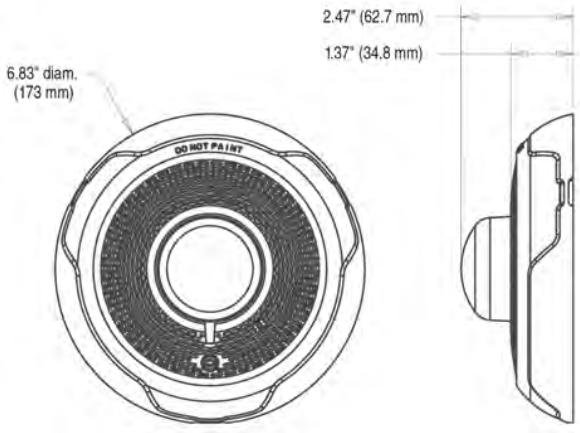
Notification Appliance Devices

Drawings

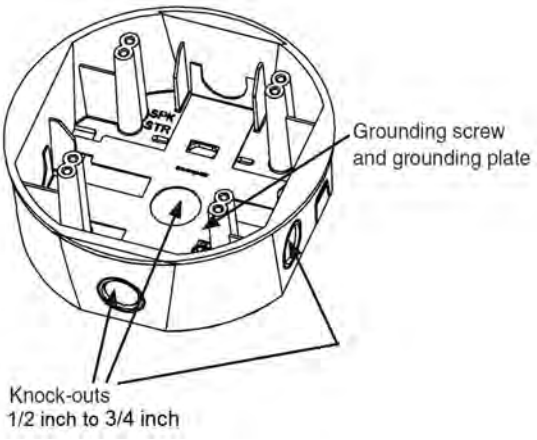
Wiring Diagram



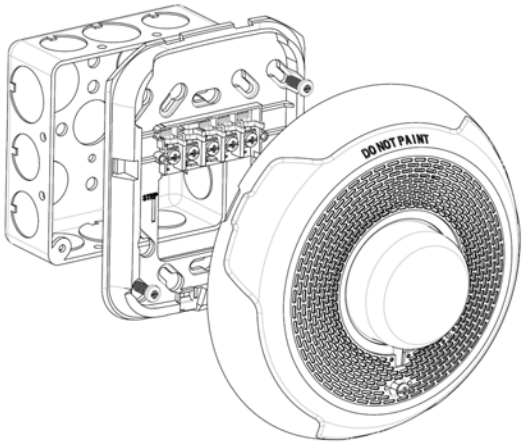
Ceiling-mount Horn Strobe



Back Box, Ceiling-mount Surface-mount



Junction Box, Ceiling-mount Flush-mount



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Explosion-proof Horn Strobe, Hazardous Locations, Grey

585-111-00

Description

The Monaco explosion-proof horn strobe for hazardous locations is a high output alarm horn sounder with a 10 Joule Xenon strobe warning light/beacon. The robust enclosure ensures suitability for all hazardous location fire alarm and general signaling applications. The corrosion proof, marine grade aluminum die cast enclosure is chromated and powder coated providing resilience in the harshest of hazardous environments.

Features

- Class 1 Div 2 certified temperature: –40°F to 158°F (–40°C to 70°C)
- 116 dBA alarm horn sounder with a 10 Joule Xenon strobe beacon
- NEMA 4 and 4X, IP66 enclosure
- Corrosion proof, weatherproof, marine grade aluminum die cast
- 24 VDC
- Blocking diode installed for use with NAC circuits
- 64 alarm tones, 4 remotely selectable alarm stages/channels
- Automatic synchronization on multi-sounder system
- Grey housing with a clear lens
- ATEX approved

Application Notes

Signals selected for hazardous locations should be UL Listed and marked for at least the Hazardous Location Classifications dictated by the application. The signal should be 10 dB higher than the ambient noise level and as different from the background noise as possible.

The National Electric Code has created three classes of hazardous locations: Class I Hazardous Gases; Class II Hazardous Dusts; Class III Hazardous Fibers.

Specifications

Voltage	24 VDC
Operating Voltage Range	20 to 28 VDC
Strobe Candela	Effective Intensity: 288.8cd Peak candela: 101,784cd
Strobe Flash Rate	1 Hz, 60 flashes per minute
Maximum Output	116 dBA at 3.3 ft. (1 m) 107 dBA at 10 ft. (3 m)
Effective Range	410 ft. (125 m) at 1 kHz
Number of Tones	64; 4 stages
Input Wiring	14 to 20 AWG **NOTE** Required wire gauge based on wire voltage drop.
Operating Temperature	Class 1 Div 2 –40°F to 158°F (–40°C to 70°C) All other approvals –40°F to 122°F (–40°C to 50°C)
Relative Humidity	95%
Cable Entries	2 x M20 x 1.5 mm threaded gland entries
Weight	6.16 lb (2.8 kg)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Standards Compliance:

UL Listed	UL464 and UL1638 Hazardous Location, File E230764
State of California	7136-2279:0503
IECEx Cert.	IECEx ULD 14.0004X
ATEX Cert.	DEMKO 14 ATEX 4786493904X
Ex EAC Certified	**EA**C RU C-GB.**AA**71.**B**.00273/20
PFEER	Compliant tones listed in the "Tone Selection Table"

Classifications

NEC / CEC:

Class I Div 2 ABCD T1 Ta –40°C +70°C

Class I Div 2 ABCD T2 Ta –40°C +50°C

Class I Div 2 FG T4A Ta –40°C +50°C (T5 to +40°C)

Class III Div 1&2 Ta –40°C +50°C

NEC:

Class I Zone 2 AEx nA IIC T1 Gc (Ta –40°C +50°C)

Class I Zone 2 AEx nA IIC T2 Gc (Ta –40°C +40°C)

Zone 22 AEx tc IIIC 120°C Dc (Ta –40°C +50°C)

CEC:

Class I Zone 2 AEx nA IIC T1 Gc X(Ta –40°C +50°C)

Class I Zone 2 AEx nA IIC T2 Gc X(Ta –40°C +40°C)

Zone 22 Ex tc IIIC 120°C Dc (Ta –40°C +50°C)

Class II Div 2 EFG T4A Ta –40°C +50°C

IECEx & ATEX:

II 3G Ex nA IIC T1 Gc (Ta –40°C +50°C)(T2 to –40°C)

II 3D Ex tc IIIC 90°C Dc (Ta –40°C +50°C)

Current Draw

Type	Nominal Voltage	Voltage Range	Current Draw (at nominal)
Horn Sounder	24 VDC	10 to 30 VDC	313mA
Xenon Strobe Beacon	24 VDC	20 to 28 VDC	560mA
Combined Horn and Strobe	24 VDC	20 to 28 VDC	876mA

Ordering Information

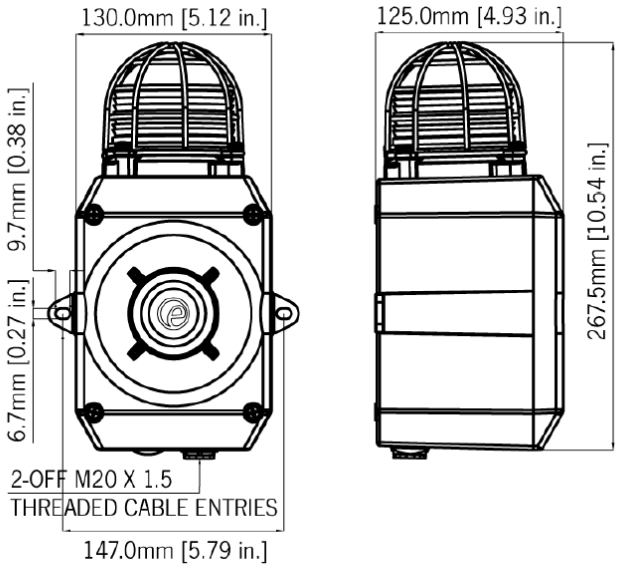
Part Number	Description
585-111-00	Explosion-proof Horn Strobe, Hazardous Location, weatherproof, 24 VDC, grey with clear lens, cable entries: two M20 x 1.5mm threaded gland entry

Associated Parts

Part Number	Description
589-047-00	Replacement Tube, Xenon Strobe (P/N 585-111-00)

Drawings

Dimensions



Tone Selection Table

NOTE In the table below, "T" is Tone; "S" is Stage

S 1	Description	S 2	S 3	S 4
T1	1000 Continuous – PFEER Toxic Gas	T3	T2	T44
T2	1200/500 @ 1Hz Sweeping – DIN / PFEER P.T.A.P.	T1	T3	T44

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

S 1	Description	S 2	S 3	S 4
T3	1000 @ 0.5Hz (1s on, 1s off) Intermittent – PFEER Gen. Alarm	T1	T2	T44
T4	1.4KH-1.6 kHz 1s, 1.6 kHz-1.4 kHz 0.5s – NF C 48-265	T44	T24	T1
T5	544(100mS)/440 (400mS) – NF S 32-001	T52	T19	T1
T6	1500/500 – (0.5s on, 0.5s off) x3 + 1s gap – AS4428	T17	T44	T1
T7	500-1500Hz Sweeping 2 sec on 1 sec off – AS4428	T6	T44	T1
T8	500/1200Hz @ 0.26Hz(3.3s on, 0.5s off) – NEN 2575	T44	T24	T35
T9	1000 (1s on, 1s off)x7 + (7s on, 1s off) – IMO Code 1a	T18	T34	T1
T10	1000 (1s on, 1s off)x7 + (7s on, 1s off) – IMO Code 1a	T21	T34	T1
T11	420(0.5s on, 0.5s off)x3 + 1s gap – ISO 8201 Temporal	T44	T1	T8
T12	1000(0.5s on, 0.5s off)x3 + 1s gap – ISO 8201 Temporal	T44	T1	T8
T13	422/775 – (0.85 on, 0.5 off) x3 + 1s gap – NFPA Temporal	T44	T1	T8
T14	1000/2000 @ 1Hz – Singapore	T23	T3	T35
T15	300 Continuous	T44	T24	T35
T16	440 Continuous	T44	T24	T35
T17	470 Continuous	T44	T24	T35
T18	500 Continuous – IMO code 2 (Low)	T44	T24	T35
T19	554 Continuous	T64	T24	T35
T20	660 Continuous	T44	T24	T35
T21	800 Continuous – IMO code 2 (High)	T44	T24	T35
T22	1200 Continuous	T44	T24	T35
T23	2000 Continuous	T15	T3	T35
T24	2400 Continuous	T48	T20	T35
T25	440 @ 0.83Hz (0.60s on, 0.60s off) Intermittent	T1	T44	T8
T26	470 @ 0.9Hz (0.55s on, 0.55s off) Intermittent	T1	T44	T8
T27	470 @ 5Hz (0.10s on, 0.10s off) Intermittent	T1	T44	T8
T28	544 @ 1.14Hz (0.43s on, 0.44s off) Intermittent	T44	T24	T8
T29	655 @ 0.875Hz (0.57s on, 0.57s off) Intermittent	T1	T44	T8
T30	660 @ 0.28Hz (1.80s on, 1.80s off) Intermittent	T44	T24	T8
T31	660 @ 3.3Hz (0.15s on, 0.15s off) Intermittent	T30	T24	T8

S 1	Description	S 2	S 3	S 4
T32	745 @ 1Hz (0.50s on, 0.50s off) Intermittent	T44	T24	T8
T33	800 (0.25s on, 1.00s off) Intermittent	T53	T24	T8
T34	800 @ 2Hz (0.25s on, 0.25s off) – IMO code 3.a (High)	T56	T24	T8
T35	1000 @ 1Hz (0.50s on, 0.50s off) Intermittent	T44	T24	T8
T36	2400 @ 1Hz (0.50s on, 0.50s off) Intermittent	T21	T24	T8
T37	2900 @ 5Hz (0.10s on, 0.10s off) Intermittent	T53	T24	T8
T38	363/518 @ 1Hz (0.50s / 0.50s) Alternating	T1	T8	T19
T39	450/500 @ 2Hz (0.25s / 0.25s) Alternating	T1	T8	T19
T40	554/440 @ 1Hz (0.50s / 0.50s) Alternating	T44	T24	T19
T41	554/440 @ 0.65Hz (0.76s / 0.76s) Alternating	T1	T8	T19
T42	561/760 @ 0.83Hz (0.60s / 0.60s) Alternating	T1	T8	T19
T43	780/600 @ 0.96Hz (0.52s / 0.52s) Alternating	T1	T8	T19
T44	800/1000 @ 2Hz (0.25s / 0.25s) Alternating	T5	T24	T19
T45	970/800 @ 2Hz (0.25s / 0.25s) Alternating	T1	T8	T19
T46	800/1000 @ 0.875Hz (0.57s / 0.57s) Alternating	T53	T24	T19
T47	2400/2900 @ 2Hz (0.25s / 0.25s) Alternating	T57	T24	T19
T48	500/1200 @ 0.3Hz (1.67s / 1.67s) Sweeping	T44	T24	T12
T49	560/1055 @ 0.18Hz (2.73s / 2.73s) Sweeping	T44	T24	T12
T50	560/1055 @ 3.3Hz (0.15s / 0.15s) Sweeping	T44	T24	T12
T51	600/1250 @ 0.125Hz (4s / 4s) Sweeping	T44	T24	T12
T52	660/1200 @ 1Hz (0.50s / 0.50s) Sweeping	T64	T24	T12
T53	800/1000 @ 1Hz (0.50s / 0.50s) Sweeping	T56	T24	T12
T54	800/1000 @ 7Hz (0.07s / 0.07s) Sweeping	T57	T24	T12
T55	800/1000 @ 50Hz (0.01s / 0.01s) Sweeping	T54	T24	T12
T56	2400/2900 @ 7Hz (0.07s / 0.07s) Sweeping	T57	T24	T12
T57	2400/2900 @ 1Hz (0.50s / 0.50s) Sweeping	T47	T24	T12
T58	2400/2900 @ 50Hz (0.01s / 0.01s) Sweeping	T54	T24	T12
T59	2500/3000 @ 2Hz (0.25s / 0.25s) Sweeping	T44	T24	T12
T60	2500/3000 @ 7.7Hz (0.65s / 0.65s) Sweeping	T44	T24	T12
T61	800Hz Motor Siren	T44	T24	T12
T62	1200Hz Motor Siren	T44	T24	T12
T63	2400Hz Motor Siren	T44	T24	T12
T64	Simulated Bell	T44	T24	T12

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices Catalog Section 11

Speakers

Weatherproof Horn Speaker, Grey, Surface-mount. 124-042-00
Cluster Speakers, 2-, 3-, or 4-Horn Speaker System 124-050-00, 124-051-00, 124-052-00
Outdoor Speaker, White, Square, Weatherproof, Type II 124-069-00
Outdoor Speaker, White, Wall-mount, Type I. 124-072-00
Outdoor Speaker, Red, Wall-mount, Type I 124-072-50
Indoor Speaker, White, Wall-mount, Type I 124-091-00
Indoor Speaker, Red, Wall-mount, Type I. 124-092-00
Indoor Speaker, Red, Ceiling-mount, Type I. 124-093-00
Indoor Speaker, White, Ceiling-mount, Type I 124-094-00
Indoor Speaker, White, Ceiling-mount, Type I 124-095-00
Explosion-proof Speaker 124-097-00
Selectable Output Speaker, Outdoor, Ceiling-mount, Type I 124-098-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Weatherproof Horn Speaker, Grey, Surface-mount

124-042-00

Specifications

Nominal Voltage	25 or 70V
Speaker Frequency Range	400–14,000 Hz
Power Settings	15 W continuous
Sound Level	102 dB
Sound Dispersion	70 degrees
Mounting	Surface-mount
Housing Material	Heavy-gauge, treated aluminum
Operating Temperature	–30°F to 150°F (–35°C to 66°C)
Speaker Dimensions	9.31 in. L x 7.88 in. W x 8.75 in. H (23.65 cm x 20.01 cm x 22.23 cm)
Standards Compliance:	
UL Listed	File S2652
MEA Approved	151-92-E
State of California	7320-0785:144
FM	Approved

Features

- 15 W compression driver
- Weatherproof aluminum construction
- 7-position watt/impedance selection switch
- Grey baked epoxy finish, no lettering
- 5 mfd capacitor for supervision
- Built-in 25/70/100V transformer
- Mounting bracket for directional sound dispersion
- Metal interface adaptor for installation terminal and power selector protection

Wattage Selector Switch Settings and dBA

Setting	70V	dB	25V	dB
1	.9 W	93	N/A	N/A
2	1.8W	96	N/A	N/A
3	3.8 W	96	0.48 W	90
4	7.5 W	99	0.94 W	90
5	15.0 W	102	1.8 W	93
6	N/A	N/A	7.5 W	99
7	N/A	N/A	15.0 W	102

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Ordering Information

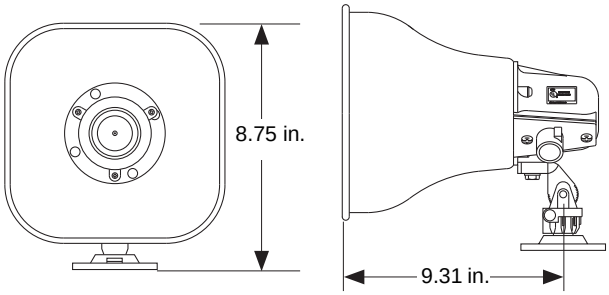
Part Number	Description
124-042-00	Horn Speaker, weatherproof, grey, surface-mount

Associated Parts

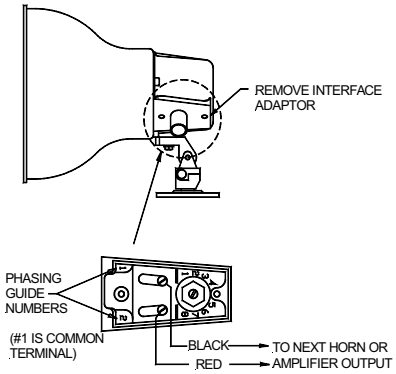
Part Number	Description
588-061-00	Backbox, surface-mount, for use with adaptor plate (P/N 085-573-00) for surface mount installation
085-573-00	Mounting Plate Adaptor for surface-mounting loudspeaker to P/N 588-061-00

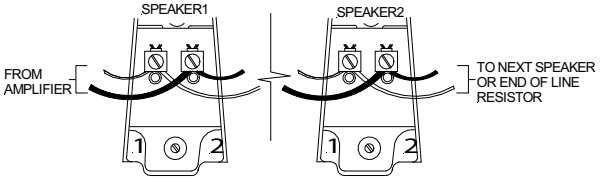
Drawings

Dimensions



Wiring





Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Cluster Speakers, 2-, 3-, or 4-Horn Speaker System

124-050-00, 124-051-00, 124-052-00

Features

- Cluster Speakers come pre-assembled with two, three, or four speakers/horns prefabricated to a steel enclosure for indoor use
- Designed for high ambient noise level environments
- Omnidirectional sound
- Field-selectable taps from 0.48 to 15 W at 25 Vrms or 0.9 to 15 W at 70 Vrms
- Speaker line inputs are compatible with standard supervision of circuit wiring by a voice control panel
- Each loudspeaker meets or exceeds UL Listed standards for audible signal appliances
- Supervised weatherproof horn speaker
- Swivel mounted for easy angle adjustment

Specifications

Voltage Line	25V or 70V
Power Handling	15 W continuous
Frequency Response	400–14000 Hz anechoic 400–4000 Hz (at full rated output)
Sensitivity	102 dB @ 15 W, 10 ft. (3 m) Peak: 120 dB @ 15W, 3 ft. (1 m)
Dispersion Angle	70 degrees
Impedance (Ohms)	Field-selectable 7-position switch: 5000, 2500, 1300, 666, 333, 89, 45
Power Taps	with 3 dB incremental rating: 25V: 0.48, 0.94, 1.8, 7.5, 15 W 70V: 0.9, 1.8, 3.8, 7.5, 15 W
Material	Horns: red, aluminum Enclosure: red, NEMA 1 steel
Mounting	Enclosure mounts to ceiling or wall with four pre-drilled holes and conduit knockouts, comes with mounting bracket and single locking pin
Temperature Range	150°F to –31°F (66°C to –35°C)
Relative Humidity	95% maximum
Enclosure Dimensions	10 in. W x 10 in. L x 6 in. D (254 mm x 254 mm x 152 mm)
Horn Dimensions	7.87 in. W x 8.75 in. H x 9.32 in. D (200 mm x 222 mm x 237 mm)
Horn Weight	4.5 lb (2.0 kg)
Standards Compliance:	
System UL Listed	1480
Horns UL Listed	S2652
NFPA	72 and 101
OSHA	1910.165

Ordering Information

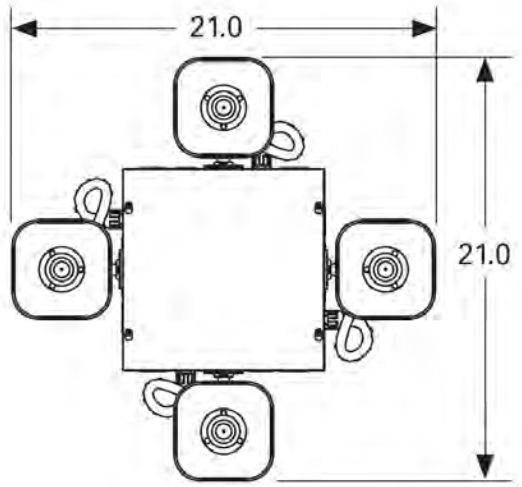
Part Number	Description
124-050-00	Cluster Speakers, 4-Horn Speaker System, Indoor, 25 or 70 Vrms, NEMA 1 red enclosure
124-051-00	Cluster Speakers, 2-Horn Speaker System, Indoor, 25 or 70 Vrms, NEMA 1 red enclosure
124-052-00	Cluster Speakers, 3-Horn Speaker System, Indoor, 25 or 70 Vrms, NEMA 1 red enclosure

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

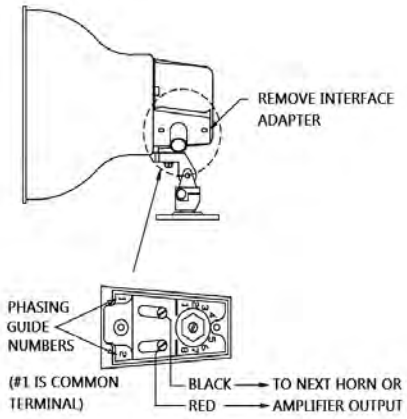
Detect Manage Record

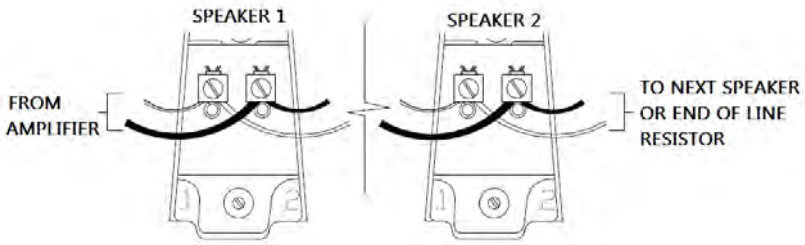
Drawings

Dimensions - front view



Wiring Diagrams





Monaco Enterprises, Inc.
P.O. Box 14129, Spokane, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Outdoor Speaker, White, Square, Weatherproof, Type II

124-069-00

MEA approved

Features

- Square, white housing with no lettering
- Vandal-resistant die cast grilles
- Covers both 25 and 70V audio systems
- Multiple wattage taps from 0.125 W to 8 W in 3 dB steps
- For both indoor and outdoor applications
- Sealed back speaker construction for extra protection and improved audibility
- Audio inputs include a 10 uF blocking capacitor for compatibility

Specifications

Nominal Voltage	24 VDC; 16 VDC or FWR to 33 VDC or FWR
Supervisory Voltage	33 VDC maximum
Speaker Frequency Range	400 to 4000 Hz
Power	1/8, 1/4, 1/2, 1, 2, 4, 8 W
Input Wiring	12–18 AWG **NOTE** Required wire gauge based on voltage drop
Operating Temperature	–31°F to 150°F (–35°C to 66°C)
Relative Humidity	Up to 95%, non-condensing
Wall-mount Dimensions Speaker	4.29 in. L x 4.29 in. W x 4.09 in. D (109 mm x 109 mm x 104 mm)
Wall-mount Dimensions Weatherproof Back box	3.375 in. L x 3.375 in. W x 2 in. D (85.725 mm x 85.725 mm x 50.8 mm)
Standards Compliance:	
UL Listed	1480
MEA Approved	151-93-E, Vol. 14
State of California	7320-0785: 105

Speaker dBA at 10 feet

Watts	1/8	1/4	1/2	1	2	4	8
dBA	77	80	83	86	87	92	94

Ordering Information

Part Number	Description
124-069-00	Speaker, White, Type II, Square, Surface-mount, Outdoor, 24V, no lettering, 1/8 to 8 watts

Associated Parts

Part Number	Description
588-055-00	Back Box, Metal Option, Wall- or Ceiling-mount, White, Weatherproof, 3.375 in. x 3.375 in. x 2 in.

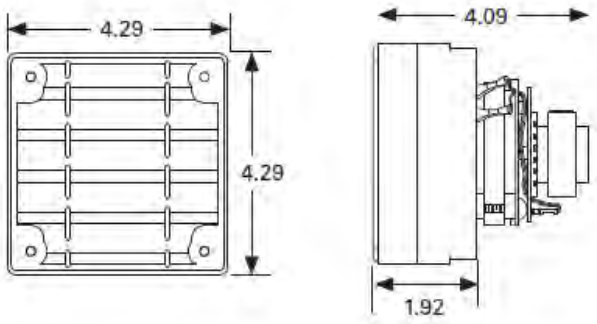
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

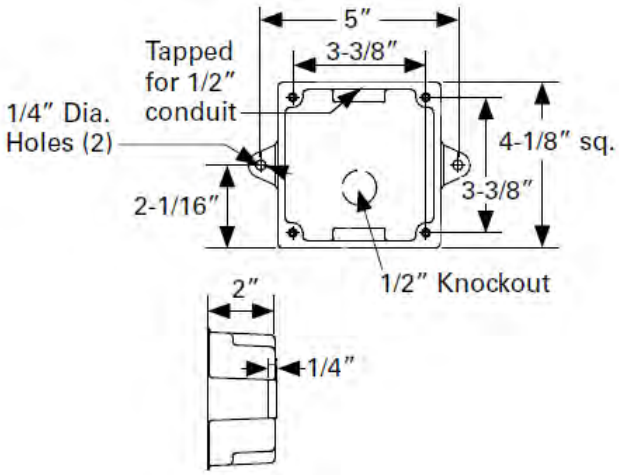
Notification Appliance Devices

Drawings

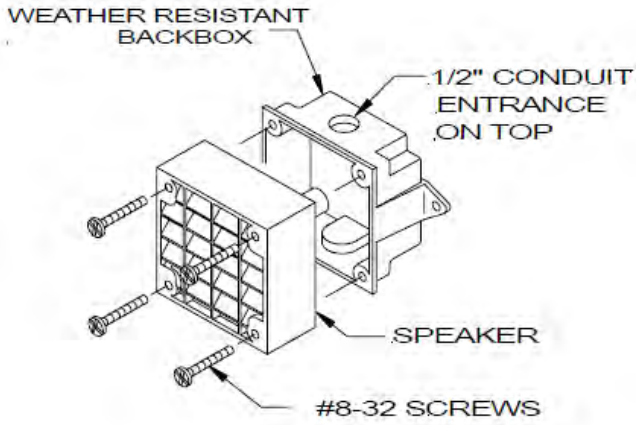
Speaker



Weatherproof Back Box



Weatherproof Back Box Mounting



MAXIMUM NUMBER OF CONDUCTORS

AWG #18	AWG #16	AWG #14	AWG #12
4	4	4	4

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Outdoor Speaker, White, Wall-mount, Type I

124-072-00

MEA approved

Features

- White housing with no lettering
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Universal mounting plate with an onboard shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch simplifies field selection of speaker voltage (25 and 70.7 Vrms) and power settings (1/4, 1/2, 1, and 2 watts)
- Speakers offer high fidelity and high volume sound output
- Weatherproof per NEMA 4X, IP56
- Plastic weatherproof back box included

Specifications

Nominal Voltage	25 or 70.7 V rms
Supervisory Voltage	50 VDC maximum
Speaker Frequency Range	400–4,000 Hz
Power Settings	1/4, 1/2, 1, and 2 watts
Mounting	Universal mounting plate mounts to weatherproof back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Speaker Dimensions	6 in. L x 5 in. W x 2.9 in. D (152 mm x 127 x 74 mm)
Dimensions with Weatherproof Back Box	6.5 in. L x 5.5 in. W x 2.9 in. D (165 mm x 140 mm x 74 mm)
Standards Compliance:	
UL Listed	UL1480, File S4048
MEA Approved	10-08-E
State of California	7320-1653:201

Sound Output (dBA @ 10 ft.)

Speaker Power	1/4 watt	1/2 watt	1 watt	2 watts
UL Reverberant	81	84	87	90

Ordering Information

Part Number	Description
124-072-00	Speaker, White, Type I, Wall-mount, Outdoor, 12V or 24V, no lettering, 25/70.7 Vrms, 1/4, 1/2, 1, or 2 watts, NEMA 4X rated, incudes plastic weatherproof back box

Associated Parts

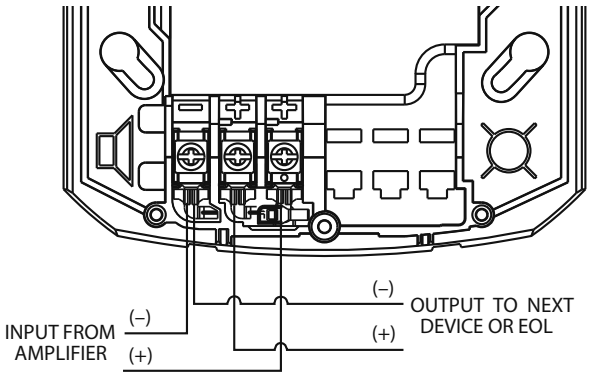
Part Number	Description
589-003-00	Red Decals, wall-mount: AGENT, EVAC, ALERT, or FIRE **NOTE** Order two per device.
588-059-00	Trim Ring, wall-mount, white
588-056-00	Back Box, metal option, wall-mount, white, outdoor weatherproof, 6.5 in. L x 5.5 in. W x 2.9 in. D

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

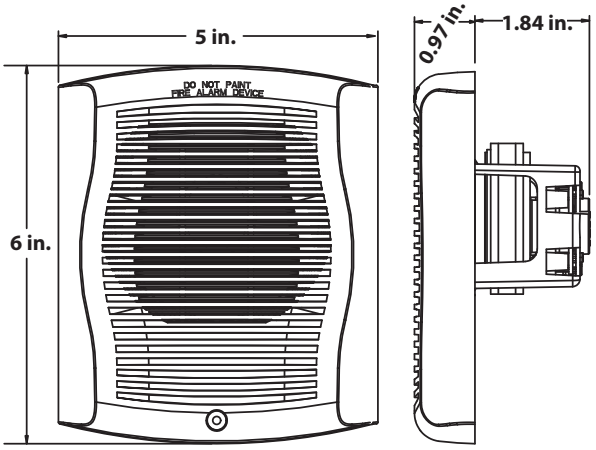
Detect Manage Record

Drawings

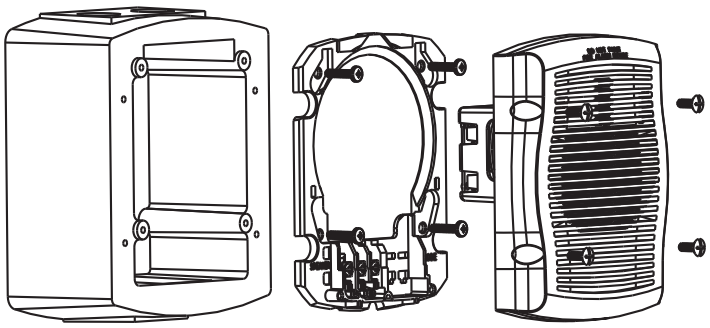
Wiring Diagram



Wall-mount Speaker



Weatherproof Back Box for Mounting Speaker



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Outdoor Speaker, Red, Wall-mount, Type I

124-072-50

MEA approved

Features

- Red housing with no lettering
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Universal mounting plate with an onboard shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch simplifies field selection of speaker voltage (25 and 70.7 Vrms) and power settings (1/4, 1/2, 1, and 2 watts)
- Speakers offer high fidelity and high volume sound output
- Weatherproof per NEMA 4X, IP56
- Plastic weatherproof back box included

Specifications

Nominal Voltage	25 or 70.7 Vrms
Supervisory Voltage	50 VDC maximum
Speaker Frequency Range	400–4,000 Hz
Power Settings	1/4, 1/2, 1, or 2 watts
Mounting	Universal Mounting Plate mounts to Weatherproof Back Box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Speaker Dimensions	6 in. L x 5 in. W x 2.9 in. D (152 mm x 127 x 74 mm)
Weatherproof Back Box Dimensions	6.5 in. L x 5.5 in. W x 2.9 in. D (165 mm x 140 mm x 74 mm)
Standards Compliance:	
UL Listed	UL1480, File S4048
State of California	7320-1653:201
MEA Approved	10-08-E

Sound Output (dBA @ 10 ft.)

Speaker Setting	1/4 watt	1/2 watt	1 watt	2 watts
UL Reverberant	81	84	87	90

Ordering Information

Part Number	Description
124-072-50	Speaker, Red, Type I, Wall-mount, Outdoor, 12V or 24V, no lettering, 25/70.7 Vrms, 1/4, 1/2, 1, or 2 watts, NEMA 4X rated, includes plastic weatherproof back box

Associated Parts

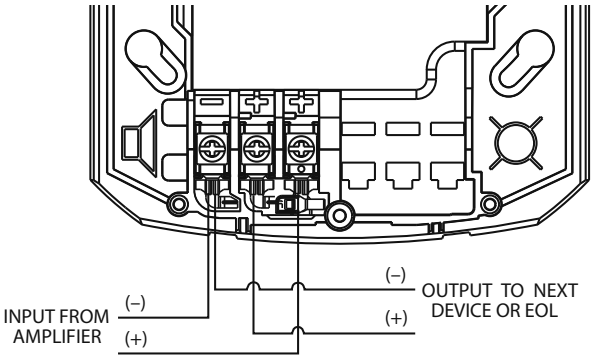
Part Number	Description
589-005-00	White Decals, wall-mount: AGENT, EVAC, ALERT, or FIRE **NOTE** Order two per device.
588-056-01	Back Box, metal option, wall-mount, red, outdoor, weatherproof, 6.5 in. L x 5.5 in. W x 2.9 in. D
588-059-50	Trim Ring, wall-mount, red

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

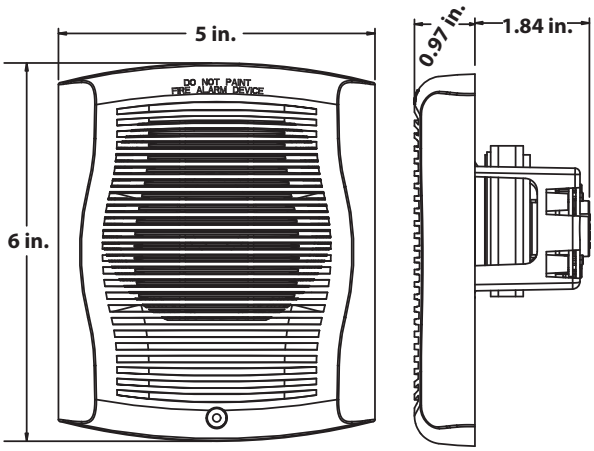
Detect Manage Record

Drawings

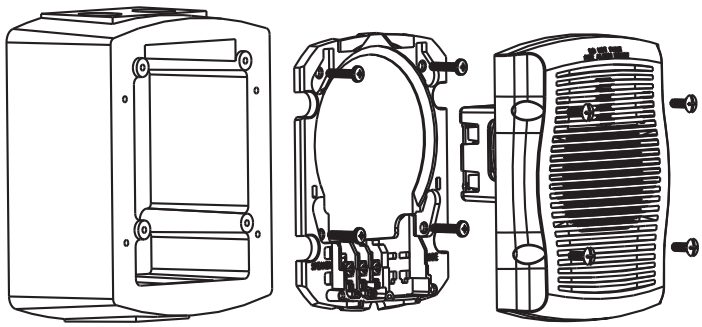
Wiring Diagram



Wall-mount Speaker



Weatherproof Back Box for Mounting Speaker



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Speaker, White, Wall-mount, Type I

124-091-00

Specifications

Nominal Voltage	25V or 70.7V (nominal)
Supervisory Voltage	50 VDC maximum
Speaker Frequency Range	400 to 4,000 Hz
Power	1/4, 1/2, 1, 2 watt
*Mounting**	Universal Mounting Plate mounts to 4 in. x 4 in. x 2 1/8 in. back box *Flush mount applications do not require an extension ring
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Wall-mount Dimensions Speaker	6.5 in. L x 5 in. W x 0.97 in. D (165 mm x 127 x 23 mm)
Dimensions with Surface–mount Back Box	6.6 in. L x 5.1 in. W x 3.2 in. D (168 mm x 130 mm x 82 mm)
Standards Compliance	Listed to 1480
UL Listed	S4048
FM Approved	3057493
State of California	7320-1653:0505

Wall-mount Speaker Sound Output (dBA)

Speaker	1/4 W	1/2 W	1 W	2 W
UL Reverberant (dBA @ 10 ft.)	79	82	85	88
UL Anechoic (dBA @ 10 ft.)	79	82	85	88

Features

- White housing with no lettering
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch simplifies field selection of speaker voltage
- Speakers offer high fidelity and high volume sound output

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ordering Information

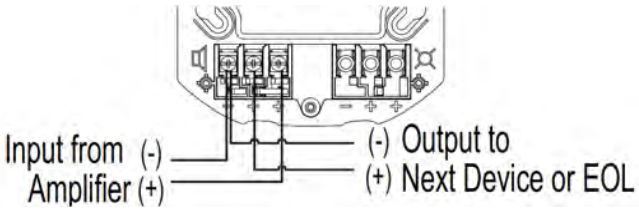
Part Number	Description
124-091-00	Speaker, White, Type I, Wall-mount, Indoor, 12V or 24V, no lettering, 25/70.7V, 1/4, 1/2, 1, 2 watts

Associated Parts

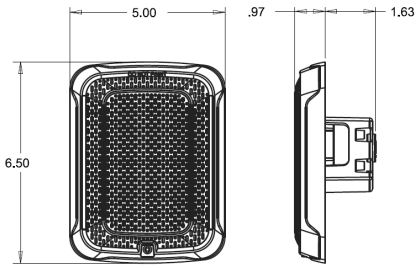
Part Number	Description
588-099-00	Trim Ring, White, Type I, Wall-mount, Universal, 8.2 in. H X 6.3 in. W X 0.4 in. D
588-093-00	Back Box, Wall Surface-mount, White, Type I, Speaker; Speaker Strobe, 5.12 in. x 6.62 in. x 2.25 in.

Drawings

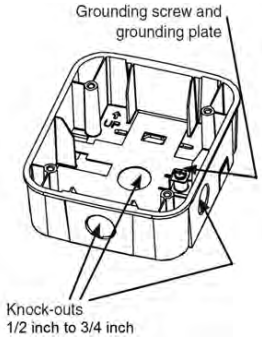
Wiring Diagram



Wall-mount Speaker



Back Box, Surface-mount



Junction Box for Flush Mounting use 4 in.x 4 in. x 2 1/8 in.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Speaker, Red, Wall-mount, Type I

124-092-00

Specifications

Nominal Voltage	25V or 70.7V (nominal)
Supervisory Voltage	50 VDC maximum
Speaker Frequency Range	400 to 4,000 Hz
Power	1/4, 1/2, 1, 2 watt
*Mounting**	Universal Mounting Plate mounts to 4 in. x 4 in. x 2 1/8 in. back box *Flush mount applications do not require an extension ring
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Wall-mount Speaker Dimensions	6.5 in. L x 5 in. W x 0.97 in. D (165 mm x 127 x 23 mm)
Dimensions with Surface-mount Back Box	6.6 in. L x 5.1 in. W x 3.2 in. D (168 mm x 130 mm x 82 mm)
Standards Compliance	Listed to 1480
UL Listed	S4048
FM Approved	3057493
State of California	7320-1653:0505

Wall-mount Speaker Sound Output (dBA)

Speaker	1/4 W	1/2 W	1 W	2 W
UL Reverberant (dBA @ 10 ft.)	79	82	85	88
UL Anechoic (dBA @ 10 ft.)	79	82	85	88

Features

- Red housing with no lettering
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch simplifies field selection of speaker voltage
- Speakers offer high fidelity and high volume sound output

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ordering Information

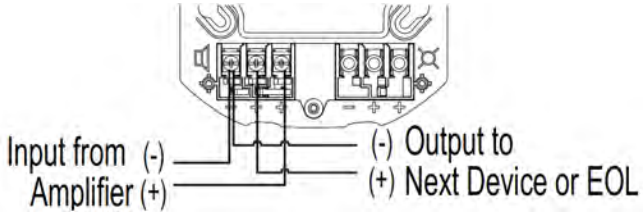
Part Number	Description
124-092-00	Speaker, Red, Type I, Wall-mount, Indoor, 12V or 24V, no lettering, 25/70.7V, 1/4, 1/2, 1, 2 watts

Associated Parts

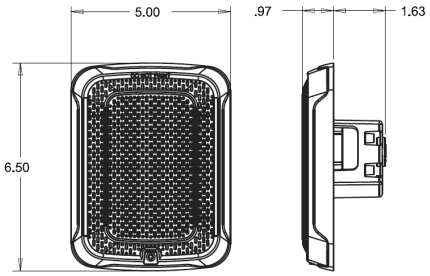
Part Number	Description
588-098-00	Trim Ring, Red, Type I, Wall-mount, Universal, 8.2 in. x 6.3 in. x 0.4 in.
588-092-00	Back Box, Wall Surface-mount, Red, Type I, Speaker; Speaker Strobe, 5.12 in. x 6.62 in. x 2.25 in.

Drawings

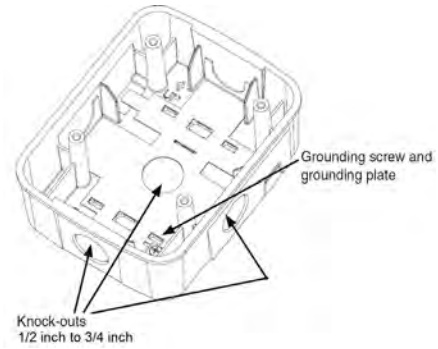
Wiring Diagram



Wall-mount Speaker



Back Box, Surface-mount



Junction Box for Flush Mounting use 4 in. x 4 in. x 2 1/8 in.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Speaker, Red, Ceiling-mount, Type I

124-093-00

Specifications

Nominal Voltage	25V or 70.7V (nominal)
Supervisory Voltage	50 VDC maximum
Speaker Frequency Range	400 to 4,000 Hz
Power	1/4, 1/2, 1, 2 watt
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 2 1/8 in. back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Ceiling-mount Speaker Dimensions	6.8 in. OD x 1 in. D (173 mm x 25 mm)
Dimensions with Surface-mount Back Box	6.9 in. OD x 3.5 in. D (176 mm x 89 mm)
Standards Compliance:	Listed to UL 1480
UL Listed	S4048
FM Approved	3057493
State of California	7320-1653:0505

Features

- Red housing with no lettering
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch simplifies field selection of speaker voltage
- Speaker offers high fidelity and high volume sound output
- 520 Hz capable with compatible FACP

Ceiling-mount Speaker Sound Output (dBA)

Speaker	1/4 W	1/2 W	1 W	2 W
UL Reverberant (dBA @ 10 ft.)	79	82	85	88
UL Anechoic (dBA @ 10 ft.)	79	82	85	88

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ordering Information

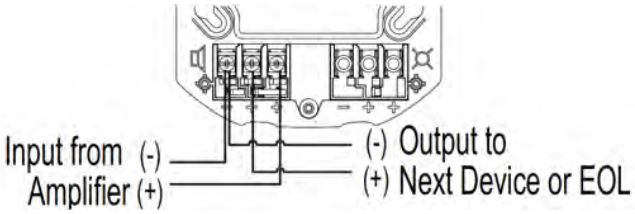
Part Number	Description
124-093-00	Speaker, Red, Type I, Ceiling-mount, Indoor, 6.8 in., no lettering, 25/70.7V, 1/4, 1/2, 1, 2 watts

Associated Parts

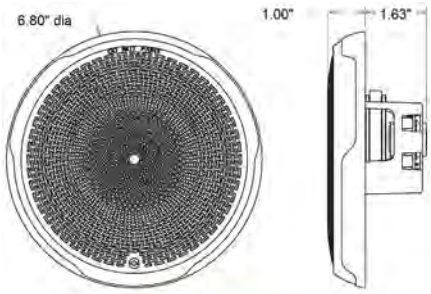
Part Number	Description
588-096-00	Trim Ring, Red, Type I, Ceiling-mount, Universal, 8.5 in. OD x 0.4 in.D
588-097-00	Back Box, Ceiling Surface-mount, Red, Type I, Strobe; Speaker; Speaker Strobe; Horn Strobe; Chime Strobe, 6.9 in. OD x 2.5 in. D

Drawings

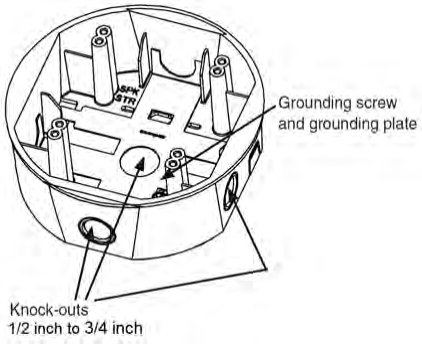
Wiring Diagram



Ceiling-mount Speaker



Back Box, Surface-mount



Junction Box for Flush Mounting use 4 in. x 4 in. x 2 1/8 in.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Speaker, White, Ceiling-mount, Type I

124-094-00

Specifications

Nominal Voltage	25V or 70.7V (nominal)
Supervisory Voltage	50 VDC maximum
Speaker Frequency Range	400 to 4,000 Hz
Power	1/4, 1/2, 1, 2 watts
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 2 1/8 in. back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Ceiling-mount Speaker Dimensions	6.8 in. OD x 1 in. D (173 mm x 25 mm)
Dimensions with Surface-mount Back Box	6.9 in. OD x 3.5 in. D (168 mm x 89 mm)
Compliance Standards	Listed to UL 1971
UL Listed	S4048
FM Approved	3057493
State of California	7320-1653:0505

Ceiling-mount Speaker Sound Output (dBA)

Speaker	1/4 W	1/2 W	1 W	2 W
UL Reverberant (dBA @ 10 ft.)	79	82	85	88
UL Anechoic (dBA @ 10 ft.)	79	82	85	88

Features

- White housing with no lettering
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch simplifies field selection of speaker voltage
- Speaker offers high fidelity and high volume sound output
- 520 Hz capable with compatible FACP

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ordering Information

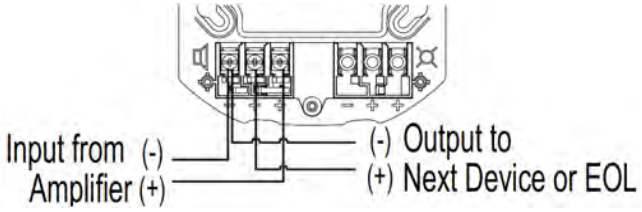
Part Number	Description
124-094-00	Speaker, White, Type I, Ceiling-mount, Indoor, 6.8 in, no lettering, 25/70.7V, 1/4, 1/2, 1, 2 watts

Associated Parts

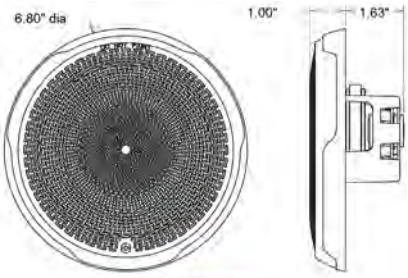
Part Number	Description
588-095-00	Trim Ring, White, Type I, Ceiling-mount, Universal, 8.5 in. OD x 0.4 in. D
588-094-00	Back Box, Ceiling Surface-mount, White, Type I, Strobe; Speaker; Speaker Strobe; Horn Strobe; Chime Strobe, 6.9 in. OD X 2.5 in. D

Drawings

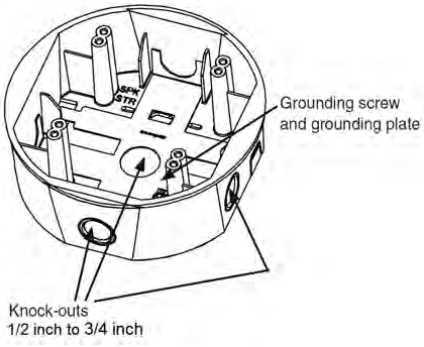
Wiring Diagram



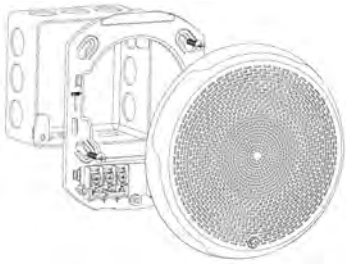
Ceiling-mount Speaker



Back Box, Surface-mount



Junction Box for Flush Mounting use 4 in. x 4 in. x 2 1/8 in.



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Speaker, White, Ceiling-mount, Type I

124-095-00

Specifications

Nominal Voltage	25V or 70.7V (nominal)
Supervisory Voltage	50 VDC maximum
Frequency Range	400–4,000 Hz (Fire Alarm), 200 Hz–15 KHz (General Signaling)
Power	1/8, 1/4, 1/2, 1, 2, 4 and 8 watts
Mounting	Surface-mount with included back can, or Flush-mount with optional tile support bracket, P/N 588-100-00
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Ceiling-mount Speaker Dimensions with Grille	12.8 in. OD x 2.7 in. D (325.1 mm x 68.6 mm)
Speaker Dimensions with Back Can	12.8 in. OD x 4.2 in. D (325 mm x 106.7 mm)
Tile Support Bracket Dimensions (P/N 588-100-00)	23.75 in. L x 4.125 in. W x 10.75 in. OD (603.3 mm x 104.8 mm x 273.1 mm)
Standards Compliance:	Listed to ANSI/UL 1480 CAN/ULC S541 CSA C22.2 No. 205 requirements for public mode and general signaling applications as well as ANSI/UL 2043 plenum rated
UL Listed	S4048
State of California	7320-1653:0500

Features

- White housing, 8 in., no lettering
- For use with separately sold tile support bracket: P/N 588-100-00
- Flush and ceiling tile mounting with use of ceiling tile bracket
- Field selection of speaker voltage (25 and 70.7 Vrms) and power settings (1/8, 1/4, 1/2, 1, 2, 4, and 8 watts) via jumper selection
- UL and ULC listed

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Ceiling-mount Speaker Sound Output (dBA)

Speaker	Watts						
	1/8	1/4	1/2	1	2	4	8
UL Reverberant (dBA @ 10 ft.)	75	78	81	84	87	90	93
UL Anechoic (dBA @ 10 ft.)	82	85	87	91	94	97	100

Ordering Information

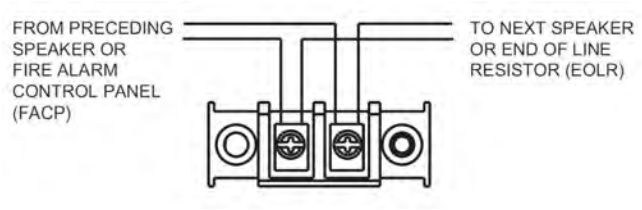
Part Number	Description
124-095-00	Speaker, White, Type I, Ceiling-mount, Indoor, 8 in., no lettering, 25/70.7V, 1/8, 1/4, 1/2, 1, 2, 4, and 8 watts

Associated Parts

Part Number	Description
588-100-00	Tile Support Bracket for 8 in., 1/8, 1/4, 1/2, 1, 2, 4, and 8 watt Speaker; for use on MEI P/N 124-095-00

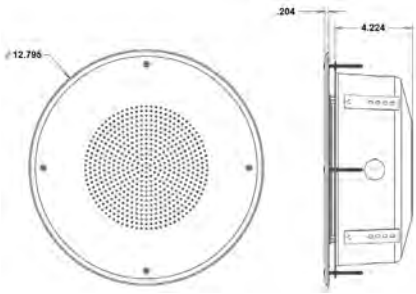
Drawings

Wiring Diagram

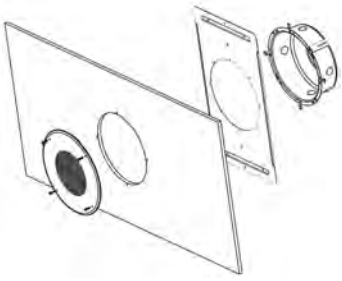


Back Can

Ceiling-mount Speaker



Ceiling-mount Speaker with Back Can



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Explosion-proof Speaker
124-097-00

Description

The Monaco explosion-proof speaker is designed for use in hazardous locations. It produces a crisp, clear, high decibel tone/voice output on any 25 Vrms or 70 Vrms audio system. The speaker is well suited for signaling in hazardous areas with high ambient noise levels where a high efficiency, weatherproof and corrosion-resistant surface-mount speaker is required.

Features

- Operates on 25 Vrms or 70 Vrms signal lines
- Multiple power taps at 0.5, 1, 2, 7, and 15 watts
- Built-in 15 watts high efficiency compression driver
- High dB output for large area coverage
- UL sound pressure level 99 dB(A) at 10 feet
- NFPA 70, Hazardous Locations
  Class I, Division 1, Groups B, C and D
- Wide Frequency Response from 400 to 4000 Hz
- NEMA 3 rated enclosure
- Indoor or outdoor use
- Supervisory capacitor
- One 1/2 in. threaded conduit entry (bottom of housing)

Specifications

Operating Voltage	25 or 70 Vrms
Input Power (selectable)	0.5, 1, 2, 7, and 15 W
Operating Temperatures	–40°F to 151°F (–40°C to 66°C)
Mounting	Surface-mount
Dimensions	8.375 in. OD x 14.75 in. D (21.273 cm OD x 37.465 cm D)
Approx. Shipping Weight	15 lb (6.8 kg)
Material	Speaker: Spun Aluminum Housing: Die-Cast Aluminum
Standards Compliance:	
UL	UL E190743

dB Specifications

Wattage Tap	UL dB(A) Sound Pressure	dB(A) Sound Power
0.5	87	104.2
1	90	106.8
2	93	109.6
7	99	114.2
15	99	116.8

Ordering Information

Part Number	Description
124-097-00	Explosion-proof Speaker, surface mount, 25 or 70 Vrms, one 1/2 in. threaded conduit entry

Application Notes

Signals selected for hazardous locations should be UL Listed and marked for at least the Hazardous Location Classifications dictated by the application. The signal should be 10 dB higher than the ambient noise level and as different from the background noise as possible.

The National Electric Code has created three classes of hazardous locations: Class I Hazardous Gases; Class II Hazardous Dusts; Class III Hazardous Fibers.

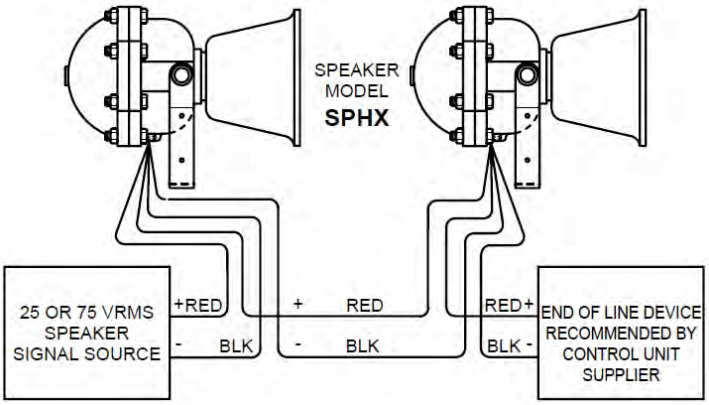
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

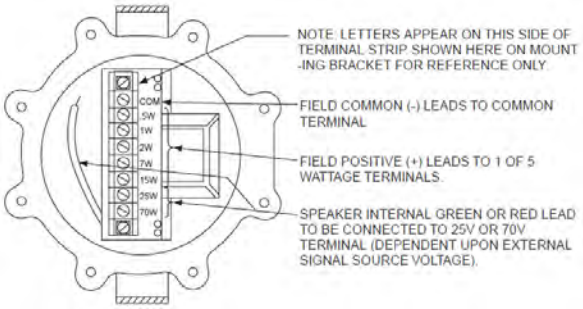
Notification Appliance Devices

Drawings

Wiring Diagrams

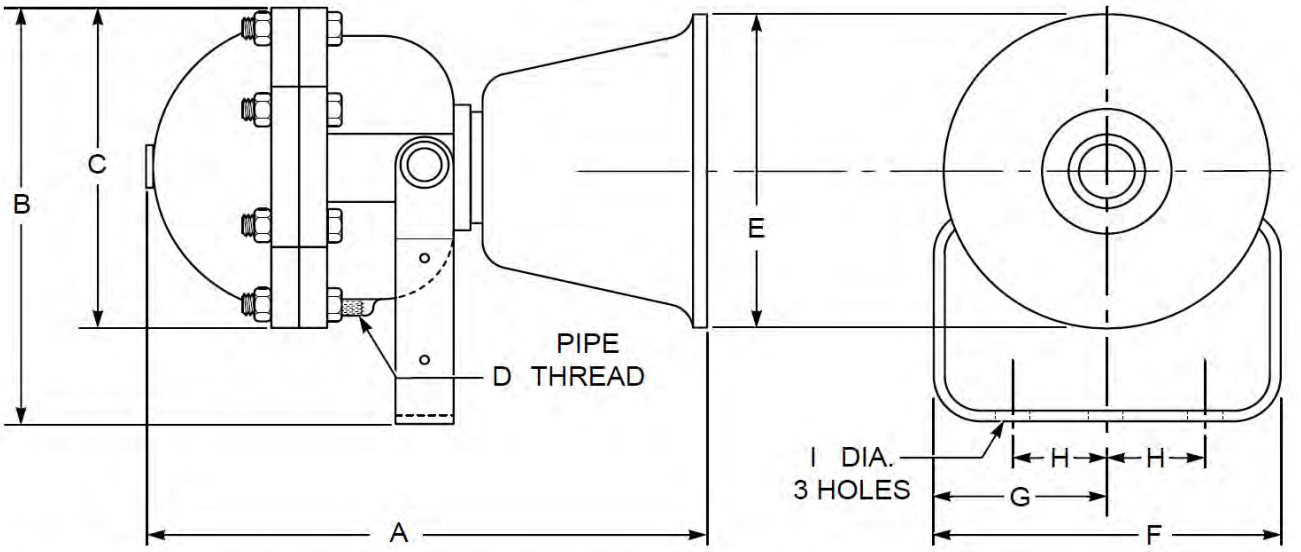


Typical Installation Wiring



Internal Multi-tap Wiring Set-up

Speaker Dimensions



A	B	C	D	E	F	G	H	I
14.75 in.	14.75 in.	8.312 in.	0.500 in.	8.375 in.	8.875 in.	4.500 in.	2.500 in.	0.531 in.
37.5 cm.	37.5 cm.	21.1 cm.	12 mm.	21.3 cm.	22.5 cm.	11.4 cm.	6.35 cm.	13 mm.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Selectable Output Speaker, Outdoor, Ceiling-mount, Type I

124-098-00

MEA approved

Features

- White housing without lettering
- Plug-in design reduces ground faults
- Tamper resistant construction
- Universal mounting plate with an onboard shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch simplifies field selection of speaker voltage (25 and 70.7 Vrms) and power settings (1/4, 1/2, 1, and 2 W)
- Speakers offer high fidelity and high volume sound output
- Weatherproof per NEMA 4X, IP56
- Plastic weatherproof back box included

Specifications

Nominal Voltage	25 or 70.7 Vrms
Supervisory Voltage	50 VDC maximum
Frequency Range	400–4,000 Hz
Power	1/4, 1/2, 1, and 2 W
Mounting	Universal Mounting Plate with onboard shorting spring
Input Wiring	12 to 18 AWG
Speaker Dimensions	6.8 in. OD x 2.9 in. D (17.3 cm x 7.4 cm)
Back Box Dimensions	7.2 in. OD x 2.9 in. D (18.3 cm x 7.4 cm)
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Standards Compliance:	
UL Listed	UL1480, File S4048
MEA Approved	10-08-E
State of California	7320-1653:201

Speaker Sound Output (dBA)

Speaker	1/4 W	1/2 W	1 W	2 W
UL Reverberant (dBA @ 10 ft.)	81	84	87	90

Ordering Information

Part Number	Description
124-098-00	Selectable Output Speaker, Outdoor, Ceiling-mount, White, 25 or 70.7 Vrms, 1/4, 1/2, 1, and 2 W, NEMA 4X, includes plastic weatherproof back box

Associated Parts

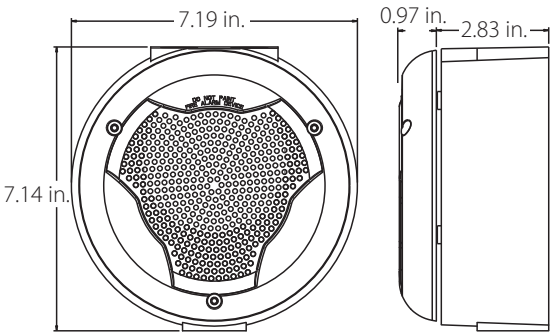
Part Number	Description
588-089-00	Back Box, metal option, white, speaker, ceiling-mount, 7.2 in. OD x 2.9 in. D

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

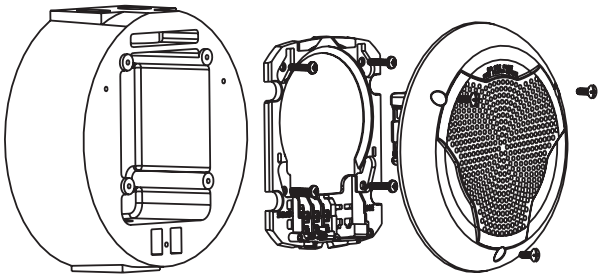
Detect Manage Record

Notification Appliance Devices

Dimensions



Back Box Ceiling-mount



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices Catalog Section 11

Speaker Strobes

Indoor Speaker Strobe, Wall-mount, White, Type II. 580-05x-xx, 580-06x-00, 580-07x-00, 580-081-00
Speaker Strobe, White, Ceiling-mount, Indoor, Type II 580-062-00
Indoor Speaker Strobe, Ceiling-mount, White, Type II. 580-064-00
Indoor Speaker Strobe, MC, Wall-mount, White, Type II 580-068-00
Indoor Speaker Strobe, 8 in., Ceiling-mount, White, Type II 580-074-00
Outdoor Speaker Strobe, 180cd, Wall-mount, White, Type II 580-075-00
Indoor Speaker Strobe, White, Ceiling-mount, Type II. 580-077-00
Outdoor Speaker Strobe, 180cd, Wall-mount, White, Type II 580-078-00
Indoor Speaker Strobe, Self-Amp, Ceiling-mount, Type II. 580-079-00
Indoor Speaker Strobe, Wall-mount, White, Type II, ...580-081-00
Outdoor Speaker Strobe, White, Wall-mount, Type I 580-087-00
Outdoor Speaker Strobe, Red, Wall-mount, Type I. 580-088-00
Indoor Speaker Strobe, 8 in., Ceiling-mount, White, Type II 580-099-00
Outdoor Speaker Strobe, White, Ceiling-mount, Type I 580-104-00
Outdoor Speaker Strobe, White, Wall-mount, Type I 580-105-00
Outdoor Speaker Strobe, White, Ceiling-mount, Type I 580-106-00
Indoor Speaker Strobe, Red, Wall-mount, Type I 580-107-00
Indoor Speaker Strobe, White, Wall-mount, Type I 580-108-00
Indoor Speaker Strobe, White, Wall-mount, Type I 580-110-00
Indoor Speaker Strobe, White, Wall-mount, Type I 580-111-00
Indoor Speaker Strobe, White, Ceiling-mount, Type I 580-112-00
Indoor Speaker Strobe, White, Ceiling-mount, Type I 580-113-00
Indoor Speaker Strobe, White, Wall-mount, Type I 580-114-00
Indoor Speaker Strobe, Red, Wall-mount, Type I 580-115-00
Speaker Strobe for Hazardous Locations. 580-117-00
Speaker Strobe LED for Hazardous Locations 580-117-01, 580-117-02, 580-117-03
Indoor Speaker Strobe, White, Ceiling-mount, Type I 580-118-00
Drop-in Speaker Strobe, Tile, White, Ceiling-mount, Type I 580-119-00
Indoor Speaker Strobe, White, Ceiling-mount, Type II. 580-120-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Speaker Strobe, Wall-mount, White, Type II

580-05x-xx, 580-06x-00, 580-07x-00, 580-081-00

Description

These low profile speaker strobes are designed for high-efficiency sound output with dual voltage capability and field-selectable taps from 1/8 to 8 watts.

Features

- Meets UL1971, UL1480, and Americans with Disabilities Act signaling requirements; FM approved
- 24 VDC Operation
- Fixed and selectable candela options
- 2 W and 8 W options with selectable speaker taps from 1/8 W to 2 or 8 W
- Amber and clear strobe lens options
- ALERT and FIRE options available
- Low current draw allows more devices per loop
- Synchronizable with Type II Sync Module (P/N 367-036-00) or Type II NAC Distributed Power Extender (P/N 404-119-00)

Specifications

Flash Rate	1 flash per second
Voltage	24 VDC and Vrms unfiltered
Voltage Range	16 to 33 VDC
Candela	Indoor: 15, 30, 75, 110cd Weatherproof: 180cd
Input Terminal	12 AWG to 18 AWG
Operating Temperature	32°F to 120° F (0°C to 49° C)
Dimensions	5.13 in. x 5.13 in. (13.03 cm x 13.03 cm)
Speaker Frequency	400–4,000 Hz
Speaker Input Voltage	25 or 70.07 Vrms nominal
Speaker Power Taps	2 W: 1/8, 1/4, 1/2, 1, 2 8 W: 1/8, 1/4, 1/2, 1, 2, 4, 8
Strobe Current Draw	15, 30, 75, 95, 110, 180 (See "Strobe Current Ratings" table below)

Strobe Current Ratings

UL maximum current ratings (maximum RMS current draw) at voltage range 16–33 VDC.

Candela (cd)					
15	**30**	**75**	**95**	**110**	**180**
0.060A	0.092A	0.165A	0.249A	0.220A	0.138A

Ordering Information

Speaker Strobes

Part Number	Description
580-055-01	Indoor speaker strobe, 24 VDC, standard dB speaker, wall-mount, white, red FIRE lettering, clear lens, multi-candela: 15, 30, 75, 110cd
580-058-00	Weatherproof speaker strobe, 24 VDC, standard dB speaker, wall-mount, white, no lettering, clear lens, candela: 180cd
580-063-00	Indoor speaker strobe, 24 VDC, standard dB speaker, wall-mount, white, no lettering, clear lens, multi-candela: 15, 30, 75, 110cd
580-065-00	Indoor speaker strobe, 24 VDC, standard dB speaker, wall-mount, white, no lettering, amber lens, multi-candela: 15, 30, 75, 95cd
580-075-00	Weatherproof speaker strobe, 24 VDC, standard dB speaker, wall-mount, white, no lettering, amber lens, candela: 180cd
580-078-00	Weatherproof speaker strobe, 24 VDC, standard dB speaker, wall-mount, white, red ALERT lettering, clear lens, Candela: 180cd

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Part Number	Description
580-081-00	Indoor speaker strobe, 24 VDC, standard dB speaker, wall-mount, white, red ALERT lettering, clear lens, multi-candela: 15, 30, 75, 110cd

Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
404-119-00	NAC Power Extender, 115 VAC 60 Hz, 12/24 VDC, 8A, four Class B or two Class A, use with Type II strobes
588-013-01	Back Box, indoor, surface-mount, white
588-028-00	Back Box, surface-mount, weatherproof, white

Mounting Options

- Fits standard 4 in. x 4 in. x 2 1/8 in. back box with extension ring
- See “Associated Parts” for back box P/Ns

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Notification Appliance Devices

Speaker Strobe, White, Ceiling-mount, Indoor, Type II

580-062-00

Specifications

Nominal Voltage (Speakers)	25 or 70 Vrms
Nominal Voltage (Strobes)	24 VDC
Operating Voltage	16 to 33 VDC
Candela	15, 30, 75, and 95cd
Strobe Flash Rate	1 flash per second
Power	1/8, 1/4, 1/2, 1, 2, 4, and 8 W
Frequency Range	400–4,000 Hz
Input Wiring	12 to 18 AWG
Mounting	Speaker mounting plate for ceiling-mount
Dimensions	7.27 in. OD x 5.24 in. D (18.5 cm x 13.3 cm)
Standards Compliance:	
UL Listed	UL1971 and UL1480, File S5391
FM	Approved
MEA Approved	151-92-E
State of California	7125-0785:152

Features

- Indoor speaker strobe with white housing, no lettering, and a white lens
- Field-selectable candela settings of 15, 30, 75, and 95cd
- Low profile design
- Strobe synchronization option through the use of a sync module
- Xenon flash tube with solid state circuitry
- Speaker voltage of 25/70 Vrms with field selectable taps of 1/8, 1/4, 1/2, 1, 2, 4, and 8 W
- Built-in level adjustment and incorporated speaker mounting plate for easy installation

Ordering Information

Part Number	Description
580-062-00	Speaker Strobe, White, Type II, Indoor, Ceiling-mount, 24 VDC, no lettering, white lens, 15, 30, 75, and 95cd, 400–4,000 Hz, 1/8, 1/4, 1/2, 1, 2, 4, and 8 W

Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
588-027-00	Ceiling Tile, 2 ft. bridge support for 4 in. speakers
404-119-00	Type II NAC Distributed Power Extender, emulates synchronization signals compatible with sync module (P/N 367-036-00) **NOTE** P/N 404-119-00 needs two 7.7 Ah batteries (P/N 400-704-00) for 24 hour battery backup, or two 12 Ah batteries (P/N 400-713-00) for 72 hour battery backup

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

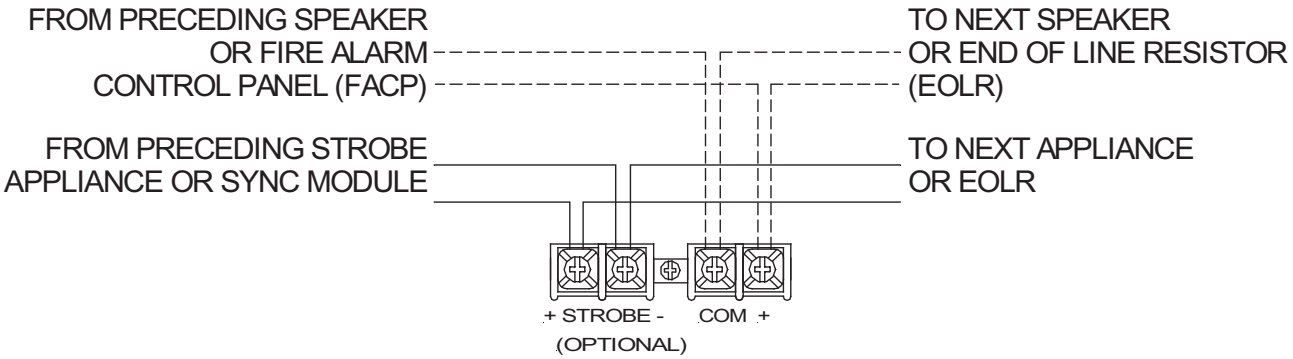
UL Maximum Current Draw

DC Input	16 to 33 VDC			
Candela Settings	15cd	30cd	75cd	95cd
Current Draw	0.065	0.105	0.189	0.249

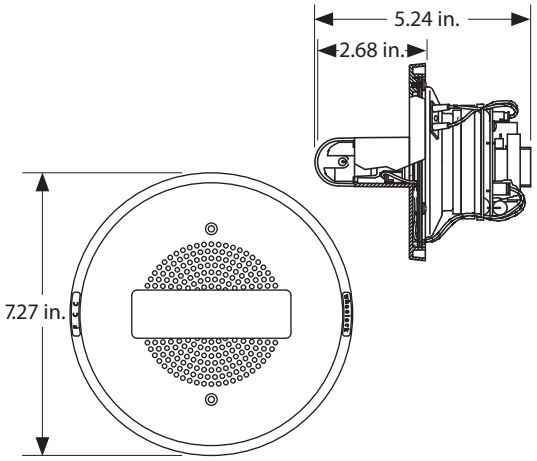
Speaker Output

Sound Output	1/8 W	1/4 W	1/2 W	1 W	2 W	4 W	8 W
UL Reverberant dBA @ 10 ft.	75	78	81	84	87	90	93

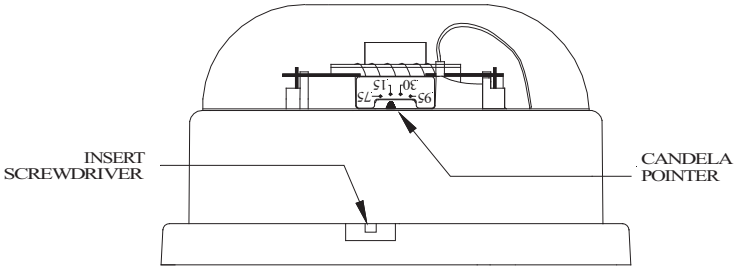
Wiring



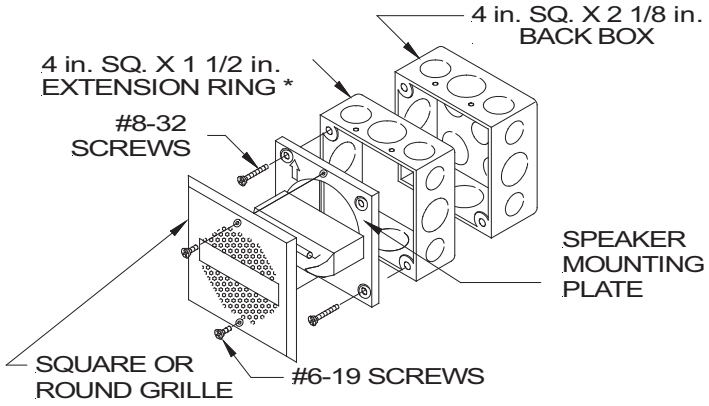
Dimensions



Candela



Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Speaker Strobe, Ceiling-mount, White, Type II

580-064-00

Specifications

Voltage	Regulated 24 VDC/Vrms
Operating Voltage	16 to 33 VDC (filtered or FWR voltage)
Strobe Candela Settings	15, 30, 75, and 95cd
Strobe Flash Rate	1 flash per second over regulated voltage range
Speaker Selections	1/8, 1/4, 1/2, 1, and 2 watts
Frequency Range	400–4,000 Hz
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	85%
Mounting	Ceiling-mount to standard 4 in. electrical box with extension ring
Dimensions	7.27 in. OD x 5.24 in. D
Standards Compliance	Listed UL 1638 general signaling and UL 1971 amber lens light distribution
UL	S2652
CSFM	7125-0785:0152

Features

- Indoor Speaker Strobe with white housing, amber lens, and no lettering
- Synchronized or non-synchronized strobe signal
- Low profile design
- Xenon flashtube in a polycarbonate lens
- Field selectable multi-candela settings: 24V: 15/30/75/95cd
- Speaker input voltage: of 25/70 Vrms and field selectable taps: 1/8, 1/4, 1/2, 1 and 2 watts
- Replaceable speaker grille
- In/out screw terminals for fast installation
- Integrated mounting plate included

Ordering Information

Part Number	Description
580-064-00	Speaker Strobe, Round, White, Type II, Ceiling-mount, Indoor, 24 VDC, no lettering, amber lens, 15, 30, 75, 95cd, frequency range 400–4,000Hz, 1/8, 1/4, 1/2, 1, and 2 watt

Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
588-027-00	Ceiling Tile 2 ft. bridge support for 4 in. speakers
404-119-00	NAC Power Extender, 115 VAC 60 Hz, 12/24 VDC, 8A, four Class B or two Class A, use with Type II strobes **NOTE** P/N 404-119-00 requires two 12V/8Ah batteries (P/N 400-704-00) for 24-hour battery backup OR two 12V/12Ah batteries (P/N 400-713-00) for 72 hour battery backup.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Amber Strobe Current Draw

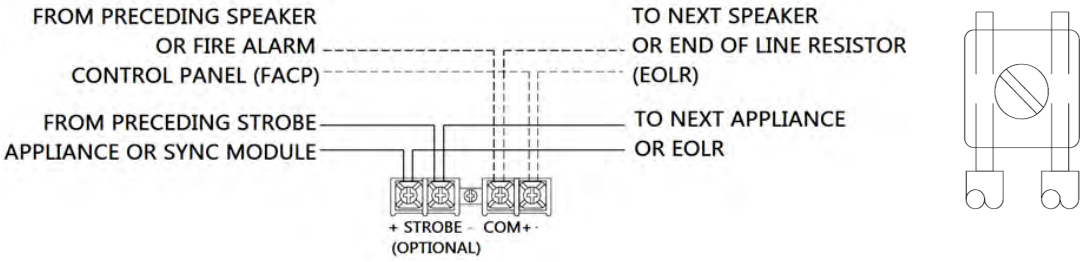
Voltage	UL Maximum Current Ratings (Maximum RMS Current Draw) 15cd | 30cd | 75cd | 95cd with derated amber lens:			
	11.25cd	22.50cd	56.25cd	71.25cd
16–33V	0.65	0.105	0.189	0.249

Speaker Output

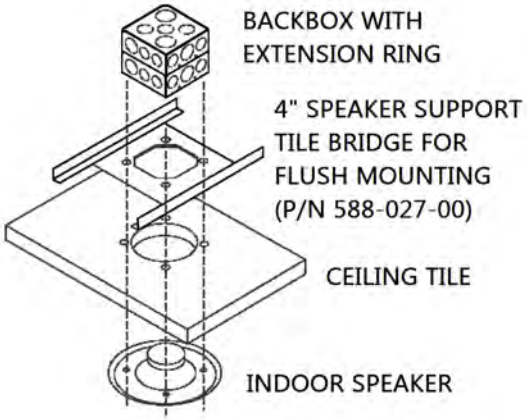
Voltage (Vrms)	Reverberant dBA at 10 ft. (per UL 1480 rated watts)				
	1/8 W	1/4 W	1/2 W	1 W	2 W
25/70	75	78	81	84	87

Diagrams

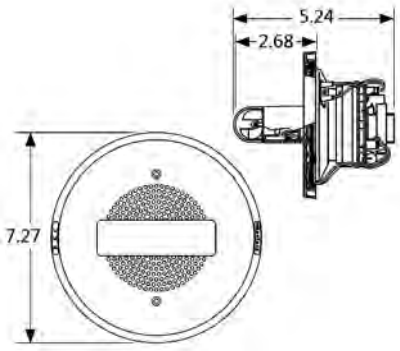
Wiring Diagram



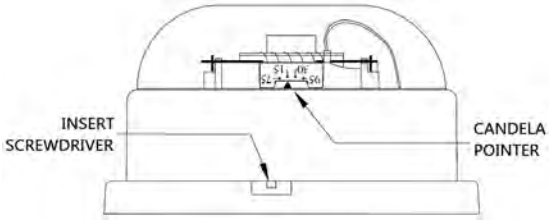
Mounting



Dimensions



Candela



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Speaker Strobe, MC, Wall-mount, White, Type II

580-068-00

Strobe Flash Rate	1 flash per second over regulated voltage range
Speaker Selections	1/8, 1/4, 1/2, 1, and 2 watt
Frequency Range	400–4,000 Hz
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	85%
Mounting	flush-mount: 4 in. x 2 1/8 in. electrical box or surface-mount: 4 in. square back box
Dimensions	6.74 in. H x 5 in. W x 2.58 in. D
Weight	1.6 lb (0.73 kg)
Standards Compliance	Listed UL 1638, UL 1480 and UL 1971
UL	S5391
FM	Approved
CSFM	7125-0785:0165

Features

- Indoor Speaker Strobe, oblong with white housing, amber lens, and no lettering
- Synchronized or non-synchronized strobe signal
- Low profile speaker strobe
- Xenon flashtube in a polycarbonate lens
- Field selectable multi-candela settings: 24V: 15/30/75/110cd
- Speaker input voltage: of 25/70 Vrms and field selectable taps: 1/8, 1/4, 1/2, 1, and 2 watts
- Replaceable speaker grille
- Integrated speaker mounting plate
- In/out screw terminals for fast installation
- No extension ring required

Specifications

Voltage	Regulated 24 VDC/Vrms
Operating Voltage	16 to 33 VDC (regulated)
Strobe Candela	15, 30, 75, and 110cd

Ordering Information

Part Number	Description
580-068-00	Speaker Strobe, Oblong, White, Type II, Wall-mount, indoor, 24 VDC, no lettering, amber lens, multi-candela: 15, 30, 75, 110cd, Speaker input 25/70 Vrms, taps 1/8, 1/4, 1/2, 1, and 2 watt

Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
588-033-00	Indoor Back Box, surface-mount, white
404-119-00	NAC Power Extender, 115 VAC 60 Hz, 12/24 VDC, 8A, four Class B or two Class A, use with Type II strobes **NOTE** P/N 404-119-00 requires two 12V/8Ah batteries (P/N 400-704-00) for 24-hour battery backup OR two 12V/12Ah batteries (P/N 400-713-00) for 72 hour battery backup.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Amber Strobe Current Draw

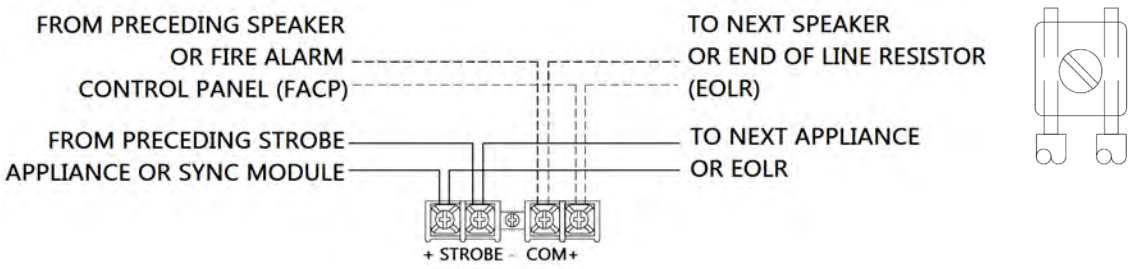
	UL Current Ratings (Amps) Maximum RMS Current			
	15cd | 30cd | 75cd | 110cd with derated Amber lens:			
Voltage	**11.25cd**	**22.50cd**	**56.25cd**	**82.50cd**
16–33 VDC	0.60	0.092	0.165	0.220

Speaker Output

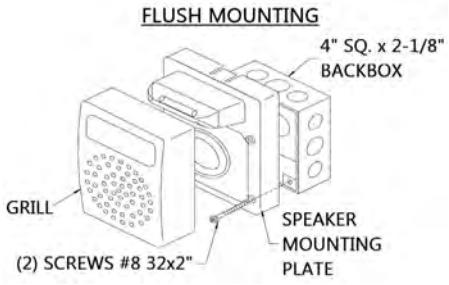
Voltage (Vrms)	**Reverberant dBA at 10 ft. (Rated watts)**				
	1/8 W	**1/4 W**	**1/2 W**	**1 W**	**2 W**
25/70	77	79.5	82.5	85.0	88.0

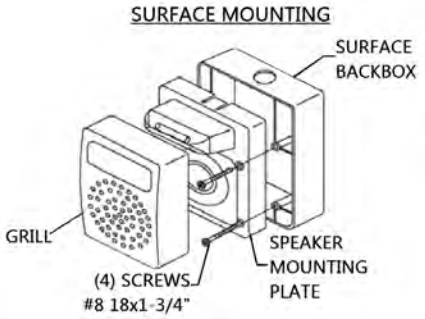
Diagrams

Wiring Diagram

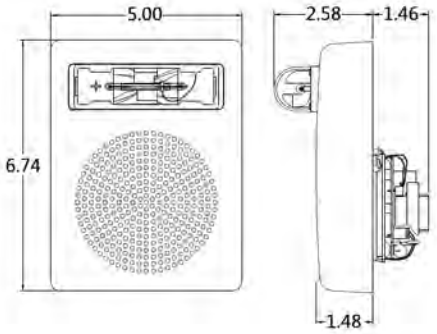


Mounting

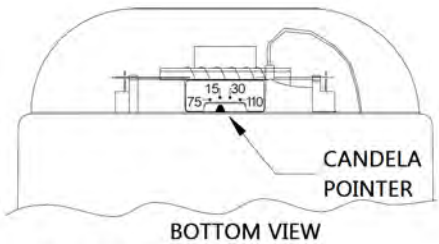




Dimensions



Candela



NOTE: PRE-SET AT 15 CD

NOTE Maximum number conductors for 12 to 18 AWG is eight.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Speaker Strobe, 8 in., Ceiling-mount, White, Type II

580-074-00

Strobe Flash Rate	1 flash per second over regulated voltage range
Speaker impedance	8 ohms
Speaker	25/70 Vrms 1/8, 1/4, 1/2, 1, 2, 4, and 8 watts
Frequency Range	400–4,000 Hz
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	85%
Mounting	Flush-mount with 8 in. back box with optional 8 in. support bridge
Dimensions	12.81 in. OD x 3.52 in. D
Weight	3.12 lb (1.42 kg)
Standards Compliance:	Listed to UL 1480, UL 1638, UL 1971 CAN/ULC-S526, CAN/ULC-S541
CSFM	7320-0785:0164

Features

- Indoor Speaker Strobe, 8 in., white housing, amber lens, and no lettering
- Synchronized or non-synchronized strobe signal
- Low profile speaker strobe
- Xenon flashtube in a polycarbonate lens
- Field selectable multi-candela settings:
  24V: 15/30/75/95cd
- Speaker input voltage: of 25/70 Vrms and field selectable taps: 1/8, 1/4, 1/2, 1, 2, 4, and 8 watts
- Compatible with reverse polarity supervision circuits
- Round metal 12 in. grille
- In/out screw terminals for fast installation

Specifications

Voltage	Regulated 24 VDC
Operating Voltage	16 to 33 VDC (filtered or FWR input voltage)
Strobe Candela Settings	15, 30, 75 and 95cd

Ordering Information

Part Number	Description
580-074-00	Speaker Strobe, 8 in., Round, White, Type II, Ceiling-mount, Indoor, 24 VDC, no lettering, amber lens, multi-candela: 15, 30, 75, 95cd, speaker input 25/70 Vrms, taps: 1/8, 1/4, 1/2, 1, 2, 4, and 8 watts

Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
129-049-00	8 in. Ceiling Speaker Back Box for installation of 8 in. round speaker
129-048-00	Indoor 8 in. speaker support tile bridge
404-119-00	NAC Power Extender, 115 VAC 60 Hz, 12/24 VDC, 8A, four Class B or two Class A, use with Type II strobes **NOTE** P/N 404-119-00 requires two 12V/8Ah batteries (P/N 400-704-00) for 24-hour battery backup OR two 12V/12Ah batteries (P/N 400-713-00) for 72 hour battery backup.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Amber Strobe Current Draw

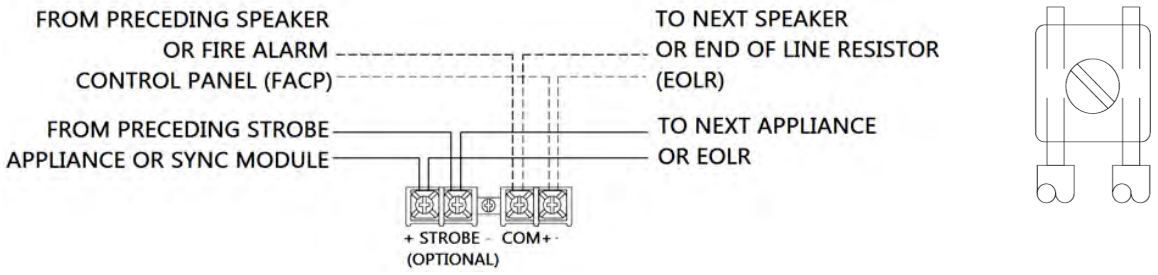
Voltage	UL Maximum Current Ratings (Maximum RMS Current Draw) 15cd | 30cd | 75cd | 95cd with derated amber lens:			
	11.25cd	22.50cd	56.25cd	72.12cd
16–33V	0.065	0.105	0.189	0.249

Speaker Output

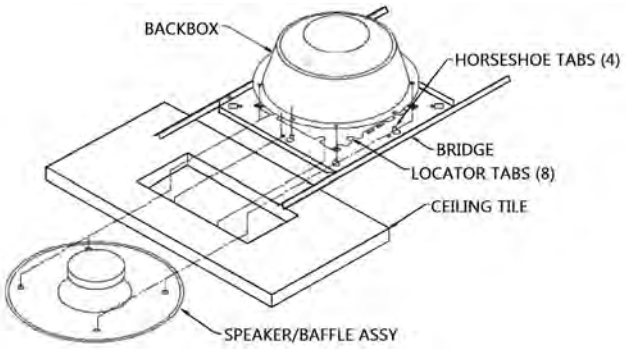
Voltage (Vrms)	Reverberant dBA at 10 ft.						
	1/8 W	1/4 W	1/2 W	1 W	2 W	4 W	8 W
25/70	75	78	81	84	87	90	93

Diagrams

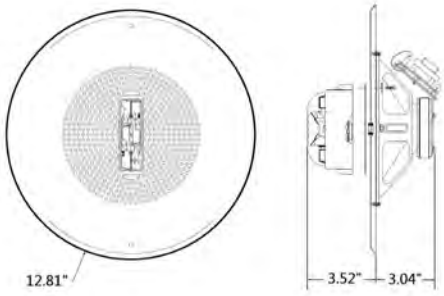
Wiring Diagram



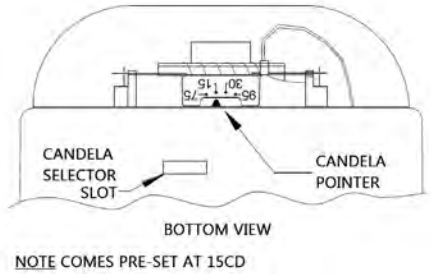
Mounting



Dimensions



Candela



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Outdoor Speaker Strobe, 180cd, Wall-mount, White, Type II

580-075-00

Specifications

Voltage	Regulated 24 VDC/Vrms
Operating Voltage	16 to 33 VDC (filtered or FWR voltage)
Strobe Candela	180cd (UL 1638 at 77°F)
Strobe Flash Rate	1 flash per second over regulated voltage range
Speaker Selections	1/8, 1/4, 1/2, 1, 2, 4, and 8 watts
Frequency Range	400–4,000 Hz
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–31°F to 150°F (–35°C to 66°C)
Relative Humidity	95%
Mounting	Surface-mount weatherproof back box
Dimensions	Square: 5.12 in. H x 5.12 in. W x 5.368 in. D
Standards Compliance	Listed UL 1638 and UL 1971
CSFM	7125-0785:0146

Features

- Outdoor Speaker Strobe, square with white housing, amber lens, and no lettering
- Synchronized or non-synchronized strobe signal
- Low profile speaker strobe
- Strobe inputs polarized
- Xenon flashtube in a polycarbonate lens
- Strobe setting: 180cd, UL 1638 at 77°F
- Speaker input voltage: of 25/70 Vrms and field selectable taps: 1/8, 1/4, 1/2, 1, 4, and 8 watts
- Replaceable speaker grille
- In/out screw terminals for fast installation
- Weatherproof

Ordering Information

Part Number	Description
580-075-00	Speaker Strobe, Square, White, Type II, Wall-mount, Outdoor, 24 VDC, no lettering, amber lens, 180cd, Speaker input 25/70 Vrms, taps 1/8, 1/4, 1/2, 1, 2, 4, and 8 watts, weatherproof

Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
588-028-00	Back Box, weatherproof, surface-mount, white
404-119-00	NAC Power Extender, 115 VAC 60 Hz, 12/24 VDC, 8A, four Class B or two Class A, use with Type II strobes **NOTE** P/N 404-119-00 requires two 12V/8Ah batteries (P/N 400-704-00) for 24-hour battery backup OR two 12V/12Ah batteries (P/N 400-713-00) for 72-hour battery backup.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Strobe Current Draw

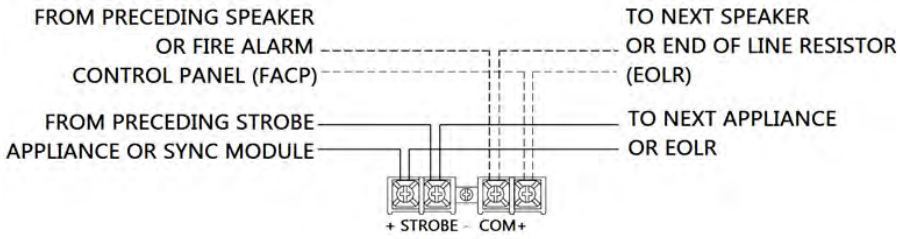
	Candela Ratings			Strobe Only Maximum Current Draw
	UL 1971	UL 1638 @ 77°F	UL 1638 @ –40°F	
Candela	30cd	180cd	115cd	0.138
	derate for amber lens:			
	22.5cd	135cd	86.25cd	

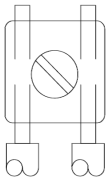
Speaker Output

Voltage (Vrms)	Reverberant dBA at 10 ft. (Rated watts)						
	1/8 W	1/4 W	1/2 W	1 W	2 W	4 W	8 W
25/70	77	80	83	86	88	91	93

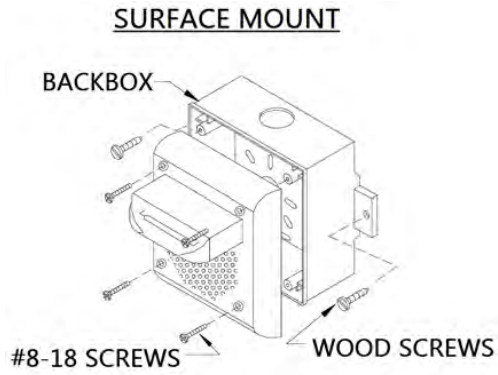
Diagrams

Wiring Diagram

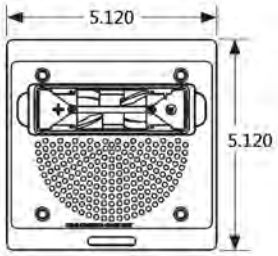


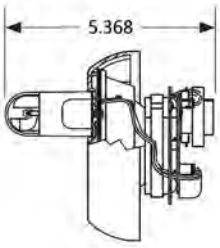


Mounting



Dimensions





NOTE Maximum number conductors for 12 to 18 AWG is eight.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Speaker Strobe, White, Ceiling-mount, Type II

580-077-00

FM APPROVED

Features

- Indoor Speaker Strobe with white housing, amber lens, and no lettering
- Synchronized or non-synchronized strobe signal
- Low profile design
- Xenon flashtube in a polycarbonate lens
- Field selectable multi-candela settings: 24V: 15/30/75/95cd
- Speaker input voltage: of 25/70 Vrms and field selectable taps: 1/8, 1/4, 1/2, 1, and 2 watts
- Replaceable speaker grille
- In/out screw terminals for fast installation
- Integrated mounting plate included

Specifications

Voltage	Regulated 24 VDC/Vrms
Operating Voltage	16 to 33 VDC (filtered or FWR voltage)
Strobe Candela Settings	15, 30, 75, and 95cd
Strobe Flash Rate	1 flash per second over regulated voltage range
Speaker Input	25/70 Vrms
Speaker Selections	1/8, 1/4, 1/2, 1, and 2 watts
Frequency Range	400–4,000 Hz
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	85%
Mounting	Ceiling-mount to 4 in. square back box
Dimensions	7.38 in. OD x 3.02 in. D
Weight	1.7 lb (0.77 kg)
Standards Compliance	Listed UL 1480, UL 1638 and UL 1971
FM	Approved
CSFM	7125-0785-0152

Ordering Information

Part Number	Description
580-077-00	Speaker Strobe, Round, White, Type II, Ceiling-mount, Indoor, 24 VDC, no lettering, amber lens, 15, 30, 75, and 95cd, Frequency Range 400–4,000Hz, Speaker Input: 25/70 Vrms, taps 1/8, 1/4, 1/2, 1, and 2 watts

Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
588-027-00	Ceiling Tile 2 ft. bridge support for 4 in. speakers
404-119-00	NAC Power Extender, 115 VAC 60 Hz, 12/24 VDC, 8A, four Class B or two Class A, use with Type II strobes **NOTE** P/N 404-119-00 requires two 12V/8Ah batteries (P/N 400-704-00) for 24-hour battery backup OR two 12V/12Ah batteries (P/N 400-713-00) for 72-hour battery backup.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Strobe Current Draw

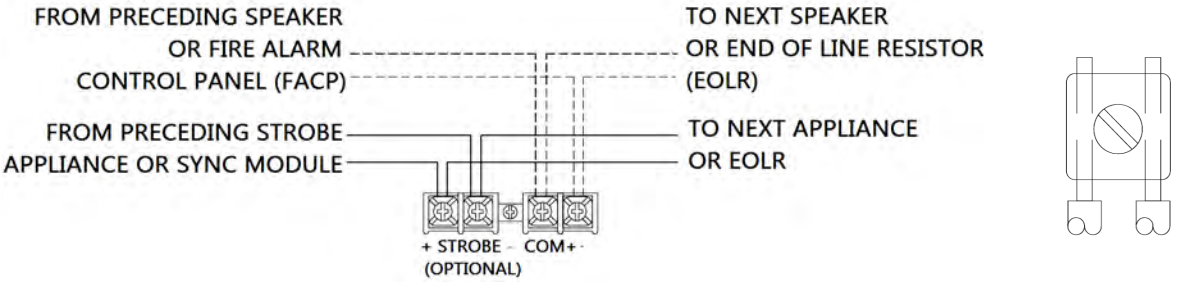
Voltage	UL Maximum Current Ratings (Maximum RMS Current Draw) 15cd | 30cd | 75cd | 95cd derate for amber lens:			
	11.25cd	22.5cd	56.25cd	71.25cd
16–33V	0.065	0.105	0.189	0.249

Speaker Output

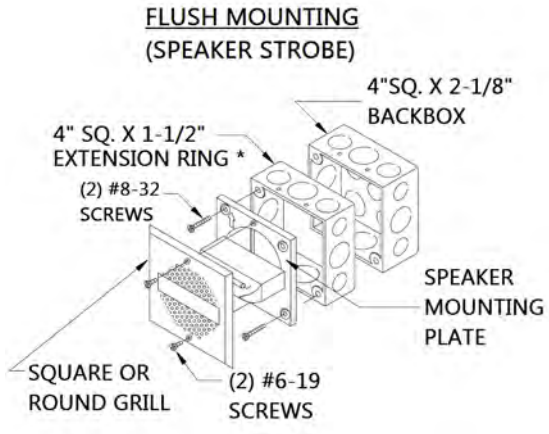
Voltage (Vrms)	Reverberant dBA at 10 ft. (rated watts)				
	1/8 W	1/4 W	1/2 W	1 W	2 W
25/70	77	79.5	82.5	85	88

Diagrams

Wiring Diagram

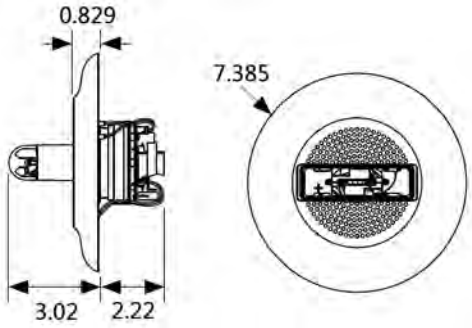


Mounting

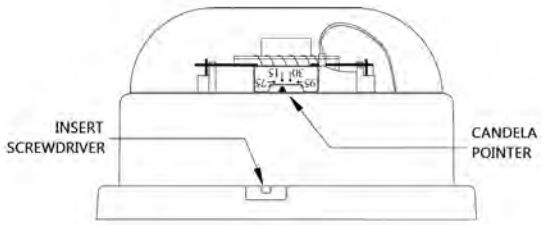


NOTE Max number of conductors for 12 to 18 AWG is eight.

Dimensions



Candela



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Outdoor Speaker Strobe, 180cd, Wall-mount, White, Type II

580-078-00

UL® FM APPROVED

Features

- Outdoor Speaker Strobe, square with white housing, ALERT lettering, and clear lens
- Synchronized or non-synchronized strobe signal
- Low profile speaker strobe
- Strobe inputs polarized
- Xenon flashtube in a polycarbonate lens
- Strobe setting: 180cd, UL 1638 at 77°F
- Speaker input voltage: of 25/70 Vrms and field selectable taps: 1/8, 1/4, 1/2, 1, 4, and 8 watts
- Replaceable speaker grille
- In/out screw terminals for fast installation
- Weatherproof

Specifications

Voltage	Regulated 24 VDC/Vrms
Operating Voltage	16 to 33 VDC (filtered or FWR voltage)
Strobe Candela	180cd (UL 1638 at 77°F)
Strobe Flash Rate	1 flash per second over regulated voltage range
Speaker Selections	1/8, 1/4, 1/2, 1, 2, 4, and 8 watts
Frequency Range	400–4,000 Hz
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–40°F to 150°F (–40°C to 66°C)
Relative Humidity	95%
Mounting	Surface-mount weatherproof back box
Dimensions	Square: 5.12 in. H x 5.12 in. W x 5.368 in. D
Standards Compliance	Listed UL 1638, UL 1480 and UL 1971
UL	S5391, S2652
FM	Approved

Ordering Information

Part Number	Description
580-078-00	Speaker Strobe, Square, White, Type II, Wall-mount, outdoor, 24 VDC, red ALERT lettering, clear lens, 180cd, Speaker input 25/70 Vrms, taps 1/8, 1/4, 1/2, 1, 2, 4, and 8 watts, weatherproof; requires weatherproof back box

Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
588-028-00	Back Box, weatherproof, surface-mount, white
404-119-00	NAC Power Extender, 115 VAC 60 Hz, 12/24 VDC, 8A, four Class B or two Class A, use with Type II strobes **NOTE** P/N 404-119-00 requires two 12V/8Ah batteries (P/N 400-704-00) for 24-hour battery backup OR two 12V/12Ah batteries (P/N 400-713-00) for 72-hour battery backup.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Strobe Current Draw

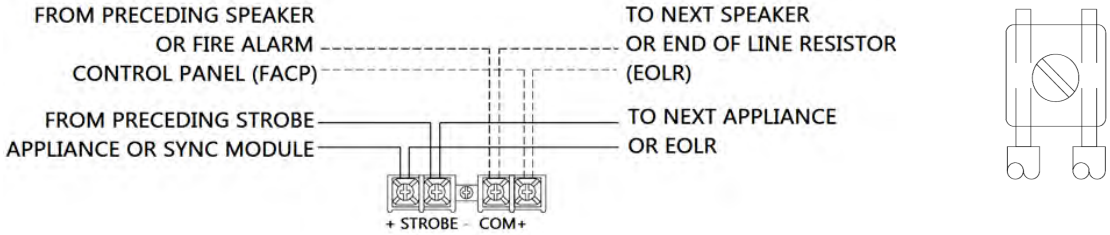
	Candela Ratings			Strobe Only Max. Current Draw
	UL 1971	UL 1638 @ 77°F	UL 1638 @ –40°F	
Candela	30cd	180cd	115cd	0.138

Speaker Output

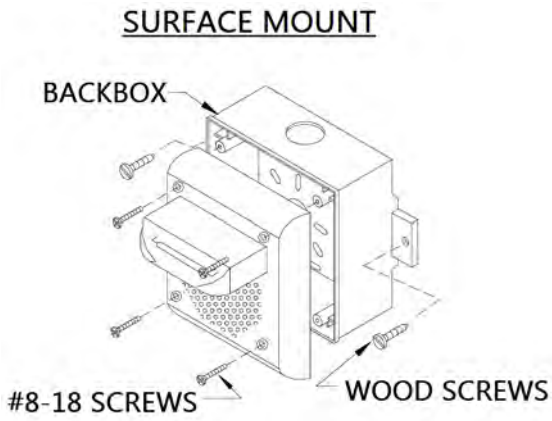
Voltage (Vrms)	Reverberant dBA at 10 ft. (rated watts)						
	1/8 W	1/4 W	1/2 W	1 W	2 W	4 W	8 W
25/70	77	80	83	86	88	91	93

Diagrams

Wiring Diagram

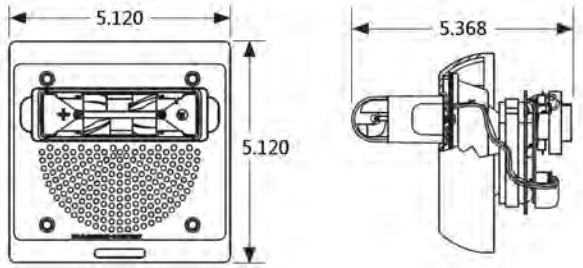


Mounting



NOTE Maximum number conductors for 12 to 18 AWG is eight.

Dimensions



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Speaker Strobe, Self-Amp, Ceiling-mount, Type II

580-079-00

Features

- Indoor Speaker Strobe, Self-Amplified, Supervised, white housing, ALERT lettering, and clear lens
- Synchronized or non-synchronized strobe
- Low profile speaker strobe
- Xenon flashtube in a polycarbonate lens
- Field selectable multi-candela settings: 24V: 15/30/75/95cd
- Selectable switch settings for six different sound output levels operating with audio input levels of 0.5 and 25 Vrms
- Compatible with reverse polarity supervision circuits
- Integrated speaker mounting plate
- In/out screw terminals for fast installation

Specifications

Voltage	Regulated 24 VDC
Power Input Voltage	16 to 33 VDC (regulated)
Current Consumption	120 mA RMS maximum
Appliance Input Level	0.5 Vrms or 25 Vrms (Switch selectable)
Appliance Input Impedance	0.5V Settings: Greater than 400 ohms, or equivalent to less than 1/1,000 W load 25V Settings: Greater than 20 kohms, or equivalent to less than 1/32 W load
Strobe Candela Settings	15, 30, 75, and 95cd
Strobe Flash Rate	1 flash per second over regulated voltage range
Frequency Range	400–4,000 Hz
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Mounting	Mounts to 4 in. square deep back box with an extension ring
Dimensions	7.27 in. OD x 5.24 in. D
Standards Compliance	Listed to UL 1480 and UL 1971

Ordering Information

Part Number	Description
580-079-00	Speaker Strobe, Self-Amplified, Supervised, Round, White, Type II, Ceiling-mount, Indoor, 24 VDC, red ALERT lettering, clear lens, multi-candela: 15, 30, 75 and 95cd, Speaker Input 0.5 and 25 Vrms with six output levels

Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
588-013-01	Indoor Back Box, surface-mount, white
588-027-00	Ceiling Tile 2 ft. bridge support for 4 in. speakers
404-119-00	NAC Power Extender, 115 VAC 60 Hz, 12/24 VDC, 8A, four Class B or two Class A, use with Type II strobes **NOTE** P/N 404-119-00 requires two 12V/8Ah batteries (P/N 400-704-00) for 24-hour battery backup OR two 12V/12Ah batteries (P/N 400-713-00) for 72-hour battery backup.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Strobe Current Draw

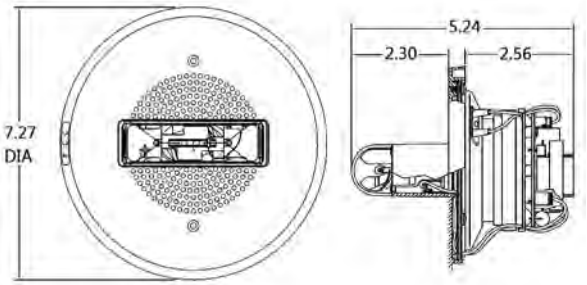
Voltage	UL Maximum Current Ratings (Amps) Maximum RMS Current			
	15cd	30cd	75cd	95cd
16–33V	0.065	0.105	0.189	0.249

Speaker Output

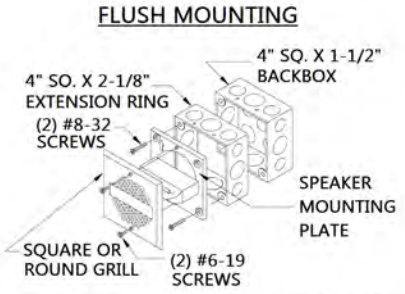
Vrms	Rated Reverberant dBA at 10 ft. (per UL 1480) Sound Level					
	6	5	4	3	2	1
0.5 and 25	84	81	77	74	71	68

Diagrams

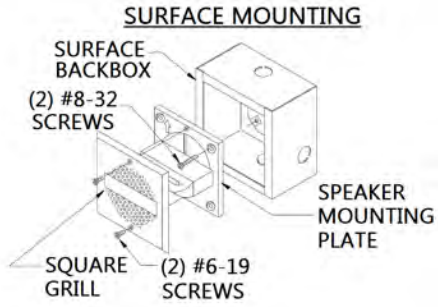
Dimensions



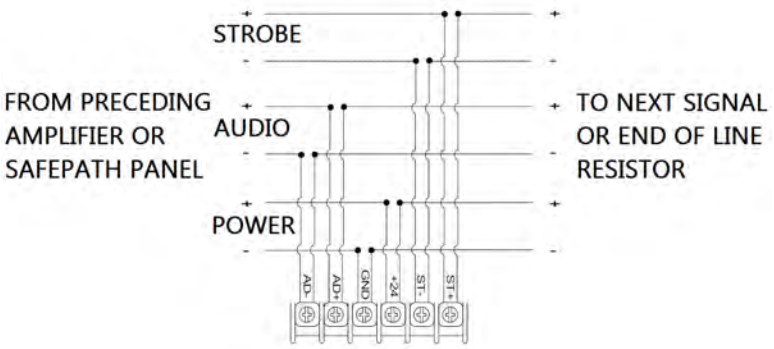
Mounting



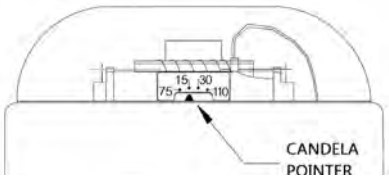
NOTE Max number of conductors is 8 for AWG#12 - AWG#18



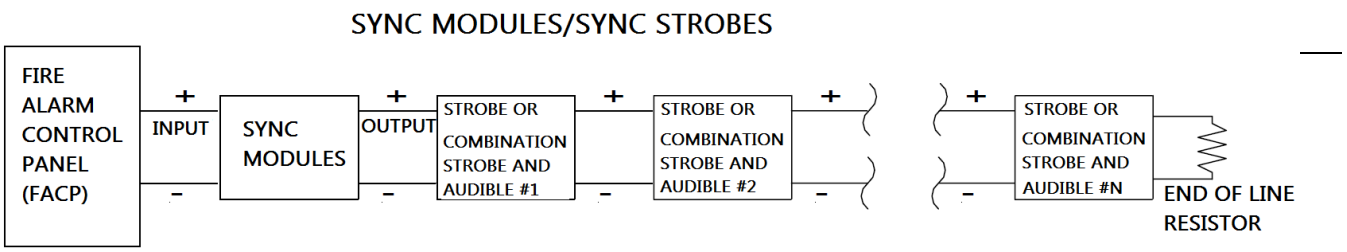
Wiring Diagram



Candela



Connection Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Speaker Strobe, Wall-mount, White, Type II, 580-081-00

Strobe Candela Settings	15, 30, 75 and 110cd
Strobe Flash Rate	1 flash per second over regulated voltage range
Speaker Selections	1/8, 1/4, 1/2, 1 and 2 watts
Frequency Range	400–4,000 Hz
Listed Sound Output	83 dB at 10 ft.
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	85%
Mounting	Mounts to 4 in. square deep back box with an extension ring
Dimensions	5.13 in. W x 5.13 in. H x 2.56 in. D
Weight	1.8 lb (0.82 kg)
Standards Compliance:	Listed UL 1480 and UL 1971
UL	S5391
FM	Approved
CSFM	7125-0785:0152

Features

- Indoor Speaker Strobe with white housing, ALERT lettering, and clear lens
- Synchronized or non-synchronized strobe signal
- Low profile design
- Xenon flashtube in a polycarbonate lens
- Field selectable multi-candela settings: 24V: 15/30/75/110cd
- Speaker input voltage: of 25/70 Vrms and field selectable taps: 1/8, 1/4, 1/2, 1 and 2 watts
- Replaceable speaker grille
- In/out screw terminals for fast installation
- Integrated mounting plate included

Specifications

Voltage	Regulated 24 VDC/Vrms
Operating Voltage	16 to 33 VDC (filtered or FWR voltage)

Ordering Information

Part Number	Description
580-081-00	Speaker Strobe, Square, White, Type II, Wall-mount, Indoor, 24 VDC, red ALERT letter, clear lens, 15, 30, 75, 110cd, Frequency Range 400–4,000Hz, Speaker input 25/70 Vrms, taps 1/8, 1/4, 1/2, 1 and 2 watts

Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
588-013-01	Indoor Back Box, surface-mount, white
404-119-00	NAC Power Extender, 115 VAC 60 Hz, 12/24 VDC, 8A, four Class B or two Class A, use with Type II strobes **NOTE** P/N 404-119-00 requires two 12V/8Ah batteries (P/N 400-704-00) for 24-hour battery backup OR two 12V/12Ah batteries (P/N 400-713-00) for 72-hour battery backup.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Strobe Current Draw

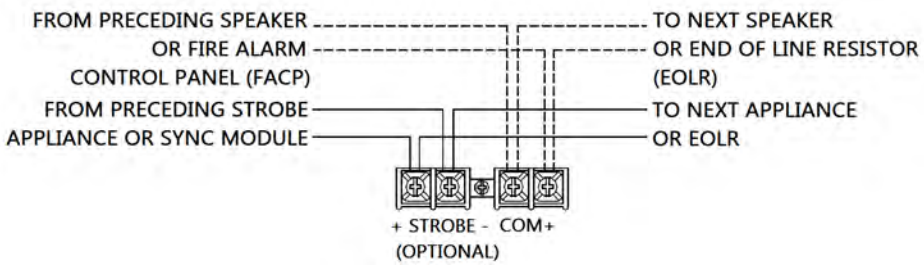
Voltage	UL Maximum Current Ratings (Maximum RMS Current Draw)			
	15cd	30cd	75cd	110cd
16–33V	0.06	0.092	0.165	0.22

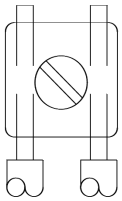
Speaker Output

Voltage (Vrms)	Reverberant dBA at 10 ft. (per UL 1480 rated watts)				
	1/8 W	1/4 W	1/2 W	1 W	2 W
25/70	71	75	78	81	83

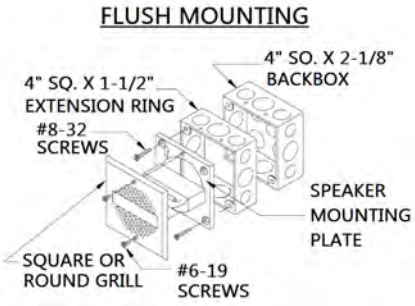
Diagrams

Wiring Diagram

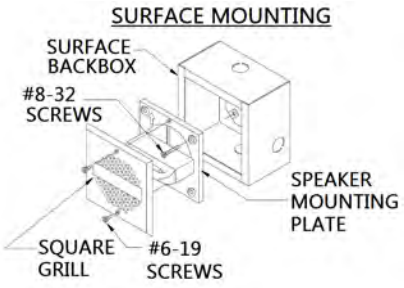




Mounting

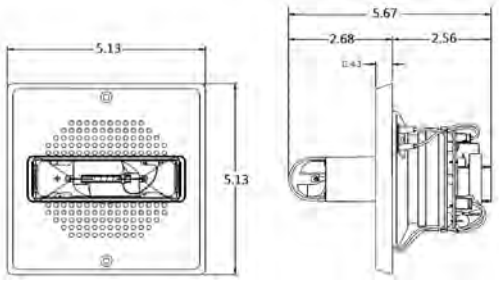


NOTE Max number of conductors for Flush-mount and Surface-mount is eight for AWG#12 thru AWG#18.

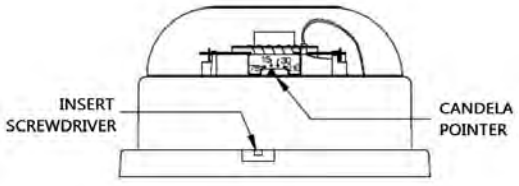


NOTE Back Box is compatible with wire-mold and conduit. Mounting holes are for single-gang, double-gang, 4 in. square, 3.5 in. and 4 in. octagon or round back box

Dimensions



Candela



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Outdoor Speaker Strobe, White, Wall-mount, Type I

580-087-00

MEA approved

Features

- White housing with red FIRE lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 15/75cd settings.
- Field-selectable candela settings:
  12V: 15 and 15/75cd
  24V: 15, 15/75, 30, 75, 95, 110, and 115cd
- Universal mounting plate with an onboard shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch simplifies field selection of speaker voltage (25 and 70.7 Vrms) and power settings (1/4, 1/2, 1, and 2 watts)
- Speakers offer high fidelity and high volume sound output
- Weatherproof NEMA 4X, IP56
- Plastic weatherproof back box included

Specifications

Nominal Voltage (Speakers)	25 or 70.7 Vrms
Supervisory Voltage (Speakers)	50 VDC maximum
Nominal Voltage (Strobes)	Regulated 12 VDC/FWR or Regulated 24 VDC/FWR
Operating Voltage (Includes fire alarm panels with built-in sync)	8 to 17.5V (12V nominal) or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	9 to 17.5V (12V nominal) or 17 to 33V (24V nominal)
Candela	12 VDC: 15 and 15/75cd 24 VDC: 15, 15/75, 30, 75, 95, 110, and 115cd
Strobe Flash Rate	1 flash per second
Speaker Frequency Range	400–4,000 Hz
Speaker Power Settings	1/4, 1/2, 1, and 2 watts
Mounting	Universal Mounting Plate mounts to weatherproof back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Dimensions Including Lens and Speaker	6 in. L x 5 in. W x 4.7 in. D (152 mm x 127 mm x 119 mm)
Weatherproof Back Box Dimensions	6.5 in. L x 5.5 in. W x 2.9 in. D (165 mm x 140 mm x 74 mm)
Standards Compliance:	
UL Listed	UL1480, File S4048
MEA Approved	10-08-E
State of California	7320-1653:201

Maximum Current Draw (mA RMS)

DC Input	16–33 VDC						
Candela Setting	**15cd**	**15/75cd**	**30cd**	**75cd**	**95cd**	**110cd**	**115cd**
Current Draw	66	77	94	158	181	202	210

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Low Temperature Candela Derating (@ –40°F)

Candela Setting	75cd	95cd	110cd	115cd
Actual Candela	44cd	77cd	110cd	115cd
NOTE Do not use the 15, 15/75, or 30cd settings below 32°F.				

Sound Output (dBA @ 10 ft.)

Speaker Setting	1/4 watt	1/2 watt	1 watt	2 watts
UL Reverberant	80	83	86	89

Ordering Information

Part Number	Description
580-087-00	Speaker Strobe, White, Type I, Wall-mount, Outdoor, 12V or 24V, red FIRE lettering, clear lens, 15, 15/75, 30, 75, 95, 110, and 115cd, 25/70.7 Vrms, 1/4, 1/2, 1, and 2 watts, NEMA 4X rating, includes plastic weatherproof back box

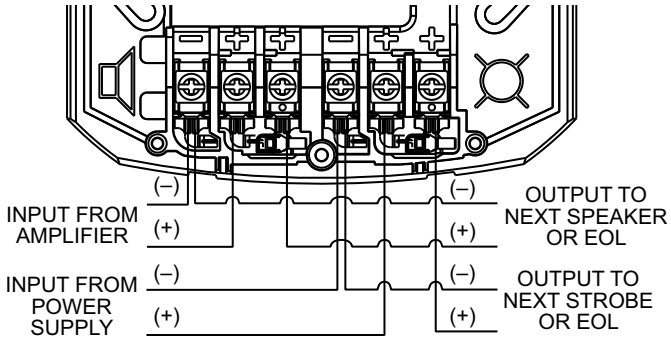
Associated Parts

Part Number	Description
588-059-00	Trim Ring, wall-mount, white
588-056-00	Back Box, metal option, wall-mount, white, outdoor weatherproof, 6.5 in. L x 5.5 in. W x 2.9 in. D
367-047-00	Sync Module, Type I

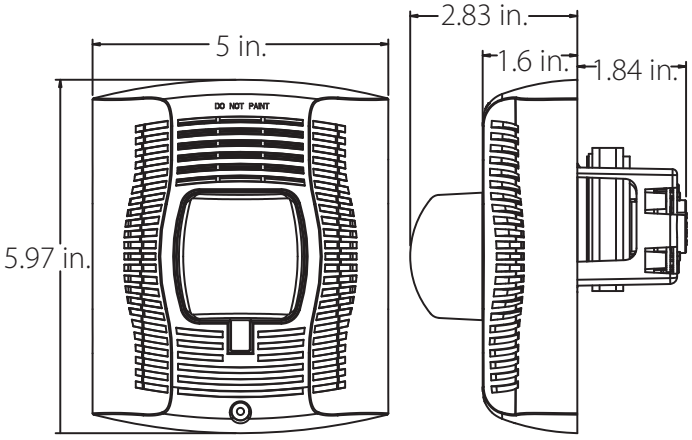
Drawings

Wiring Diagram

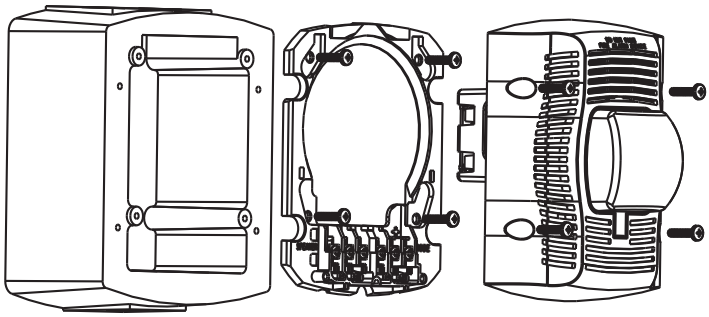
NOTE For proper operation, supply power for strobe must be continuous.



Outdoor Wall-mount Speaker Strobe



Weatherproof Back Box for Mounting Outdoor Wall-mount Speaker Strobe



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Outdoor Speaker Strobe, Red, Wall-mount, Type I

580-088-00

MEA approved

Features

- Red housing with white FIRE lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 15/75cd settings.
- Field-selectable candela settings on wall units:
  12V: 15 and 15/75cd
  24V: 15, 15/75, 30, 75, 95, 110, and 115cd
- Universal mounting plate with an onboard shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch simplifies field selection of speaker voltage (25 and 70.7 Vrms) and power settings (1/4, 1/2, 1, and 2 watts)
- Speakers offer high fidelity and high volume sound output
- Weatherproof NEMA 4X, IP56
- Plastic weatherproof back box included

Specifications

Nominal Voltage (Speakers)	25 or 70.7 Vrms
Supervisory Voltage (Speakers)	50 VDC maximum
Nominal Voltage (Strobes)	Regulated 12 VDC/FWR or Regulated 24 DC/FWR
Operating Voltage (Includes fire alarm panels with built-in sync)	8 to 17.5V (12V nominal) or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	9 to 17.5V (12V nominal) or 17 to 33V (24V nominal)
Candela	12 VDC: 15 and 15/75cd 24 VDC: 15, 15/75, 30, 75, 95, 110, and 115cd
Strobe Flash Rate	1 flash per second
Speaker Frequency Range	400–4,000 Hz
Speaker Power Settings	1/4, 1/2, 1, and 2 watts
Mounting	Universal Mounting Plate mounts to Weatherproof Back Box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Speaker Strobe Dimensions with Lens and Speaker	6 in. L x 5 in. W x 4.7 in. D (152 mm x 127 mm x 119 mm)
Weatherproof Back Box Dimensions	6.5 in. L x 5.5 in. W x 2.9 in. D (165 mm x 140 mm x 74 mm)
Standards Compliance:	
UL Listed	UL1480, File S4048
State of California	7320-1653:201
MEA Approved	10-08-E

Maximum Strobe Current Draw (mA RMS)

DC Input	16–33 VDC						
Candela Setting	**15cd**	**15/75cd**	**30cd**	**75cd**	**95cd**	**110cd**	**115cd**
Current Draw	66	77	94	158	181	202	210

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

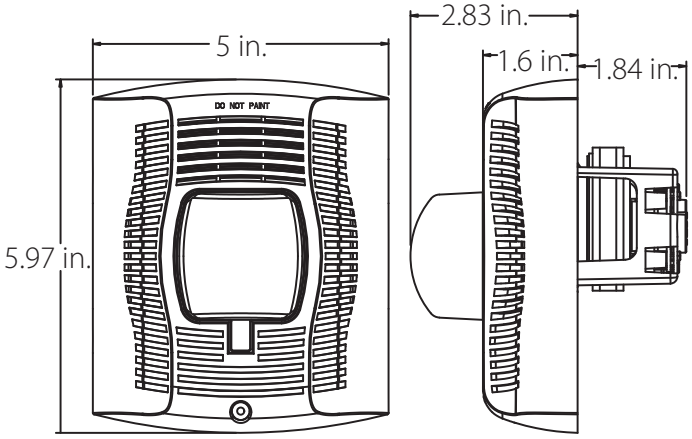
Low Temperature Candela Derating (@ –40°F)

Candela Setting	75cd	95cd	110cd	115cd
Actual Candela	44cd	77cd	110cd	115cd
NOTE Do not use the 15, 15/75, or 30cd settings below 32°F.				

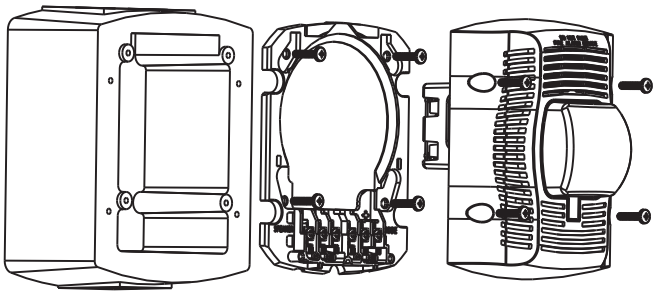
Speaker Sound Output (dBA)

Speaker Setting	1/4 watts	1/2 watts	1 watts	2 watts
UL Reverberant	80	83	86	89

Outdoor Wall-mount Speaker Strobe



Weatherproof Back Box for Mounting Outdoor Wall-mount Speaker Strobe



Ordering Information

Part Number	Description
580-088-00	Speaker Strobe, Red, Type I, Wall-mount, Outdoor, 12V or 24V, white FIRE lettering, clear lens, 15, 15/75, 30, 75, 95, 110, and 115cd, 25/70.7 Vrms, 1/4, 1/2, 1, or 2 watts, NEMA 4X rating, includes plastic weatherproof back box

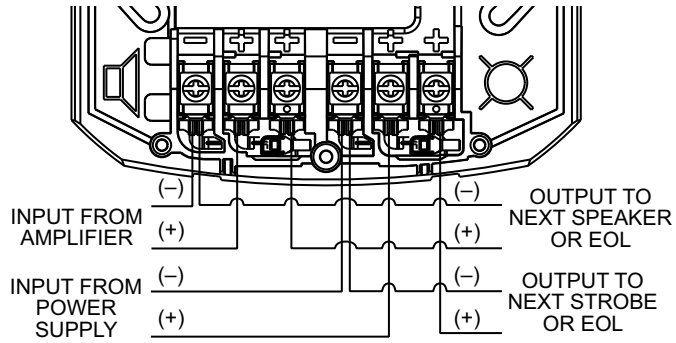
Associated Parts

Part Number	Description
588-059-50	Trim Ring, wall-mount, red
588-056-01	Back Box, metal option, wall-mount, red, outdoor, weatherproof, 6.5 in. L x 5.5 in. W x 2.9 in. D
367-047-00	Sync Module, Type I

Drawings

Wiring Diagram

NOTE For proper operation, supply power for strobe must be continuous.



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Speaker Strobe, 8 in., Ceiling-mount, White, Type II

580-099-00

Speaker impedance	8 ohms
Speaker	25/70 Vrms 1/8, 1/4, 1/2, 1, 2, 4, and 8 W
Frequency Range	400–4,000 Hz
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	85%
Mounting	Flush-mount with 8 in. back box with optional 8 in. support bridge
Dimensions	12.81 in. OD x 3.52 in. D
Weight	3.12 lb (1.42 kg)
Standards Compliance	Listed to UL 1480, UL 1971 CAN/ULC-S526, CAN/ULC-S541
CSFM	7320-1785:0164

Features

- Indoor Speaker Strobe, 8 in., white housing, FIRE lettering, and clear lens
- Synchronized or non-synchronized strobe signal
- Low profile speaker strobe
- Xenon flashtube in a polycarbonate lens
- Field selectable multi-candela settings:
  24V: 115/177cd
- Speaker input voltage: of 25/70 Vrms and field selectable taps: 1/8, 1/4, 1/2, 1, 2, 4, and 8 watt
- Compatible with reverse polarity supervision circuits
- Round metal 12 in. grille
- In/out screw terminals for fast installation

Specifications

Voltage	Regulated 24 VDC
Operating Voltage	16 to 33 VDC (filtered or FWR input voltage)
Strobe Candela Settings	115/177cd
Strobe Flash Rate	1 flash per second over regulated voltage range

Ordering Information

Part Number	Description
580-099-00	Speaker Strobe, 8 in., Round, White, Type II, Ceiling-mount, Indoor, 24 VDC, FIRE lettering, clear lens, high intensity candela: 115/177, Speaker input 25/70 Vrms, taps: 1/8, 1/4, 1/2, 1, 2, 4, and 8 watts

Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
129-049-00	8 in. Ceiling Speaker Back Box for installation of 8 in. round speaker
129-048-00	Indoor 8 in. speaker support tile bridge
404-119-00	NAC Power Extender, 115 VAC 60 Hz, 12/24 VDC, 8A, four Class B or two Class A, use with Type II strobes **NOTE** P/N 404-119-00 requires two 12V/8Ah batteries (P/N 400-704-00) for 24-hour battery backup OR two 12V/12Ah batteries (P/N 400-713-00) for 72-hour battery backup.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Strobe Current Draw

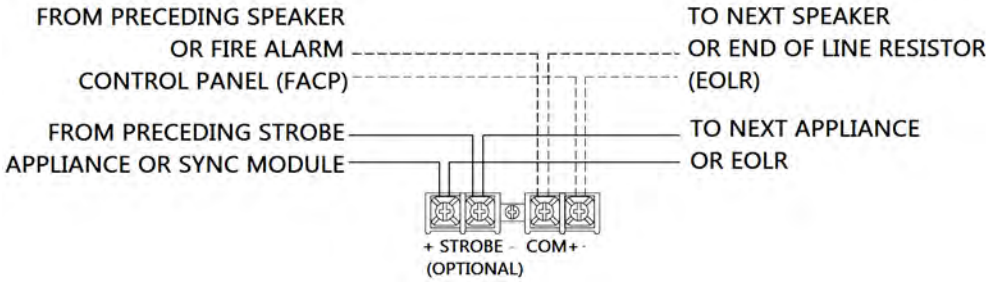
Voltage	UL Maximum Current Ratings (Maximum RMS Current Draw)	
	115cd	177cd
16–33V	0.300	0.420

Speaker Output

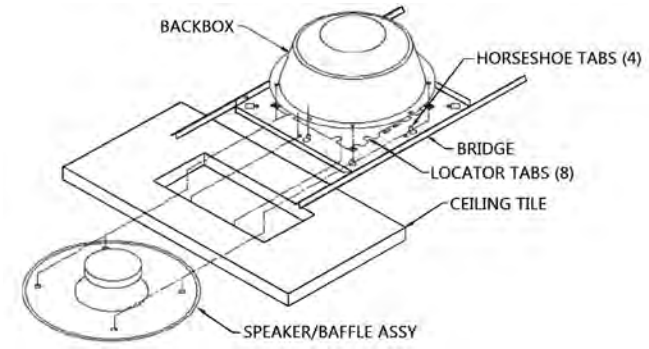
Voltage (Vrms)	Reverberant dBA at 10 ft.						
	1/8 W	1/4 W	1/2 W	1 W	2 W	4 W	8 W
25/70	75	78	81	84	87	90	93

Diagrams

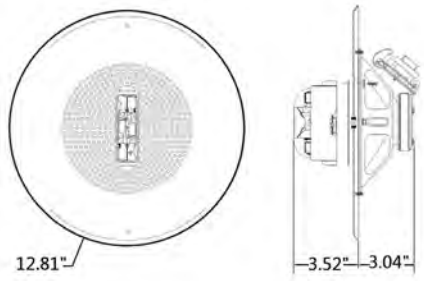
Wiring Diagram



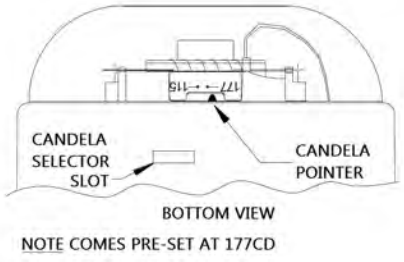
Mounting



Dimensions



Candela



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Outdoor Speaker Strobe, White, Ceiling-mount, Type I

580-104-00

Specifications

Nominal Voltage (Speakers)	25 or 70.7 Vrms
Supervisory Voltage (Speakers)	50 VDC maximum
Nominal Voltage (Strobes)	Regulated 24 VDC/FWR
Operating Voltage (Includes fire alarm panels with built-in sync)	16 to 33V
Operating Voltage with Type I Sync Module	17 to 33V
High Candela	135, 150, 177, and 185cd
Strobe Flash Rate	1 flash per second
Speaker Frequency Range	400–4,000 Hz
Power Settings	1/4, 1/2, 1, and 2 watts
Mounting	Universal Mounting Plate mounts to weatherproof back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Speaker Strobe Dimensions with Lens and Speaker	6.8 in. OD x 4.7 in. D (173 mm x 119 mm)
Weatherproof Back Box Dimensions	7.2 in. OD x 2.9 in. D (183 mm x 193 mm)
Standards Compliance:	
UL Listed	UL1480, File S4048
MEA Approved	10-08-E
State of California	7320-1653:201

MEA approved

Features

- White housing with clear lens and no lettering
- Plug-in design reduces ground faults
- Tamper-resistant construction
- Field-selectable high candela settings: 135, 150, 177, and 185cd
- Universal mounting plate with an onboard shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch simplifies field selection of speaker voltage (25 and 70.7 Vrms) and power settings (1/4, 1/2, 1, and 2 watts)
- Speakers offer high fidelity and high volume sound output
- Weatherproof NEMA 4X, IP56
- Plastic weatherproof back box included

Maximum Current Draw (mA RMS)

DC Input	16–33 VDC			
High Candela Setting	**135cd**	**150cd**	**177cd**	**185cd**
Current Draw	228	246	281	286

Sound Output (dBA @ 10 ft.)

Power Setting	1/4 watt	1/2 watt	1 watt	2 watts
UL Reverberant	80	83	86	89

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ordering Information

Part Number	Description
580-104-00	Speaker Strobe, White, Type I, Ceiling-mount, Outdoor, 24V, no lettering, clear lens, 135, 150, 177, and 185 high candela, 25/70.7 Vrms, 1/4, 1/2, 1, and 2 watts, NEMA 4X rating, includes plastic weatherproof back box

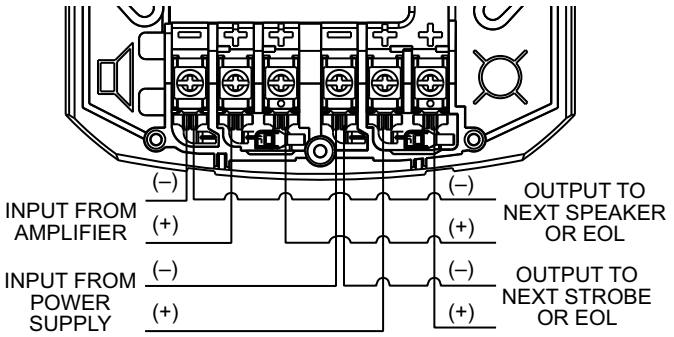
Associated Parts

Part Number	Description
589-004-00	Red Decals, ceiling-mount: AGENT, EVAC, ALERT, or FIRE **NOTE** Order three per device.
369-022-00	Strobe Attachment, amber lens option for ceiling-mount device
369-025-00	Blue lens option for ceiling-mount device
369-026-00	Red lens option for ceiling-mount device
369-027-00	Green lens option for ceiling-mount device
588-060-00	Trim Ring, ceiling-mount, white
367-047-00	Sync Module, Type I

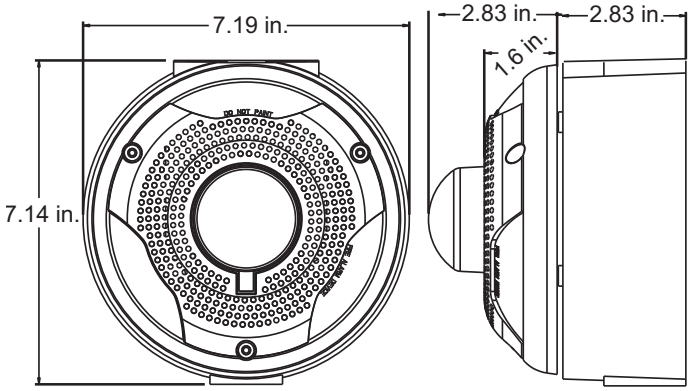
Drawings

Wiring Diagram

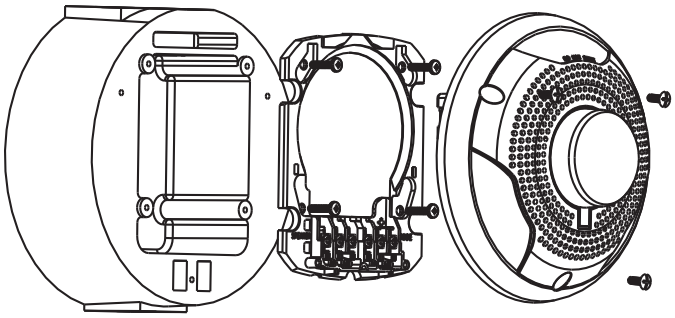
NOTE For proper operation, supply power for strobe must be continuous.



Outdoor Ceiling-mount Speaker Strobe



Weatherproof Back Box for Mounting Outdoor Ceiling-mount Speaker Strobe



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Outdoor Speaker Strobe, White, Wall-mount, Type I

580-105-00

MEA approved

Features

- White housing with red ALERT lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 15/75cd settings.
- Field selectable candela settings:
  12V: 15 and 15/75cd
  24V: 15, 15/75, 30, 75, 95, 110, and 115cd
- Universal mounting plate with an onboard shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch simplifies field selection of speaker voltage (25 and 70.7 Vrms) and power settings (1/4, 1/2, 1, and 2 watts)
- Speakers offer high fidelity and high volume sound output
- Weatherproof NEMA 4X, IP56
- Plastic weatherproof back box included

Specifications

Nominal Voltage (Speakers)	25 or 70.7 Vrms
Supervisory Voltage (Speakers)	50 VDC maximum
Nominal Voltage (Strobes)	Regulated 12 VDC/FWR or Regulated 24 VDC/FWR
Operating Voltage Range (Includes fire alarm panels with built-in sync)	8 to 17.5V (12V nominal) or 16 to 33V (24V nominal)
Operating Voltage Range with Type I Sync Module	8.5 to 17.5V (12V nominal) or 17.5 to 33V (24V nominal)
Standard Candela	12 VDC: 15 and 15/75cd 24 VDC: 15, 15/75, 30, 75, 95, 110, and 115cd
Strobe Flash Rate	1 flash per second
Speaker Frequency Range	400–4,000 Hz
Speaker Power Settings	1/4, 1/2, 1, and 2 watts
Mounting	Universal Mounting Plate mounts to weatherproof back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Relative Humidity	10% to 93% non-condensing
Speaker Strobe Dimensions With Lens and Speaker	6 in. L x 5 in. W x 4.7 in. D (152 mm x 127 mm x 119 mm)
Weatherproof Back Box Dimensions	6.5 in. L x 5.5 in. W x 2.9 in. D (165 mm x 140 mm x 74 mm)
Standards Compliance:	
UL Listed	UL 1480, File S4048
MEA Approved	10-08-E
State of California	7320-1653:201

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Strobe Current Draw (mA)

Maximum Current Draw 16–33 VDC						
15cd	**15/75cd**	**30cd**	**75cd**	**95cd**	**110cd**	**115cd**
66	77	94	158	181	202	210

Low Temperature Candela Derating (@ –40°F)

Setting	**75cd**	**95cd**	**110cd**	**115cd**
Actual Candela	44cd	77cd	110cd	115cd

NOTE Do not use the 15, 15/75, and 30cd settings below 32°F.

Speaker Sound Output (dBA @ 10 ft.)

Speaker	**1/4 watts**	**1/2 watts**	**1 watts**	**2 watts**
UL Reverberant	80	83	86	89

Ordering Information

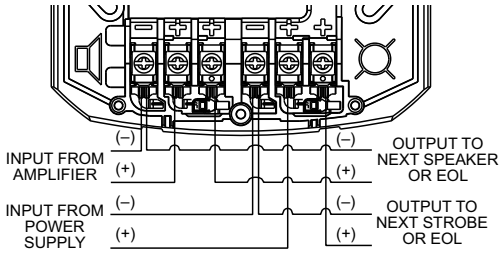
Part Number	**Description**
580-105-00	Speaker Strobe, White, Type I, Wall-mount, Outdoor, 12V or 24V, red ALERT lettering, clear lens, 15, 15/75, 30, 75, 95, 110, and 115cd, 25/70.7 Vrms, 1/4, 1/2, 1, and 2 watts, includes plastic weatherproof back box

Associated Parts

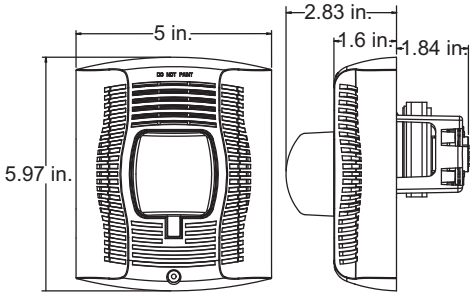
Part Number	**Description**
369-023-00	Strobe Attachment, amber lens for wall-mount device, used for indoor and outdoor application
588-059-00	Trim Ring, wall-mount, white
588-056-00	Back Box, metal option, wall-mount, white
367-047-00	Sync Module, Type I

Drawings

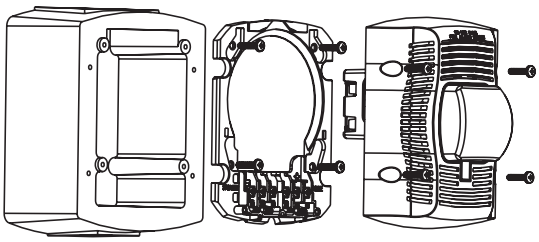
Wiring Diagram



Outdoor Wall-mount Speaker Strobe



Weatherproof Back Box for Mounting Outdoor Wall-mount Speaker Strobe



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Outdoor Speaker Strobe, White, Ceiling-mount, Type I

580-106-00

MEA approved

Features

- White housing with red ALERT lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 15/75cd settings.
- Field-selectable candela settings:
  12V: 15, 15/75cd
  24V: 15, 15/75, 30, 75, 95, 110, and 115cd
- Universal mounting plate with an onboard shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch simplifies field selection of speaker voltage (25 and 70.7 Vrms) and power settings (1/4, 1/2, 1, and 2 W)
- Speakers offer high fidelity and high volume sound output
- Weatherproof per NEMA 4X, IP56
- Plastic weatherproof back box included

Specifications

Nominal Voltage (Speakers)	25 or 70.7 Vrms
Supervisory Voltage (Speakers)	50 VDC maximum
Nominal Voltage (Strobes)	Regulated 12 VDC/FWR or Regulated 24 VDC/FWR
Operating Voltage Range (Includes fire alarm panels with built-in sync)	8 to 17.5V (12V nominal) or 16 to 33V (24V nominal)
Operating Voltage Range with Type I Sync Module	9 to 17.5V (12V nominal) or 17 to 33V (24V nominal)
Candela	12 VDC: 15 and 15/75cd 24 VDC: 15, 15/75, 30, 75, 95, 110, and 115cd
Strobe Flash Rate	1 flash per second
Speaker Frequency Range	400–4,000 Hz
Power	1/4, 1/2, 1, and 2 W
Mounting	Universal Mounting Plate mounts to weatherproof back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Relative Humidity	10% to 93% non-condensing
Speaker Strobe Dimensions With Lens and Speaker	6.8 in. OD x 4.7 in. D (173 mm x 119 mm)
Weatherproof Back Box Dimensions	7.2 in. OD x 2.9 in. D (182 mm x 74 mm)
Standards Compliance:	
UL Listed	UL1480, File S4048
MEA Approved	10-08-E
State of California	7320-1653:201

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Maximum Current Draw (mA)

DC Input	16 to 33 VDC						
Candela Settings	15cd	15/75cd	30cd	75cd	95cd	110cd	115cd
Current Draw	66	77	94	158	181	202	210

Low Temperature Candela Derating (at –40°F)

Candela Setting	75cd	95cd	110cd	115cd
Derated Candela	44cd	77cd	110cd	115cd

NOTE Do not use the 15, 15/75, and 30cd settings below 32°F.

Outdoor Speaker Sound Output

Sound Output	1/4 W	1/2 W	1 W	2 W
UL Reverberant (dBA @ 10 ft.)	80	83	86	89

Ordering Information

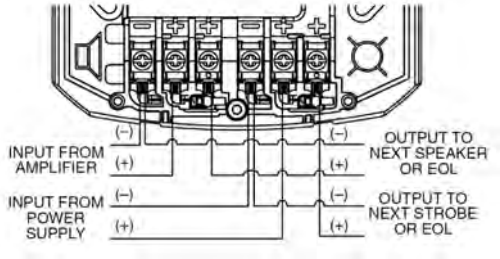
Part Number	**Description**
580-106-00	Speaker Strobe, White, Type I, Ceiling-mount, Outdoor, 12V or 24V, red ALERT lettering, clear lens, 15, 15/75, 30, 75, 95, 110, and 115cd, 25/70.7 Vrms, 1/4, 1/2, 1, and 2 W, NEMA 4X, includes plastic weatherproof back box

Associated Parts

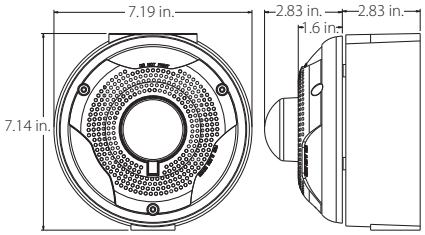
Part Number	**Description**
588-089-00	Back Box, metal option, white, speaker, ceiling-mount, 7.2 in. OD x 2.9 in. D
589-004-00	Red Decals, ceiling-mount: AGENT, EVAC, ALERT, or FIRE **NOTE** Order three per device.
369-022-00	Strobe Attachment, amber lens option for ceiling-mount device
369-025-00	Blue Lens option for ceiling-mount device
369-026-00	Red Lens option for ceiling-mount device
369-027-00	Green Lens option for ceiling-mount device
588-060-00	Trim Ring, ceiling-mount, white
367-047-00	Sync Module, Type I

Drawings

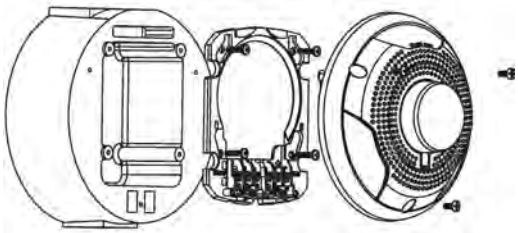
Wiring Diagram



Ceiling-mount Speaker Strobe



Weatherproof Back Box for Mounting Outdoor Ceiling-mount Speaker Strobe



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Speaker Strobe, Red, Wall-mount, Type I

580-107-00

Features

- Red housing with white FIRE lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12V or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on wall units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 110, 135, and 185cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch simplifies field selection of speaker voltage
- Speakers offer high fidelity and high volume sound output

Specifications

Nominal Voltage (Speakers)	25 or 70 Vrms (nominal)
Supervisory Voltage (Speakers)	50 VDC maximum
Nominal Voltage (Strobes)	Regulated 12 VDC/FWR Regulated 24 VDC/FWR
Operating Voltage (includes fire alarm panels with built in sync)	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	9 to 17.5V (12V nominal), or 17 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 110, 135, 185cd
Strobe Flash Rate	1 flash per second
Speaker Frequency Range	400–4,000 Hz
Speaker Power	1/4, 1/2, 1, 2 watts
*Mounting**	Universal Mounting Plate mounts to 4 in. x 4 in. x 2 1/8 in. back box *Flush-mount applications do not require an extension ring.
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Wall-mount Dimensions with lens and speaker	6.5 in. L x 5.0 in. W x 3.9 in. D (165 mm x 127 mm x 99 mm)
Dimensions with Surface-mount Back Box	6.6 in. L x 5.1 in. W x 4.5 in. D (168 mm x 130 mm x 116 mm)
Standards Compliance:	
UL Listed	Listed to UL 1480 and UL 1971 S4048
FM Approved	3057493
State of California	7320-1653:0505

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Wall-mount Strobe Current Draw (mA)

Maximum Current Draw 16–33 VDC						
15cd	**30cd**	**75cd**	**95cd**	**110cd**	**135cd**	**185cd**
43	63	107	121	148	172	222

Wall-mount Speaker Sound Output

Sound Output	1/4 W	1/2 W	1 W	2 W
UL Reverberant (dBA @ 10 ft.)	77	80	83	86
UL Anechoic (dBA @ 10 ft.)	77	80	83	86

Ordering Information

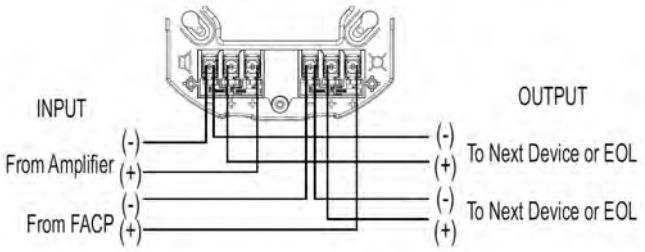
Part Number	Description
580-107-00	Speaker Strobe, Red, Type I, Wall-mount, Indoor, 12V or 24V, White FIRE lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd, 25/70 Vrms, 1/4, 1/2, 1, 2 watts

Associated Parts

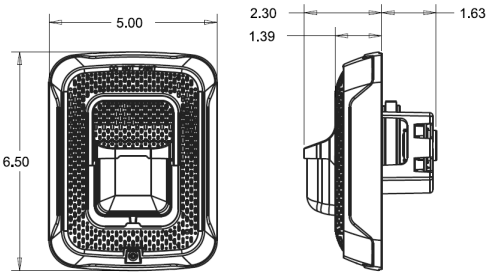
Part Number	Description
589-021-00	Bezel, Red, Type I, Wall-mount, Speaker Strobe, no lettering, order one per device
588-098-00	Trim Ring, Red, Type I, Wall-mount, Universal, 8.2 in. H x 6.3 in. W x 0.4 in. D
588-092-00	Back Box, Wall-Surface-mount, Red, Type I, Speaker; Speaker Strobe, 5.12 in. W x 6.62 in. H x 2.25 in. D
367-047-00	Sync Module Type I

Drawings

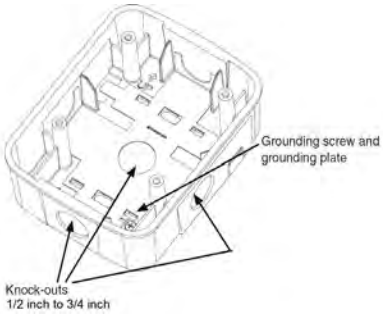
Wiring Diagram



Wall-mount Speaker Strobe



Back Box, Surface-mount



Junction Box for Flush Mounting use 4 in. x 4 in. x 2-1/8 in.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Speaker Strobe, White, Wall-mount, Type I

580-108-00

Features

- White housing with red FIRE lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on wall units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 110, 135, and 185cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch simplifies field selection of speaker voltage
- Speakers offer high fidelity and high volume sound output

Specifications

Nominal Voltage (Speakers)	25 or 70 Vrms (nominal)
Supervisory Voltage (Speakers)	50 VDC maximum
Nominal Voltage (Strobes)	Regulated 12 VDC/FWR Regulated 24 VDC/FWR
Operating Voltage (Includes Fire Alarm Panels with built in sync)	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	9 to 17.5V (12V nominal), or 17 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 110, 135, 185cd
Strobe Flash Rate	1 flash per second
Speaker Frequency Range	400–4,000 Hz
Speaker Power	1/4, 1/2, 1, 2 watts
*Mounting**	Universal Mounting Plate mounts to 4 in. x 4 in. x 2-1/8 in. back box *Flush-mount applications do not require an extension ring.
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Wall-mount Dimensions with Lens and Speaker	6.5 in. L x 5.0 in. W x 3.9 in. D (165 mm x 127 mm x 99 mm)
Dimensions with Surface-mount Back Box	6.6 in. L x 5.1 in. W x 4.5 in. D (168 mm x 130 mm x 116 mm)
Standards Compliance:	
UL Listed	Listed to UL 1480 and UL 1971 S4048
FM Approved	3057493
State of California	7320-1653:0505

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Wall-mount Strobe Current Draw (mA)

Maximum Current Draw 16–33 VDC						
15cd	**30cd**	**75cd**	**95cd**	**110cd**	**135cd**	**185cd**
43	63	107	121	148	172	222

Wall-mount Speaker Sound Output

Sound Output	1/4 W	1/2 W	1 W	2 W
UL Reverberant (dBA @ 10 ft.)	77	80	83	86
UL Anechoic (dBA @ 10 ft.)	77	80	83	86

Ordering Information

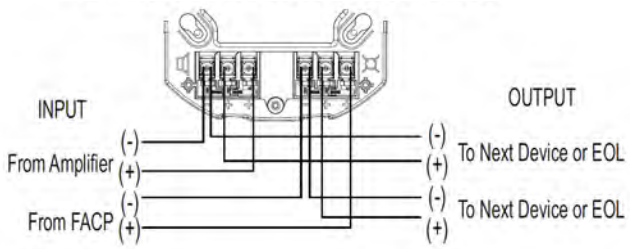
Part Number	Description
580-108-00	Speaker Strobe, White, Type I, Wall-mount, Indoor, 12V or 24V, Red FIRE lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd, 25/70 Vrms, 1/4, 1/2, 1, 2 watts

Associated Parts

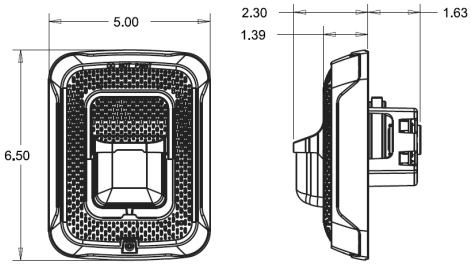
Part Number	Description
589-026-00	Bezel, White, Type I, Wall-mount, Speaker Strobe, no lettering, order one per device
588-099-00	Trim Ring, White, Type I, Wall-mount, Universal, 8.2 in. H x 6.3 in. W x 0.4 in. D
588-093-00	Back Box, Wall-surface-mount, White, Type I, Speaker; Speaker Strobe, 5.12 in. W x 6.62 in. H x 2.25 in. D
367-047-00	Sync Module, Type I

Drawings

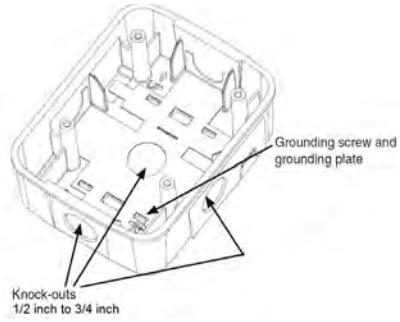
Wiring Diagram



Wall-mount Speaker Strobe



Back Box, Surface-mount



Junction Box for Flush-mounting use 4 in. x 4 in. x 2 1/8 in.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Speaker Strobe, White, Wall-mount, Type I
580-110-00

Features

- White housing with red ALERT lettering and amber lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant Torx head screw
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on wall units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 110, 135, and 185cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rated from 32°F to 120°F (indoor devices)

Specifications

Nominal Voltage (Speakers)	25 or 70 Vrms (nominal)
Supervisory Voltage (Speakers)	50 VDC maximum
Nominal Voltage (Strobes)	Regulated 12 VDC/FWR Regulated 24 VDC/FWR
Operating Voltage (Includes Fire Alarm Panels with built in sync)	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	9 to 17.5V (12V nominal), or 17 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 110, 135, 185cd
Strobe Flash Rate	1 flash per second
Speaker Frequency Range	400–4,000 Hz
Speaker Power	1/4, 1/2, 1, 2 watts
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 2 1/8 in. back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Wall-mount Dimensions with Lens And Speaker	6.5 in. L x 5.0 in. W x 3.9 in. D (165 mm x 127 mm x 99 mm)
Dimensions with Surface-mount Back Box	6.6 in. L x 5.1 in. W x 4.5 in. D (168 mm x 130 mm x 116 mm)
Standards Compliance:	
UL Listed	Speaker Listed to ANSI/UL 1480 Strobe Listed to ANSI/UL 1638 S4048
State of California	7320-1653:0505

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Wall-mount Strobe Current Draw (mA)

Maximum Current Draw 16–33 VDC						
15cd	**30cd**	**75cd**	**95cd**	**110cd**	**135cd**	**185cd**
43	63	107	121	148	172	222

Wall-mount Speaker Sound Output

Sound Output	1/4 W	1/2 W	1 W	2 W
UL Reverberant (dBA @ 10 ft.)	77	80	83	86
UL Anechoic (dBA @ 10 ft.)	77	80	83	86

Ordering Information

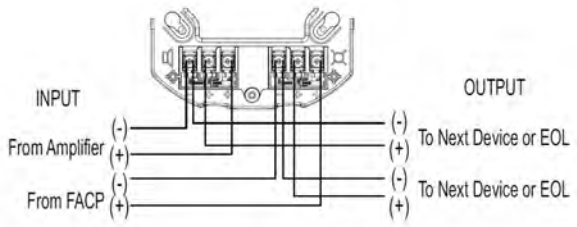
Part Number	Description
580-110-00	Speaker Strobe, White, Type I, Wall-mount, Indoor, 12 V or 24 V, Red ALERT lettering, amber lens, 15, 30, 75, 95, 110, 135, and 185cd, 25/70 Vrms, 1/4, 1/2, 1, 2 watts

Associated Parts

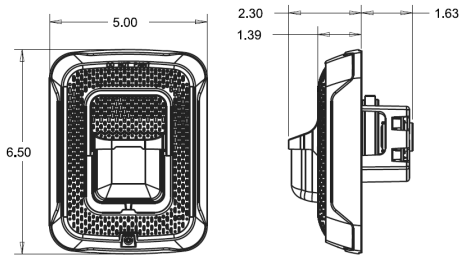
Part Number	Description
589-026-00	Bezel, White, Type I, Wall-mount, Speaker Strobe, no lettering, order one per device
588-099-00	Trim Ring, White, Type I, Wall-mount, Universal, 8.2 in. H x 6.3 in. W x 0.4 in. D
588-093-00	Back Box, Wall-Surface-mount, White, Type I, Speaker; Speaker Strobe, 5.12 in. W x 6.62 in. H x 2.25 in. D.
367-047-00	Sync Module, Type I

Drawings

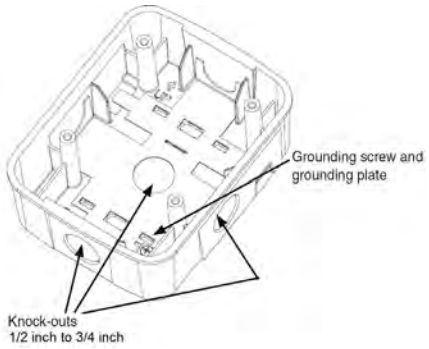
Wiring Diagram



Wall-mount Speaker Strobe



Back Box, Surface-mount



Junction Box for Flush Mounting use 4 in. x 4 in. x 2 1/8 in.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Speaker Strobe, White, Wall-mount, Type I

580-111-00

Features

- White housing with red ALERT lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Automatic selection of 12V or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field-selectable candela settings on wall units:
  12V: 15 and 30cd
  24V: 15, 30, 75, 95, 110, 135, and 185cd
- Universal mounting plate with an onboard shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch simplifies field selection of speaker voltage (25 and 70.7 Vrms) and power settings (1/4, 1/2, 1, and 2 watts)
- Speakers offer high fidelity and high volume sound output

Specifications

Nominal Voltage (Speakers)	25 or 70.7 Vrms
Supervisory Voltage (Speakers)	50 VDC maximum
Nominal Voltage (Strobes)	Regulated 12 VDC/FWR or Regulated 24 VDC/FWR
Operating Voltage (Includes fire alarm panels with built-in sync)	8 to 17.5V (12V nominal) or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	9 to 17.5V (12V nominal) or 17 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 110, 135, and 185cd
Strobe Flash Rate	1 flash per second
Speaker Frequency Range	400–4,000 Hz
Power Settings	1/4, 1/2, 1, or 2 watts
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 2 1/8 in. back box **NOTE** Flush-mount applications do not require an extension ring.
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Dimensions with Lens and Speaker	6.5 in. L x 5 in. W x 2.3 in. D (165 mm x 127 mm x 58 mm)
Wall-mount Back Box Dimensions	6.6 in. L x 5.1 in. W x 4.5 in. D (168 mm x 130 mm x 116 mm)
Standards Compliance:	
UL Listed	UL1480, File S4048
FM Approved	3057493
State of California	7320-1653:0505

Maximum Strobe Current Draw (mA RMS)

DC Input	16–33 VDC						
Candela	**15cd**	**30cd**	**75cd**	**95cd**	**110cd**	**135cd**	**185cd**
Current Draw	43	63	107	121	148	172	222

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Sound Output (dBA @ 10 ft.)

Sound Output	1/4 watt	1/2 watt	1 watt	2 watts
UL Reverberant	77	80	83	86
UL Anechoic	77	80	83	86

Ordering Information

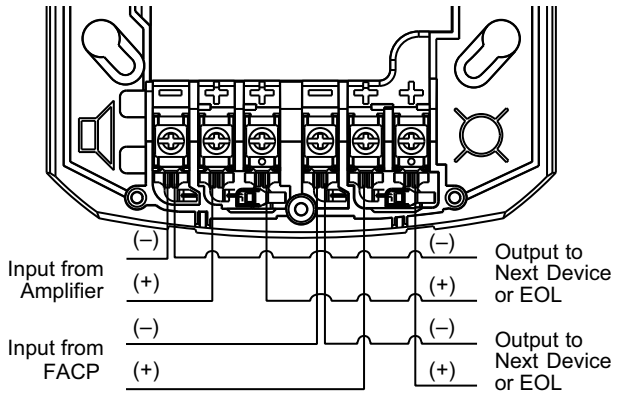
Part Number	Description
580-111-00	Speaker Strobe, White, Type I, Wall-mount, Indoor, 12V or 24V, red ALERT lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd, 25/70.7 Vrms, 1/4, 1/2, 1, and 2 watts

Associated Parts

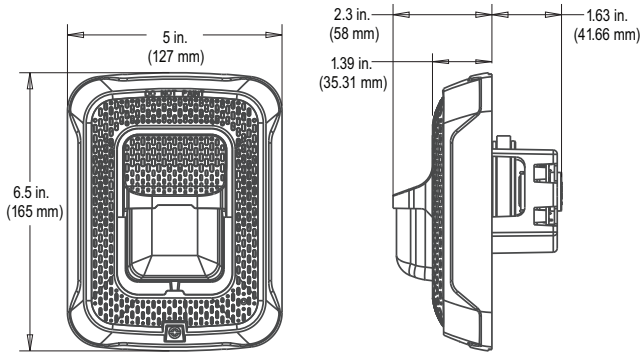
Part Number	Description
589-026-00	Bezel, White, Type I, Wall-mount, Speaker Strobe, no lettering, order one per device
588-099-00	Trim Ring, White, Type I, Wall-mount, Universal, 8.2 in. H x 6.3 in. W x 0.4 in. D
588-093-00	Back Box, Wall-mount, White, Type I, Speaker; Speaker Strobe, 5.12 in. W x 6.62 in. H x 2.25 in. D
367-047-00	Sync Module, Type I

Drawings

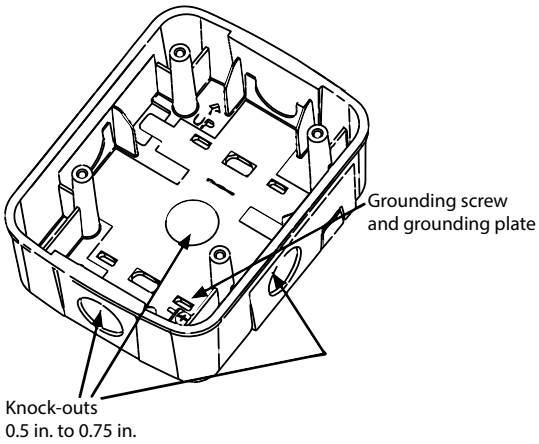
Wiring Diagram



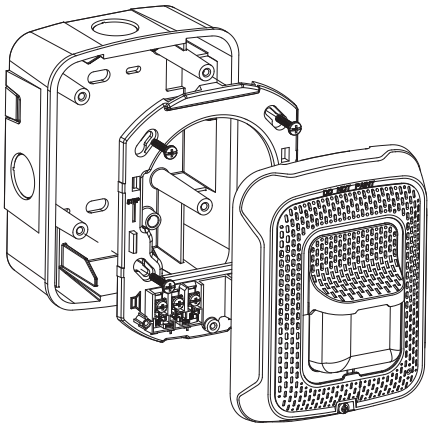
Wall-mount Speaker Strobe



Back Box, Surface-mount



Junction Box for Flush Mounting use 4 in. x 4 in. x 2 1/8 in.



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Speaker Strobe, White, Ceiling-mount, Type I

580-112-00

Specifications

Nominal Voltage (Speakers)	25 or 70 Vrms (nominal)
Supervisory Voltage (Speakers)	50 VDC maximum
Nominal Voltage (Strobes)	Regulated 12 VDC/FWR Regulated 24 VDC/FWR
Operating Voltage (Includes Fire Alarm Panels with built in sync)	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	9 to 17.5V (12V nominal), or 17 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 115, 150, 177cd
Strobe Flash Rate	1 flash per second
Speaker Frequency Range	400–4,000 Hz
Speaker Power	1/4, 1/2, 1, 2 watts
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 2 1/8 in. back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Ceiling-mount Dimensions with Lens and Speaker	6.8 in. OD x 4.5 in. D (173 mm x 73 mm)
Dimension with Surface-mount Back Box	6.9 in. OD x 5.37 in. D (176 mm x 136 mm)
Standards Compliance:	
UL Listed	Listed to 1480 and UL 1971 S4048
State of California	7320-1653:0505

Features

- White housing with red ALERT lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper resistant Torx head screw
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on ceiling units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 115, 150, and 177cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rated from 32°F to 120°F (indoor devices)

Ceiling-mount Strobe Current Draw (mA)

Maximum Current Draw 16–33 VDC						
15cd	**30cd**	**75cd**	**95cd**	**115cd**	**150cd**	**177cd**
41	63	111	134	158	189	226

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ceiling-mount Speaker Sound Output

Sound Output	1/4 W	1/2 W	1 W	2 W
UL Reverberant (dBA @ 10 ft.)	77	80	83	86

Ordering Information

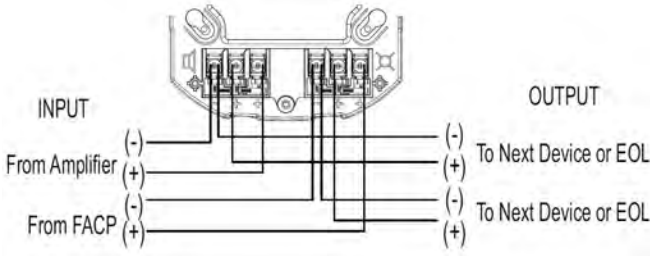
Part Number	Description
580-112-00	Speaker Strobe, White, Type I, Ceiling-mount, Indoor, 12 V or 24 V, Red ALERT lettering, clear lens, 15, 30, 75, 95, 115, 150, and 177cd, 25/70 Vrms, 1/4, 1/2, 1, 2 watts

Associated Parts

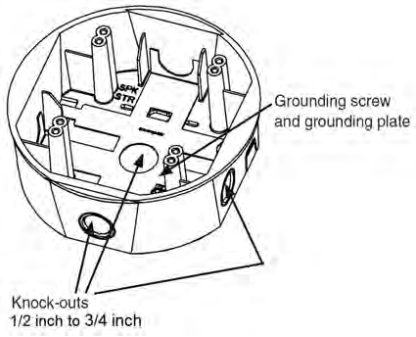
Part Number	Description
589-034-00	Bezel, White, Type I, Ceiling-mount, Speaker Strobe, no lettering, order one per device
365-013-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Amber, order one per device to **change** color of clear lens
365-017-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Blue, order one per device to **change** color of clear lens
365-018-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Green, order one per device to **change** color of clear lens
365-019-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Red, order one per device to **change** color of clear lens
588-095-00	Trim Ring, White, Type I, Ceiling-mount, Universal, 8.5 in. OD x 0.4 in. D
588-094-00	Back Box, Ceiling-Surface-mount, White, Type I, Strobe; Speaker; Speaker Strobe; Horn Strobe; Chime Strobe, 6.9 in. OD x 2.5 in. D
367-047-00	Sync Module, Type I

Drawings

Wiring Diagram



Back Box, Surface-mount



Junction Box for Flush Mounting use 4 in. x 4 in. x 2 1/8 in.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Speaker Strobe, White, Ceiling-mount, Type I

580-113-00

Specifications

Nominal Voltage (Speakers)	25 or 70 Vrms (nominal)
Supervisory Voltage (Speakers)	50 VDC maximum
Nominal Voltage (Strobes)	Regulated 12 VDC/FWR Regulated 24 VDC/FWR
Operating Voltage	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	9 to 17.5V (12V nominal), or 17 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 115, 150, 177cd
Strobe Flash Rate	1 flash per second
Speaker Frequency Range	400–4,000 Hz
Speaker Power	1/4, 1/2, 1, 2 watts
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 2 1/8 in. back box
Wiring Input	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Ceiling-mount Dimensions with Lens and Speaker	6.8 in. OD x 2.8 in. D (173 mm x 73 mm)
with Surface-mount Back Box	6.9 in. OD x 5.37 in. D (176 mm x 136 mm)
Standards Compliance:	
UL Listed	Listed to UL 1480 and UL 1971 S4048
FM Approved	3057493
State of California	7320-1653:0505

Features

- White housing with no lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper resistant Torx head screw
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on ceiling units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 115, 150, and 177cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rated from 32°F to 120°F (indoor devices)

Ceiling-mount Strobe Current Draw (mA)

Maximum Current Draw 16–33 VDC						
15cd	**30cd**	**75cd**	**95cd**	**115cd**	**150cd**	**177cd**
41	63	111	134	158	189	226

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ceiling-mount Speaker Sound Output

Sound Output	1/4 W	1/2 W	1 W	2 W
UL Reverberant (dBA @ 10 ft.)	79	82	85	88

Ordering Information

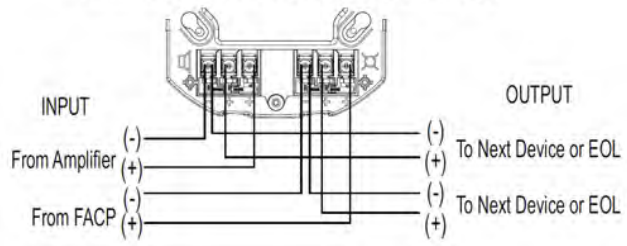
Part Number	Description
580-113-00	Speaker Strobe, White, Type I, Ceiling-mount, Indoor, 12V or 24V, No Lettering, Clear Lens, 15, 30, 75, 95, 115, 150, and 177cd, 25/70 Vrms, 1/4, 1/2, 1, 2 watts

Associated Parts

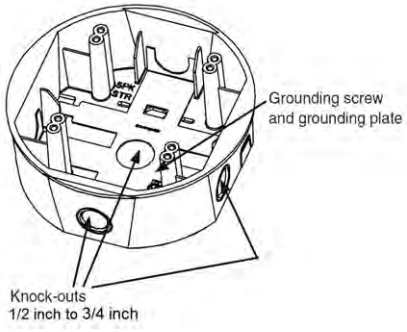
Part Number	Description
589-027-00	Bezel, White, Type I, Ceiling-mount, Speaker Strobe, Red EVAC lettering, order one per device
589-031-00	Bezel, White, Type I, Ceiling-mount, Speaker Strobe, Red AGENT lettering, order one per device
589-032-00	Bezel, White, Type I, Ceiling-mount, Speaker Strobe, Red ALERT lettering, order one per device
589-033-00	Bezel, White, Type I, Ceiling-mount, Speaker Strobe, Red FIRE lettering, order one per device
365-013-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Amber, order one per device to **change** color of clear lens
365-017-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Blue, order one per device to **change** color of clear lens
365-018-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Green, order one per device to **change** color of clear lens
365-019-00	Lens, Type I, Ceiling-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Red, order one per device to **change** color of clear lens
588-095-00	Trim Ring, White, Type I, Ceiling-mount, Universal, 8.5 in. OD x 0.4 in. D
588-094-00	Back Box, Ceiling-Surface-mount, White, Type I, Strobe; Speaker; Speaker Strobe; Horn Strobe; Chime Strobe, 6.9 in. OD x 2.5 in. D
367-047-00	Sync Module Type I

Drawings

Wiring Diagram



Back Box, Ceiling-mount



Junction Box for Flush Mounting use 4 in. x 4 in. x 2 1/8 in.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Speaker Strobe, White, Wall-mount, Type I

580-114-00

Specifications

Nominal Voltage (Speakers)	25 or 70 Vrms (nominal)
Supervisory Voltage (Speakers)	50 VDC maximum
Nominal Voltage (Strobes)	Regulated 12 VDC/FWR Regulated 24 VDC/FWR
Operating Voltage	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	9 to 17.5V (12V nominal), or 17 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 110, 135, 185cd
Strobe Flash Rate	1 flash per second
Speaker Frequency Range	400–4,000 Hz
Speaker Power	1/4, 1/2, 1, 2 watts
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 2 1/8 in. back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Dimensions Wall-mount with Lens and Speaker	6.5 in. L x 5 in. W x 3.9 in. D (165 mm x 127 mm x 99 mm)
Standards Compliance:	
UL Listed	Listed to UL 1480 and UL 1971 S4048
FM Approved	3057493
State of California	7320-1653:0505

Features

- White housing with no lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper resistant Torx head screw
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on wall units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 110, 135, and 185cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rated from 32°F to 120°F (indoor devices)

Wall-mount Strobe Current Draw (mA)

Maximum Current Draw 16–33 VDC						
15cd	**30cd**	**75cd**	**95cd**	**110cd**	**135cd**	**185cd**
43	63	107	121	148	172	222

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Wall-mount Speaker Sound Output

Sound Output	1/4 W	1/2 W	1 W	2 W
UL Reverberant (dBA @ 10 ft.)	77	80	83	86

Ordering Information

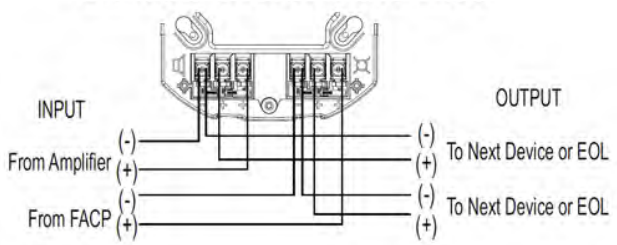
Part Number	Description
580-114-00	Speaker Strobe, White, Type I, Wall-mount, Indoor, 12V or 24V, no lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd, 25/70 Vrms, 1/4, 1/2, 1, 2 watts

Associated Parts

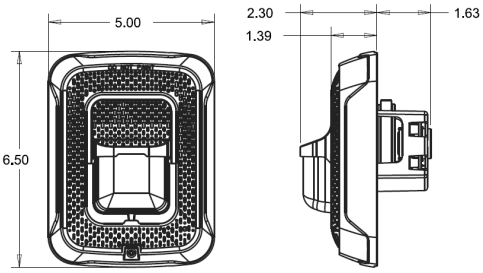
Part Number	Description
589-022-00	Bezel, White, Type I, Wall-mount, Speaker Strobe, Red AGENT lettering, order one per device
589-023-00	Bezel, White, Type I, Wall-mount, Speaker Strobe, Red ALERT lettering, order one per device
589-024-00	Bezel, White, Type I, Wall-mount, Speaker Strobe, Red EVAC lettering, order one per device
589-025-00	Bezel, White, Type I, Wall-mount, Speaker Strobe, Red FIRE lettering, order one per device
365-012-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Amber, order one per device to **change** color of clear lens
365-014-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Blue, order one per device to **change** color of clear lens
365-015-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Green, order one per device to **change** color of clear lens
365-016-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Red, order one per device to **change** color of clear lens
588-099-00	Trim Ring, White, Type I, Wall-mount, Universal, 8.2 in. H x 6.3 in. W x 0.4 in. D
588-093-00	Back Box, Wall-Surface-mount, White, Type I, Speaker; Speaker Strobe, 5.12 in. W x 6.62 in. H x 2.25 in. D
367-047-00	Sync Module, Type I

Drawings

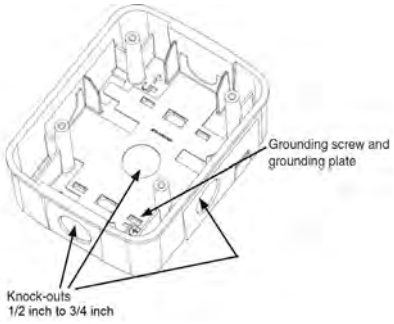
Wiring Diagram



Wall-mount Speaker Strobe



Back Box, Surface-mount



Junction Box for Flush Mounting use 4 in. x 4 in. x 2 1/8 in.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Speaker Strobe, Red, Wall-mount, Type I

580-115-00

Specifications

Nominal Voltage (Speakers)	25 or 70 Vrms (nominal)
Supervisory Voltage (Speakers)	50 VDC maximum
Nominal Voltage (Strobes)	Regulated 12 VDC/FWR Regulated 24 VDC/FWR
Operating Voltage	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	9 to 17.5V (12V nominal), or 17 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 110, 135, 185cd
Strobe Flash Rate	1 flash per second
Speaker Frequency Range	400–4,000 Hz
Speaker Power	1/4, 1/2, 1, 2 watts
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 2 1/8 in. back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Dimensions Wall-mount with Lens And Speaker	6.5 in. L x 5.0 in. W x 3.9 in. D (165 mm x 127 mm x 99 mm)
Standards Compliance:	
UL Listed	Listed to UL 1480 and UL 1971 S4048
FM Approved	3057493
State of California	7320-1653:0505

Features

- Red housing with clear lens and no lettering
- Plug-in design for simplified installation and troubleshooting
- Tamper resistant Torx head screw
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on wall units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 110, 135, and 185cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rated from 32°F to 120°F (indoor devices)

Wall-mount Strobe Current Draw (mA)

Maximum Current Draw 16–33 VDC						
15cd	**30cd**	**75cd**	**95cd**	**110cd**	**135cd**	**185cd**
43	63	107	121	148	172	222

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Wall-mount Speaker Sound Output

Sound Output	1/4 W	1/2 W	1 W	2 W
UL Reverberant (dBA @ 10 ft.)	77	80	83	86

Ordering Information

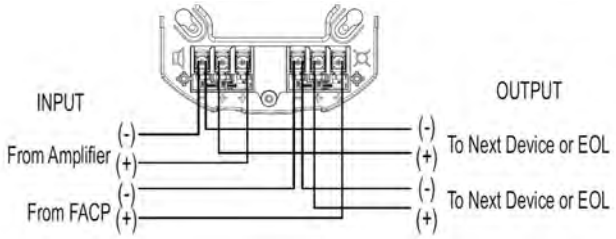
Part Number	Description
580-115-00	Speaker Strobe, Red, Type I, Wall-mount, Indoor, 12V or 24V, no lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd, 25/70 Vrms, 1/4, 1/2, 1, 2 watts

Associated Parts

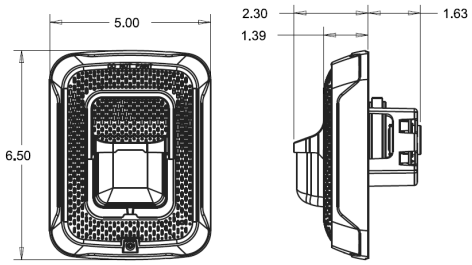
Part Number	Description
589-017-00	Bezel, Red, Type I, Wall-mount, Speaker Strobe, White AGENT lettering, order one per device
589-018-00	Bezel, Red, Type I, Wall-mount, Speaker Strobe, White ALERT lettering, order one per device
589-019-00	Bezel, Red, Type I, Wall-mount, Speaker Strobe, White EVAC lettering, order one per device
589-020-00	Bezel, Red, Type I, Wall-mount, Speaker Strobe, White FIRE lettering, order one per device
365-012-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Amber, order one per device to **change** color of clear lens
365-014-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Blue, order one per device to **change** color of clear lens
365-015-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Green, order one per device to **change** color of clear lens
365-016-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Red, order one per device to **change** color of clear lens
588-098-00	Trim Ring, Red, Type I, Wall-mount, Universal, 8.2 in. H x 6.3 in. W x 0.4 in. D
588-092-00	Back Box, Wall-Surface-mount, Red, Type I, Speaker; Speaker Strobe, 5.12 in. W x 6.62 in. H x 2.25 in. D
367-047-00	Sync Module, Type I

Drawings

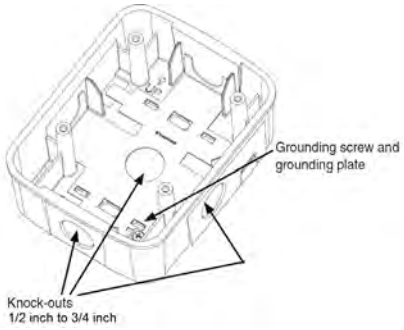
Wiring Diagram



Wall-mount Speaker Strobe



Back Box, Surface-mount



Junction Box for Flush Mounting use 4 in. x 4 in. x 8.5 in.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Speaker Strobe for Hazardous Locations

580-117-00

Description

This speaker strobe for hazardous locations is a modular design—each can be functional as a stand-alone device or as a 2-module configuration when more than one signal is required. The connecting system requires only a single explosion-proof wiring gland external to the device. When connected, they can be wired to function independently or in tandem. The robust enclosure ensures suitability for all hazardous location fire alarm and general signaling applications.

Features

- UL and cUL listed for Class I, Div 2, Groups A, B, C, and D; Class II, Div 2, Groups F and G; Class III
- Zone 1, 21 Rated, IECEx, ATEX, IIC
- Non-metallic corrosion resistant design with glass reinforced polyester (GRP) housings
- NEMA 4X, IP66 enclosure; visual signal is also IP69K compliant
- 24 VDC
- 15 W, 70 Vrms loudspeaker
- 21 joule high-output Xenon strobe
- 10,000 hour lamp life
- Strobe has a supervisory diode and 4-wire terminal block
- 316 stainless steel fasteners and strobe dome guard
- Black housing with a blue lens
- Standard M20 cable entries; 1/2 in. NPT and 3/4 in. NPT adaptors available; M25 cable entry option

Application Notes

Signals selected for hazardous locations should be UL Listed and marked for at least the Hazardous Location Classifications dictated by the application. The signal should be 10 dB higher than the ambient noise level and as different from the background noise as possible.

The National Electric Code has created three classes of hazardous locations: Class I Hazardous Gases; Class II Hazardous Dusts; Class III Hazardous Fibers.

Specifications

Voltage	24 VDC
Strobe Candela	500cd
Strobe Flash Rate	60 flashes per minute
Loudspeaker Output	106 dBA at 3.3 ft. (1 m) 96 dBA at 10 ft. (3 m)
Input Wiring	14 to 20 AWG **NOTE** Required wire gauge based on wire voltage drop.
Operating Temperature	–67°F to 158°F (–55°C to 70°C)
Relative Humidity	95%
Cable Entries	2 x M20 x 1.5 mm threaded gland entries available
Dimensions	8.95 in. H x 6.09 in. W x 15.7 in. L (22.74 cm x 15.48 cm x 39.88 cm)
Weight	18.84 lb (8.54 kg)
Standards Compliance:	
UL Listed	UL 121201, UL 1638, UL 1480, UL 1480A, UL 60079-0, 60079-1, 60079-31
Certificates	E207119, E488522, 20170926-E12629, and 20171020-E492950
IECEx Cert.	Strobe IECEx BAS 15.0103X Audible IECEx BAS 15.0104X
ATEX Cert.	Strobe Baseefa 15 ATEX0154X Audible Baseefa 15 ATEX0155X

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Loudspeaker Output Level and Current Draw

Audio Level	Max. Current Draw	Decibels at 10 ft. (3 m)	Decibels at 3.3 ft. (1 m)
70 Vrms	0.16A	96 dBA	106 dBA

Strobe Output Level* and Current Draw

Operating Voltage	Nominal Oper. Current	Light Output in Candela*	Flash Rate
24 VDC	1.5A	500cd	60 FPM

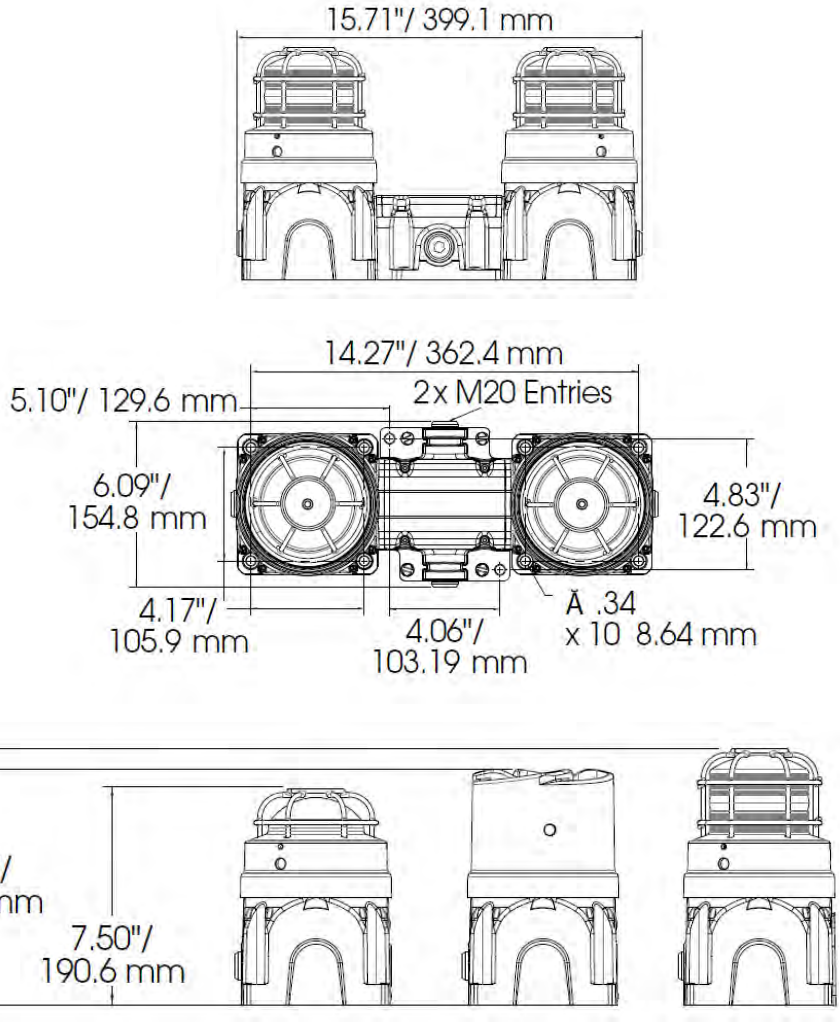
*Output based on clear lens.

Ordering Information

Part Number	Description
580-117-00	Speaker Strobe for Hazardous Locations, 24 VDC, 70 Vrms, 15 W speaker, 21 J strobe, 96 dBA, 500cd output, black housing with blue lens, cable entries: two M20 x 1.5 mm threaded gland entry

Drawings

Dimensions



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Speaker Strobe LED for Hazardous Locations

580-117-01, 580-117-02, 580-117-03

Description

This speaker strobe LED for hazardous locations is a modular design; each can be functional as a stand-alone device or as a 2-module configuration when more than one signal is required. The connecting system requires only a single explosion-proof wiring gland external to the device. When connected, they can be wired to function independently or in tandem. The robust enclosure ensures suitability for all hazardous location fire alarm and general signaling applications.

P/N 580-117-01 Shown

Features

- UL and cUL listed for Class I, Div 2, Groups A, B, C, and D; Class II, Div 2, Groups F and G; Class III
- Zone 1, 21 Rated, IECEx, ATEX, IIC
- Non-metallic corrosion resistant design with glass reinforced polyester (GRP) housings
- NEMA 4X, IP66 enclosure; visual signal is also IP69K compliant
- 24 VDC
- 15 watt, 70 Vrms loudspeaker
- LED strobe with eight field-selectable flash patterns including 60, 75, and 90 FPM; default is 60 FPM
- 50,000 hour lamp life
- LED has a supervisory diode and 4-wire terminal block
- 316 stainless steel fasteners and LED dome guard
- Black housing with a blue, amber, or clear lens
- Standard M20 cable entries; 1/2 in. NPT and 3/4 in. NPT adaptors available; M25 cable entry option

Application Notes

Signals selected for hazardous locations should be UL Listed and marked for at least the Hazardous Location Classifications dictated by the application. The signal should be 10 dB higher than the ambient noise level and as different from the background noise as possible.

The National Electric Code has created three classes of hazardous locations: Class I Hazardous Gases; Class II Hazardous Dusts; Class III Hazardous Fibers.

Specifications

Voltage	24 VDC
Strobe Candela	175cd
Strobe Flash Rate	Default: 60 FPM (eight settings available)
Loudspeaker Output	106 dBA at 3.3 ft. (1 m) 96 dBA at 10 ft. (3 m)
Input Wiring	14 to 20 AWG **NOTE** Required wire gauge based on wire voltage drop.
Operating Temperature	–67°F to 158°F (–55°C to 70°C)
Relative Humidity	95%
Cable Entries	2 x M20 x 1.5 mm threaded gland entries available
Dimensions	8.23 in. H x 6.09 in. W x 15.7 in. L (20.91 cm x 15.48 cm x 39.88 cm)
Weight	17.84 lb (8.09 kg)
Standards Compliance:	
UL Listed	UL 121201, UL 1638, UL 1480, UL 1480A, UL 60079-0, 60079-1, 60079-31
Certificates	E207119, E488522, 20170926-E12629, and 20171020-E492950
IECEx Cert.	LED IECEx BAS 15.0102X Audible IECEx BAS 15.0104X
ATEX Cert.	LED Baseefa 15 ATEX0153X Audible Baseefa 15 ATEX0155X

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Loudspeaker Output Level and Current Draw

Audio Level	Max Current Draw	Decibels at 10 ft. (3 m)	Decibels at 3.3 ft. (1 m)
70 Vrms	0.16A	96 dBA	106 dBA

Strobe Output Level* and Current Draw

Operating Voltage	Operating Current	Light Output in candela*	Default Flash Rate
24 VDC	0.3A	175cd	60 FPM

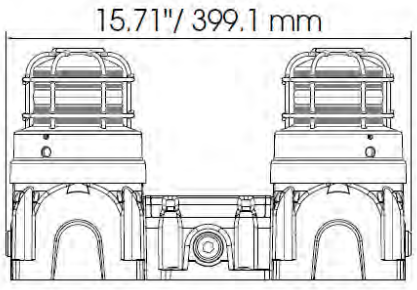
*Strobe output based on clear, low profile lens.

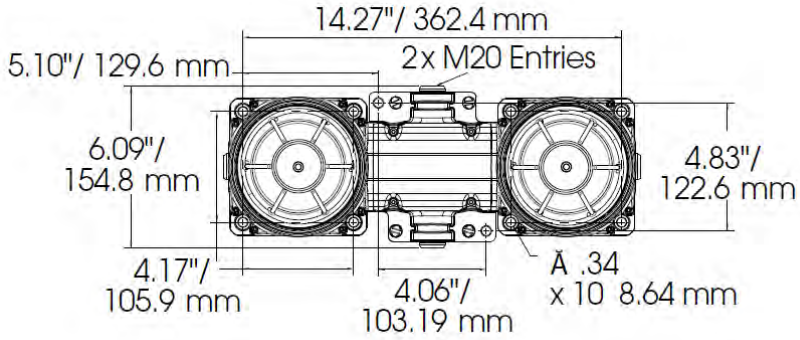
Ordering Information

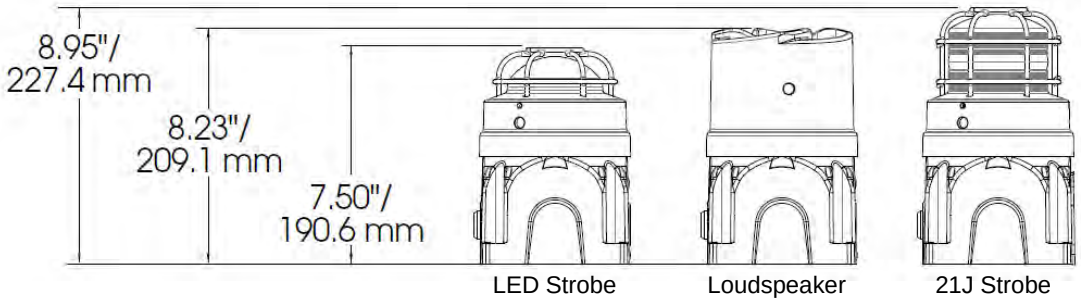
Part Number	Description
580-117-01	Speaker Strobe LED for Hazardous Locations, 24 VDC, 70 Vrms, 15 watt speaker, 96 dBA, 175cd output, black housing with low profile blue lens, cable entries: two M20 x 1.5 mm threaded gland entry
580-117-02	Speaker Strobe LED for Hazardous Locations, 24 VDC, 70 Vrms, 15 watt speaker, 96 dBA, 175cd output, black housing with low profile amber lens, cable entries: two M20 x 1.5 mm threaded gland entry
580-117-03	Speaker Strobe LED for Hazardous Locations, 24 VDC, 70 Vrms, 15 watt speaker, 96 dBA, 175cd output, black housing with low profile clear lens, cable entries: two M20 x 1.5 mm threaded gland entry

Drawings

Dimensions







Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Speaker Strobe, White, Ceiling-mount, Type I

580-118-00

Features

- White housing with FIRE lettering and clear lens
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant Torx head screw
- Automatic selection of 12V or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field-selectable candela settings:
  12V: 15 and 30cd
  24V: 15, 30, 75, 95, 115, 150, and 177cd
- Rotary switch simplifies field selection of speaker voltage (25 and 70.7 Vrms) and power settings (1/4, 1/2, 1, and 2 watts)
- Universal mounting plate with an onboard shorting spring that allows wire continuity testing before device is installed; disengages after device is installed

Specifications

Speaker Voltage	Nominal: 25 or 70.7 Vrms Supervisory: 50 VDC maximum
Nominal Strobe Voltage	Regulated 12 VDC or Regulated 24 VDC/FWR
Operating Voltage Range	8 to 17.5V (12V) or 16 to 33V (24V)
Operating Voltage Range with Type I Sync Module	8.5 to 17.5V (12V) or 16.5 to 33V (24V)
Candela Settings	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 115, 150, and 177cd
Strobe Flash Rate	1 flash per second
Speaker Frequency Range	400–4,000 Hz
Speaker Power	1/4, 1/2, 1, and 2 watts
Mounting	Universal Mounting Plate mounts to back box
Wiring Input	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Dimensions Including Lens and Speaker	6.8 in. OD x 2.8 in. D (173 mm x 73 mm)
Dimensions with Back Box	6.9 in. OD x 5.37 in. D (176 mm x 136 mm)
Standards Compliance:	
UL Listed	UL1480, File S4048
FM Approved	3057493
State of California	7320-1653:0505

Strobe Current Draw (mA RMS)

DC Input	16–33 VDC						
Candela Setting	15cd	30cd	75cd	95cd	115cd	150cd	177cd
Current Draw	41	63	111	134	158	189	226

Speaker Sound Output (dBA @ 10 ft.)

Sound Output	1/4 W	1/2 W	1 W	2 W
UL Reverberant	77	80	83	86

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Ordering Information

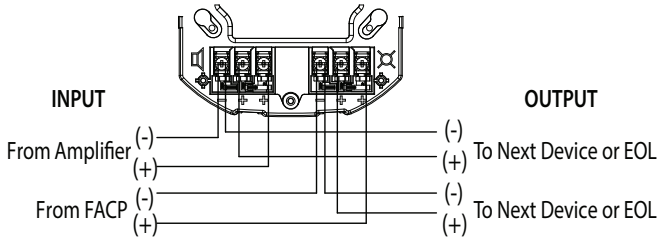
Part Number	Description
580-118-00	Speaker Strobe, White, Type I, Ceiling-mount, Indoor, 12V or 24V, FIRE lettering, clear lens, 15, 30, 75, 95, 115, 150, and 177cd, 25/70.7 Vrms, 1/4, 1/2, 1, 2 watts

Associated Parts

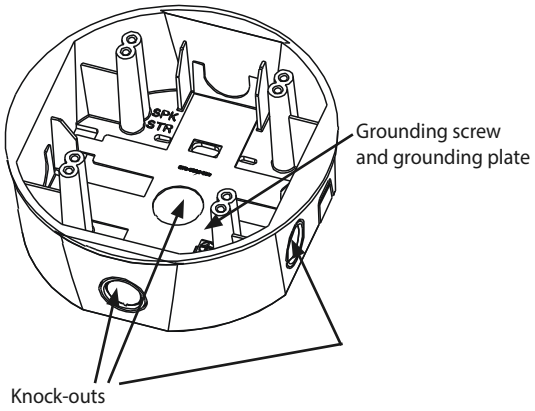
Part Number	Description
365-013-00	Amber Lens for Type I Ceiling-mount Strobe devices
365-017-00	Blue Lens for Type I Ceiling-mount Strobe devices
365-018-00	Green Lens for Type I Ceiling-mount Strobe devices
365-019-00	Red Lens for Type I Ceiling-mount Strobe devices
588-095-00	Trim Ring, White, Type I, Ceiling-mount, Universal, 8.5 in. OD x 0.4 in. D
588-094-00	Back Box, Ceiling-mount, White, 6.9 in. OD x 2.5 in. D, for Type I Strobe, Speaker, Speaker Strobe, Horn Strobe, or Chime Strobe
367-047-00	Sync Module, Type I

Drawings

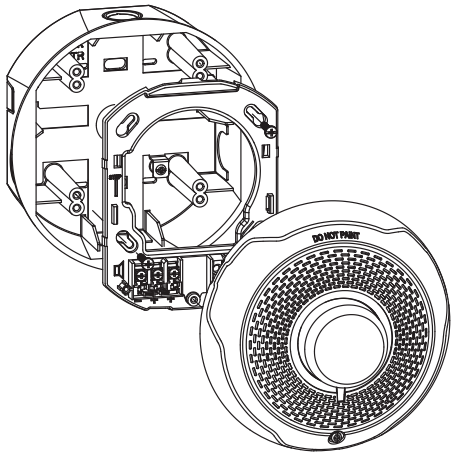
Wiring Diagram



Back Box, Ceiling-mount



Surface-mount with Back Box P/N 588-094-00



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Drop-in Speaker Strobe, Tile, White, Ceiling-mount, Type I

580-119-00

Features

- White housing with optional FIRE lettering decal included
- Sized to use with standard drop-in ceiling opening 2 ft. x 2 ft. (61 cm x 61 cm)
- Complete turn-key solution that eliminates the need for a separate back box, extension ring, and suspended ceiling support bracket
- Automatic selection of 12V or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field-selectable candela settings:
  12V: 15 and 30cd
  24V: 15, 30, 75, 95, 115, 150, and 177cd
- Rotary switch simplifies field selection of speaker voltage (25 and 70.7 Vrms) and power settings (1/4, 1/2, 1, and 2 watts)
- Simplified wiring process saves time and eliminates ground faults
- Includes seismic tie off or screw attachment points

Specifications

Speaker Voltage	Nominal: 25 or 70.7 Vrms Supervisory: 50 VDC maximum
Nominal Strobe Voltage	Regulated 12 VDC Regulated 24 VDC/FWR
Operating Voltage Range	8 to 17.5V (12V) or 16 to 33V (24V)
Operating Voltage Range with Type I Sync Module	8.5 to 17.5V (12V) or 16.5 to 33V (24V)
Candela Settings	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 115, 150, and 177cd
Strobe Flash Rate	1 flash per second
Speaker Frequency Range	400–4,000 Hz
Speaker Power	1/4, 1/2, 1, and 2 watts
Mounting	2 ft. x 2 ft. (61 cm x 61 cm) suspended ceiling tile opening
Wiring Input	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Speaker Strobe Dimensions	23.69 in. L x 23.69 in. W x 3.29 in. D (60.2 cm x 60.2 cm x 8.4 mm)
Standards Compliance:	
UL Listed	UL1480, File S4048
FM Approved	3057493
State of California	7125-1653:0522

Strobe Current Draw (mA RMS)

DC Input	16–33 VDC						
Candela Setting	15cd	30cd	75cd	95cd	115cd	150cd	177cd
Current Draw	41	63	111	134	158	189	226

Speaker Sound Output (dBA @ 10 ft.)

Sound Output	1/4 W	1/2 W	1 W	2 W
UL Reverberant	77	79	83	86
ULC Anechoic	79	82	85	88

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

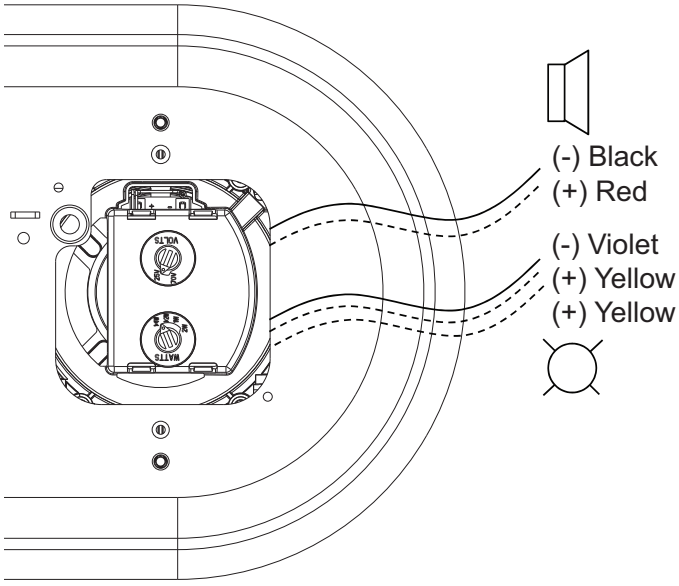
Ordering Information

Part Number	Description
580-119-00	Drop-in Speaker Strobe Tile, White, Type I, Ceiling-mount, Indoor, 12V or 24V, clear lens, 15, 30, 75, 95, 115, 150, and 177cd, 25/70.7 Vrms, 1/4, 1/2, 1, 2 watts, optional FIRE decal included

Associated Parts

Part Number	Description
365-013-00	Amber Lens for Type I Ceiling-mount Strobe devices
365-017-00	Blue Lens for Type I Ceiling-mount Strobe devices
365-018-00	Green Lens for Type I Ceiling-mount Strobe devices
365-019-00	Red Lens for Type I Ceiling-mount Strobe devices
367-047-00	Sync Module, Type I

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Speaker Strobe, White, Ceiling-mount, Type II

580-120-00

Features

- Indoor speaker strobe with white housing, FIRE lettering, and a clear lens
- Field-selectable candela settings of 15, 30, 75, and 95cd
- Produces high efficiency sound output
- Dual voltage capability (25 or 70 Vrms) and field-selectable taps from 1/8 to 2 W
- Strobes can be synchronized
- Quick installation with IN/OUT screw terminals and 12 to 18 AWG input wiring
- Replaceable speaker grille
- Integrated mounting plate included

Specifications

Nominal Voltage	Speakers: 25 or 70 Vrms Strobes: 25 VDC
Operating Voltage	16 to 33 VDC
Candela	15, 30, 75, and 90cd
Strobe Flash Rate	1 flash per second
Speaker Power	1/8, 1/4, 1/2, 1, or 2 watts
Frequency Range	400–4,000 Hz
Input Wiring	12 to 18 AWG
Mounting	Ceiling-mount
Operating Temperature	33.8°F to 122°F (0°C to 50°C)
Relative Humidity	93% maximum
Dimensions	7.327 in. OD x 2.68 in. D (18.6 cm x 6.8 cm)
Weight	1.6 lb (0.73 kg)
Standards Compliance:	
UL Listed	UL1971, UL1480, and UL1638
FM	Approved
State of California	7320-0785:0134

UL Maximum Current Draw

DC Input	16 to 33 VDC			
Candela Settings	15cd	30cd	75cd	95cd
Current Draw	0.065	0.105	0.189	0.249

Speaker Output

Sound Output	1/8 W	1/4 W	1/2 W	1 W	2 W
UL Reverberant dBA @ 10 ft.	75	78	81	84	87

Ordering Information

Part Number	Description
580-120-00	Speaker Strobe, Round, White, Type II, Ceiling-mount, Indoor, 16 to 33 VDC, red FIRE lettering, clear lens, 15, 30, 75 and 95cd, 400–4,000 Hz, 25/70 Vrms, 1/8, 1/4, 1/2, 1, and 2 watts

Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
588-013-01	Back Box, indoor, surface-mount, white
588-027-00	Ceiling Tile 2 ft. bridge support for 4 in. speakers
404-119-00	NAC Power Extender, 115 VAC 60 Hz, 12/24 VDC, 8A, four class B or two Class A, use with Type II strobes **NOTE** P/N 404-119-00 requires two 12V/8Ah batteries (P/N 400-704-00) for 24 hour battery backup OR two 12V/12Ah batteries (P/N 400-713-00) for 72 hour battery backup.

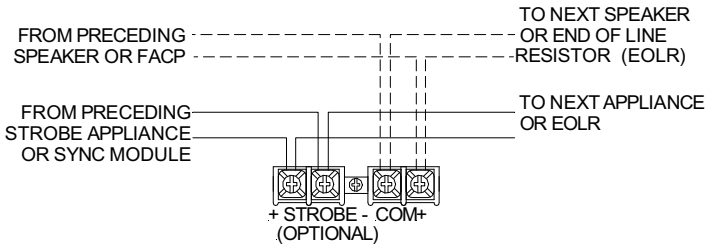
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

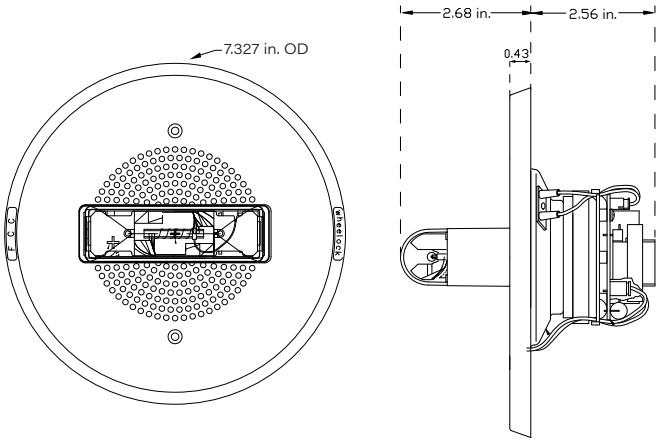
Notification Appliance Devices

Drawings

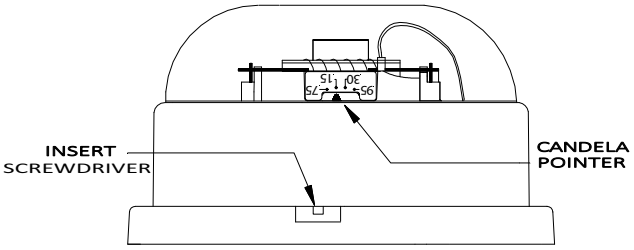
Wiring



Dimensions

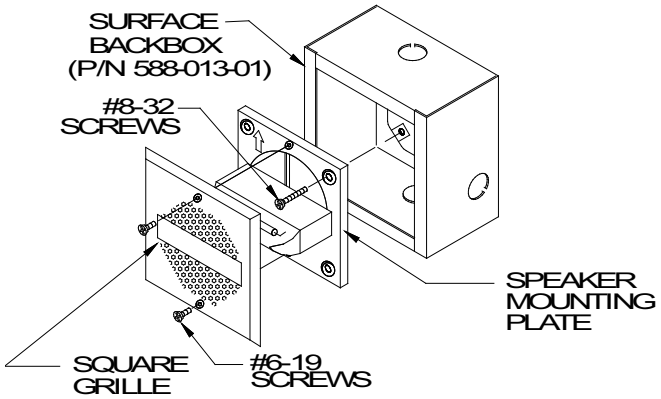


Candela

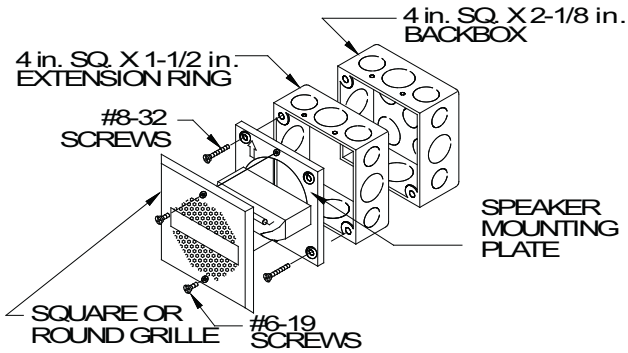


Mounting

Surface-mount



Flush-mount



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices Catalog Section 11

Bells

Motorized Vibrating Alarm Bell 581-422-00, 581-473-00
Vibrating Alarm Bell, Explosion-proof 581-423-00, 581-451-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Motorized Vibrating Alarm Bell

581-422-00, 581-473-00

(P/N 581-473-00 Shown)

Features

- 24 VDC, 6 in. or 10 in. shell sizes, red housing
- Prewired for simplified installation
- Mounting options for surface, semi-flush, outdoor, and concealed conduit installation
- Motorized alarm bell
- Low power consumption with high sound output
- Polarized for DC supervision with built-in transient protection
- Weatherproof

Specifications

Dimensions	P/N 581-422-00: 6 in. OD (15.2 cm) P/N 581-473-00: 10 in. OD (25.4 cm)
Input Voltage	24 VDC
Input Current	P/N 581-422-00: 20 mA maximum P/N 581-473-00: DC 31.1 mA/FWR 53.5 mA
Sound Output	P/N 581-422-00: 95 dBA at 10 ft. P/N 581-473-00: 81 dBA at 10 ft. Sound output measured at Underwriter Laboratories as specified in UL464
Environmental	P/N 581-422-00: –40°F to 150°F (–40°C to 66°C) P/N 581-473-00: –31°F to 140°F (–35°C to 60°C)
Mounting Options:	
Indoor	Surface- or semi-flush-mount back box (P/N 588-005-00) Adaptor plate required for concealed conduit mounting (P/N 588-006-00)
Outdoor	Weatherproof back box (P/N 588-000-01)
Standards Compliance:	
UL Listed	P/N 581-422-00: S3247 P/N 581-473-00: S4011
FM Approved	P/N 581-473-00: 3005255
State of California	P/N 581-422-00: 7135-0328:0519 P/N 581-473-00: 7135-1653:0125

Ordering Information

Part Number	Description
581-422-00	Motorized 6 in. Bell, 20 mA at 24 VDC
581-473-00	Motorized 10 in. Bell, DC 31.1 mA/FWR 53.5 mA at 24 VDC

Associated Parts

Part Number	Description
588-000-01	Back Box, weatherproof with gasket, red
588-005-00	Back Box, indoor, surface- or semi-flush-mount, red
588-006-00	Adaptor Plate, red

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Vibrating Alarm Bell, Explosion-proof

581-423-00, 581-451-00

Description

Use these diode-polarized, vibrating-type alarm bells for hazardous locations. They are ideally suited for aircraft hangars and areas where they might be exposed to gasoline or other fuels, paint spray, or dust.

Signals selected for hazardous locations should be UL Listed and marked for at least the Hazardous Location Classifications indicated by the application. The signal should be 10 dB higher than the ambient noise level and as different from the background noise as possible.

The National Electric Code has created three classes of hazardous locations:

- Class I—Hazardous Gases
- Class II—Hazardous Dusts
- Class III—Hazardous Fibers

Features

- UL Listed locations:
  - Class I, Divisions 1 and 2 (Groups B, C, D)
  - Class II, Divisions 1 and 2 (Groups E, F, G)
  - Class III, Divisions 1 and 2
- Self-compensating plunger never needs adjustment
- Polarized for DC supervision of alarm lines
- Mounts to any solid surface using 3/8 in. fasteners
- Fitted with sealing fitting for 3/4 in. conduit
- Corrosion-resistant finish
- NEMA Type 4 enclosure

Specifications

Input Voltage	24 VDC
Amperes RMS	P/N 581-423-00: 0.290A P/N 581-451-00: 0.290A
dBA at 10 ft.	P/N 581-423-00: 83 dB P/N 581-451-00: 86 dB
Weight	P/N 581-423-00: 5.25 lb P/N 581-451-00: 7 lb
Dimensions	See “Drawings”

Ordering Information

Bells

Part Number	Description
581-423-00	Vibrating Alarm Bell, explosion-proof, 6 in., 24 VDC
581-451-00	Vibrating Alarm Bell, explosion-proof, 8 in., 24 VDC

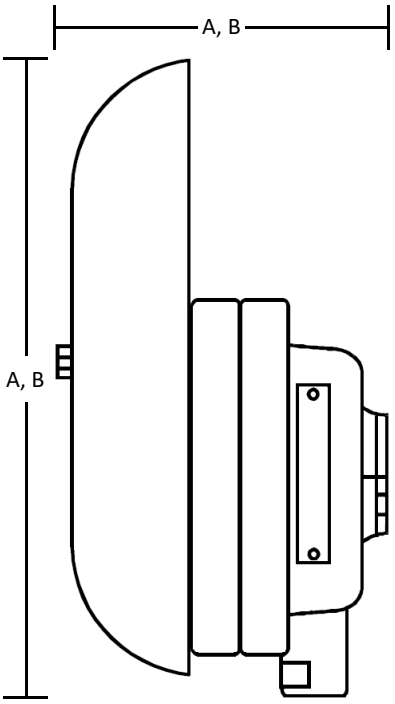
Associated Parts

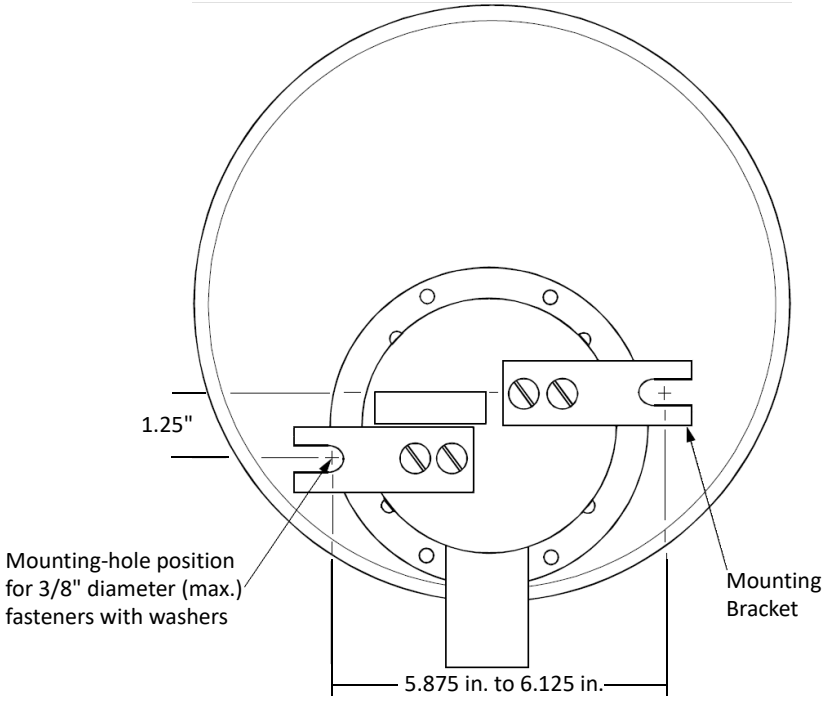
Part Number	Description
210-544-00	Transient Protector for explosion-proof devices, required

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Drawings





A (P/N 581-423-00): 7 in. High, 5 in. Deep
8 (P/N 581-451-00): 9 in. High, 5.125 in. Deep

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices Catalog Section 11

Chimes

Indoor Chime, Red, Wall-mount, Type I 587-009-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Indoor Chime, Red, Wall-mount, Type I

587-009-00

Specifications

Nominal Voltage	Regulated 12 VDC Regulated 24 DC/FWR
Operating Voltage Range	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage Range with Type I Sync Module	8.5 to 17.5V (12V nominal), or 16.5 to 33V (24V nominal)
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in. back box, or 4 in. Octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Dimensions Wall-mount Chime	5.6 in. L x 4.7 in. W x 1.25 in. D (143 mm x 119 mm x 32 mm)
Standards Compliance	Listed to UL 464
UL Listed	S4011
FM Approved	3057383 3057072
State of California	7135-1653:0503

Features

- Red housing with no lettering
- Plug-in design for simplified installation and troubleshooting
- Tamper-resistant construction
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch for tone and volume selections
- Five selectable tones with high and low volume settings

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Chime Current Draw (mA), Sound Output (dBA)

Sound Pattern	Volume	Maximum Current Draw 16–33 VDC	Sound Output (dBA) 16–33 VDC
1 Second Chime	High	8	62
1 Second Chime	Low	8	55
1/4 Second Chime	High	10	70
1/4 Second Chime	Low	9	61
Temporal Chime	High	10	66
Temporal Chime	Low	9	60
5 Second Whoop	High	15	78
5 Second Whoop	Low	10	64
Coded	High	15	51

Ordering Information

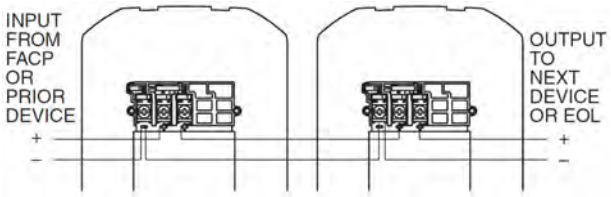
Part Number	Description
587-009-00	Chime, Red, Type I, Wall-mount, Indoor, 12V or 24V, no lettering

Associated Parts

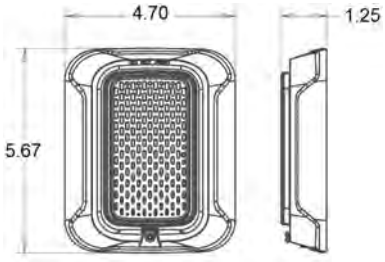
Part Number	Description
589-042-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White AGENT lettering, order one per device
589-043-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White ALERT lettering, order one per device
589-044-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White EVAC lettering, order one per device
589-045-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White FIRE lettering, order one per device
588-098-00	Trim Ring, Red, Type I, Wall-mount, Universal, 8.2 in. H X 6.3 in. W X 0.4 in. D
588-090-00	Back Box, Wall Surface-mount, Red, Type I, Strobe, Horn Strobe; Chime Strobe; Chime; Horn, 4.82 in. W X 5.78 in. H X 1.85 in. D
367-047-00	Sync Module, Type I

Drawings

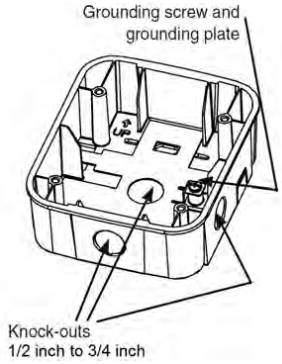
Wiring Diagram



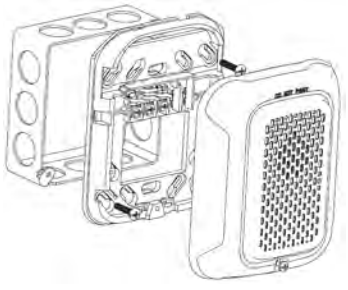
Wall-mount Chime



Back Box, Surface-mount



Junction Box for Flush Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices Catalog Section 11

Chime Strobes

Indoor Chime Strobe, Red, Wall-mount, Type I 587-008-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Chime Strobe, Red, Wall-mount, Type I

587-008-00

Features

- Red housing with clear lens and no lettering
- Plug-in design with minimal intrusion into the back box
- Tamper resistant construction
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on wall units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 110, 135, and 185cd
- Universal mounting plate with an on-board shorting spring that allows wire continuity testing before device is installed; disengages after device is installed
- Rotary switch for tone and volume selections
- Five selectable tones with high and low volume settings

Specifications

Nominal Voltage	Regulated 12 VDC Regulated 24 DC/FWR
Operating Voltage	8 to 17.5V (12V nominal), or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	8.5 to 17.5V (12V nominal), or 16.5 to 33V (24V nominal)
Candela	12 VDC: 15 and 30cd 24 VDC: 15, 30, 75, 95, 110, 135, 185cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting Plate mounts to 4 in. x 4 in. x 1.5 in. back box, or 4 in. Octagon back box, or Double-gang back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Dimensions Wall-mount Chime Strobe with lens	5.6 in. L x 4.7 in. W x 1.91 in. D (143 mm x 119 mm x 49 mm)
Standards Compliance	Listed to UL 1638 and UL 464
UL Listed	S4011
FM Approved	3057383 3057072
State of California	7135-1653:0503

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Wall-mount Chime Strobe Current Draw (mA) and Sound Output (dBA)

Chime Tone	Volume Setting	Maximum Current Draw 16–33 VDC							Sound Output (dBA) 16–33 VDC
		15cd	30cd	75cd	95cd	110cd	135cd	185cd	
1 Second Chime	High	51	71	115	136	161	202	238	62
1 Second Chime	Low	50	70	116	136	154	199	242	55
1/4 Second Chime	High	52	72	117	137	168	201	242	70
1/4 Second Chime	Low	49	70	115	136	165	199	241	61
Temporal Chime	High	49	69	112	137	168	201	246	66
Temporal Chime	Low	47	68	111	136	167	196	241	60
5 Second Whoop	High	52	70	113	132	176	206	243	78
5 Second Whoop	Low	46	66	108	130	170	202	240	64
Coded - for Chime Only	High	na	na	na	na	na	na	na	51

Ordering Information

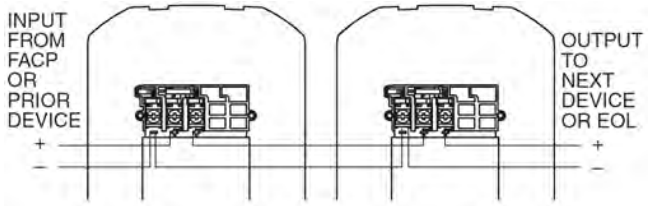
Part Number	Description
587-008-00	Chime Strobe, Red, Type I, Wall-mount, Indoor, 12V or 24V, no lettering, Clear lens, 15, 30, 75, 95, 110, 135, 185 Candela

Associated Parts

Part Number	Description
589-042-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White AGENT lettering, order one per device
589-043-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White ALERT lettering, order one per device
589-044-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White EVAC lettering, order one per device
589-045-00	Bezel, Red, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, White FIRE lettering, order one per device
365-012-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Amber, order one per device to **change** color of clear lens
365-014-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Blue, order one per device to **change** color of clear lens
365-015-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Green, order one per device to **change** color of clear lens
365-016-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Red, order one per device to **change** color of clear lens
588-098-00	Trim Ring, Red, Type I, Wall-mount, Universal, 8.2 in. H x 6.3 in. W x 0.4 in. D
588-090-00	Back Box, Wall Surface-mount, Red, Type I, Strobe, Horn Strobe; Chime Strobe; Chime; Horn, 4.82 in. W x 5.78 in. H x 1.85 in. D
367-047-00	Sync Module, Type I

Drawings

Wiring Diagram

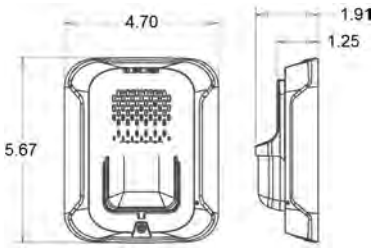


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

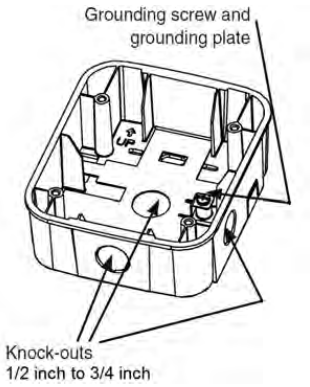
Detect Manage Record

Notification Appliance Devices

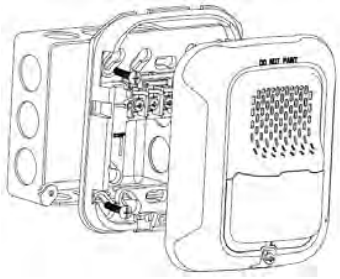
Wall-mount Chime Strobe



Back Box, Surface-mount



Junction Box for Flush Mounting



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices Catalog Section 11

MNS Wide Area

MNS Driver Amplifier with Speaker Arrays - Reserved

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices Catalog Section 11

Bases – Reserved

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices Catalog Section 11

Accessories

Sync Module, Type I 367-047-00
Sync Module, Type II 367-036-00
Indoor Strobe Plate, Wall-mount, Red, Type II. 367-049-00
Universal Expander Plate, Indoor, White, Wall-mount, Type I 369-036-00
Universal Expander Plate, Indoor, White, Wall-mount, Type I 369-037-00
Universal Expander Plate Back Box Skirt 588-101-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Notification Appliance Devices

Sync Module, Type I
367-047-00

Description

The sync module works with Monaco Type I series of notification appliances, synchronizing temporal-coded horns/chimes and one-second flash timing of strobes. It can silence horns and chimes in combination appliances over two-wire circuitry and still leave strobes active.

The module can synchronize multiple zones by daisy-chaining multiple modules together and resynchronizing each other along the chain.

Features

- Synchronizes strobes at 1 Hz
- Synchronizes one Class A or two Class B circuits
- Allows slave module operation for additional circuits

Mounting Options

Use a 4 11/16 in. square × 2 1/8 in. deep back box.

Specifications

Operating Voltage	No Strobes: 12 VDC/FWR (range: 8 to 17.5V) 24 VDC/FWR (range: 16 to 33V) With Strobes: 12 VDC/FWR (range: 8.5 to 17.5V) 24 VDC/FWR (range: 16.5 to 33V)
Maximum Load	3A per loop
Operating Temperature	32°F to 120°F (0°C to 49°C)
Dimensions	5.25 in. square (13.335 cm x 13.335 cm)

Current Draw (mA)

	Average		Peak		Inrush		NAC Slave Input	
Voltage	**DC**	**FWR**	**DC**	**FWR**	**DC**	**FWR**	**DC**	**FWR**
12 VDC	10	12	50	60	100	120	3.5	4
24 VDC	12	15	60	75	120	150	4.5	5

Ordering Information

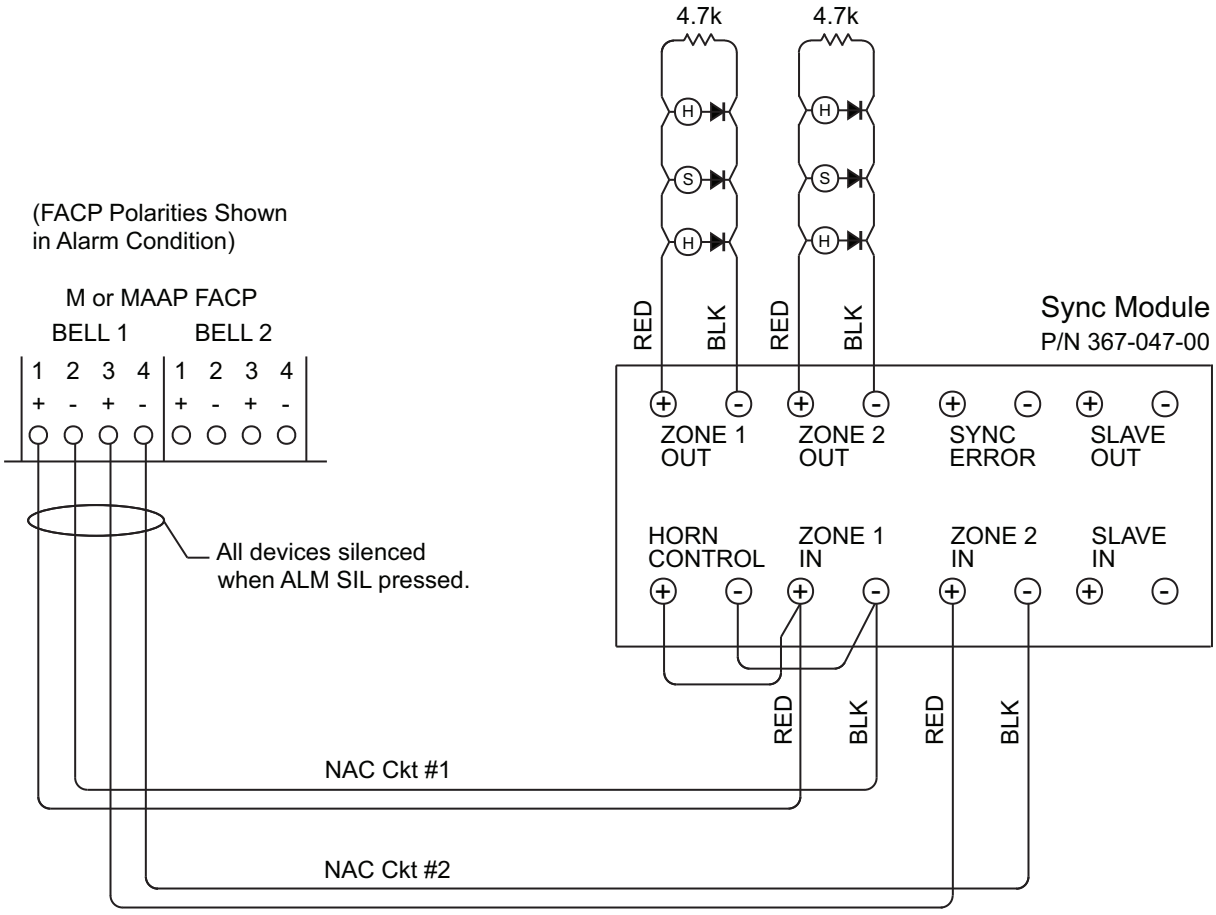
Part Number	Description
367-047-00	Sync Module, Type I

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Wiring Diagrams

Class B

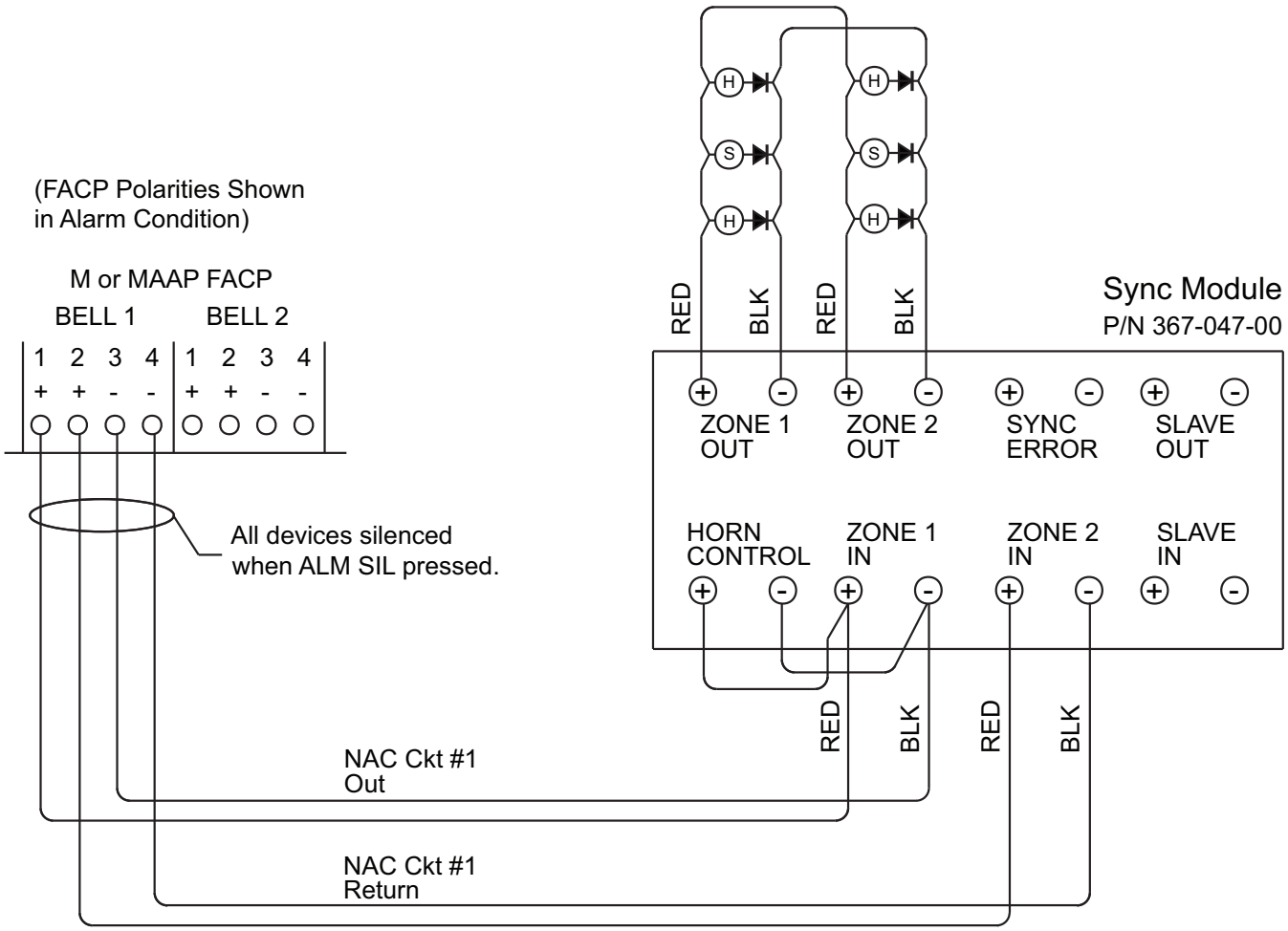


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Class A



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

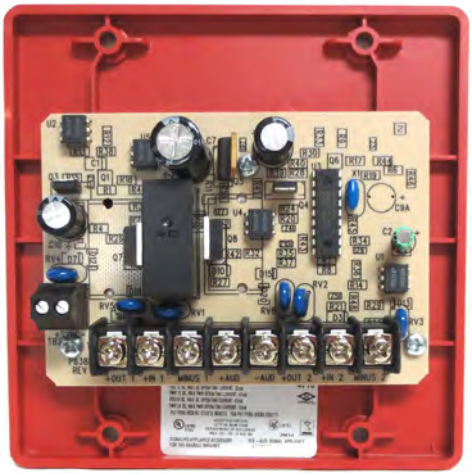
Detect
Manage
Record

Notification Appliance Devices

Sync Module, Type II
367-036-00

Description

The Type II Sync Module provides independent operation of synchronized temporal pattern (Code 3) horn and synchronized strobe flash as well as the ability to silence the horn while maintaining the strobe flash. Additional circuits can be added by connecting the input and output terminals between modules.



The Type II Sync Module incorporates two input NAC circuits for power connection from the fire alarm control panel (FACP): one for the strobe NAC circuit and one for the audible NAC circuit plus an additional strobe circuit input/output for control of either two Class B NAC circuits or one Class A NAC circuit. Upon activation of the audible silence function at the FACP, the audible signal component of a horn strobe combination appliance may be silenced while maintaining strobe activation.

The module can interconnect up to 20 sync modules for synchronous horn and strobe operation on multiple NAC circuits (40 maximum).

Specifications

Input Voltage	12 or 24 VDC
Average Current	0.02A at 12 VDC, 0.035A at 24 VDC
Load Current	3A per NAC circuit, 12 or 24 VDC
Input Wiring	12 to 18 AWG
Module Dimensions	4.97 in. H x 4.97 in. W x 1.34 in. D (12.62 cm x 12.62 cm x 3.4 cm)
Back Box Dimensions	4 11/16 in. H x 4 11/16 in. W x 2 1/8 in. D (11.91 cm x 11.91 cm x 5.4 cm)
Standards Compliance:	
UL Listed	UL1947, File E5946
FM Approved	Approved
MEA Approved	151-92-E
State of California	7300-0785:0132

Current Requirements (Amps)

		Rated Average Current		Rated Peak Current		Rated Inrush Current	
		In1/In2	Audible	In1/In2	Audible	In1/In2	Audible
UL Listed Voltage	12 VDC	0.020	0.004	0.064	0.004	0.170	0.019
	24 VDC	0.035	0.008	0.080	0.008	0.342	0.030

Ordering Information

Part Number	Description
367-036-00	Sync Module, Type II

Associated Parts

Part Number	Description
367-049-00	Indoor Strobe Plate, wall-mount, red, 24 VDC, white FIRE lettering, clear lens, 15, 30, 75, and 110cd
367-049-02	Indoor Strobe Plate, wall- or ceiling-mount, white, 24 VDC, no lettering, amber lens, 15, 30, 75, and 95cd

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Indoor Strobe Plate, Wall-mount, Red, Type II
367-049-00

Description

The multi-candela strobe plate is a cost-effective way to retrofit required strobe appliances to bells, horns, chimes, multitone appliances, or speakers.

Features

- UL, ULC, MEA, CSFM, FM, and BFP listed
- Allows existing audible signals or speakers to be easily upgraded
- Low current draw with temperature compensation reduces power consumption and wiring costs
- Synchronization with Type II sync module (P/N 367-036-00)
- Field selectable candela settings of 15, 30, 75, and 110cd

Specifications

Flash Rate	1 per second
Input Voltage	24 VDC and FWR unfiltered
Voltage Range	16 to 33 VDC
Candela	15, 30, 75, and 110cd
Input Terminals	12 to 18 AWG
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	93% ± 2% non-condensing
Mounting	Indoor surface- or semi-flush mount back box P/N 588-005-00
Standards Compliance:	
UL/ULC Listed	File S5391
FM Approved	RSSP
MEA Approved	151-92-E
State of California	7125-0785:0141

Strobe Current Draw and Output

RMS Current (Amps) 16–33 VDC			
15cd	30cd	75cd	110cd
0.060	0.092	0.165	0.220

Ordering Information

Part Number	Description
367-049-00	Indoor Strobe Plate, Wall-mount, Red, 24 VDC, white FIRE lettering, clear lens, 15, 30, 75, and 110cd

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

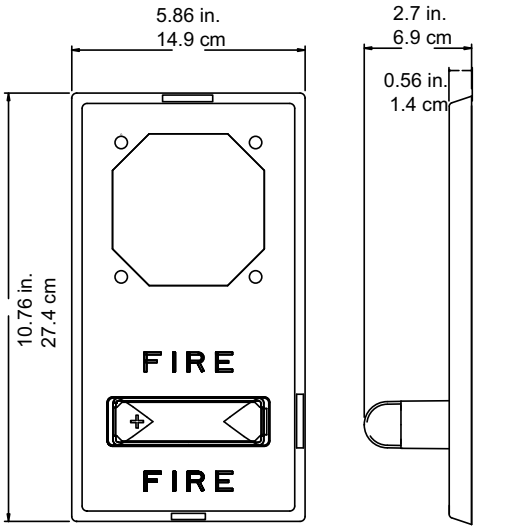
Detect Manage Record

Notification Appliance Devices

Associated Parts

Part Number	Description
367-036-00	Sync Module, Type II
588-005-00	Back Box, Indoor, Surface or Semi-Flush-mount, Red, 4 in. x 4 in. x 1.5 in.
404-119-00	NAC Power Extender, 115 VAC, 60 Hz, 12/24 VDC, 8A, four Class B or two Class A, use with Type II strobes; See **NOTE**
NOTE P/N 404-119-00 needs two 7.7 Ah batteries (P/N 400-704-00) for 24-hour battery backup, or two 12 Ah batteries (P/N 400-713-00) for 72-hour battery backup	

Dimensions



Front View Side View

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

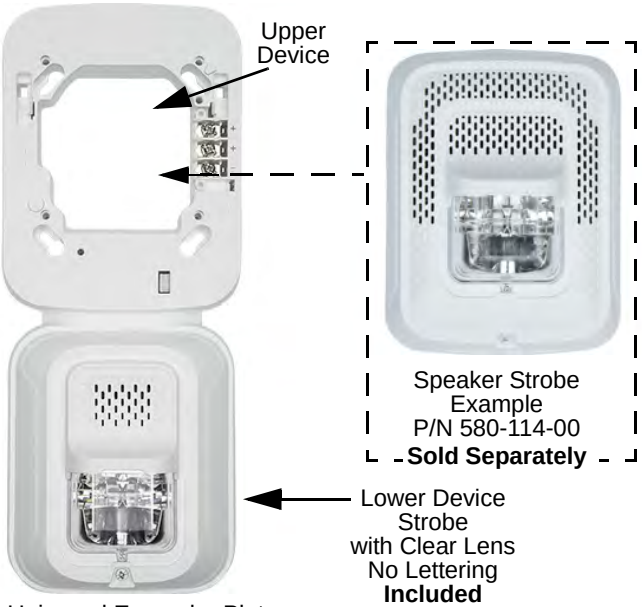
Detect
Manage
Record

Notification Appliance Devices

Universal Expander Plate, Indoor, White, Wall-mount, Type I
369-036-00

Description

This is an indoor, white, wall-mount, Universal Expander Plate with Clear Strobe and no lettering. The open upper device allows for mounting an additional Speaker, Strobe, Speaker Strobe, Horn, or Horn Strobe to create a combination emergency communication device.



Features

- White Expander Plate housing with clear lens strobe and no lettering
- Optional tamper-resistant Torx head screw (included)
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on wall units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 110, 135, and 185cd
- Compatible with a Speaker, Strobe, Speaker Strobe, Horn, or Horn Strobe mounted to upper device
- Universal mounting plate with on-board shorting spring checks wiring continuity on Speaker and Horn Strobes before device installation

Specifications

Nominal Voltage (Strobes)	Regulated 12 VDC/FWR, Regulated 24 VDC/FWR
Operating Voltage	8 to 17.5V (12V nominal) or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	9 to 17.5V (12V nominal) or 17 to 33V (24V nominal)
Candela	12 VDC: 15, 30cd 24 VDC: 15, 30, 75, 95, 110, 135, 185cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting plate mounts to a 4 in. x 4 in. x 2 1/8 in. or deeper back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Expander Plate Dimensions with Strobe	13.1 in. L x 5.4 in. W x 2.4 in. D (332 mm x 137 mm x 61 mm)
Back Box Skirt Dimensions	13.75 in. L x 6.1 in. W x 2.5 in. D (349.3 mm x 154.9 mm x 63.5mm)
Standards Compliance:	
UL	File No. S5512 Investigated to ANSI/UL1638 and ANSI/UL1971 (Clear Lens Strobe)
State of California	7300-1653:0511
FM Approved	Class of Work: 3150

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Expander Plate Strobe Current Draw (mA)

Maximum Current Draw 16–33 VDC						
15cd	**30cd**	**75cd**	**95cd**	**110cd**	**135cd**	**185cd**
43	63	107	121	148	172	222

Ordering Information

Part Number	Description
369-036-00	Universal Expander Plate, White, Type I, Wall-mount, Indoor, 12V or 24V, Clear Lens Strobe with no lettering; 15, 30, 75, 95, 110, 135, and 185cd; compatible with Speaker, Strobe, Speaker Strobe, Horn or Horn Strobe—mounts to upper device

Associated Parts

Part Number	Description
Speakers	
124-091-00	Speaker, White, Type I, Wall-mount, Indoor, 12V or 24V, no lettering, 25/70 Vrms, 1/4, 1/2, 1, 2 watts
124-092-00	Speaker, Red, Type I, Wall-mount, Indoor, 12V or 24V, no lettering, 25/70 Vrms, 1/4, 1/2, 1, 2 watts
Strobes	
367-099-00	Strobe, White, Type I, Wall-mount, Indoor, 12V or 24V Red ALERT lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd
367-100-00	Strobe, White, Type I, Wall-mount, Indoor, 12V or 24V, Red FIRE lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd
367-101-00	Strobe, White, Type I, Wall-mount, Indoor, 12V or 24V, no lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd
Speaker Strobes	
580-111-00	Speaker Strobe, White, Type I, Wall-mount, Indoor, 12V or 24V, Red ALERT lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd, 25/70 Vrms, 1/4, 1/2, 1, 2 watts
580-108-00	Speaker Strobe, White, Type I, Wall-mount, Indoor, 12V or 24V, Red FIRE lettering, clear lens, 15, 30, 75, 110, 135, and 185cd, 25/70 Vrms, 1/4, 1/2, 1, 2 watts
580-114-00	Speaker Strobe, White, Type I, Wall-mount, Indoor, 12V or 24V, no lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd, 25/70 Vrms, 1/4, 1/2, 1, 2 watts
Horns	
585-100-00	Horn, Red, Type I, Wall-mount, Indoor, 12V or 24V, No Lettering
585-104-00	Horn, White, Type I, Wall-mount, Indoor, 12V or 24V, no lettering
Horn Strobes	
585-102-00	Horn Strobe, White, Type I, Wall-mount, 2-Wire, Indoor, 12V or 24V, Red FIRE lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd
585-103-00	Horn Strobe, White, Type I, Wall-mount, 2-Wire, Indoor, 12V or 24V, no lettering, Clear lens, 15, 30, 75, 95, 110, 135, and 185cd
Bezels	
589-038-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, Red ALERT lettering, order one per device
589-039-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, Red EVAC lettering, order one per device
589-040-00	Bezel, White, Type I, Wall-mount, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, Red FIRE lettering, order one per device
Expander Plate Lens Kits	
365-014-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Blue, order one per device to **change** color of clear lens
365-015-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Green order one per device to **change** color of clear lens
365-016-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Red order one per device to **change** color of lens
Other	
588-093-00	Back Box, Wall-Surface-mount, White, Type I, Speaker; Speaker Strobe, 5.12 in. W x 6.62 in. H x 2.25 in. D
588-091-00	Back Box, Wall-Surface-mount, White, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, 4.82 in. W x 5.78 in. H x 1.85 in. D

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

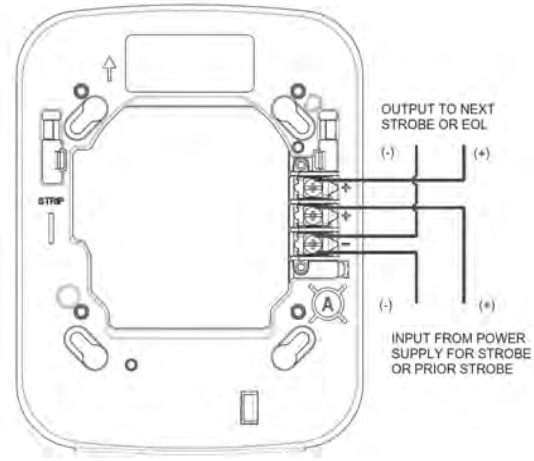
Notification Appliance Devices

Part Number	Description
588-101-00	Universal Expander Plate Back Box Skirt, White, Surface-Wall-mount, Type I. (2.5 in. deep); Requires back box

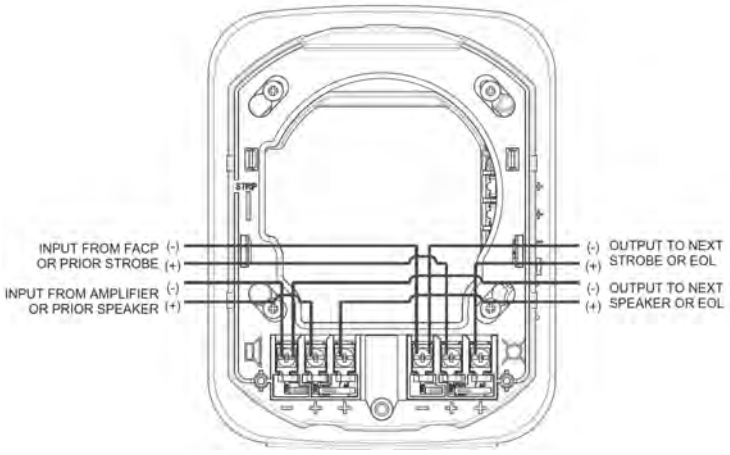
Part Number	Description
367-047-00	Sync Module, Type I

Diagrams

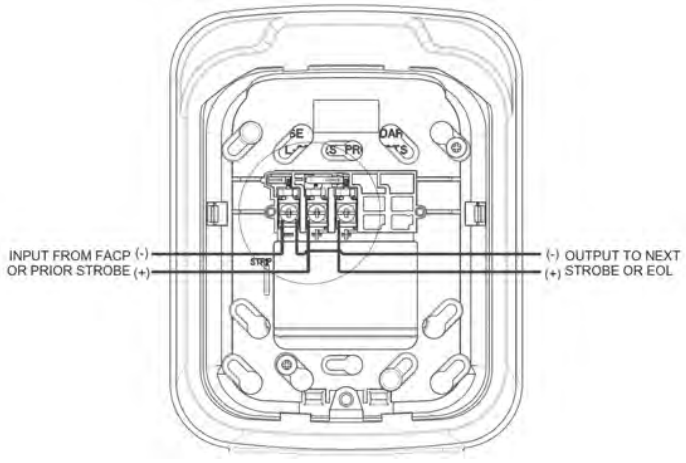
Wiring Diagrams



Connect Universal Expander Plate's Lower Strobe

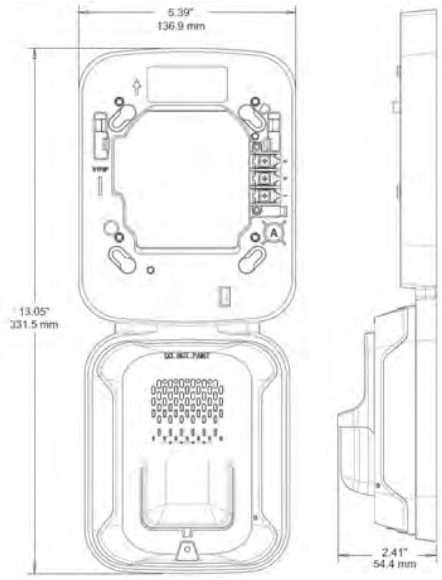


Connect Speaker Strobe to Upper Device



Connect Horn Strobe to Upper Device

Expander Plate Dimensions



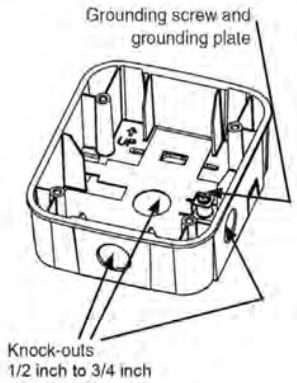
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

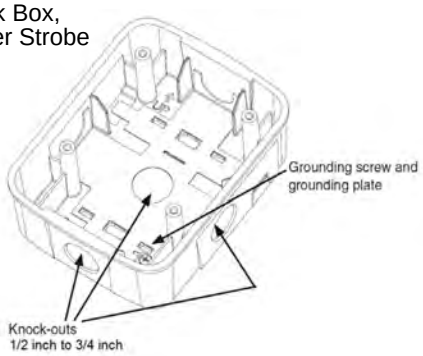
Notification Appliance Devices

Back Box, Wall-mount

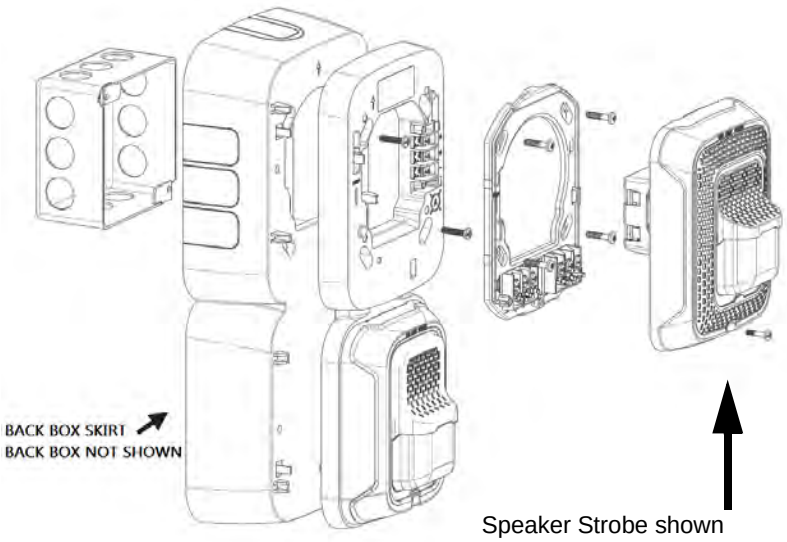
Back Box,
Horn Strobe



Back Box,
Speaker Strobe

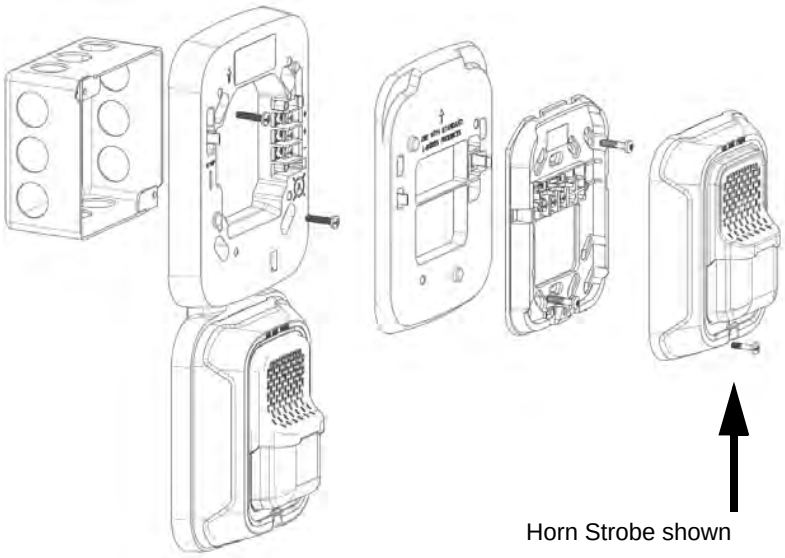


Surface, Wall-mount



Speaker Strobe shown

Junction Box, Flush-mount



Horn Strobe shown

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

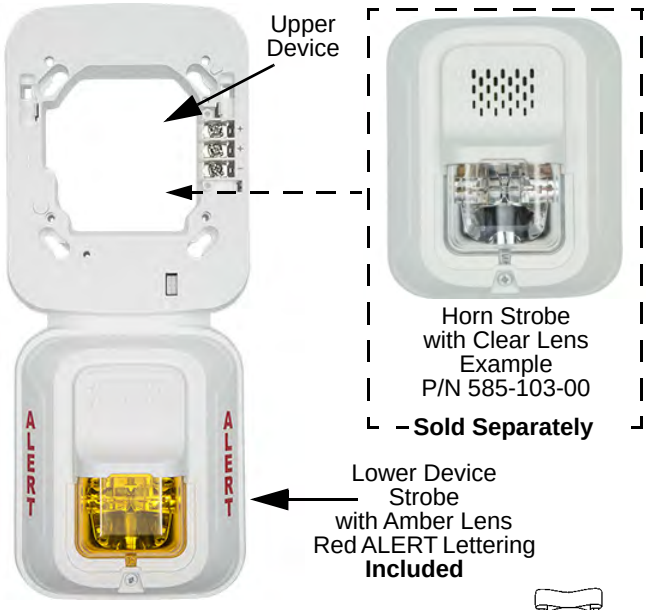
Detect
Manage
Record

Notification Appliance Devices

Universal Expander Plate, Indoor, White, Wall-mount, Type I
369-037-00

Description

This is an indoor, white, wall mount, Universal Expander Plate with Amber ALERT Strobe. The upper device location allows for mounting an additional Speaker, Strobe, Speaker Strobe, Horn or Horn Strobe to create a combination emergency communication device.



Features

- White Expander Plate housing, amber lens strobe with red ALERT lettering included
- Optional tamper-resistant Torx head screw (included)
- Automatic selection of 12 or 24V operation
  NOTE 12V operation only supports 15 and 30cd settings.
- Field selectable candela settings on wall units:
  12V: 15, 30cd
  24V: 15, 30, 75, 95, 110, 135, and 185cd
- Upper device location compatible with Speaker, Strobe, Speaker Strobe, Horn, or Horn Strobe
- Universal mounting plate with on-board shorting spring checks wiring continuity on Speaker and Horn Strobes before device installation

Specifications

Nominal Voltage (strobes)	Regulated 12 VDC/FWR, Regulated 24 VDC/FWR
Operating Voltage	8 to 17.5V (12V nominal) or 16 to 33V (24V nominal)
Operating Voltage with Type I Sync Module	9 to 17.5V (12V nominal) or 17 to 33V (24V nominal)
Candela	12 VDC: 15, 30cd 24 VDC: 15, 30, 75, 95, 110, 135, 185cd
Strobe Flash Rate	1 flash per second
Mounting	Universal Mounting plate mounts to a 4 in. x 4 in. x 2 1/8 in. or deeper back box
Input Wiring	12 to 18 AWG **NOTE** Required wire gauge based on voltage drop.
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	10% to 93% non-condensing
Dimensions with Speaker Strobe	13.1 in. L x 5.4 in. W x 2.4 in. D (332 mm x 137 mm x 61 mm)
Back Box Skirt Dimensions	13.75 in. L x 6.10 in. W x 2.5 in. D (349.3 mm x 154.9 mm x 63.5mm)
Standards Compliance:	
UL Listed	File No. S5512 Investigated to ANSI/UL1638
State of California	7300-1653:0511

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Notification Appliance Devices

Expander Plate Strobe Current Draw (mA)

Maximum Current Draw 16–33 VDC						
15cd	**30cd**	**75cd**	**95cd**	**110cd**	**135cd**	**185cd**
43	63	107	121	148	172	222

Ordering Information

Part Number	Description
369-037-00	Universal Expander Plate, White, Type I, Wall-mount, Indoor, 12V or 24V, Amber Lens Strobe with Red ALERT lettering; 15, 30, 75, 95, 110, 135 and 185cd; Compatible with Speaker, Strobe, Speaker Strobe, Horn, or Horn Strobe— mounts to upper device

Associated Parts

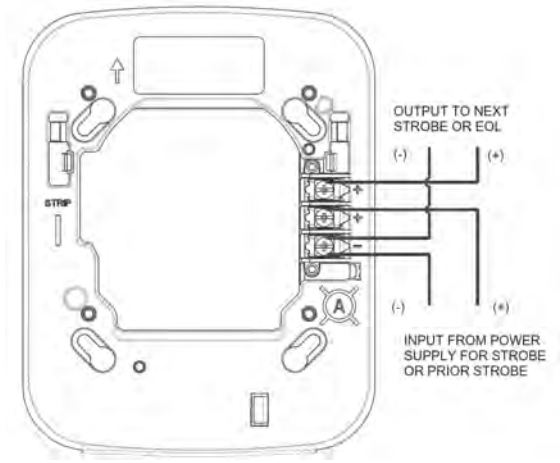
Part Number	Description
Speakers	
124-091-00	Speaker, White, Type I, Wall-mount, Indoor, 12V or 24V, no lettering, 25/70 Vrms, 1/4, 1/2, 1, 2 watts
124-092-00	Speaker, Red, Type I, Wall-mount, Indoor, 12V or 24V, no lettering, 25/70 Vrms, 1/4, 1/2, 1, 2 watts
Strobes	
367-099-00	Strobe, White, Type I, Wall-mount, Indoor, 12V or 24V, Red ALERT lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd
367-100-00	Strobe, White, Type I, Wall-mount, Indoor, 12V or 24V, Red FIRE lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd
367-101-00	Strobe, White, Type I, Wall-mount, Indoor, 12V or 24V, no lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd
Speaker Strobes	
580-111-00	Speaker Strobe, White, Type I, Wall-mount, Indoor, 12V or 24V, Red ALERT lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd, 25/70 Vrms, 1/4, 1/2, 1, 2 watts
580-108-00	Speaker Strobe, White, Type I, Wall-mount, Indoor, 12V or 24V, Red FIRE lettering, clear lens, 15, 30, 75, 110, 135, and 185cd, 25/70 Vrms, 1/4, 1/2, 1, 2 watts
580-114-00	Speaker Strobe, White, Type I, Wall-mount, Indoor, 12V or 24V, no lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd, 25/70 Vrms, 1/4, 1/2, 1, 2 watts
Horns	
585-100-00	Horn, Red, Type I, Wall-mount, Indoor, 12V or 24V, no lettering
585-104-00	Horn, White, Type I, Wall-mount, Indoor, 12V or 24V, no lettering
Horn Strobes	
585-102-00	Horn Strobe, White, Type I, Wall-mount, 2-Wire, Indoor, 12V or 24V, Red FIRE lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd
585-103-00	Horn Strobe, White, Type I, Wall-mount, 2-Wire, Indoor, 12V or 24V, no lettering, clear lens, 15, 30, 75, 95, 110, 135, and 185cd
Expander Plate Lens Kits	
365-014-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Blue, order one per device to **change** color of clear lens
365-015-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Green order one per device to **change** color of clear lens
365-016-00	Lens, Type I, Wall-mount, Strobe; Speaker Strobe; Horn Strobe; Chime Strobe, Red order one per device to **change** color of lens
Other	
588-093-00	Back Box, Wall-Surface-mount, White, Type I, Speaker; Speaker Strobe, 5.12 in. W x 6.62 in. H x 2.25 in. D
588-091-00	Back Box, Wall-Surface-mount, White, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, 4.82 in. W x 5.78 in. H x 1.85 in. D
588-101-00	Universal Expander Plate Back Box Skirt, White, Surface-Wall-mount, Type I. (2.5 in. deep); requires back box
367-047-00	Sync Module Type I

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

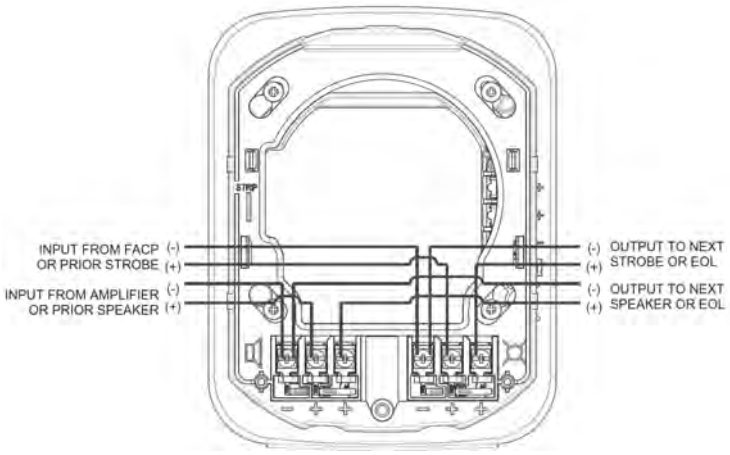
Notification Appliance Devices

Diagrams

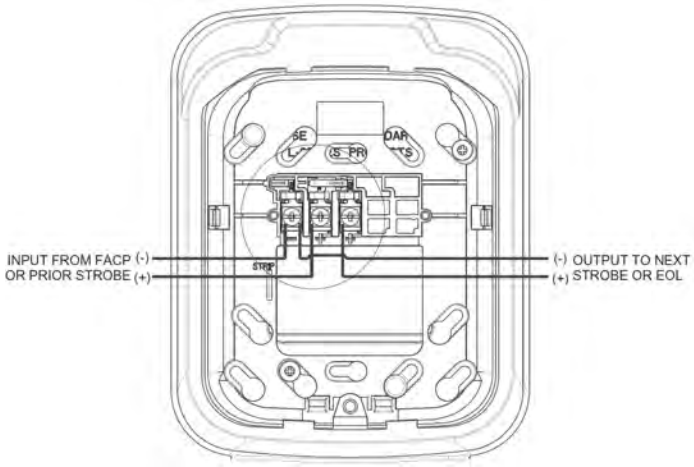


Connect Universal Expander Plate's Lower Strobe

Wiring Diagrams

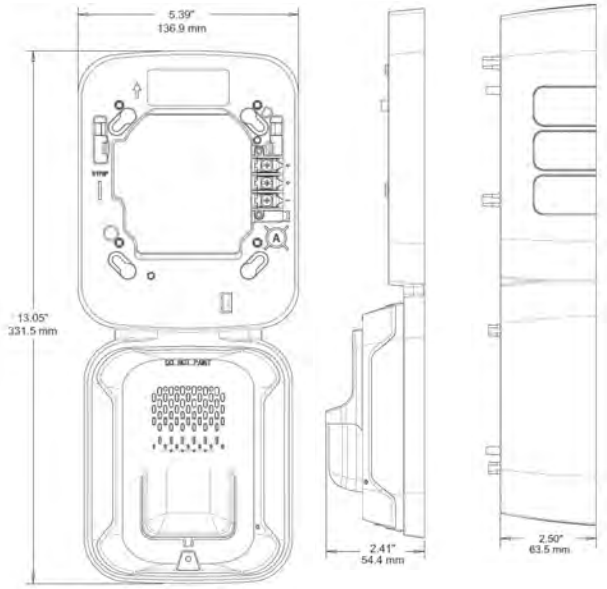


Connect Speaker Strobe to Upper Device



Connect Horn Strobe to Upper Device

Expander Plate Dimensions



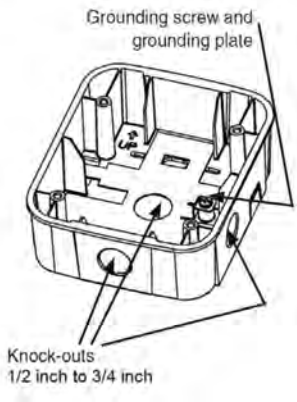
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

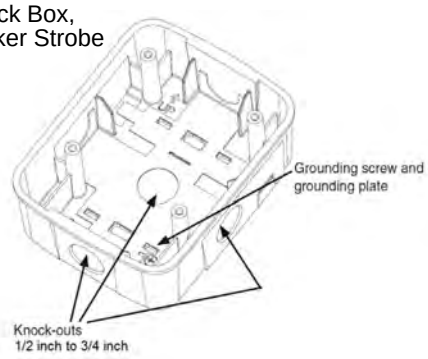
Notification Appliance Devices

Back Box, Wall-mount

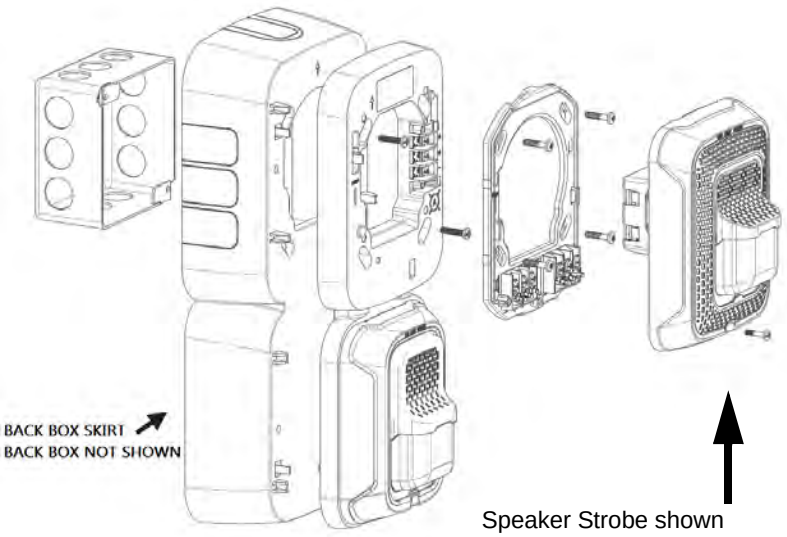
Back Box,
Horn Strobe



Back Box,
Speaker Strobe

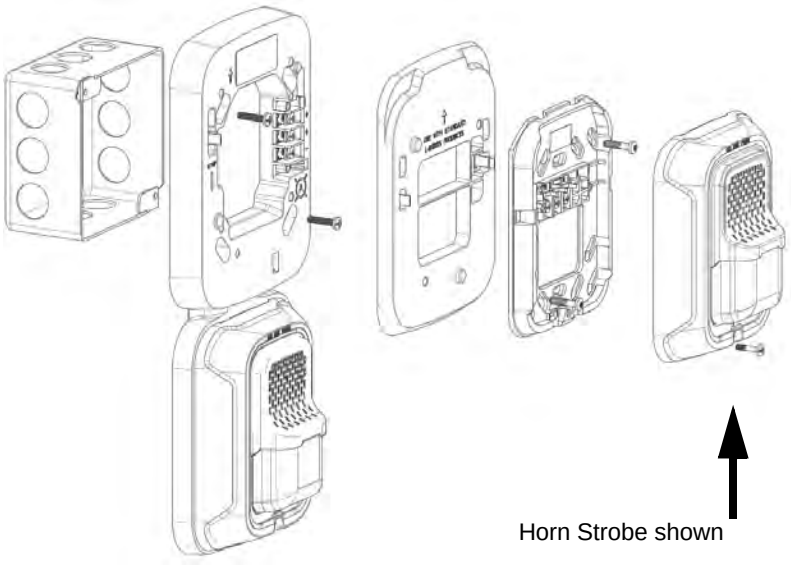


Surface, Wall-mount



Speaker Strobe shown

Junction Box, Flush-mount



Horn Strobe shown

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Notification Appliance Devices

Universal Expander Plate Back Box Skirt
588-101-00

Expander Plate Back Box Skirt

Shown with Universal Expander Plate P/N 369-037-00 and Speaker Strobe P/N 580-108-00

Features

- White housing, no lettering
- Compatible with Universal Expander Plate for Strobes, Speaker Strobes, and Horn Strobes
- Snap on Assembly

Specifications

Mounting	4 in. x 4 in. x 2 1/8 in. Back Box
Back Box Skirt Dimensions	13.75 in. L x 6.10 in. W x 2.5 in. D (349.3 mm x 154.9 mm x 63.5mm)

Ordering Information

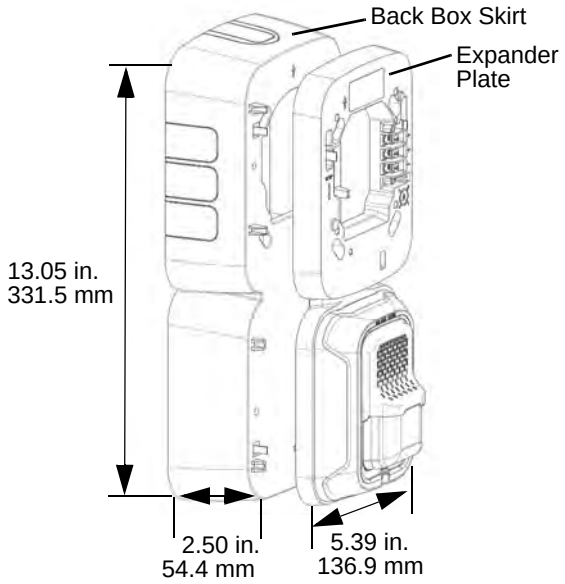
Part Number	Description
588-101-00	Back Box skirt for use with strobe, speaker strobe, horn strobe expander plate, indoor, surface wall-mount, white, Type I, 2.5 in. deep; requires back box

Associated Parts

Part Number	Description
588-093-00	Back Box, Wall-surface-mount, White, Type I, Speaker; Speaker Strobe, 5.12 in. W x 6.62 in. H x 2.25 in. D **NOTE** Wall-mount Speaker Strobes using this back box and expander plate (P/N 369-031-00) require back box skirt (P/N 588-084-00).
588-091-00	Back Box, Wall-Surface-mount, White, Type I, Strobe; Horn Strobe; Chime Strobe; Chime; Horn, 4.82 in. W x 5.78 in. H x 1.85 in. D **NOTE** Available for use with Dual Strobe Expander Plate.

Drawings

Dimensions



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Security Devices Catalog Section 12

Section 12. Security Devices

Door Station Camera, Indoor/Outdoor, White. 192-296-01
Outdoor Network Camera, Fixed. 192-279-11

Motion Detectors – Reserved

Door Mags – Reserved

Accessories – Reserved

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Security Devices

Door Station Camera, Indoor/Outdoor, White

192-296-01

Description

The high-resolution Door Station Camera is an innovative, powerful solution that is easy to install. This camera comes with a power over Ethernet (PoE) injector for direct PC connection, a quick install anti-theft frame, wall-mount housing, and a security door opener with backup power supply. The Door Station Camera is weatherproof, maintenance-free, suitable for indoor and outdoor areas, and can be used in temperatures from –22°F to 122°F (–30°C to 50°C).

Camera shown without accessories

Features

- NDAA-compliant surveillance camera
- Full image recording with audio
- Equipped with shock detector and temperature sensor
- Installation via CAT cable or two-wire cable
- Two-way audio communication
- Configurable format options: 4:3, 8:3, 16:9, or custom (image cropping)

Specifications

PoE	Class 2 or 3 (variable); Factory Setting: Class 3
Power Consumption	5 W, typically at 68°F (20°C)
Interfaces	Ethernet 10/100 (RJ45 and LSA), MxBus, and USB
SoC Memory	1 GB RAM, 512 MB Flash
Audio Streaming	Two-way
CMOS Image Sensor	1/1.8 in., 6MP color, progressive scan,
Light Sensitivity	0.1 lux at 1/60 second; 0.005 lux at 1 second
Image Size	6MP (3072x2048) maximum
Frame Rate at Full HD	• MxPEG: 34 maximum • MJPEG: 13 maximum • H.264: 25 maximum
Lens Focal Length	1.6 mm
Field of View	Hemispheric 360 degree view
Operating Temperature	–22°F to 122°F (–30°C to 50°C)
Camera Dimensions	3.9 in. H x 3.9 in. W x 2.24 in. D (99 mm x 99 mm x 57 mm)
Frame Dimensions	5.63 in. H x 5.16 in. W x 0.71 in. (143 mm x 131 mm x 18 mm)
Housing Dimensions	5.43 in. H x 4.96 in. W x 1.22 in. D (138 mm x 126 mm x 31 mm)
Weight	3.35 oz (265 g)

Ordering Information

Part Number	Description
192-296-01	Door Station Camera, Indoor/Outdoor, White, hemispheric, color image, two-way audio, includes PoE injector, anti-theft frame, wall-mount housing, and security door opener

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

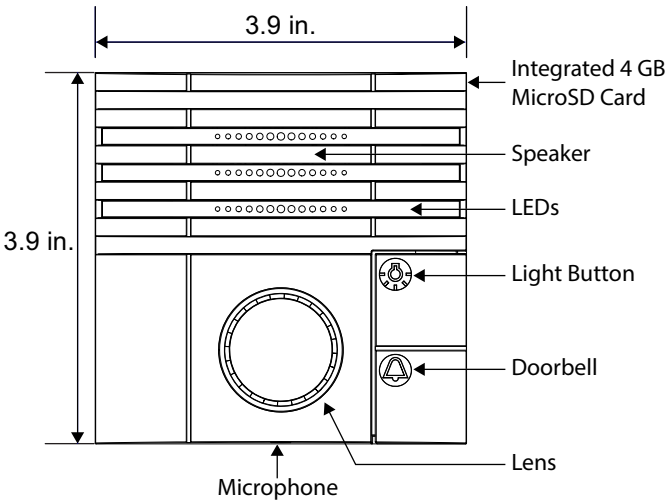
Detect Manage Record

Associated Parts

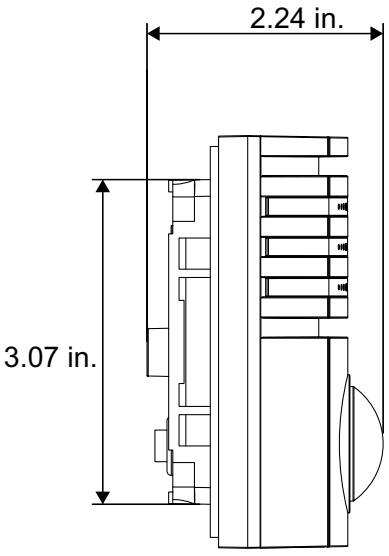
Part Number	Description
453-111-01	Relay, SPDT, 10 to 30 VDC, 10A contacts, LED, red enclosure; to be used with security door opener
122-018-01	Desktop PTT Microphone
640-540-01	XLR Adaptor for desktop microphone in two-way audio communication
703-238-00	USB to XLR Adaptor for desktop microphone in two-way audio communication

Diagrams

Camera Front View



Camera Side View



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Security Devices

Outdoor Network Camera, Fixed

192-279-11

Description

The Fixed Outdoor Network Camera handles temperatures of –40°F to 140 °F (–40°C to 60°C) and has Forensic wide dynamic range (WDR) and Lightfinder 2.0 technology, allowing the camera to deliver details even in low light conditions. This camera has a robust, impact-resistant design with a IP66-, IP67-, IK10-, and NEMA 4X-rated casing.

Features

- NDAA-compliant surveillance camera
- Excellent HDTV 1080p video in up to 60 fps
- Power over Ethernet (PoE) and DC power
- Digital Pan/Tilt/Zoom
- Electronic image stabilization and IK10
- Signed firmware and secure boot
- Replaceable lens
- Controllable frame rate and bandwidth
- Zipstream with H.264 and H.265

Specifications

DC Input Voltage	12 to 28 VDC
Power	9.7 W maximum, 5.3 W typical
PoE	Class 3
Network	RJ45 10BASE-T/100BASE-TX/1000BASE-T
SoC Memory	1 GB RAM, 512 MB Flash
Audio Streaming	Two-way, full duplex
Video Resolution	1920 x 1080p HDTV to 160 x 90p
CMOS Image Sensor	1/2.8 in., progressive scan, RGB
Light Sensitivity with WDR and Lightfinder	Color: 0.05 lux at Black and White: 0.01 lux
Shutter Speed	WDR: 1/34,500 second to 2 seconds No WDR: 1/66,500 second to 2 seconds
Frame Rate	Forensic WDR: 25/30 fps (50/60 Hz) No WDR: 50/60 fps (50/60 Hz)
Field of View With IK10 Protection	Horizontal: 107 degrees to 42 degrees Vertical: 57 degrees to 24 degrees
Field of View Without IK10 Protection	Horizontal: 124 degrees to 42 degrees Vertical: 65 degrees to 24 degrees
Lens Mount	CS mount
Casing Material	IP66-, IP67-, and NEMA 4X-rated, IK10 impact-resistant polymer elcosure with aluminum base
Operating Temperature	–40°F to 140 °F (–40°C to 60°C) **NOTE** According to NEMA TS 2 (2.2.7), the maximum operating temperature of this camera is 165°F (74°C).
Relative Humidity	10% to 100% condensing
Wind Load (Sustained)	123 mph (198 kph)
Dimensions	15.9 in. x 6.26 in. x 5.63 in. (404 mm x 159 mm x 143 mm)
Weight	4.9 lb (2.2 kg)
Standards Compliance:	
UL/ULC Listed	File E482555

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

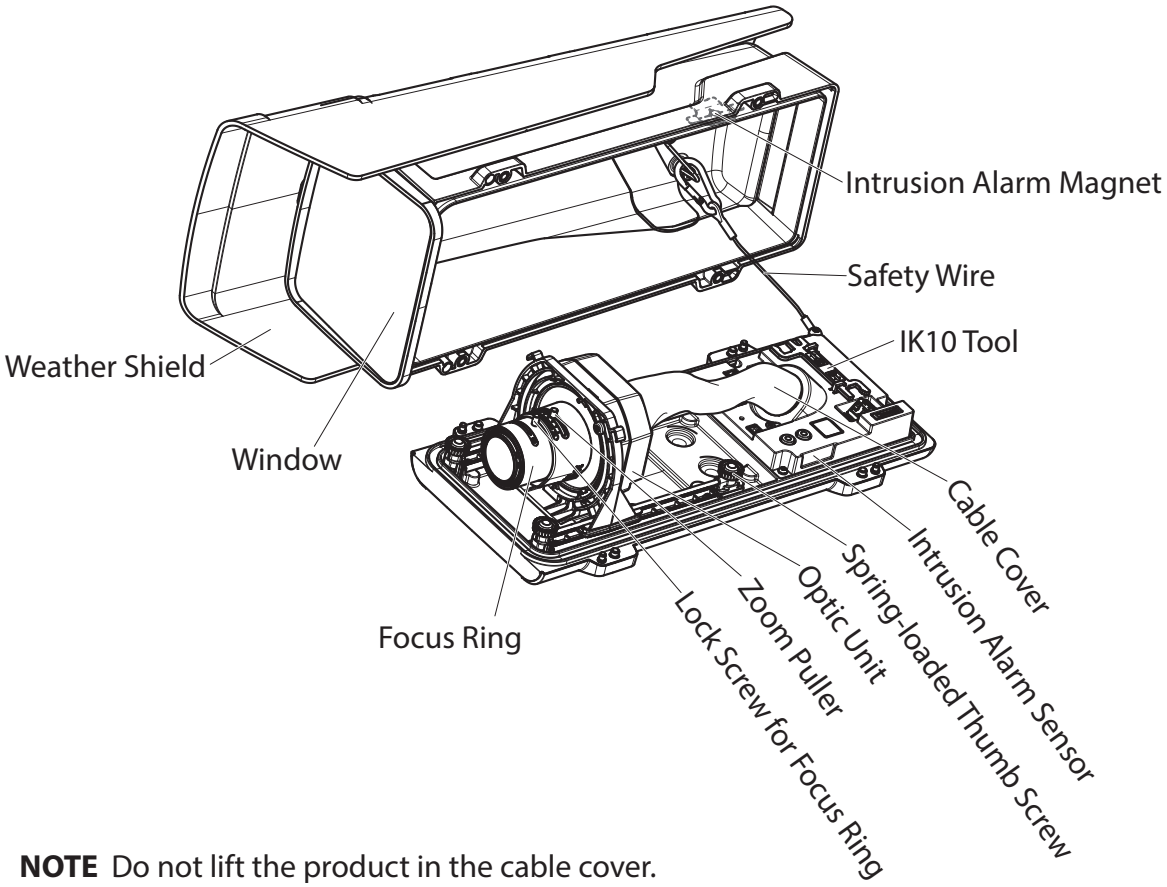
Ordering Information

Part Number	Description
192-279-11	Outdoor Network Camera, Fixed, White, includes wall-mount bracket, weather shield, and connector kit

Associated Parts

Part Number	Description
192-877-00	Camera Conduit Back Box, Indoor/Outdoor, Wall-mount, White, 5.1 in. x 6.2 in. x 1.9 in., NEMA 4X

Drawing



NOTE Do not lift the product in the cable cover.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Motion Detectors – Reserved

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Security Devices Catalog Section 12

Door Mags – Reserved

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Security Devices Catalog Section 12

Accessories – Reserved

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Generic Accessories Catalog Section 13

Section 13. Generic Accessories

Wire Mold – Reserved

Off-the-Shelf Generic Electrical Boxes – Reserved

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Generic Accessories Catalog Section
13

Wire Mold – Reserved

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Off-the-Shelf Generic Electrical Boxes – Reserved

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Section 14. Supplemental Equipment

Cabinet, Fire Alarm Terminal, 32 point. 081-243-00
Cabinet Assembly, Record Document Storage 081-261-01
Enclosure, Rail-mount, Steel, Powder Coated. 081-262-00
Current In-rush Limiter 176-257-00
4-wire Data Fiber Optic Media Converter. 194-532-00
Fiber Optic Media Converter. 194-534-00
Contact Mapping Data Transmitter/Receiver Pair. 196-400-00, 197-700-00
Ethernet Firewall, 8-Port, 10/100 VPN 200-442-11
Ethernet Switch, Managed 10-Port, L2 200-459-01
KVM Assembly 200-464-03, 200-470-04
KVMA Single and Dual-Monitor Extender Kit. 200-476-01, 200-476-02
Key Switch, FACP Suspend on Test 510-319-10
USB Serial Adaptor, High Speed. 649-118-00
HVAC Shutdown Kit. 708-032-01
Emergency Message Display. 710-057-00
Annunciator, Red LED, Remote 729-091-00

Battery Enclosures

Enclosures with Batteries. 081-155-00, 081-156-0x, 081-172-00, 081-177-00, 081-182-00
Batteries 400-70x-00, 400-71x-00, 400-720-00

Auxiliary Power Supplies

UPS Kit, 1200W, 120V 404-064-01
NAC Distributed Power Supply. 404-073-00
UPS 120 VAC, 60 Hz, 800 W 404-111-10, 404-111-11
UPS 120 VAC, 60 HZ, 400W 404-114-01

Power Supply/Battery Chargers

Power Supply/Battery Charger, 24 VDC, 3 Amp, 115 VAC 404-095-00
Power Supply/Battery Charger 24 VDC, 10/8 Amp, 115 VAC 404-098-00
Power Supply/Battery Charger 24 VDC, 8/10 Amp, 230 VAC 404-098-10
Power Supply/Battery Charger, 12/24 VDC, 6A, 115/230 VAC 404-150-00
Power Supply/Battery Charger, 24 VDC, 10/8A, 115 VAC 404-190-00
Power Supply/Battery Charger, 24 VDC, 10/8A, 220 VAC 404-194-00

NAC Boosters

NAC Distributed Power Extender 404-126-00, 404-126-01
NAC Distributed Power Extender 404-164-00

Relays

Relay, SPDT, 120-277 VAC, 10A 451-700-00, 451-700-01
Relay, SPDT, 24 VDC, 7A 453-100-00
Relay, SPDT, 24 VDC, 7A 453-102-00, 453-103-00
Relay, DPDT, 24 VDC, 7A 453-104-00, 453-105-00
Relay, SPDT, 24 VDC/VAC, 10A 453-106-00, 453-106-01
Relay, SPDT, 24 VDC/VAC, 10A 453-107-00, 453-107-01
Relay, DPDT, 24 VDC/VAC, 10A 453-110-00, 453-110-01
Relay, SPDT, 10–30 VDC, 10A Input 453-111-00, 453-111-01
Relay, SPDT, 24 VDC/VAC, 7A and 10A 453-114-00
Relay, Time Delay, SPDT, 10A 453-117-00

AC and DC Surge Protection

Surge Protector, Transient, 2-Outlet Direct Plug In 210-505-00
Surge Protector Kit, 120 VAC, Transient 210-509-00, 210-510-00
Surge Protector, Signal Line 210-511-00
Surge Protector, Initiating/Indicating Circuit, 24 VDC 210-514-00
Surge Protectors, 120 VAC, 240 VAC, and 120/240 VAC 210-524-00, 210-555-00, 210-556-00
Surge Protector, 4-Wire Leased Line, 5V, SPD 210-526-00
Surge Suppressor, RJ-45 Ethernet 210-540-00
Surge Protector Module and Base 210-549-xx, 210-550-xx, 210-551-xx
Surge Protector, Series Wired, Single Phase 210-562-00

Enclosure Heater

Silicone Rubber Enclosure Heater 532-001-00, 532-002-00

Click to go back to "Table of Contents - Index by Product Name"

Supplemental Equipment

Cabinet, Fire Alarm Terminal, 32 point

081-243-00

Mounting	Wall-mount
Knockout Clusters	0.5 in., 0.75 in., 1 in., 1.5 in., and 2 in. EMT on top, bottom and left side
Terminal Strips	Dual 16 point barrier terminal strips 20A max. 250V (Class B/UL)
Wire Rating	12 gauge
Standards Compliance:	
UL	S2580
State of California	7300-0553:0110

Ordering Information

Part Number	Description
081-243-00	Cabinet, Fire Alarm Terminal, electric, dual 16 point barrier terminal strips, wall-mount, 20A max. 250V

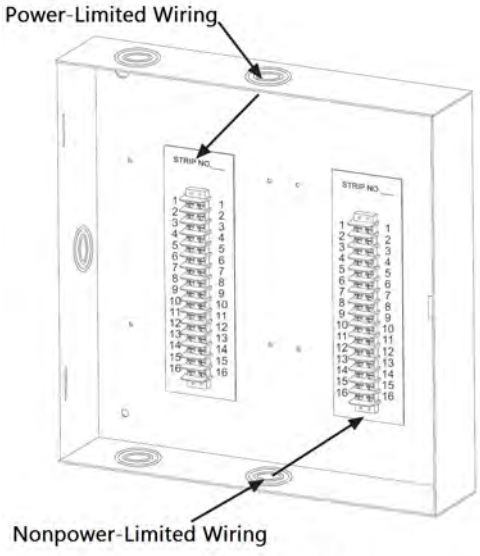
Features

- Red enclosure with white lettering
- Lift-away hinged front cover
- 2 in. lettering displays FIRE ALARM TERMINAL CABINET
- Barrier terminal strips
- Terminal strip and field ID labels

Specifications

Dimensions	14 in. W x 3 1/4 in. D x 14 in. H
Enclosure	16 gauge cold rolled steel Red powder coat finish
Front Cover	Removable, hinged 30 CAT keyed lock

Wiring Diagram



Power-Limited and Nonpower Limited circuit wiring must remain separated in the cabinet. All power-limited circuit wiring must remain at least 1/4 inch from nonpower limited wiring and must enter cabinet through different knockouts or conduits.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

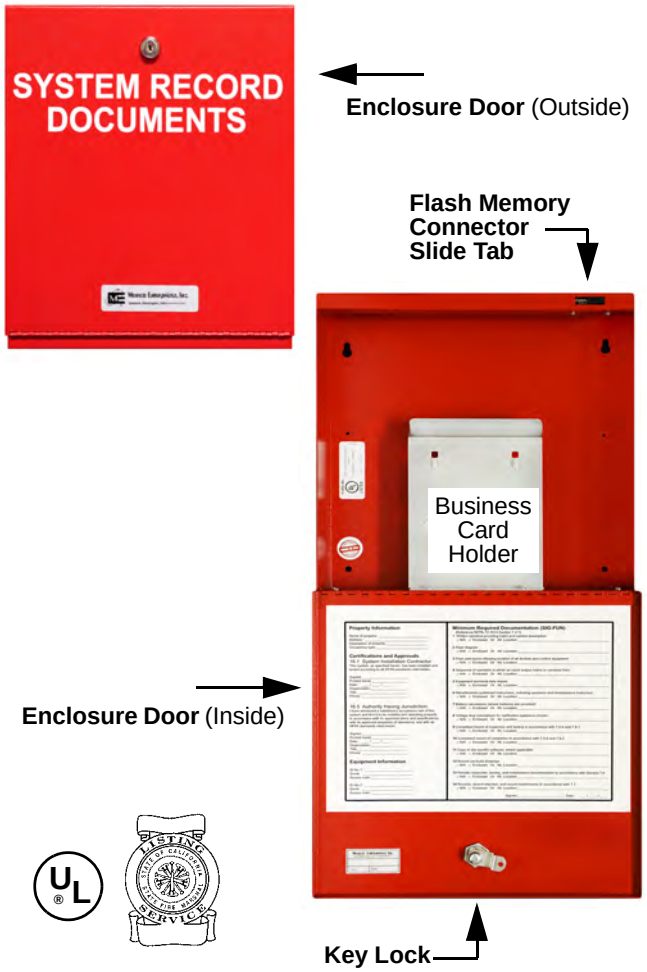
Detect
Manage
Record

Supplemental Equipment

Cabinet Assembly, Record Document Storage
081-261-01

Description

The Record Document Storage Cabinet provides for storage of important system documents near the system control unit.



This cabinet has an 8 GB digital flash memory drive with a slide tab that allows selection between USB-C or Micro USB connector to access records electronically. The cabinet protects important hard copy documents and accommodates standard 8 1/2 in. x 11 in. manuals and document records.

Features

- Durable construction
- Red cabinet with white lettering
- Business card holder for important contacts
- Two key ring hooks for system keys
- Hinged enclosure door swings down with attached information and maintenance label
- Meets NFPA 72 7.7.2.4 requirements

Specifications

Material	18 Gauge Cold Rolled Steel
Finish	Powder Coat
Hinge	12 in. stainless steel piano
Dimensions	12 in. H x 13 in. L x 2.25 in. D
Mounting	Four mounting holes in back box—mount to wall using appropriate mounting screws (not supplied)
Standards Compliance	UL Listed S2580 Vol 3 and CSFM 7300-0553:0110

Ordering Information

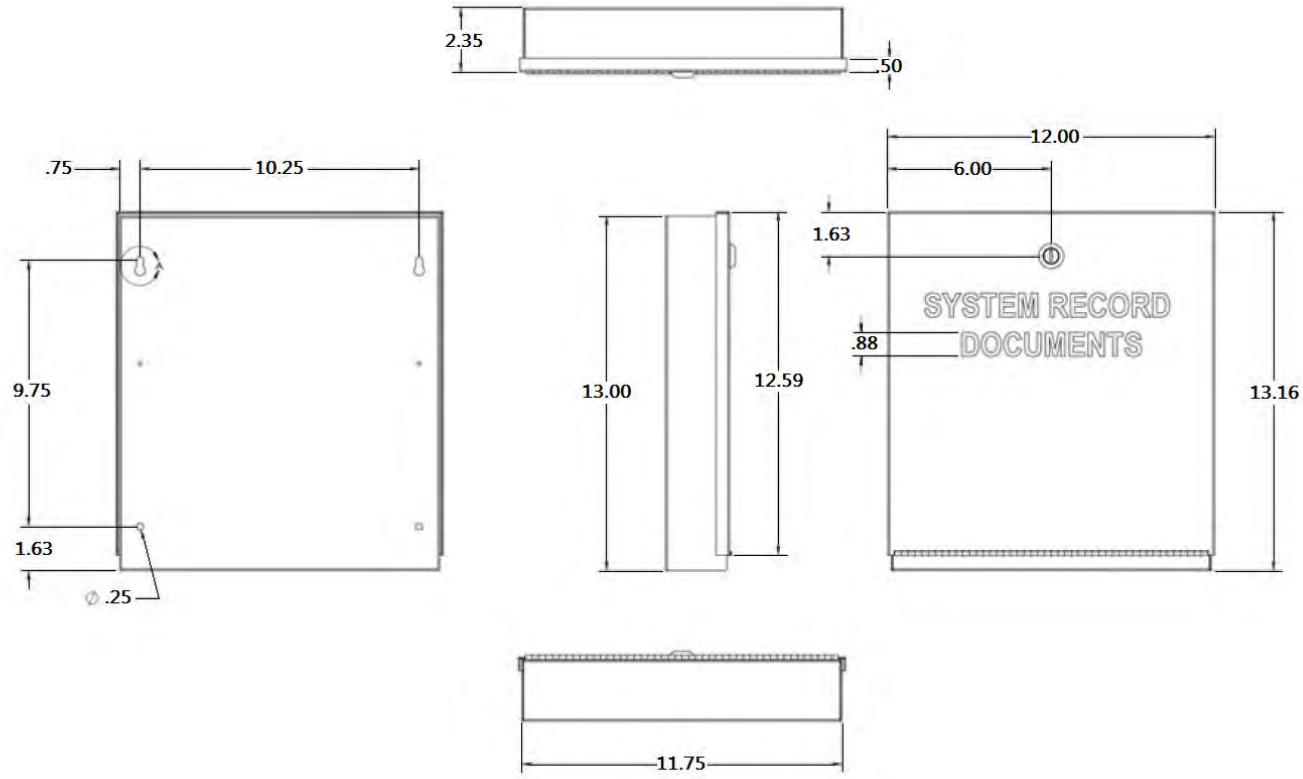
Part Number	Description
081-261-01	Cabinet Assembly, Record Document Storage with digital storage, uses same key as Monaco Fire Alarm Control Panel (C415A)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

Dimensions (in.)



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Enclosure, Rail-mount, Steel, Powder Coated

081-262-00

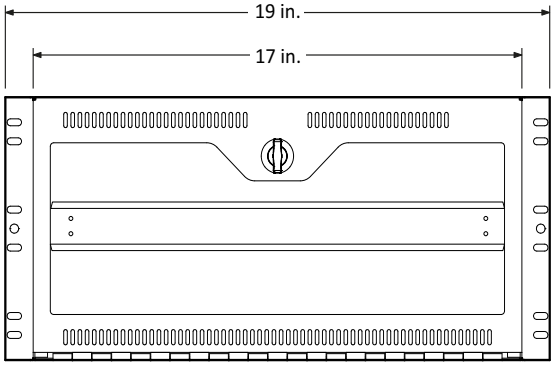
Description

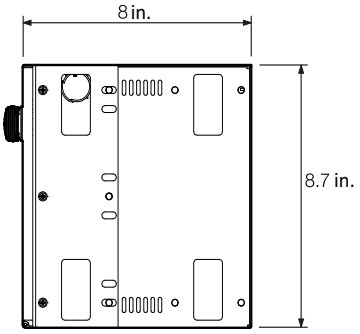
This enclosure safely houses equipment for mounting on its 35 mm rail. The transparent door allows for quick assessment complemented by easy access through the use of the quarter turn latch. Multiple openings on the sides and bottom of the enclosure along with plastic guides allow for manageable routing of cables.

Ordering Information

Part Number	Description
081-262-00	Enclosure, Rail-mount, Steel, Powder Coated

Dimensions





Features

- 19 or 23 in. rack- or wall-mount (hardware included)
- Durable powder coated steel construction
- Quarter turn access latch or key locking latch option
- Hinged door with acrylic window to monitor equipment

Specifications

Operating Temperature	–13°F to 158°F (–25°C to 70°C)
Relative Humidity	95% maximum
Dimensions	17 in. W x 8.7 in. x 8 in. D (43.2 cm x 22.1 cm x 20.3 cm)
Standards Compliance:	
UL Listed	UL60950-1, UL508

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

Current In-rush Limiter
176-257-00

Description

The in-rush current limiter is designed to limit the in-rush current drawn by a device or devices connected to the AUX Power terminal of a conventional or addressable M-series fire alarm control panel.

The in-rush current limiter limits peak momentary current to a level sustainable by the main power source (≤2.5A DC). When the attached device(s) reach their nominal operating current, the current limiting device becomes electrically invisible and allows normal function. No adjustments or maintenance is required.

The in-rush current limiter is wired to the AUX POWER terminals of the M-series panel on the side marked Power INPUT and connected to the device(s) such as duct smoke detectors on the side marked Power OUTPUT. When power is applied to the Power INPUT terminal of the in-rush current limiter, the LEDs marked PWR IN and PWR OUT will light.

When using the panel to power smoke detectors, an M-series panel relay is installed and designated “Smoke Power.” The in-rush current limiter is wired after the smoke power relay. The M-series panel activates the smoke power relay during panel reset to remove power from the smoke detector and allow a latched smoke detector to reset.

NOTE Only use the current limiting assembly to limit the main power supply out rush current when the attached device presents a momentary high current demand on the fire panel power supply. For instance, in the case of duct detectors connected directly to the AUX power of the fire panel, those detectors have a high in-rush current and require the use of the limiter when two or more are connected. However, if more than seven duct detectors are needed provide an auxiliary power supply to provide sufficient power to the detectors.

Specifications

Input Volts	≤ 30 VDC maximum
Sustained Output Current	≤ 0.6A DC maximum
Instantaneous Output Current	≤ 2.5A DC maximum
Temperature Rise	≤ 60°C at 0.6A DC maximum

Ordering Information

Part Number	Description
176-257-00	Current In-rush Limiter, ≤ 2.5A DC

Associated Parts

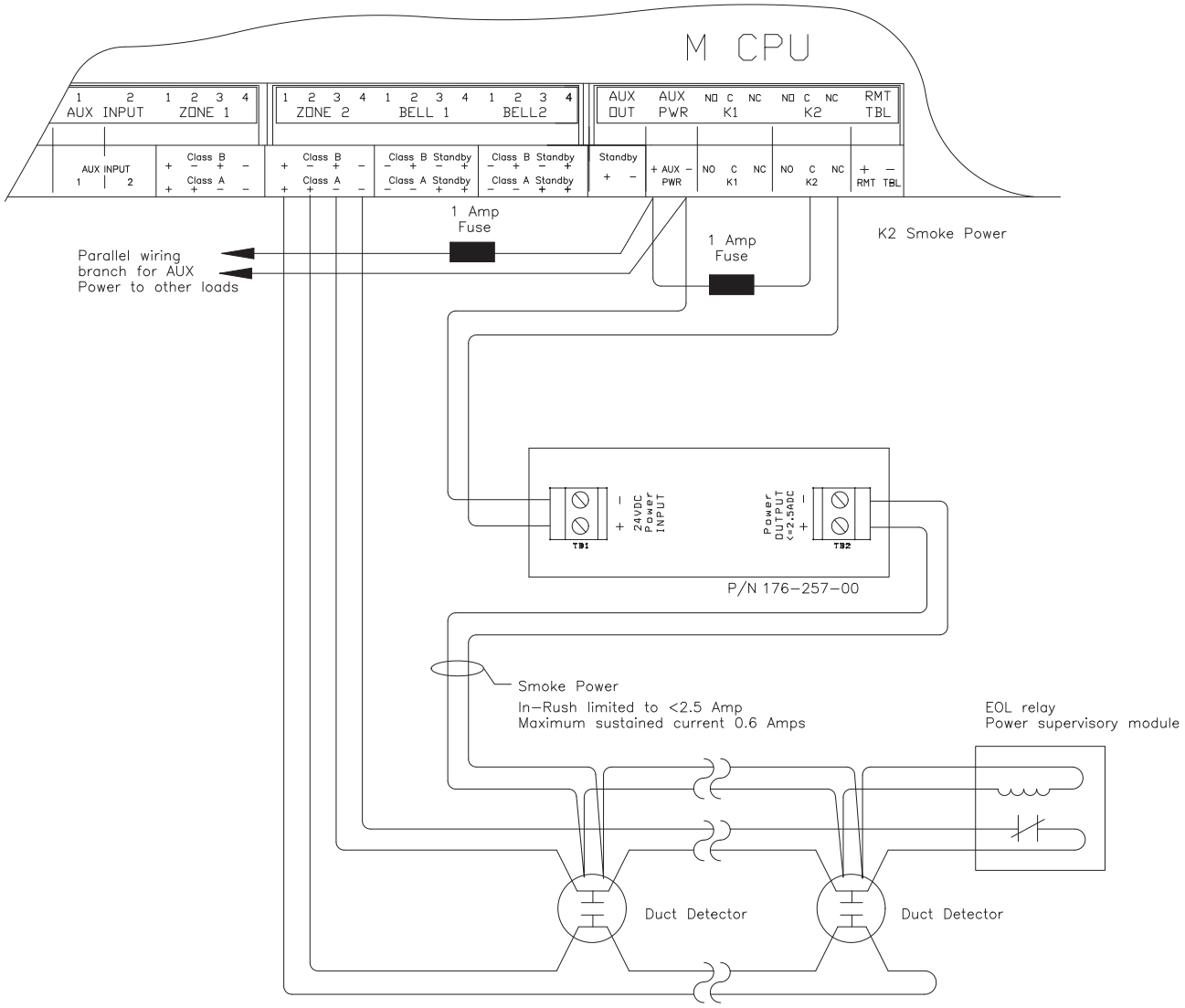
Part Number	Description
501-123-00	Fuse, slow-blow, 1A, 250V, 1/4 in. x 1 1/4 in.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Wiring Diagram

Class A Configuration

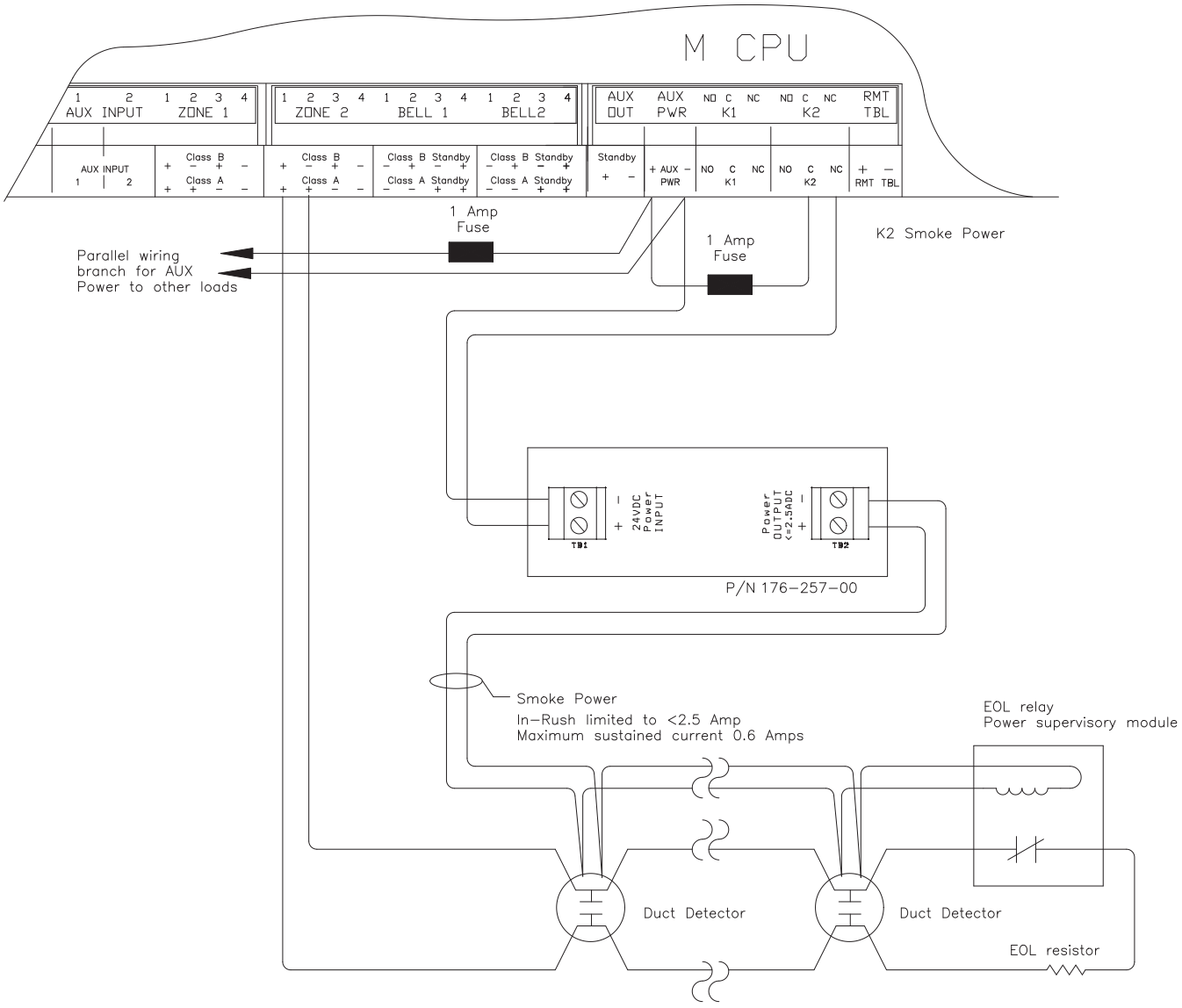


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

Class B Configuration



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

4-wire Data Fiber Optic Media Converter

194-532-00

Description

This fiber optic media converter provides the capacity for the extension of 4-wire voice frequency signals over fiber optic cables. A single mode ST connector is used to allow for signals to travel a distance of up to 20 km with noise immunity from RF and electromagnetic interference. It is also dual power capable and supports E&M connections.

Features

- Fiber optic conversion for 4-wire voice frequency signals
- ST single mode fiber connector
- 20 km maximum signal distance with noise immunity to RF and electromagnetic interference
- Built-in alarm relay for indication of system failure
- E&M support
- Analog bandwidth of 300–3,400 Hz

Specifications

Power	Requirements: 25 to 56 VDC Consumption: 6 W maximum
E&M Voltage	Input: 24 to 48 VDC, 3,000 Vrms Output: 1,500 Vrms
Fiber Type	Single Mode ST
Distance	12.4 miles (20 km)
Analog Bandwidth	300–3,400 Hz
Nominal Impedence	600 ohms
Response Time	15 to 18 ms
Operating Temperature	–40°F to 158°F (–40°C to 70°C)
Relative Humidity	95% non-condensing
Dimensions	4.93 in. H x 1.2 in. W x 3.93 in. D (12.52 cm x 3.05 cm x 9.98 cm)

Ordering Information

Part Number	Description
194-532-00	4-wire Data Fiber Optic Media Converter, Single Mode ST, 20 km, 300–3,400 Hz

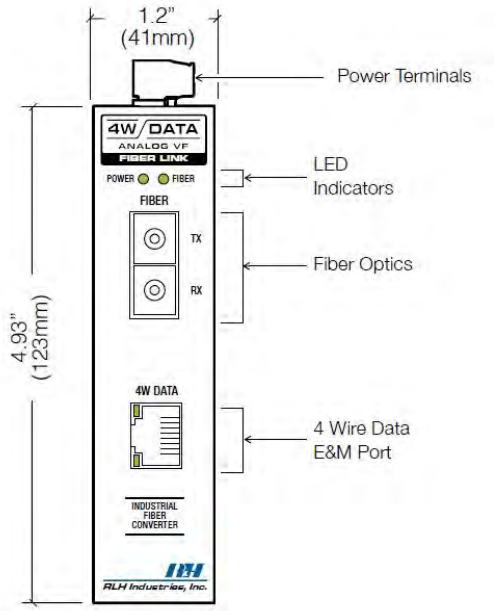
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

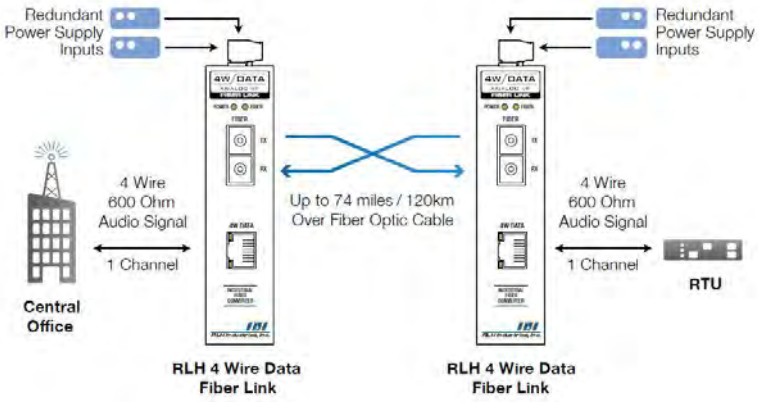
Supplemental Equipment

Drawings

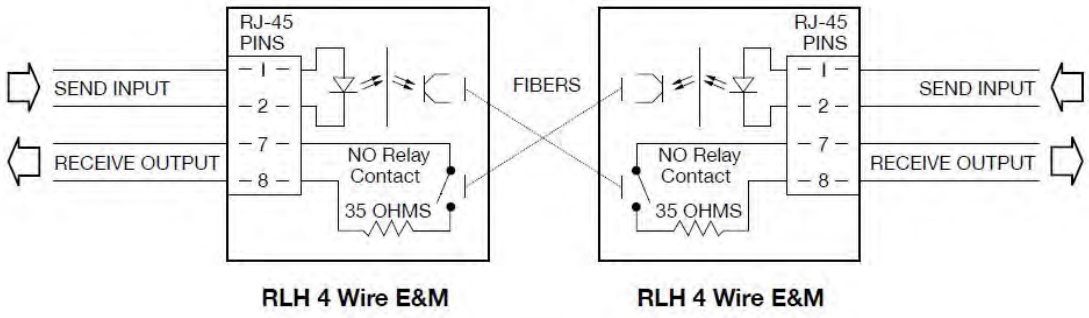
Dimensions



Configuration



E&M Connection



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Fiber Optic Media Converter

194-534-00

Description

This media converter transports data from copper wire through fiber optic connection. The single mode fiber allows for long distance communication with immunity to radio and electrical interference. Also included are redundant power inputs and wall-mount capabilities.

Features

- Dual fiber
- Two active channels of serial data
- Harsh environment reliant
- Redundant power capable
- Single Model fiber with ST connectors

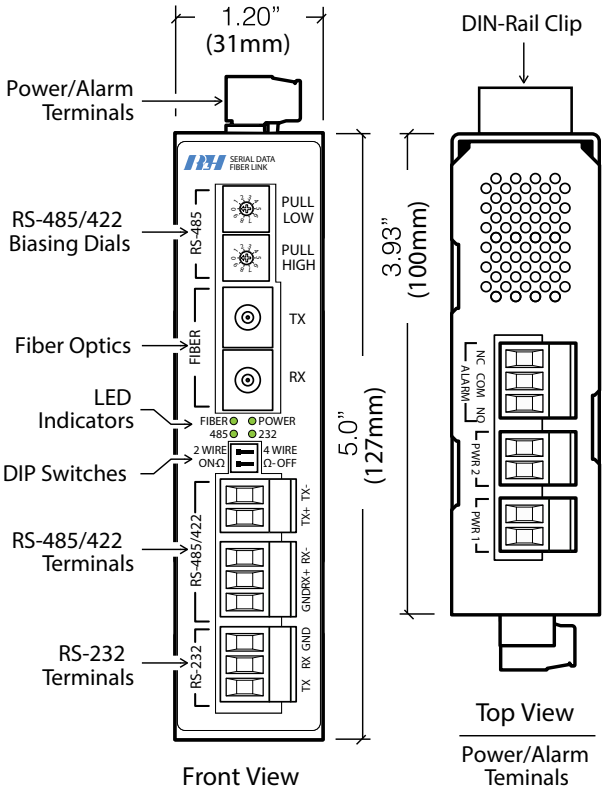
Specifications

Power	Requirements: 24 to 48 VDC Consumption: 3.6 W
Fiber Type	Single Mode, 1310 nm, 8 to 9 µm
Distance	12.4 miles (20 km)
Temperature	Operating: –13°F to 158°F (–25°C to 85°C) Storage: –40°F to 185°F (–40°C to 85°C)
Dimensions	4.93 in. H x 1.20 in. W x 3.93 in. D (12.5 cm x 3.05 cm x 9.98 cm)
Fiber Connector	ST Single Mode

Ordering Information

Part Number	Description
194-534-00	Fiber Optic Media Converter, single mode ST, 20 km, 24 to 48 VDC

Dimensions



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

Contact Mapping Data Transmitter/Receiver Pair

196-400-00, 197-700-00

Description

The full duplex data contact mapping transmitter and receiver provide transmission of up to eight independent contact closures over one optical fiber. Utilizing microprocessor-based logic for exceptionally robust communications channel redundancy. A plug-and-play design ensures ease of installation requiring no electrical or optical adjustments. Each module incorporates power and individual status indicating LEDs for monitoring confirmation of contact closure of each of the eight channels.

Features

- Transmits up to eight contact closures over one fiber
- Eight channel point-to-point transmission architecture
- Power and eight individual channel status LED indicators
- Eight SPST reed relays (with individual indicators)
- Loss of carrier relay for alarm notifications
- Relay contact rating: 200 VDC, 0.5A, normally open
- No in-field electrical or optical adjustments required
- Automatic resettable solid-state current limiters
- Transmission distances up to 2.5 miles

Specifications

Input/Output Channels	8
Contact Relay Rating	200 VDC, 0.5A, 12 watts, Normally Open
Response Time	25 ms maximum
Number of Fibers	1
Wavelength	850nm
Power	12 VDC @ 150 mA
Current Protection	Automatic Resettable Solid-State Current Limiters
Dimensions	7 in. x 4.9 in. x 2 in. (17.8 cm x 12.5 cm x 5. cm)
Shipping Weight	< 2 lb/0.9 kg
Operating Temperature	–40°F to 165.2°F (–40°C to 74°C)
Storage Temperature	–40°F to 185°F (–40°C to 85°C)
Relative Humidity	0% to 95% (non-condensing)
Transmission Distance	Up to 2.5 miles (4 km)

Ordering Information

Part Number	Description
197-700-00	Contact Mapping Transmitter, 850 nm, multimode (62.5/125 µm) fiber optic transmitter, eight individual point-to-point, form A (normally open, short active) relay zone inputs
196-400-00	Contact Mapping Receiver, 850 nm, multimode (62.5/125 µm) fiber optic receiver, eight individual point-to-point, form A (normally open, short active) relay outputs

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

Ethernet Firewall, 8-Port, 10/100 VPN
200-442-11

Description

This Ethernet firewall unit is a next-generation, full-featured adaptive security appliance. It delivers high-performance firewall, SSL and IPsec VPN, and rich networking services that enable Monaco certified D-21 technicians to remotely assist with systems troubleshooting.

Features

- High speed 24/7 Monaco remote support
- Multibus architecture
- Flexible 8-port 10/100 Fast Ethernet switch
- Ports can be dynamically grouped to create up to three separate VLANs for improved network segmentation and security
- Two Power over Ethernet (PoE) ports
- Three USB ports
- One expansion slot (SSC)
- RJ-45 console serial port
- Security lock slot

Specifications

Power Input (Nominal)	100 to 240 VAC, 50/60 Hz
Power Output	• Steady State: 20 W • Maximum Peak: 96 W
Firewall Throughput	Up to 150 Mbps
VPN Throughput	Up to 100 Mbps
Concurrent Sessions	10,000
IPsec VPN Peers	10
New Connections	4,000 per second
Acoustic Noise	0 dBa maximum
Memory	512 Mb
System Flash	128 Mb min.
Operating Temperature	32 to 104°F (0 to 40°C)
Relative Humidity	5% to 95% non-condensing
Dimensions	1.75 in. H x 7.89 in. W x 6.87 in. D (4.45 cm x 20.04 cm x 17.45 cm)
Weight	4 lb (1.8 kg)
Compliance and Certifications	Safety: UL 60950 Certification: FIPS 140-2 Level 2

Ordering Information

Part Number	Description
200-442-11	Ethernet Firewall, 8-port, 10/100 VPN

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

Ethernet Switch, Managed 10-Port, L2
200-459-01

The Ethernet switch is an intelligent, high-performance device that provides network flexibility and robust security features. The switch secures the network from viruses using Access Control Lists (ACL), IP-MAC-Port Binding (IMPB) and Safeguard Engine™ functions.

The switch supports eight gigabit ports with two combination SFP ports. It has fanless technology to reduce heat and noise.

Features

- Ports that have no link are automatically powered down
- Ten 10/100/1000BASE-T gigabit ports
- Fiber support with two or four combo small-form pluggable (SFP) ports
- 4k VLAN
- Jumbo frame support up to 10,240 bytes
- MLD snooping v1/v2
- Loop-back detection
- Integrated malicious traffic and performance degradation prevention functions
- 802.1X authentication
- Web-based access control (WAC)
- MAC-based access control (MAC)
- IP-MAC-port binding
- SSH/SSL
- Microsoft® NAP (supports IPv4/v6)
- Eight priority queues
- 802.1p priority queues/multilayer CoS
- Traffic segmentation
- Bandwidth control
- Per-flow bandwidth control
- Broadcast storm control
- Port mirroring
- Web-based GUI (supports IPv4/v6)
- Command line interface
- Telnet client/server (supports IPv4/v6)
- RADIUS/TACACS+ authentication for management access

Specifications

Port Density	10
MAC Address Table	8k
Switch Fabric	20 Gbps
Transmission Method	Store-and-forward
Forwarding Rate	14,880 pps (10M), 148,800 pps (100M), 1,488,000 pps (1000M)
VLANs	Support up to 4k VLAN Groups
Priority Queues	8 queues
Packet Buffer	128 kB
Multicast Support	IGMP snooping, MLD snooping
Diagnostic LEDs	Per Unit: Power Console Per Port: Link, Act, Speed
Interface Options	
RJ-45	10BASE-T, 100BASE-TX, 1000BASE-T
SFP/Mini-GBICs	1000BASE-X support based on type of SFP, LC
RS-232 DB-9	Console port for out-of-band configuration
Network Management	
In and Out of Band	Telnet, CLI/Console, RMON (4 groups), SNMPv1/2/3, SSH, SSL, TACACS, Authentication, RADIUS client
Electrical and Emissions Summary	
Emissions	CE, FCC Class A, C-Tick, VCCI Class A
Power Supply	AC Input: 100 to 240 VAC, 50/60 Hz

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

Power Consumption	20.9 watts maximum
Heat Dissipation	71.3 BTU per hour
Ventilation	Fanless
Environmental	
Operating Temperature	32°F to 104°F (0°C to 40°C)
Relative Humidity	5% to 95% non-condensing
Physical Specifications	
Dimensions	11 in. W x 7.1 in. D x 1.7 in. H (280 mm W x 180 mm D x 43 mm H) 1U rack height
Weight	3.3 lb (1.5 kg)

Ordering Information

Part Number	Description
200-459-01	Ethernet Switch, managed, 8-port gigabit L2 switch with two 1000BASE-T/SFP ports

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

KVM Assembly
200-464-03, 200-470-04

Description

This KVM, for use with Monaco Central Receiving rack-mounted systems, is a rack-mount KVM drawer with a built-in 8-port high-density USB switch that includes LCD monitor, keyboard, and touch-pad mouse. The unit serves as a control station for up to eight rack-mount computers.

Features

- Drawer adjusts to rack depths from 22 in. to 39 in.
- Forward-folding 17 in. monitor
- On-screen display for setting system characteristics
- Wide tilt-angle on monitor for optimal viewing adjustment
- Compatible with PS/2 and USB computers
- Drawer locks into place when open
- Front panel security lock
- Rear connectors:
  - IEC power connector
  - Eight 15-pin HD CPU connectors (video, device)
  - One RJ45 female connector (labeled RS232) for CPU interface to control switch function
  - Optional USB port

Specifications

Monitor	Size: 17 in. Resolution: 1280 x 1024 Tilt-angle Range: 120 degrees
Power Input	100 to 240 VAC, 50/60 Hz
Power Consumption	30 W
In-rush Current	30A, maximum
Operating Temperature	32°F to 104°F (0°C to 40°C)
Relative Humidity	20% to 90% non-condensing
Dimensions	19 in. W x 21.9 in. D x 1.75 in. H (48.3 cm x 60.7 cm x 4.4 cm) Handle adds 1.5 in. (3.8 cm) to depth when monitor is closed
Weight	26 lb (12 kg)

Ordering Information

Part Number	Description
200-464-03	KVM Drawer, integrated 8-port KVM switch, USB, 17 in. monitor, high-density connectors
200-470-04	Cable Kit for connecting a local rack-mount server. Kit consists of a 1 ft. CAT6 cable and a 6 ft. male 15-pin HD to male 15-pin HD + male USB Type A interface cable

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

KVMA Single and Dual-Monitor Extender Kit
200-476-01, 200-476-02

Description

The KVMA Extender Kits give you the flexibility to keep the D-21 servers and clients in a secure location and use monitor, mouse, keyboard, and audio up to 1,000 ft. away over CAT6.

Features

- Stereo audio support
- Compatible with most video resolutions to 1920 x 1200
- Keyboard and mouse are hot pluggable
- Built-in surge protection
- Connect over CAT5 or CAT6 from the computer to the desktop

Specifications

Input Power	100/240 VAC, 50/60 Hz
Power Consumption	12.5 W
Audio	Two 3.5 mm jacks
Video	One HD15 F Res: 1920 x 1200 less than 500 ft. Res: 1600 x 1200 at 1,000 ft. maximum
Operating Temperature	32°F to 104°F (0°C to 40°C)
Dimensions	200-476-01: 2.9 in. W x 1 in. H x 6.4 in. D 200-476-02: Local: 4.7 in. W x 2 in. H x 3 in. D Remote: 6.4 in. W x 2 in. H x 3 in. D
USB Specs	Four USB Ports
Compliance	CE/ROHS

Ordering Information

Extender Kit

Part Number	Description
200-476-01	KVMA Extender Kit, single-monitor client, USB with audio, rack-mount, local/remote
200-476-02	KVMA Extender Kit, dual-monitor client, USB with audio, rack-mount, local/remote

Associated Parts

Part Number	Description
200-464-03	KVM Drawer, 1U Rack-mount, integrated 8-port KVM switch, USB, 17 in. monitor, high-density connectors
200-477-00	KVMA, 2U Rack-mount, USB, holds up to 16 local or remote extenders
404-112-00	UPS, Tower Case, in/out, 1500VA/865 W, 230V, 50/60 Hz
409-005-00	AC Adaptor Plug, black, C14 (female) to universal socket, accepts plugs Type A-L, international
626-096-00	AC Power Cord, European CEE 7/7 Plug, black, C13 (male) connector, 10A/250 VAC, plug Type F, 8.2 ft. cable length
626-098-00	AC Power Cord, United Kingdom 1363A Plug, black, C13 (male) connector, 10A/250 VAC, plug Type G, 6ft. cable length
626-099-00	Type L Cord Jumper, black, C14 (female) to C13 (male), 10A/250 VAC, 6 ft. cable length

NOTE: For international purchases, buy **one** P/N 409-005-00 and **one** P/N 626-096-00 *or* 626-098-00 (depending on your location) per Extender Kit.

NOTE: For international purchases:UPS P/N 404-112-00 to be used on remote end to provide backup power for AC fails. Also purchase P/N 626-099-00.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

Key Switch, FACP Suspend on Test

510-319-10

Description

The key switch supports MAAP(+) and MAAP-X Fire Alarm Control Panel (FACP) test and maintenance activity. The goal is to test a panel without shutting down certain system outputs.

The user must set **Suspend On Test** options in the FACP's Planner software for pertinent addressable and conventional outputs, and for an addressable input device configured as the Mini-Monitor module that connects to the switch. See the wiring diagram on the next page.

- **Suspend On Test** Checking this box (or using Action Code #203) enables alarm or trouble conditions on the output device to be temporarily suspended during a MAAP(+) system test conditionally controlled by one or more inputs configured to put the MAAP(+) in System Test Mode. This option is not available if the conventional output is assigned to MNSAction #1–#4.

NAC Suspend Configuration

While testing an Addressable MAAP(+) or MAAP-X, the FACP **Suspend On Test** switch connected to a Mini-Monitor Module can be placed in the Test Mode position, preventing outputs set to **Suspend On Test** from activating, like an HVAC shutdown or the horn strobe NAC devices.

The Mini-Monitor Module's alarm state is annunciated on the panel and sent to the Central as a supervisory alarm, indicating the panel is under test due to the Test Switch being the Test Mode position. When testing is done, the switch is restored back to its normal position (FACP Normal), the alarm clears, and an End Alarm message is sent to Central.

When in the FACP Normal position, all systems should function as expected.

Features

- Furnished with two keys per lock
- 11 criss-cross blade tumbler
- Bright chrome finish

Specifications

Switch

Finish	Bright chrome
Dimensions	2.8 in. W x 4.5 in. H x 2 in. D
Switch Rating	4A at 115 VAC / 28 VDC
Positions	Two positions, rotates 180 degrees clockwise
Keys	Two keys per lock, 11 criss-cross blade tumblers

Back Box

Material	Aluminum
Dimensions	2.75 in. W x 4.5 in. H x 2 in. D
Color	Grey

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

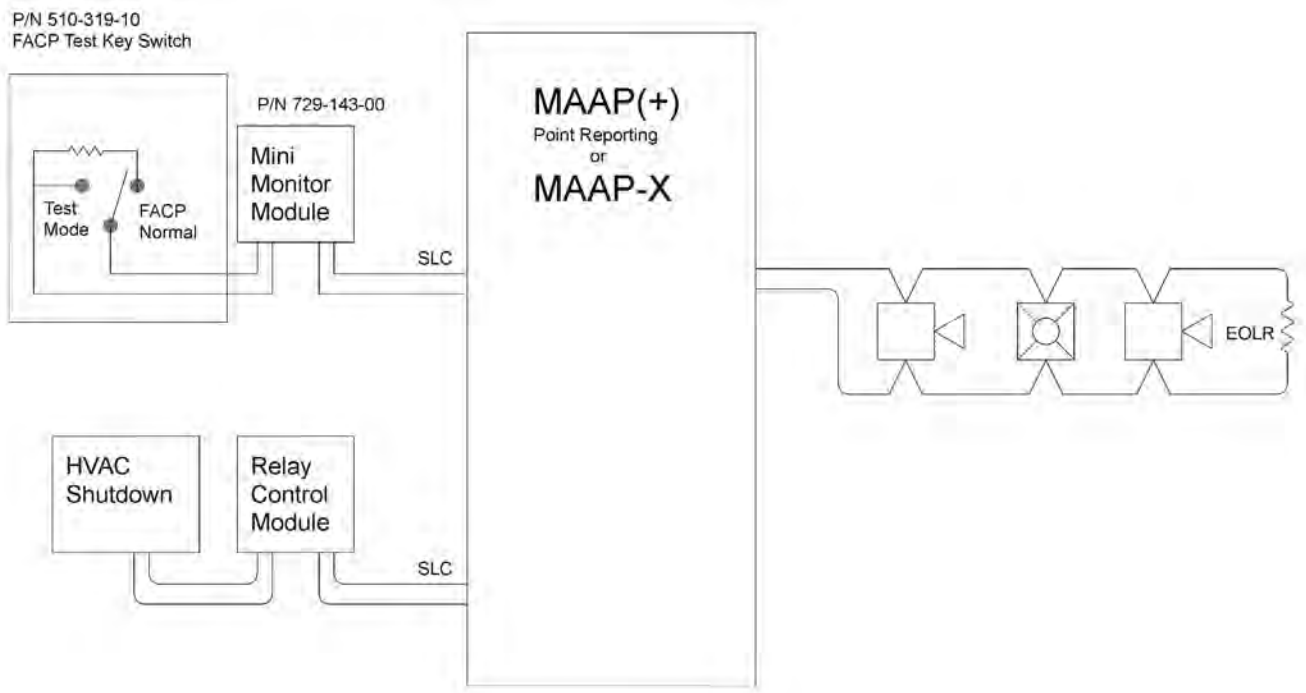
Detect
Manage
Record

Supplemental Equipment

Ordering Information

Part Number	Description
510-319-10	Key Switch Assembly, FACP Suspend on Test, normally open, Form A, dry contacts

Assembly Drawing



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

USB Serial Adaptor, High Speed

649-118-00

Description

A simple reliable solution for connecting devices with a 9-pin serial port to a USB Type-A port on a computer or laptop. The adaptor can be used with all RS-232 serial devices. Works well with Monaco panels and Planner software.

Features

- High-Speed USB-to-Serial Adaptor
- Supports data transfer speeds up to 230 Kbps (twice the speed of a built-in serial port)
- Works with any USB cable up to 16 ft.
- LED data activity indicator
- No external power supply needed

Specifications

Serial Port	DB9
USB Port	Type A
Windows Compatible	Windows® 2000, XP, Vista, 7, 8, 8.1, 10 Server 2008 R2, Server 2012, Server 2012 R2, Server 2016
Macintosh Compatible	Mac OS X 10.6, 10.7, 10.8, 10.9, 10.10, 10.11, 10.12, 10.13, 10.14
Cable	3 ft., detachable
Color	Black
Dimensions	1 in. H x 1.6 in. W x 3.1 in.D (2.54 cm x 4.06 cm x 7.87 cm)
Weight	2 oz
TAA	Compliant

Ordering Information

Part Number	Description
649-118-00	USB to 9-pin RS-232 Serial Adaptor (needed for laptops with USB only in order to program the panel)

Drawing - Connectors

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

HVAC Shutdown Kit
708-032-01

Description

This HVAC Shutdown Kit includes a yellow stopper station and a clear cover. The stopper station is ADA compliant and is designed to halt accidental activation.

The clear cover is a strong polycarbonate material approved for indoor and outdoor use.

Features

- Momentary mushroom button activation
- Yellow shell color with red push button
- Clear cover with red label included
- Indoor/outdoor cover protects against accidental or intentional damage

Specifications

Shutdown Button Specifications

Material	Polycarbonate with stainless steel backplate
Temperature Ratings	Button housing: –40°F to 250°F (–40°C to 121°C) Button electronics: –40°F to 120°F (–40°C to 49°C) **NOTE** If the temperature is below –4°F (–20°C), a remote power source is recommended.
Input Power	Commercial AC wired at a J Box
Switch Contact Rating	• 6A @ 600 VAC • 1A @ 250 VAC • Single-pole, double throw (SPDT)

Cover Specifications

Material	Polycarbonate
Temperature Rating	–40°F to 250° F (–40°C to 121° C)

Ordering Information

HVAC Shutdown Kit

Part Number	Description
708-032-01	HVAC Shutdown Kit; includes shutdown button and cover

Associated Parts

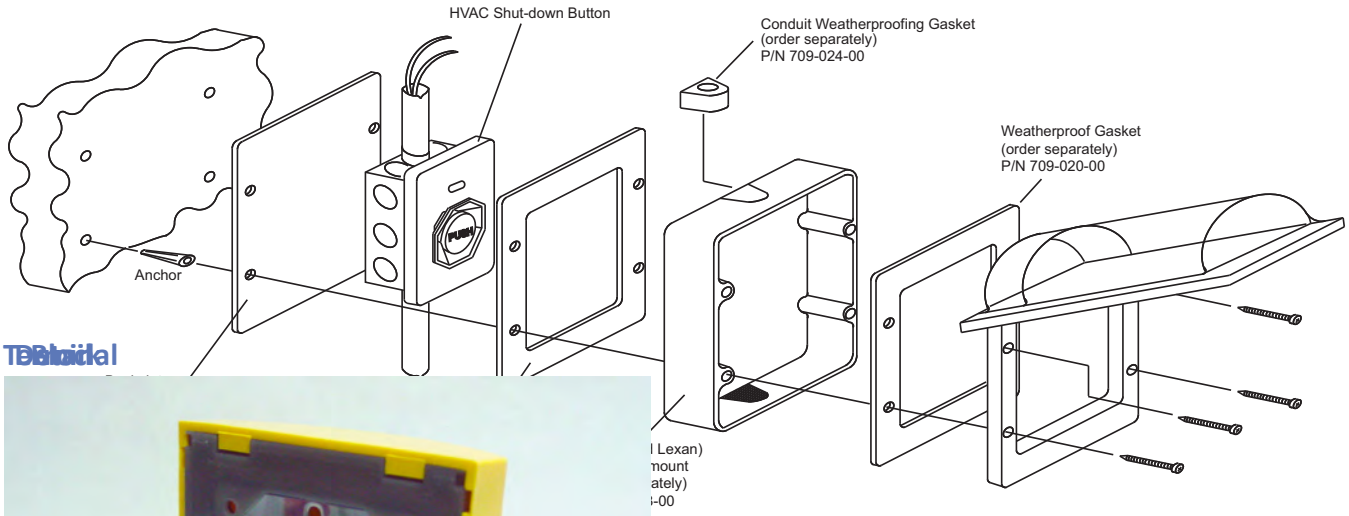
Part Number	Description
709-020-00	Weatherproofing Gasket; order two if using spacer
709-023-00	Spacer for surface-mount
709-024-00	Spacer Conduit Knockout Gasket
709-031-00	Backplate for proper sealing

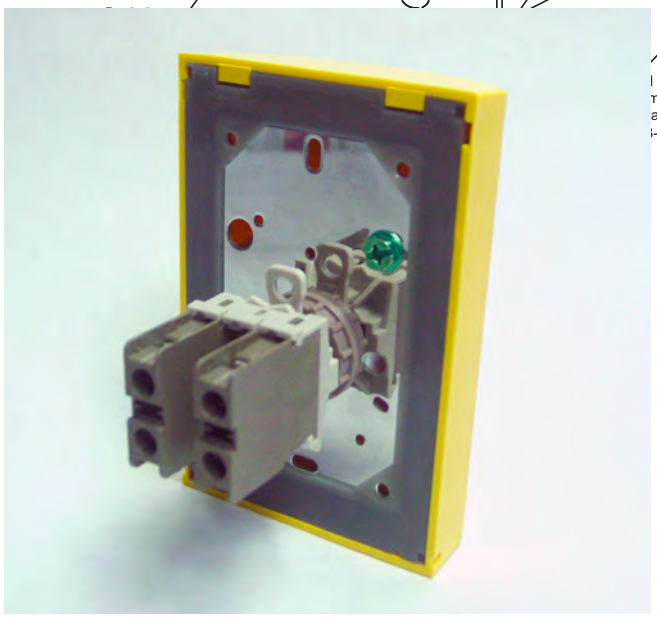
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

Mounting, Dimensions Drawings





Monaco Enterprises, Inc.
P.O. Box 14129, Spokane, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Emergency Message Display

710-057-00

Description

The Emergency Message Display is an LED illuminated text sign that provides two independently lit text messages: “Announcement” and “Evacuate”.

The sign is designed to comply with UFC requirements for Mass Notification Systems (MNS) where a text sign is required over the door of egress stairwells or other locations.

Features

- UFC 4-021-01 compliant
- Meets IP-65 rating, sealed against dust and protected from water splashes and low pressure water jets
- Two independently activated messages: “Announcement” and “Evacuate”
- Messages can be independently set to either a continuous or flashing LED illumination mode
- Compatible with reverse polarity supervision circuits

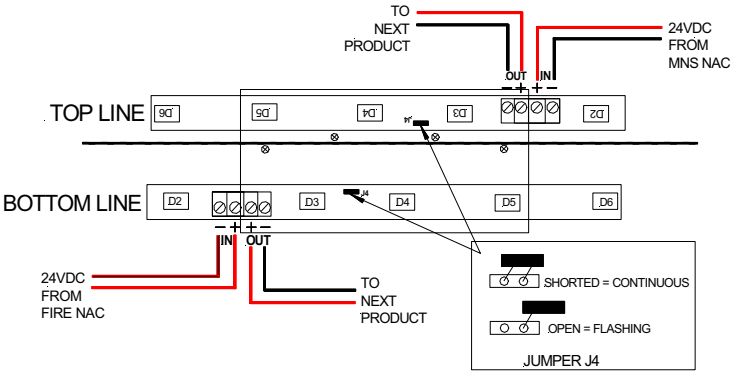
Specifications

Operating Voltage	24 VDC
Current Draw	70 mA per circuit
Input Wiring	14 to 22 AWG
Dimensions	14.5 in. L x 8 in. H x 2 in. D (36.83 cm x 20.32 cm x 5.08 cm)
Standards Compliance:	
UL Listed	UL48, File E318141

Ordering Information

Part Number	Description
710-057-00	Emergency Message Display; back box with 0.5 in. knockouts included

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Annunciator, Red LED, Remote
729-091-00

Features

- Polarized for both conventional and addressable intelligent applications
  - Provided jumper must be installed for use with conventional systems
- Red LED indicates alarm condition

Specifications

Voltage Range	Conventional System: 3.1 to 32 VDC Intelligent System: 18 to 32 VDC
Alarm Current	10 mA maximum
Operating Temperature	14°F to 140°F (–10°C to 60°C)
Dimensions	4.6 in. H x 2.8 in. W x 1.3 in. D (11.7 cm x 7.11 cm x 3.3 cm)
Mounting	Single gang electrical outlet box
Standards Compliance:	
UL Listed	File S2522
FM Approved	3034401
State of California	7300-1653:0212
CE Marked	9080301

Ordering Information

Part Number	Description
729-091-00	Remote, Red LED Annunciator, fits standard single gang electrical box (not included)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Battery Enclosures

Supplemental Equipment Catalog Section 14

Battery Enclosures

Enclosures with Batteries 081-155-00, 081-156-0x, 081-172-00, 081-177-00, 081-182-00

Batteries 400-70x-00, 400-71x-00, 400-720-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.

P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149

Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

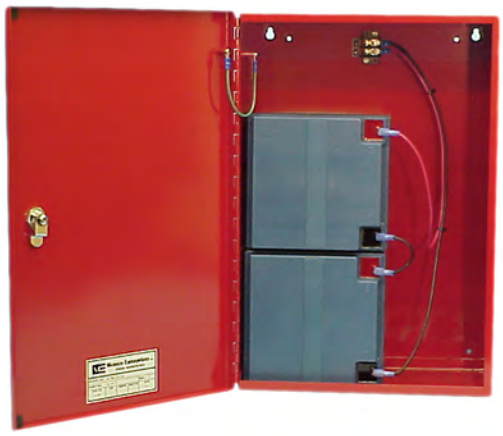
Enclosures with Batteries

081-155-00, 081-156-0x, 081-172-00, 081-177-00, 081-182-00

Description

Sealed Lead Acid (SLA) batteries are used in Monaco's products as a backup power source, and in some cases as the primary power source for Monaco's solar powered equipment. SLA batteries in enclosures that are configured for 12V and 24V backup are available in different Ah capacities. Select the appropriate P/N with the Ah capacity that is close to, but higher than, the backup Ah requirement.

Enclosure with Batteries P/N 081-156-00



Features

- Sealed, leak-proof, maintenance-free, usable in any position
- Compact, rugged, and rechargeable
- Pressure-relief valves allow venting of gases in the event of overcharging
- Cycle or float service applications (no memory effect)
- Extended shelf life

Specifications

Batteries

Voltage 12 VDC

Ah size Ah size varies (See P/N in Ordering Information for Ah sizes)

Ordering Information

Part Number	Description
081-155-00	Batteries with enclosure: Two 12V/18 Ah batteries in an 18 in. H x 12 in. W x 6 in. D red, NEMA 1 battery enclosure with wire harness for use with M-2 conventional, MAAP+, MAAP-X, and Vulcan 1 FACPs, provides 24 VDC 18 Ah.
081-156-00	Batteries with enclosure: Two 12V/26 Ah batteries in an 18 in. H x 12 in. W x 6 in. D red, NEMA 1 battery enclosure with wire harness for use with M-2 conventional, MAAP+, MAAP-X, and Vulcan 1 FACPs, provides 24 VDC 26 Ah
081-156-01	Batteries with enclosure: Two 12V/26 Ah batteries in an 18 in. H x 12 in. W x 6 in. D red, NEMA 1 battery enclosure. Assembly has an enclosure mounted military grade threaded battery connect and disconnect port with a MAAP-X battery cable assembly; for use with MAAP-X FACPs, provides 24 VDC 26 Ah
081-177-00	Batteries with enclosure: Two 12V/40 Ah batteries in a 20 in. H x 16 in. W x 8 in. D red, NEMA 1 enclosure with wire harness for use with M-2 conventional, MAAP+, MAAP-X, and Vulcan 1 FACPs, provides 24 VDC 40 Ah
081-182-00	Batteries with enclosure: Two 12V/75 Ah batteries in a 12 in. H x 24 in. W x 8 in. D red, NEMA 1 enclosure with wire harness for use with M-2 conventional, MAAP+, MAAP-X, and Vulcan 1 FACPs, provides 24 VDC 75 Ah
081-172-00	Batteries with enclosure: Four 12V/18 Ah batteries in a 20 in. H x 16 in. W x 6 in. D red, NEMA 3R battery enclosure with wire harness and tamper switch for use with BT-X 12 VDC panels, provides 12 VDC 72 Ah

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

Batteries

400-70x-00, 400-71x-00, 400-720-00

Description

Sealed Lead Acid (SLA) batteries are used in Monaco's products as a backup power source and as the primary power source in the case of Monaco's solar powered equipment. Batteries are available in 12 VDC and in several capacity options ranging from 1.2 Ah to 100 Ah.

P/N 400-701-00 Shown

Features

- Sealed, leak-proof construction allows for safe, maintenance-free operation in any position
- Compact, rugged, and rechargeable
- Pressure-relief valves allow venting of gases in the event of overcharging
- Cycle or float service applications (no memory effect)
- Extended shelf life

Specifications

Voltage 12 VDC

Capacity
P/N 400-703-00: 1.4 Ah
P/N 400-720-00: 3.3 Ah
P/N 400-704-00: 8 Ah
P/N 400-713-00: 12 Ah
P/N 400-712-00: 18 Ah
P/N 400-701-00: 26 Ah
P/N 400-714-00: 40 Ah
P/N 400-716-00: 75 Ah
P/N 400-717-00: 100 Ah
P/N 400-718-00: 100 Ah

Ordering Information

Part Number	Description
400-703-00	Battery, SLA, rechargeable, 12V/1.4 Ah, quick connect, 3.78 in. L x 1.69 in. W x 2.28 in. H, 1.2 lb
400-720-00	Battery, SLA, rechargeable, 12V/3.3 Ah, quick connect, 5.24 in. L x 2.64 in. W x 2.6 in. H, 2.9 lb
400-704-00	Battery, SLA, rechargeable, 12V/8 Ah, quick connect, 5.95 in. L x 2.56 in. W x 3.9 in. H, 3.5 lb
400-713-00	Battery, SLA, rechargeable, 12V/12 Ah, quick connect, 5.94 in. L x 3.86 in. W x 3.86 in. H, 7.92 lb
400-712-00	Battery, SLA, rechargeable, 12V/18 Ah, quick connect, 7.13 in. L x 3.03 in. W x 6.59 in. H, 12.6 lb
400-701-00	Battery, SLA, rechargeable, 12V/26 Ah, quick connect, 6.56 in. L x 6.97 in. W x 4.92 in. H, 17 lb
400-714-00	Battery, SLA, rechargeable, 12V/40 Ah, nut and bolt, 7.76 in. L x 6.5 in. W x 6.69 in. H, 29.1 lb
400-716-00	Battery, SLA, rechargeable, 12V/75 Ah, universal terminal, 10.25 in. L x 6.6 in. W x 8.98 in. H, 50.6 lb
400-717-00	Battery, SLA, rechargeable, 12V/100 Ah, universal terminal, 12 in. L x 6.6 in. W x 8.98 in. H, 68 lb
400-718-00	Battery, SLA, rechargeable, 12V/100 Ah, universal terminal, 12.01 in. L x 6.61 in. W x 9.06 in. H, 65.34 lb

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment Catalog Section 14

Auxiliary Power Supplies

UPS Kit, 1200W, 120V 404-064-01
NAC Distributed Power Supply. 404-073-00
UPS 120 VAC, 60 Hz, 800 W 404-111-10, 404-111-11
UPS 120 VAC, 60 HZ, 400W 404-114-01

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

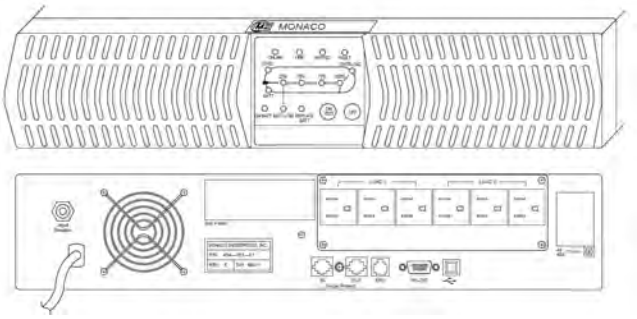
Detect
Manage
Record

Supplemental Equipment

UPS Kit, 1200W, 120V
404-064-01

Description

This Uninterruptible Power Supply (UPS) is a 1500 VA, 1200 W 120 VAC true on-line, double conversion, extended run-time unit. The UPS is designed for critical, power-sensitive electronic environments. The on-battery output waveform is true sine wave.



The full-load backup time is five minutes; the half-load backup time is 12.7 minutes. These are best estimates, however, actual backup run-time varies according to protected equipment and battery condition.

Features

- 19 in. rack and cabinet install
- 0.8 power factor (W) for large capacities
- Output receptacle control for non-critical load-shedding capacity
- Extended run-time using external battery packs
- Independent battery pack chargers to reduce battery recharge times
- Simultaneous RS-232, USB and SNMP communications
- Front panel display with load/battery and status indicators
- Dedicated remote Emergency Power Off (EPO) port
- “Hot swappable” batteries
- Phone/modem/network protection
- Six fully protected outlets
- EMI/RFI filtering
- SNMP manageable

Kit Contents

UPS	1200W, 120 VAC, 50/60 Hz
Surge Protector Kit	15A, 120 VAC
UPS to CPS Cable	484, 6 ft.
Manual	UPS and Reserve Power Supply Charger IOM Manual, P/N 001-150-00

Specifications

Power	1200W; power factor 0.8; 1500 VA
Energy Dissipation	800 joules
Input Voltage	110/120 VAC
Frequency	50/60 Hz ± 6 Hz autosensing
Power Factor Correction	Equal to or greater than 97% at full load
Battery Type	VRLA, sealed, non-spillable
Battery Dynamic Response	± 5% at 100 load change in 30 ms
Battery Transfer Time	0 ms
Battery Recharge Time	8 hours from total discharge
Battery voltage	48 VDC (four 12V/72 Ah batteries
Battery Weight	6 lb
Operating Temperature	32°F (0°C) to 104°F (40°C)
Humidity	95% non-condensing
Unit Dimensions	3.5 in. H x 17.3 in. L x 17 in. D
Weight	43.12 lb

Ordering Information

Part Number	Description
404-064-01	Uninterruptible Power Supply Kit, 1200 W, 120 VAC, 50/60 Hz, 20 minute backup

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

NAC Distributed Power Supply

404-073-00

Description

The Notification Appliance Circuit (NAC) power extender is designed to extend the power capabilities of existing NACs.

This remote power supply can be connected to any 12V or 24V Fire Alarm Control Panel (FACP) or may be used as a standalone power supply.

Features

- Fully supervised power supply, battery, and NACs
- Able to cascade up to four power supplies
- Five Class B NACs
- Built-in strobe synchronization
- 6A continuous output in standalone mode
- Safety compliance: NFPA 72, UL 864, UL 1481
- Coded signal synchronization
- Integral supervised battery charger for lead acid batteries only
- Removable terminal blocks

Specifications

Power Input	120 VAC, 50/60 Hz, 5A maximum
Wire Size	12 to 14 AWG minimum with 600V insulation
Trigger Input Voltage	9 to 32 VDC
Trigger Current	2 mA (16 to 32V); 1 mA per input
Trouble Contact Rating	4A at 24 VDC
Auxiliary Power Output	500 mA maximum
Output Circuits	• 24 VDC filtered, regulated • 1A regulated • 3A special applications • 6A maximum total continuous current for all outputs
Maximum Total Current	6A alarm; 3A standby
Secondary Power Charging Circuit (Battery)	• Supports lead acid batteries only • Float charge voltage: 27.6 VDC • Maximum current charge: 1.5A • Maximum battery capacity: 18Ah
Enclosure Dimensions	20 in. H x 14.5 in. W x 3.5 in. D (50.8 cm x 36.83 cm x 8.9 cm)
Weight	With two 7Ah batteries: 24 lb (10.9 kg) With two 18Ah batteries: 39 lb (17.7 kg)
Standards Compliance:	
UL Listed	S2424
FM Approved	Approved
State of California	7315-0075:0510

Ordering Information

Part Number	Description
404-073-00	NAC Power Extender, 120 VAC, 50/60 Hz, 24 VDC, five Class B NACs, 6A maximum

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

UPS 120 VAC, 60 Hz, 800 W

404-111-10, 404-111-11

Description

The 230 VAC, 1000,VA uninterruptible power supply is ideal for backing up devices that operate using 230 VAC power.

The unit provides surge suppression outputs. The unit has five LED indicators to show line power, battery power, overload, voltage regulation, and battery low/replace status. Audible alerts indicate power failure, overload, and low battery conidtions.

Features

- Battery backup and AC power protection
- Switches to 1kCA/800 W battery mode in milliseconds to keep your equipment running long enough to save files and safely shut down with no data loss
- Internal battery provides 14 minutes of support at half load (400 W) and four minutes at full load (800 W)
- Provides safe unattended shutdown and saves files during prolonged power failures

Specifications

Output Power	800 W, 1000 VA
Nominal Output Voltage	120 VAC
Output Frequency	60 Hz
Dimensions	6.2 in. H x 23.5 in. W x 22.5 in. D
Weight	36 lb
Operating Temperature	5°F to 122°F (–15°C to 50° C)
Operating Humidity	0% to 95% non-condensing

Ordering Information

Part Number	Description
404-111-10	1KVA rack-mount, uninterruptible power, 1KVA, 800W, 120 VAC in/out 60 Hz, 1U rack-mount with rail
404-111-11	1KVA rack-mount kit, uninterruptible power, 1KVA, 800W, 120VAC in/out 60 Hz, 1U rack-mount

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

UPS 120 VAC, 60 HZ, 400W

404-114-01

Description

This uninterruptible power supply (UPS) provides the battery backup needed to continue working through medium-length power outages.

This UPS protects equipment against damaging surges and spikes on utility and data lines. Its automatic voltage regulation (AVR) adjusts high or low voltages to safe levels during overvoltages and brownouts.

"Power saving outlets" have a user-settable option to enable/disable idle peripherals. High-efficiency charging and AVR bypass reduce power consumption.

Features

- LCD provides status for over 20 utility and battery backup conditions; audible alarms
- Three "battery backup and surge-protected" outlets
- Three "surge only" outlets (includes two power-saving "controlled" outlets)
- Data line surge protection for Ethernet or coaxial cable lines
- Pushbutton circuit breaker
- Automatic diagnostic testing
- Auto Shutdown Software manages the unit through USB or serial interface

Specifications

Input	
Voltage, Frequency	120 VAC, 50/60 Hz
Input Connector	6 ft. cord with NEMA 5-15 plug
Output	
Capacity	700 VA, 420 W
Voltage, Frequency (Utility)	120 VAC, 60 Hz
Voltage, Frequency (Battery)	115 VAC ± 8%, 60 Hz
Waveform Type	Stepped approximation to sine wave
Surge Protection	
AC Power Surge	All outlets
Data Line Surge	Network: 1000BASE-T Ethernet (gigabit) Coaxial: CATV, SATV, modem, A/V
Physical	
Dimensions	7.5 in. H x 3.6 in. W x 12.2 in. D
Weight	15.7 lb
Battery	Sealed, lead-acid, maintenance-free
Certification/ Approvals	FCC Part 15 Class B FCC Part 68 NOM UL 1778

Ordering Information

Part Number	Description
404-114-01	UPS 120 VAC, 60 Hz, 700 VA, 400 W

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment Catalog Section
14

Power Supply/Battery Chargers

Power Supply/Battery Charger, 24 VDC, 3 Amp, 115 VAC 404-095-00
Power Supply/Battery Charger 24 VDC, 10/8 Amp, 115 VAC 404-098-00
Power Supply/Battery Charger 24 VDC, 8/10 Amp, 230 VAC 404-098-10
Power Supply/Battery Charger, 12/24 VDC, 6A, 115/230 VAC 404-150-00
Power Supply/Battery Charger, 24 VDC, 10/8A, 115 VAC 404-190-00
Power Supply/Battery Charger, 24 VDC, 10/8A, 220 VAC 404-194-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Power Supply/Battery Charger, 24 VDC, 3 Amp, 115 VAC
404-095-00

Description

This Power Supply and Battery Charger converts a 115 VAC 60 Hz input into a single fuse 24 VDC at 3A Class 2 rated power limited output. Comes in a red enclosure with Cam lock. Enclosure will accommodate two 12V/12 Ah batteries.

FM APPROVED

MEA approved

Features

- Indoor Power Supply/Battery Charger with Class 2 rated power limited output
- Short circuit and thermal overload protection
- Filtered and regulated
- Battery backup instantaneous upon AC loss
- LED indicators
- Low battery disconnect
- Battery Leads included

Specifications

Input Voltage	115 VAC 60 Hz, 3.5A
Output Voltage	12 VDC or 24 VDC selectable
Supply Current	12 VDC @ 4A continuous (max.), or 24 VDC @ 3A continuous (max.)
Battery Charger	0.7A maximum charge current
BTU/Hr (approx.)	12 VDC: 25 BTU/Hr 24 VDC: 37 BTU/Hr
Supervision	AC Failure - Form "C" contacts Low Battery - Form "C" contacts
Power Output Switch	12 VDC - Switch Position: SW1 ON 24 VDC - Switch Position: SW1 OFF
LED Indicators	Input voltage present and DC output powered
Temperature	Operating: 32°F to 120°F (0°C to 49°C) Storage: –4°F to 158°F (–20°C to 70°C)
Relative Humidity	85% ±5%
Enclosure Dimensions	13.5 in. H x 13 in. W x 3.25 in. D (342.9 mm x 330.2 mm x 82.55 mm)
Weight	6.95 lb (3.25 kg)
Standards Compliance	
UL Listed	UTRZ.S4707 UL 1481 (Fire Protective Signaling Systems)
CSFM	7315-1335:0100
MEA	MEA 120-93-E Vol.3
FM	Approved Class of Work: 3010 Fire Alarm Systems

Ordering Information

Power Supply/Charger

Part Number	Description
404-095-00	Power Supply/Battery Charger, 24 VDC @ 3A, 115 VAC 60 Hz, in red enclosure, battery recharge current 0.7A (max); use with SLA battery (P/N 400-704-00), two required

Associated Parts

Part Number	Description
400-704-00	Battery, SLA, rechargeable, 12V/8 Ah, quick connect, 5.95 in.L x 2.56 in.W x 3.90 in.H, 3.50 lb

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

Power Supply/Battery Charger 24 VDC, 10/8 Amp, 115 VAC
404-098-00

Description

This Power Supply and Battery Charger converts a 115 VAC 60 Hz input into 24 VDC at 8 Amp continuous supply current with 10 Amp supply current during alarm for Fire Alarm applications. Comes in a red enclosure with Cam lock. Enclosure will accommodate two 12V/12 Ah batteries.

FM APPROVED

MEA approved

Features

- Indoor Power Supply/Battery Charger non-power limited output
- 24 VDC output at 8A supply current in non-alarm condition and at 10A supply current during alarm for Fire Alarm Applications
- 24 VDC output at 10A supply current for Access Control Applications
- Short circuit and thermal overload protection
- Filtered and electronically regulated
- Built-in battery charger
- Automatic switch over to stand-by battery when AC fails
- LED indicators
- Battery Leads included

Specifications

Input Voltage	115 VAC 60 Hz, 4.2A
Output Voltage	24 VDC
Supply Current	24 VDC @ 8A continuous, 10A during alarm for Fire Alarm Applications 24 VDC @ 10A for Access Control Applications
Battery Charger	3.6A maximum charge current
BTU/Hr (approx.)	24 VDC: 123 BTU/Hr
Supervision	AC Failure - Form "C" contacts Low Battery - Form "C" contacts Battery Presence - Form "C" contacts
LED Indicators	Input voltage present and DC output powered
Temperature	Operating: 32°F to 120°F (0°C to 49°C) Storage: –4°F to 158°F (–20°C to 70°C)
Relative Humidity	85% ± 5%
Enclosure	Red, NEMA 1
Enclosure Dimensions	15.5 in. H x 12 in. W x 4.5 in. D (394 mm x 305 mm x 114 mm)
Weight	9.25 lb (4.2 kg)
Standards Compliance	
UL Listed	URTZ.S4707 UL 1481 (Fire Protective Signaling Systems)
CSFM	7315-1335:0100
MEA	168-92-E Vol. 12
FM	Approved Class of Work: 3010 Fire Alarm Systems

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

Ordering Information

Part Number	Description
404-098-00	Power Supply/Battery Charger, 24 VDC @ 8A continuous, 10A during alarm, 115 VAC 60 Hz, red enclosure. Battery recharge current 3.6A (max), use with SLA battery (P/N 400-713-00), two required

Associated Parts

Part Number	Description
400-713-00	Battery, SLA, rechargeable, 12V/12 Ah, quick connect, 5.94 in.L x 3.86 in. W x 3.86 in.H, 7.92 lb

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Power Supply/Battery Charger 24 VDC, 8/10 Amp, 230 VAC
404-098-10

Description

This Power Supply and Battery Charger converts a 230 VAC 50/60 Hz input into a single fused 24 VDC output at 10A supply current. Comes in a red enclosure with Cam lock. Enclosure will accommodate two 12V/12 Ah batteries.

FM APPROVED

MEA approved

Features

- Indoor Power Supply/Battery Charger regulating output
- 24 VDC output at 8A supply current with 10A during alarm
- Short circuit and thermal overload protection
- Filtered and electronically regulated
- Built-in battery charger
- Upon AC loss, instantaneous
- LED indicators
- Battery Leads included

Specifications

Input Voltage	230 VAC 50/60 Hz, 2.5A
Output Voltage	24 VDC
Supply Current	24 VDC @ 8A continuous, 10A during alarm for Fire Alarm Applications 24 VDC @ 10A for Access Control Applications
Battery Charger	3.6 A maximum charge current
BTU/Hr (approx.)	24 VDC: 123 BTU/Hr
Supervision	AC Failure - Form "C" contacts Low Battery - Form "C" contacts
LED Indicators	Input voltage present and DC output powered
Temperature	Operating: 32°F to 120°F (0°C to 49°C) Storage: –4°F to 158°F (–20°C to 70°C)
Relative Humidity	85% ±5%
Enclosure	Red, NEMA 1
Enclosure Dimensions	15.5 in. H x 12 in. W x 4.5 in. D (394 mm x 305 mm x 114 mm)
Weight	9.25 lb (4.2 kg)
Standards Compliance	
UL Listed	URTZ.S4707 UL 1481 (Fire Protective Signaling Systems)
CSFM	7315-1335:0100
MEA	168-92-E Vol. 12
FM	Approved Class of Work: 3010 Fire Alarm Systems

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

Ordering Information

Part Number	Description
404-098-10	Power Supply/Battery Charger, 24 VDC @ 8A continuous, 10A during alarm, 230 VAC 50/60 Hz, red enclosure, battery recharge current 3.6 Amp (max). Use with SLA battery (P/N 400-713-00), two required

Associated Parts

Part Number	Description
400-713-00	Battery, SLA, rechargeable, 12V/12 Ah, quick connect, 5.94 in. L x 3.86 in. W x 3.86 in. H, 7.92 lb

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Power Supply/Battery Charger, 12/24 VDC, 6A, 115/230 VAC
404-150-00

Description

This Power Supply and Battery Charger is complete with transformers and power supply. The power supply converts a 115 VAC 60 Hz or a 230 VAC 50/60 Hz input into 6 Amp at 12 VDC or 24 VDC non-power limited output. Comes in a grey enclosure with Cam lock. The enclosure will accommodate two 12V/12 Ah batteries.

Features

- Power Supply/Battery Charger with non-power limited output
- Short circuit and thermal overload protection
- Filtered and regulated
- Battery backup instantaneous upon AC loss
- LED indicators
- Low battery disconnect
- Battery leads included
- Short circuit and thermal overload protection
- Filtered and regulated

Specifications

Input Voltage	115 VAC 60 Hz, 1.9A or 230 VAC 50/60 Hz, 0.95A
Output Voltage	12 VDC or 24 VDC selectable
Supply Current	6A continuous
Charge Current	0.7A (maximum)
BTU/Hr (approx.)	12 VDC: 37 BTU/Hr 24 VDC: 74 BTU/Hr
Supervision	AC Failure - Form "C" contacts Low Battery - Form "C" contacts Battery Presence - Form "C" contacts
Power Output Switch	12 VDC - Switch Position: SW1 ON 24 VDC - Switch Position: SW1 OFF
LED Indicators	Input voltage present DC output powered
Mounting	Indoor, wall-mount
Temperature	Operating: 32°F to 120°F (0°C to 49°C) Storage: –4°F to 158°F (–20°C to 70°C)
Relative Humidity	85% ±5%
Enclosure	NEMA 1
Enclosure Dimensions	15.5 in. H x 12 in. W x 4.5 in. D (394 mm x 304.8 mm x 114 mm)
Weight	12.6 lb (5.72 kg)
Standards Compliance	
UL Listed	UL 1481 (Fire Protective Signaling Systems)

Ordering Information

Part Number	Description
404-150-00	Power Supply/Battery Charger, 12/24 VDC at 6A, 115 VAC 60 Hz or 230 VAC 50/60 Hz, grey enclosure, battery recharge current 0.7A (max.), use with SLA battery (P/N 400-713-00), two required

Associated Parts

Part Number	Description
400-713-00	Battery, SLA, rechargeable, 12V/12 Ah, quick connect, 5.94 in. L x 3.86 in. W x 3.86 in. H, 7.92 lb

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Power Supply/Battery Charger, 24 VDC, 10/8A, 115 VAC
404-190-00

Description

This Power Supply/Battery Charger converts a 115 VAC, 60Hz input into 24 VDC output with an 8A continuous supply current (10A supply current during alarm). The Power Supply/Battery Charger comes in a red cam lock enclosure that can accommodate two 12V/12 Ah batteries.

NOTE Batteries must be ordered separately.

Features

- Four filtered and electronically regulated outputs
- Built-in charger for sealed lead acid (SLA) or gel type batteries
- AC failure, low battery, and battery presence supervision
- Automatic switch over to standby battery in the event of AC failure
- Short circuit and thermal overload protection
- Battery leads included

Specifications

Input Voltage	115 VAC, 60 Hz, 4.2A maximum
Output Voltage	24 VDC maximum
Output Current	10A at 24 VDC continuous maximum; four 2.5A PTC outputs
Battery Charge Current	3.6A maximum
BTU/Hour	≈123 BTU/hour
Supervision	Battery and AC Failure; Form C Contacts
LED Indicators	• Input voltage present • DC output powered • Battery discharged or not connected
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	85% ±5%
Enclosure Dimensions	15.5 in. H x 12 in. W x 4.5 in. D (39.37 cm x 30.48 cm x 11.43 cm)
Weight	9.4 lb (4.6 kg)
Standards Compliance:	
UL Listed	UL1481 and UL294; File S4707

Ordering Information

Part Number	Description
404-190-00	Power Supply/Battery Charger, 10/8A, 115 VAC, 60 Hz, with four 2.5A Class 2 power limited outputs

Associated Parts

Part Number	Description
400-704-00	Battery, SLA, rechargeable, 12V/8Ah, quick connect, 5.94 in. L x 2.56 in. W x 3.9 in. H, 5.6 lb
400-713-00	Battery, SLA, rechargeable, 12V/12Ah, quick connect, 5.94 in. L x 3.86 in. W x 3.98 in. H, 7.48 lb

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

Power Supply/Battery Charger, 24 VDC, 10/8A, 220 VAC
404-194-00

Description

This Power Supply/Battery Charger converts a 220 VAC, 50/60Hz input into 24 VDC output with an 8A continuous supply current (10A supply current during alarm). The Power Supply/Battery Charger comes in a red cam lock enclosure that can accommodate two 12V/12 Ah batteries.

NOTE Batteries must be ordered separately.

Features

- Four filtered and electronically regulated outputs
- Built-in charger for sealed lead acid (SLA) or gel type batteries
- AC failure, low battery, and battery presence supervision
- Automatic switch over to standby battery in the event of AC failure
- Short circuit and thermal overload protection
- Battery leads included

Specifications

Input Voltage	220 VAC, 50/60 Hz, 2.5A maximum
Output Voltage	24 VDC maximum
Output Current	10A at 24 VDC continuous maximum; four 2.5A PTC outputs
Battery Charge Current	3.6A maximum
BTU/Hour	≈123 BTU/hour
Supervision	Battery and AC Failure; Form C Contacts
LED Indicators	• Input voltage present • DC output powered • Battery discharged or not connected
Operating Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	85% ±5%
Enclosure Dimensions	15.5 in. H x 12 in. W x 4.5 in. D (39.37 cm x 30.48 cm x 11.43 cm)
Weight	9.4 lb (4.6 kg)

Ordering Information

Part Number	Description
404-194-00	Power Supply/Battery Charger, 10/8A, 220 VAC, 50/60 Hz, with four 2.5A Class 2 power limited outputs

Associated Parts

Part Number	Description
400-704-00	Battery, SLA, rechargeable, 12V/8Ah, quick connect, 5.94 in. L x 2.56 in. W x 3.9 in. H, 5.6 lb
400-713-00	Battery, SLA, rechargeable, 12V/12Ah, quick connect, 5.94 in. L x 3.86 in. W x 3.98 in. H, 7.48 lb

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

NAC Boosters

Supplemental Equipment Catalog Section 14

NAC Boosters

NAC Distributed Power Extender 404-126-00, 404-126-01
NAC Distributed Power Extender 404-164-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

NAC Distributed Power Extender

404-126-00, 404-126-01

Description

This NAC distributed power extender is an 8A unit with built-in battery charger. The NAC power extender can be connected to any Monaco Fire Alarm Control Panel (FACP).

Primary applications are notification appliance (horn or strobe) circuit expansion (supports ADA requirements) and auxiliary power to system accessories.

NOTE Batteries (for AC failure back-up) can interfere with conduit entry in the bottom of the enclosure. Batteries must be ordered separately. Battery Ah size varies based on backup replacements.

Features

- Two Class A, Style Z or two Class B, Style W, Y FACP inputs
- Two NC dry-contact trigger inputs
- Programmable, supervised outputs:
  - Four Class B, Style W, Y—or,
  - Four Class A, Style Z—or,
  - A combination of two Class A, Style Z and two Class B, Style W, Y
  - Two 24 VDC, 1A Aux power outputs
    - Aux 1 automatically disconnects when AC lost
    - Aux 2 has battery backup during AC fail
  - 2.5A max. per NAC output, 1A max. Aux 2 power output, 8As max total NACS and Aux 2

  NOTE P/N 404-126-01 also supports Class B, Style X inputs and outputs.
- With P/N 404-126-01, two outputs can be paralleled for more power on an indicating circuit
- Thermal, short-circuit protection with auto-reset
- Supervision (Form C contact, 1A/28 VDC):
  - AC fail supervision with field-selectable delay options
  - Instant local AC trouble reporting relay
  - Battery presence and low-battery supervision
- Automatic switch-over to batteries on AC fail—zero voltage drop
- Input and output status LEDs
- Common trouble input and output
- Ground fault detection
- Signal circuit trouble memory identifies intermittent faults
- 2-wire horn/strobe sync mode allows audible notification appliances (horns) to be silenced while visual notification appliances (strobes) continue to operate
- Horn/strobe sync protocols include:
  - System Sensor®
  - Cooper Wheelock®
  - Gentex®
  - Faraday
  - Potter/Amseco
  - Monaco Type I and Type II devices
- Synchronization modes: Temporal 3, steady, input to output, follower

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

Agency Approvals

These apply only to P/N 404-126-00:

NFPA 72 Compliant

Specifications

AC Power P/N 404-126-00: 120 VAC (nominal), 60 Hz, 5A
P/N 404-126-01: 220 VAC (nominal), 50/60 Hz, 2.5A

Output
- 24 VDC regulated, power limited
- 2.5A max. per output
- Two auxiliary outputs:
  - AUX1: 1A max. primary AC power only, disconnect on secondary battery power
  - AUX2: 1A max. primary AC power and secondary battery power
- 8A total for panel

Batteries Two 12 VDC/12 Ah or two 12 VDC/7 Ah

Standby Current 90 mA

Alarm Current 175 mA Panel consumption plus all NAC and Aux out current loads; total current must not exceed 8A

EOL Resistor 2.2 kohms

Gnd Fault Test Imped. 1,000 ohms, maximum

Weight 16.9 lb without batteries

Dimensions 18 in. H x 14.5 in. W x 4.5 in.D

Stand-by Specifications

Batteries	Stand-by Time	Alarm Output Current	Aux 2 Output
24 VDC / 7.7 Ah (use two 12 VDC batteries in series)	24 Hours	8A / 5 minutes	—
24 VDC / 12 Ah (use two 12 VDC batteries in series)	24 Hours	8A / 5 minutes	50mA
24 VDC / 36 Ah (use two 12 VDC batteries in series)	24 Hours	8A / 5 minutes	1A

NOTE Unit is equipped with two 1A max. auxiliary outputs: "AUX1" will automatically disconnect when AC is lost. "AUX2" will remain battery backed up during power outage. For loads connected to "AUX2", refer to battery "Stand-by Specifications" above for ratings. When loads are connected to "AUX1" and/or "AUX2" outputs during an alarm condition, the remaining outputs may not exceed 8A total alarm current.
Example: AUX1 = 1A, AUX2 = 1A, outputs up to 7A.

Ordering Information

NAC Power Extender

Part Number	Description
404-126-00*	NAC Power Extender, 120 VAC, 60 Hz, 24 VDC, 8A total NACs and Aux 2, four Class B or four Class A NACs; Aux 1 - 1A AC power only, no battery backup, Aux 2 - 1A with battery backup*
404-126-01*	NAC Power Extender, 220 VAC, 50/60 Hz, 24 VDC, 8A, four Class B or four Class A NACs, two 1A auxiliary outputs
***Batteries ordered separately**	

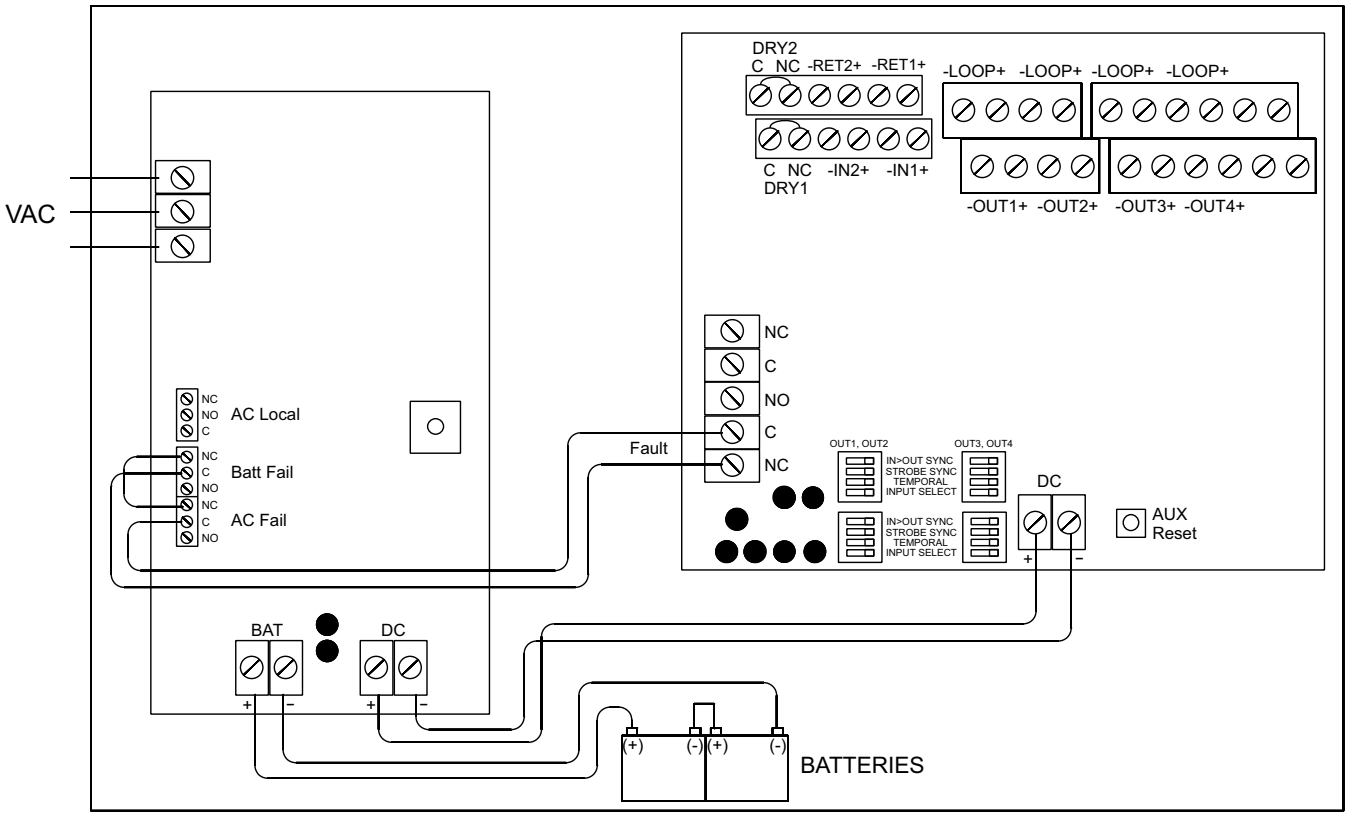
Associated Parts

Part Number	Description
400-704-00	Battery, SLA, rechargeable, 12V/8 Ah, quick connect, 5.95 in. L x 2.56 in. W x 3.90 in. H, 3.50 lb
400-713-00	Battery, SLA, rechargeable, 12V/12 Ah, quick connect, 5.94 in.L x 3.86 in. W x 3.86 in.H, 7.92 lb
NOTE 2 each required, Ah based on backup requirements.	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Wiring Example



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

NAC Distributed Power Extender
404-164-00

Description

The NAC Distributed Power Extender is a compact, easy to install, 6.5A unit complete with battery charger. It is equipped with horn strobe sync modes that support several styles of horn strobe appliances allowing horns to be silenced while strobes continue to operate without additional sync modules. It may be connected to any Monaco Fire Alarm Control Panel (FACP) or stand-alone.

Primary applications include notification appliance (horn or strobe) circuit expansion (supports ADA requirements). The NAC extender contains a battery charger capable of charging sealed lead acid or gel-type batteries.

NOTE Due to the size of the enclosure, batteries (for AC failure back-up) may interfere with conduit entry in the bottom of the enclosure.

Features

- Power input 220 VAC, 50/60 Hz, 1.2A
- 24 VDC output, 6.5A total alarm current
- Separate 1A auxiliary output
- Compatible with 12 VDC or 24 VDC fire panels
- Two Class A, Style Z or two Class B, Style W, X, Y FACP inputs
- Two NC dry-contact trigger inputs
- Two outputs may be paralleled for more power on an indicating circuit
- Programmable, supervised, IC outputs:
  - 4 Class B, Style W, X, Y—or,
  - 2 Class A, Style Z—or,
  - A combination of 1 Class A, Style Z and 2 Class B, Style W, X, Y
- Thermal and short-circuit protection with auto reset
- AC fail supervision (Form C contact, 1A/28 VDC), factory set for 30 seconds with optional 2.5 to 3 hour delay setting (field selectable)
- Instant local AC trouble reporting relay (Form C contact, 1A/28 VDC)
- Battery presence and low-battery supervision (Form C contact, 1A/28 VDC)
- Common trouble input and output
- Input and output status LEDs
- Ground fault detection
- 2-wire horn/strobe sync mode allows audible notification appliances (horns) to be silenced while visual notification appliances (strobes) continue to operate
- Horn/strobe sync protocols include:
  - System Sensor®
  - Cooper Wheelock®
  - Gentex®
  - Faraday
  - Amseco

  The power extender will only synchronize horns, horn/strobes and strobes that contain synchronization capability.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Specifications

AC Power	220 VAC (nominal), 50/60 Hz, 1.2A
Output	• 24 VDC regulated, power limited • 2.5A max. per output • Auxiliary out 1A max. • 6.5A total for panel
Batteries	Two 12 VDC/8 Ah or two 12 VDC/12 Ah
Standby Current	90 mA
Alarm Current	175 mA panel consumption plus all NAC and Aux out current loads; total current must not exceed 6.5A
EOL Resistor	2.2 kohm (2,200 ohm)
Gnd Fault Test Imped.	1,000 ohms, maximum
Weight	9.6 lb without batteries
Dimensions	15.5 in. H x 12 in. W x 4.5 in.D

Ordering Information

NAC Power Extender

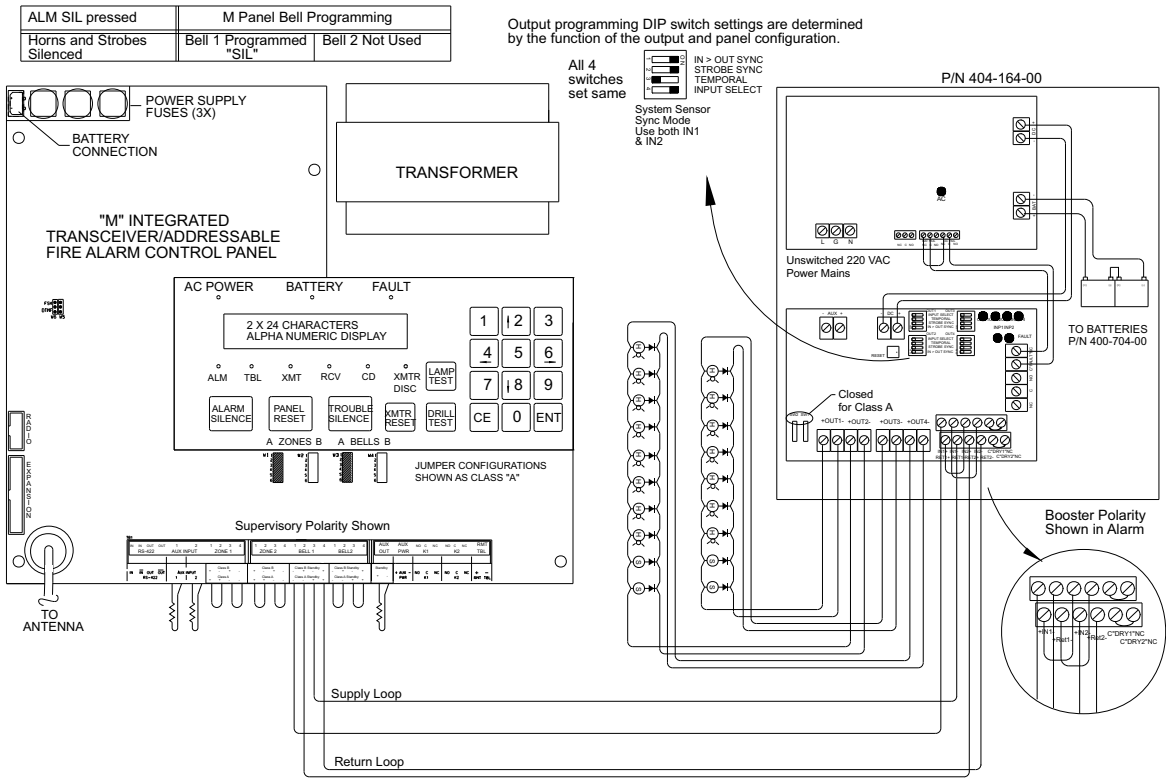
Part Number	Description
404-164-00	NAC power extender, 220 VAC, 50/60 Hz, 24 VDC, 6.5A, four Class B or two Class A NACs (2.5A each), 1A AUX power

Associated Parts

Part Number	Description
400-704-00	Battery, SLA, rechargeable, 12V/8 Ah, quick connect, 5.95 in. L x 2.56 in. W x 3.90 in. H, 3.50 lb
400-713-00	Battery, SLA, rechargeable, 12V/12 Ah, quick connect, 5.94 in. L x 3.86 in. W x 3.86 in. H, 7.92 lb

Wiring Diagram

The NAC power extender must be properly connected to the FACP to ensure the proper functioning of the synchronization feature of Type I and Type II panels.



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment Catalog Section 14

Relays

Relay, SPDT, 120-277 VAC, 10A 451-700-00, 451-700-01
Relay, SPDT, 24 VDC, 7A 453-100-00
Relay, SPDT, 24 VDC, 7A 453-102-00, 453-103-00
Relay, DPDT, 24 VDC, 7A 453-104-00, 453-105-00
Relay, SPDT, 24 VDC/VAC, 10A 453-106-00, 453-106-01
Relay, SPDT, 24 VDC/VAC, 10A 453-107-00, 453-107-01
Relay, DPDT, 24 VDC/VAC, 10A 453-110-00, 453-110-01
Relay, SPDT, 10–30 VDC, 10A Input 453-111-00, 453-111-01
Relay, SPDT, 24 VDC/VAC, 7A and 10A 453-114-00
Relay, Time Delay, SPDT, 10A 453-117-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Relay, SPDT, 120-277 VAC, 10A

451-700-00, 451-700-01

Description

This enclosed SPDT Dry-Contact Class 2 Relay can be activated by a wide range of dry contacts such as thermostats, switches or other relays. 10 Amp contacts are isolated from input power and dry contact input and can be wired to switch any other power-load or low-voltage load. This relay can operate from any voltage from 120 VAC to 277 VAC.

Features

- SPDT Relay with one continuous duty coil
- Single Relay Module
- Expected relay life of 10 million cycles minimum-mechanical
- 1.8 seconds operate time
- LED illuminates when active
- UL Accepted for use in Plenum, NEMA 1

Specifications

Power Input	50 mA @ 240 VAC maximum
Contact Ratings	10A General Use @ 277 VAC 10A Resistive @ 30 VDC (NO) 7A Resistive @ 30 VDC (NC) 470 VA Pilot Duty @ 125 VAC 770 VA Pilot Duty @ 250 VAC
Wiring	16 in. 600V rated
Dimensions	1.7 in. H x 2.8 in. W x 1.5 in. D (43.18 mm x 71.12 mm x 38.1 mm) with 0.5 in. (12.7 mm) NPT nipple
Shipping Weight	0.314 lb (0.142 kg)
Temperature	–30°F to 140°F (34.4°C to 60°C)
Relative Humidity	5% to 95% non-condensing
Standards Compliance	
UL	E68805 Management Equipment UL Listed UL916
CSFM	7300-1555:0100

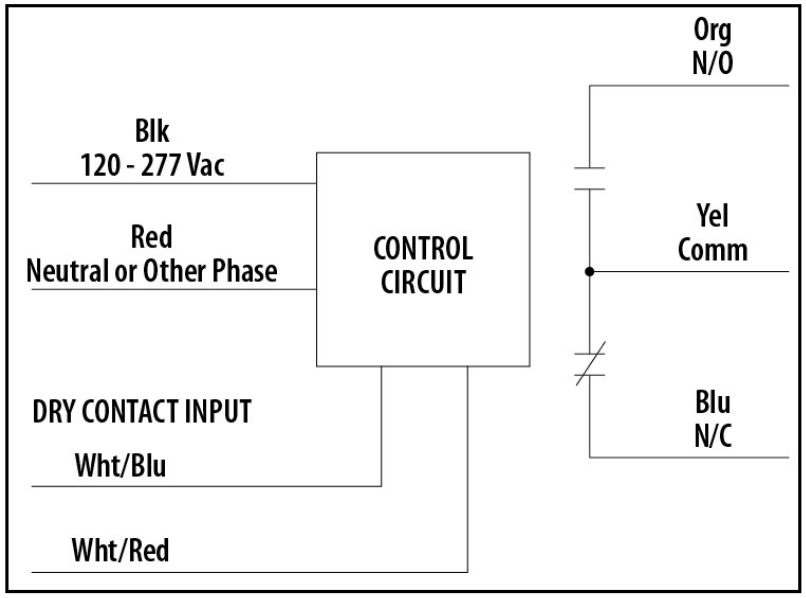
Ordering Information

Part Number	Description
451-700-00	Relay, SPDT, 120-277 VAC, 10A, Dry Contact, Class 2, LED, grey enclosure
451-700-01	Relay, SPDT, 120-277 VAC, 10A, Dry Contact, Class 2, LED, red enclosure

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Wiring Diagram



Dry Contact Input Operation

Close White/Red wire to White/Blue wire to activate relay.

If more than one dry contact relay in-a- box shares a single dry contact input, White/Blue must be common

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

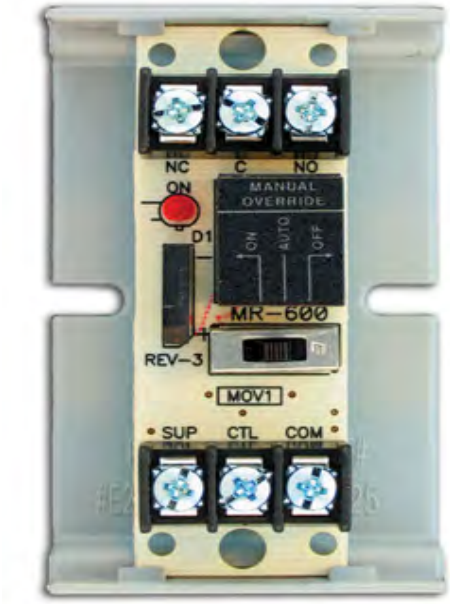
Detect
Manage
Record

Supplemental Equipment

Relay, SPDT, 24 VDC, 7A
453-100-00

Description

This SPDT track-mounted relay offers 7A contact at 24VDC or 10A contact at 120 VAC and manual override capabilities through an integral three position switch. The switch requires 24 VDC or 24 VAC constant supply power source to energize the relay.



When the switch is in the ON position, the relay is energized; when the switch is in the AUTO position, the relay operates as signaled by the control panel. The relay is not energized when the switch is in the OFF position.

Features

- Relay with manual override switch
- Relay can be energized from 24 VDC or 24 VAC
- Single module configuration
- Red LED illuminates when energized

Specifications

Voltage	24 VDC or 24 VAC @ 15 mA
Contact Ratings	Resistive load: 7A @ 24 VDC, 10A @ 120 VAC
Contacts	Dry form "C" SPDT
Wiring	Solid or Stranded #14 to #22 AWG Terminals
Track-mounting	3.5 in. wide, low profile snap track with mounting screws
Track-mount Dimensions	3.5 in. H x 2 in. W x 1.375 in. D (89 mm x 51 mm x 35 mm)
Ambient Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	85% @ 32°F non-condensing, non-freezing
Standards Compliance	
UL	UL Listed UL864 (10th edition) UL Recognized Component #S3403 UOXX2.S3403

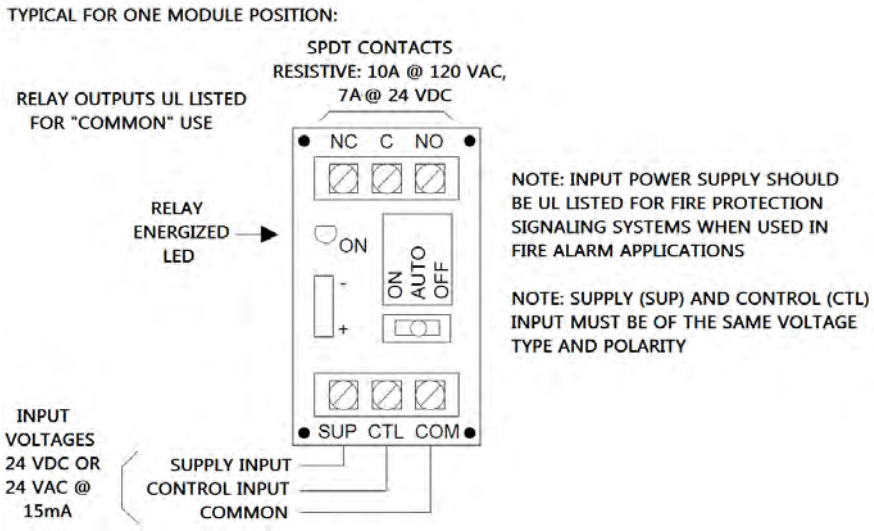
Ordering Information

Part Number	Description
453-100-00	Relay, SPDT, 24 VDC, 7A contacts, override, LED, track-mount (track included)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Wiring Diagram



Supplemental Equipment

Relay, SPDT, 24 VDC, 7A
453-102-00, 453-103-00

Description

These SPDT Multi-Voltage Control Relays offer 7A and 10A contacts which may be operated by one of four input control voltages.

P/N 453-102-00

P/N 453-103-00

Features

- Multi-Voltage Control Relay with override capabilities
- Relay can be energized from a voltage source of 24 VDC, 24 VAC, 120 VAC, or 230 VAC
- Single Relay Module
- DC Control Inputs are polarized
- Red LED illuminates when energized

Specifications

P/N 453-102-00:

Power	per module position: 24 VDC @ 15 mA 24 VAC @ 48 mA, 120 VAC @ 21 mA, 230 VAC @ 19 mA
Polarized Coil Inputs	DC control inputs only
Current Requirement	18mA per module position
Contacts	Dry Form "C" SPDT per module position
Contact Ratings (Resistive)	7A @ 30 VDC 10A @ 125 VAC 7A @ 250 VAC
Wiring	Solid or stranded: #14 to #22 AWG terminals
Mounting	Track-mount 3.5 in. wide, low profile, plastic snap track provided with mounting screws
Dimensions	3.25 in. H x 2.125 in. W x 1.50 in. D (82 mm x 54 mm x 38 mm)
Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	93% non-condensing, non-freezing
Standards Compliance:	
UL	UL Recognized Component UL Listed UL864, S3403 Control Unit Accessories UOXX2
CSFM	7300-1004:106

P/N 453-103-00:

Power	Per module position: 24 VDC @ 15 mA 24 VAC @ 48 mA, 120 VAC @ 21 mA, 230 VAC @ 19 mA
Polarized Coil Inputs	DC control inputs only
Current Requirement	18mA per module position
Contacts	Dry Form "C" SPDT per module position
Contact Ratings (Resistive)	7 A @ 30 VDC 10 A @ 125 VAC 7 A @ 250 VAC
Wiring	Solid or stranded: #14 to #22 AWG terminals
Enclosure	Grey, ABS-94V-0 Plastic
Mounting	Back Box 18 gage CRS, plated with 1/2 in. conduit knockouts top and bottom
Dimensions	5.125 in. H x 3.125 in. W x 2.5 in. D (130 mm x 79 mm x 63 mm)
Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	93% non-condensing, non-freezing
Standards Compliance	
UL	UL Listed UL864, S3403 Control Unit Accessories UOXX, UOXX7
CSFM	7300-1004:101
MEA	73-92-E Vol. 14

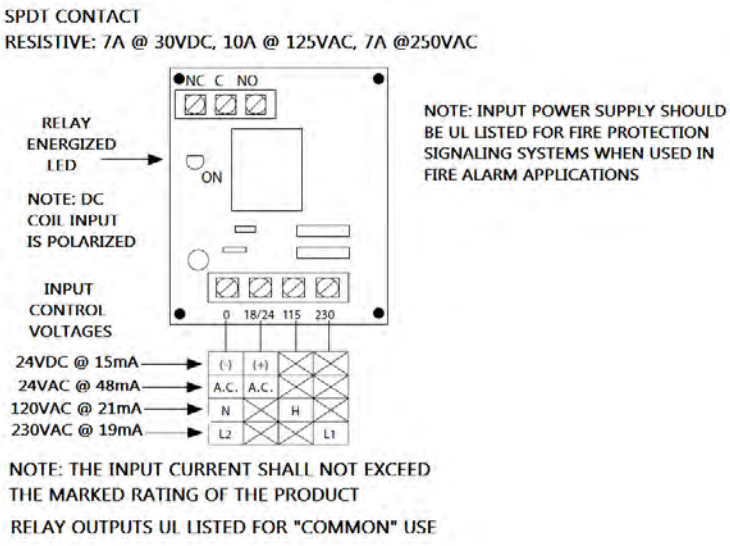
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Ordering Information

Part Number	Description
453-102-00	Relay, SPDT, 24 VDC, 7A contacts, polarized, LED, 3.5 in. track-mount (included)
453-103-00	Relay, SPDT, 24 VDC, 7A contacts, polarized, LED, enclosure

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Supplemental Equipment

Relay, DPDT, 24 VDC, 7A
453-104-00, 453-105-00

Description

These DPDT Multi-Voltage Control Relays offer 7A and 10A contacts which may be operated by one of four input control voltages.

P/N 453-104-00

P/N 453-105-00

Features

- Multi-voltage Control Relay with override capabilities
- Relay can be energized from a voltage source of 24 VDC, 24 VAC, 120 VAC, or 230 VAC
- Single Relay Module
- DC Control Inputs are polarized
- Red LED illuminates when energized

Specifications

P/N 453-104-00:

Power	per module position: 24 VDC @ 28 mA 24 VAC @ 69 mA, 120 VAC @ 45 mA, 230 VAC @ 36 mA
Polarized Coil Inputs	DC control inputs only
Current Requirement	40mA per module position
Contacts	Dry Form "C" DPDT per module position
Contact Ratings (Resistive)	7A @ 30 VDC 10A @ 125 VAC 7A @ 250 VAC
Wiring	Solid or stranded: #14 to #22 AWG terminals
Mounting	Track-mount 3.5 in. wide, low profile, plastic snap track provided with mounting screws
Dimensions	3.25 in. H x 2.125 in. W x 1.5 in. D (82 mm x 54 mm x 38 mm)
Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	93% non-condensing, non-freezing
Standards Compliance:	
UL	UL Recognized Component UL Listed UL864, S3403 Control Unit Accessories UOXX2
CSFM	7300-1004:106

P/N 453-105-00:

Power	Per module position: 24 VDC @ 28 mA 24 VAC @ 69 mA, 120 VAC @ 45 mA, 230 VAC @ 36 mA
Polarized Coil Inputs	DC control inputs only
Current Requirement	40 mA per module position
Contacts	Dry Form "C" DPDT per module position
Contact Ratings (Resistive)	7 A @ 30 VDC 10 A @ 125 VAC 7 A @ 250 VAC
Wiring	Solid or stranded: #14 to #22 AWG terminals
Enclosure	Grey, ABS-94V-0 Plastic
Mounting	Back Box 18 gage CRS, plated with 1/2 in. conduit knockouts top and bottom
Dimensions	5.125 in. H x 3.125 in. W x 2.5 in. D (130 mm x 79 mm x 63 mm)
Temperature	32°F to 120°F (0°C to 49°C)
Relative Humidity	93% non-condensing, non-freezing
Standards Compliance	
UL	UL Listed UL864, S3403 Control Unit Accessories UOXX, UOXX7
CSFM	7300-1004:101
MEA	73-92-E Vol. 16

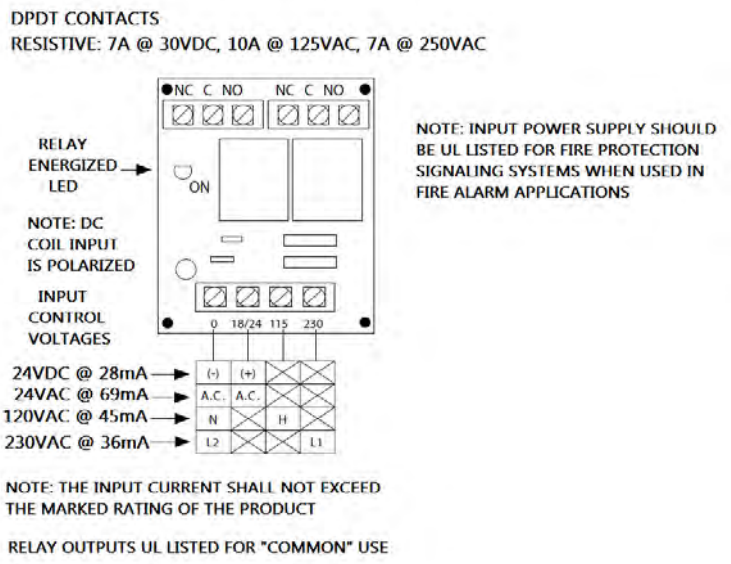
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Ordering Information

Part Number	Description
453-104-00	Relay, DPDT, 24 VDC, 7A contacts, polarized, LED, 3.5 in. track-mounted
453-105-00	Relay, DPDT, 24 VDC, 7A contacts, polarized, LED, enclosure

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

Relay, SPDT, 24 VDC/VAC, 10A

453-106-00, 453-106-01

Description

This SPDT enclosed Fire Alarm Relay is 10A, polarized with 24 VDC/VAC coil. The relay is designed for operation in systems that require supervision from controllers and utilize end-of-line resistors. This relay can also be operated from A/C voltage (non-polarized) if desired.

P/N 453-106-00 shown

Features

- SPDT Relay with one continuous duty coil
- Single Relay Module
- Expected relay life of 10 million cycles minimum-mechanical
- 6 ms operate time
- LED illuminates when active
- UL accepted for use in Plenum, NEMA 1

Specifications

Coil Voltage Input	24 VDC/VAC, 50/60 Hz Drop out = 3.8 VDC / 3 VAC Pull In = 20 VDC / 20 VAC
Coil Current	18 mA at 24 VDC 31 mA at 24 VAC
Contact Ratings	10A Resistive at 30 VDC (NO) 7A Resistive at 30 VDC (NC)
Wiring	16 in. 600V rated
Dimensions	1.70 in. H x 2.80 in. W x 1.50 in. D (43.18 mm x 71.12 mm x 38.1 mm) with 0.50 in. (12.7 mm) NPT nipple
Shipping Weight	0.291 lb (0.132 kg)
Temperature	–30°F to 140°F (–34.4°C to 60°C)
Relative Humidity	5% to 95% non-condensing
Standards Compliance	
UL	UL Listed UL916, UL864, C-UL
CSFM	7300-1555:0100

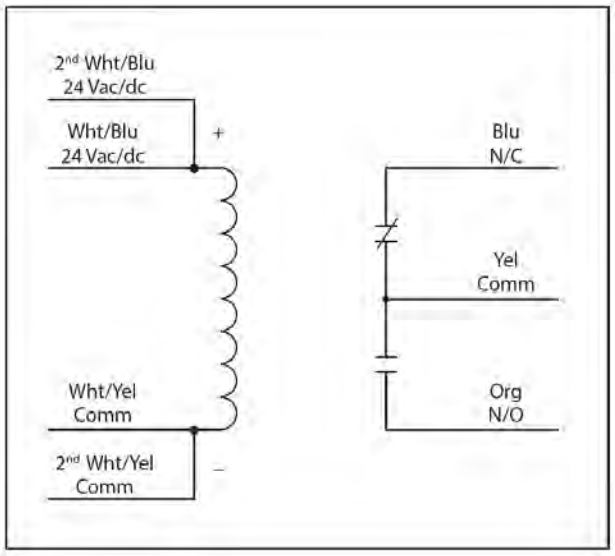
Ordering Information

Part Number	Description
453-106-00	Relay, SPDT, 24 VDC/VAC, 50/60 Hz, coil, 10A contacts, polarized, LED, grey enclosure
453-106-01	Relay, SPDT, 24 VDC/VAC, 50/60 Hz, coil, 10A contacts, polarized, LED, red enclosure

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Relay, SPDT, 24 VDC/VAC, 10A
453-107-00, 453-107-01

Description

This Single Pole Double Throw (SPDT) enclosed Fire Alarm Relay is polarized and rated for 10A. It has 24 VDC/VAC coil and override switch. The relay is designed for operation in systems that require supervision from controllers and utilize end-of-line resistors. This relay can also be operated from VAC (non-polarized) if desired.

P/N 453-107-00
Grey Enclosure

P/N 453-107-01
Red Enclosure

Features

- SPDT Relay
- Single Relay Module
- Expected relay life of 10 million mechanical cycles minimum
- Operate time of 6 ms
- LED illuminates when active
- Override switch
- UL listed for use in plenum-rated NEMA 1 housing

NOTE Hand Off Auto Switch position is not supervised, so it can be left in the "OFF" position without causing a trouble condition on the fire alarm control panel.

Specifications

Coil Voltage Input	24 VDC/VAC, 50 to 60 Hz Drop Out: 3.8 VDC/3 VAC Pull In: 20 VDC/VAC
Coil Current	18 mA at 24 VDC 31 mA at 24 VAC
Contact Ratings	10A Resistive at 30 VDC (NO) 7A Resistive at 30 VDC (NC)
Wiring	16 in. 600V rated
Operate Time	6 ms
Dimensions	1.7 in. H x 2.8 in. W x 1.5 in. D (4.318 cm x 7.112 cm x 3.81 cm) with 0.5 in. (1.27 cm) NPT nipple
Shipping Weight	0.291 lb (0.132 kg)
Operating Temperature	–30°F to 140°F (–34.4°C to 60°C)
Relative Humidity	5% to 95%, non-condensing
Standards Compliance:	
UL Listing	UL916, UL864
State of California	7300-1555:0100

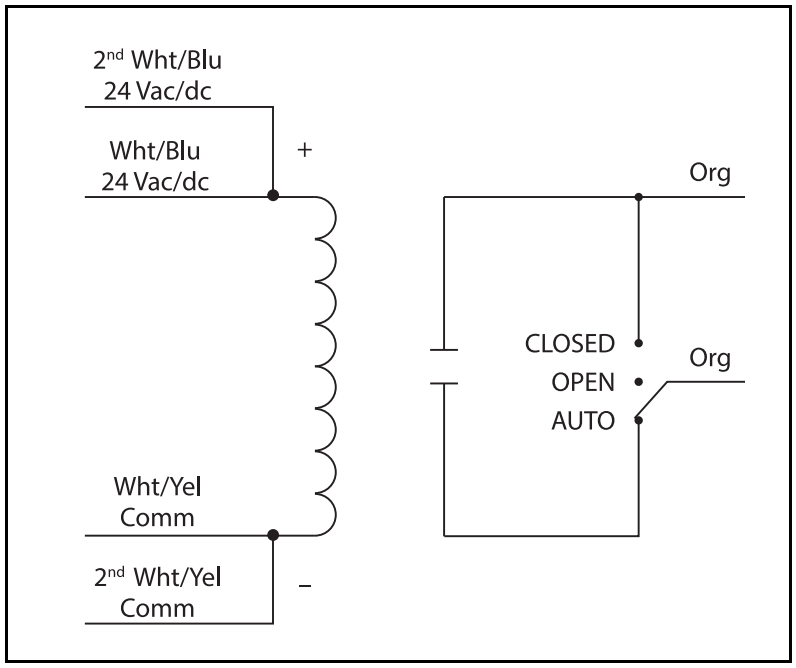
Ordering Information

Part Number	Description
453-107-00	Relay, SPDT, 24 VDC/VAC, 50/60 Hz, coil, 10A contacts, polarized, override, LED, grey enclosure
453-107-01	Relay, SPDT, 24 VDC/VAC, 50/60 Hz, coil, 10A contacts, polarized, override, LED, red enclosure

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Supplemental Equipment

Relay, DPDT, 24 VDC/VAC, 10A

453-110-00, 453-110-01

Description

This enclosed DPDT Pilot Relay is rated 10A with 24 VDC/VAC, 120 VAC Coil.

Features

- DPDT Relay with one continuous duty coil
- Single Relay Module
- Expected relay life of 10 million cycles minimum-mechanical
- 8 ms operate time
- LED illuminates when active
- UL Accepted for use in Plenum, NEMA 1

Specifications

Coil Voltage Input	24 VDC/VAC; 120 VAC; 50/60 Hz Drop Out = 3.8 VDC / 3 VAC Pull In = 20 VDC / 18 VAC
Coil Current	24 mA at 24 VDC 32 mA at 24 VAC 31 mA at 120 VAC
Contact Ratings	10A Resistive at 30 VDC B300 Pilot Duty: 120 VAC 30A Make 3A Break (360 VA) 240 VAC 15A Make 1.5A Break (360 VA) 24 VAC 30A Make 5A Break (120 VA) 5A max.
Wiring	16 in. 600V rated
Dimensions	1.7 in. H x 2.8 in. W x 1.5 in. D (43.18 mm x 71.12 mm x 38.1 mm) with 0.50 in. (12.7 mm) NPT nipple
Shipping Weight	0.336 lb (0.152 kg)
Temperature	–30°F to 140°F (–34.4°C to 60°C)
Relative Humidity	5% to 95% non-condensing
Standards Compliance	
UL	UL Listed UL916, UL864, C-UL
CSFM	7300-1555:0100

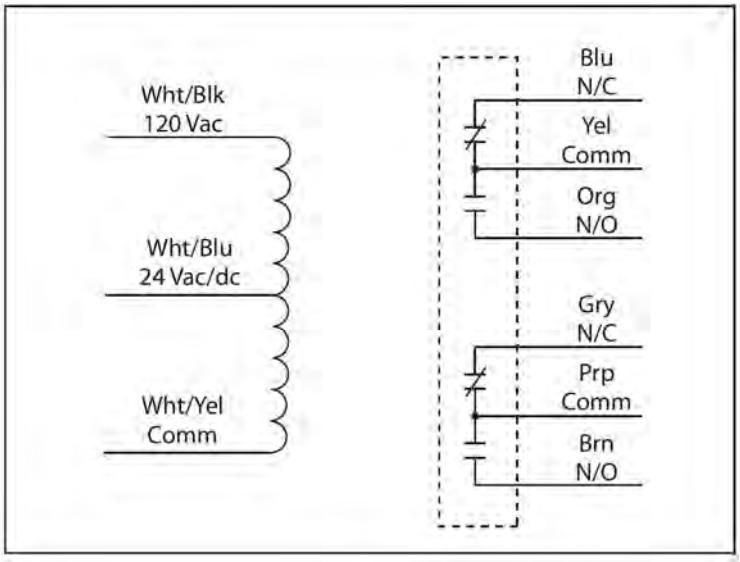
Ordering Information

Part Number	Description
453-110-00	Relay, DPDT, 24 VDC/VAC, 50/60 Hz, coil, 10A contacts, LED, grey enclosure
453-110-01	Relay, DPDT, 24 VDC/VAC, 50/60 Hz, coil, 10A contacts, LED, red, enclosure

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Relay, SPDT, 10–30 VDC, 10A Input

453-111-00, 453-111-01

Description

This enclosed SPDT Pilot Relay is rated 10A with 10–30 VDC/VAC, 120 VAC Coil.

Features

- SPDT Relay with one continuous duty coil
- Single Relay Module
- Expected relay life of 10 million cycles minimum-mechanical
- 20 ms operate time
- LED illuminates when active
- UL Accepted for use in Plenum, NEMA 1

Specifications

Coil Voltage Input	10–30 VDC/VAC; 120 VAC; 50/60 Hz Drop Out = 2.8 VDC / 2.1 VAC Pull In = 10 VDC / 9 VAC
Coil Current	18 mA at 24 VDC 46 mA at 24 VAC 28 mA at 120 VAC
Contact Ratings	10A Resistive at 28 VDC 600 watt Tungsten at 120 VAC (NO) 240 watt Tungsten at 120 VAC (NC)
Wiring	16 in. 600V rated
Dimensions	1.7 in. H x 2.8 in. W x 1.5 in. D (43.18 mm x 71.12 mm x 38.1 mm) with 0.5 in. (12.7 mm) NPT nipple
Shipping Weight	0.3 lb (0.14 kg)
Temperature	–30°F to 140°F (–34.4°C to 60°C)
Relative Humidity	5% to 95% non-condensing
Standards Compliance	
UL	UL Listed UL916, UL864, C-UL
CSFM	7300-1555:0100

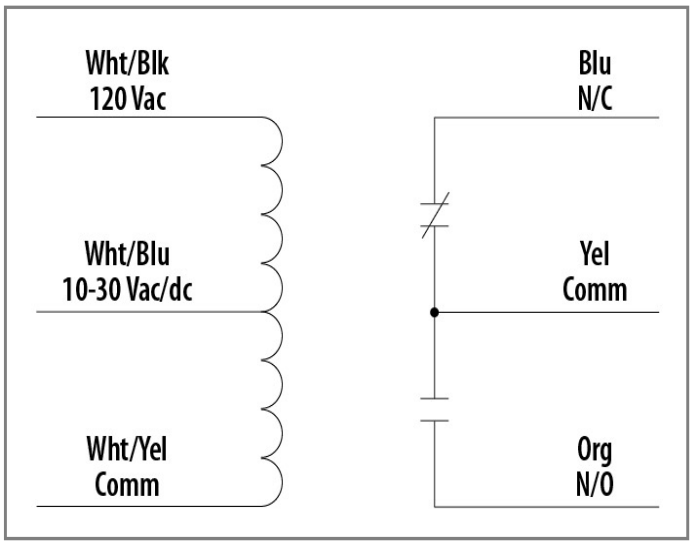
Ordering Information

Part Number	Description
453-111-00	Relay, SPDT, 10–30 VDC, 10A contacts, LED, grey enclosure
453-111-01	Relay, SPDT, 10–30 VDC, 10A contacts, LED, red enclosure

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Relay, SPDT, 24 VDC/VAC, 7A and 10A
453-114-00

Description

The Single Pole Double Throw (SPDT) 24 VDC/VAC, Fire Alarm Relay is track-mounted, polarized, and offers 10A at 30 VDC normally open (NO) contacts and 7A at 30 VDC normally closed (NC) contacts. The relay is designed for operation in systems that require supervision from controllers and utilize end-of-line resistors. This relay can also be operated from AC voltage (non-polarized) if desired.

Features

- SPDT Relay with one continuous duty coil
- Single relay module
- Expected relay life of 10 million mechanical cycles minimum
- Operating time of 6 ms
- LED illuminates when active

Specifications

Coil Voltage Input	24 VDC/VAC; 50 to 60 Hz Drop Out: 2.5 VDC/2 VAC Pull In: 11 VDC/9 VAC
Coil Current	18 mA at 24 VDC 31 mA at 24 VAC
Contact Ratings	10A Resistive at 30 VDC (NO) 7A Resistive at 30 VDC (NC) 470 VA Pilot Duty at 125 VAC 770 VA Pilot Duty at 250 VAC
Track-Mounting	Screw 2.75 in. W mounting track to any flat surface
Dimensions	1.1 in. H x 2.75 in. W x 1.75 in. D (27.94 mm x 69.85 mm x 44.45 mm) With 0.5 in. (12.7 mm) NPT nipple
Shipping Weight	0.12 lb (0.05 kg)
Temperature	–30°F to 140°F (–34.4°C to 60°C)
Relative Humidity	5% to 95% non-condensing
Standards Compliance:	
UL Listing	UL916, UL864, C-UL
State of California	7300-1555:0100

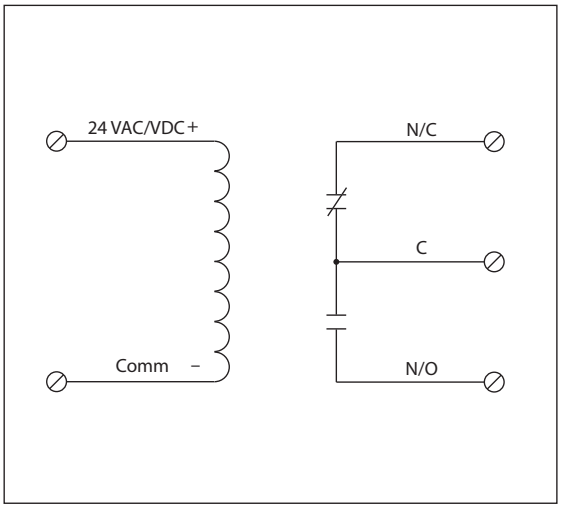
Ordering Information

Part Number	Description
453-114-00	Relay, SPDT, 24 VDC/VAC, 50/60 Hz, 10A contacts, polarized, LED, 2.75 in. track-mount

Associated Parts

Part Number	Description
082-431-00	Mounting Track for Relay, 2 in. L x 2.75 in. W, PVC flame rated 94–5V, mounting holes 2 in. center to center; for use with P/N 453-114-00

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

Relay, Time Delay, SPDT, 10A
453-117-00

Description

Monaco's relays are ideal for applications where local or remote contacts are required for control of electrical loads or general purpose switching. Suitable for use with heating, ventilating, and air conditioning (HVAC) systems, temperature control, fire alarm, security, energy management, and lighting control systems.

Features

- Enclosed, Time Delay Relay
- Single Pole Double Throw (SPDT) Continuous Duty Coil Relay
- Expected relay life of 10 million mechanical cycles (minimum)
- LED Indicator

Specifications

Contact Rating	10A General Use at 277 VAC 10A Resistive at 30 VDC (N/O) 7A Resistive at 30 VDC (N/C) 1/2 HP at 125 VAC 1 HP at 250 VAC 1/4 HP at 277 VAC C300 Pilot Duty
Input Current	66 mA at 24 VAC 38 mA at 24 VDC 40 mA at 120 to 277 VAC
Coil Voltage Input	24 VAC/VDC; 120-277 VAC; 50–60 Hz Drop Out = 3 VAC / 3.8 VDC Pull In = 20 VAC / 20 VDC
Timing	Mode: Delay On Make (N/O) Operate Time: 6ms after Time Delay Range: 6 seconds to 20 minutes Adjustment: four position DIP switch for range selection and single turn potentiometer for timing adjustment within range Tolerance: Switches 1 and 2: ±10% Switches 3 and 4: ±5% Repeatability: ±1% Temperature: ±1% Voltage: ±1% Recycle Time: 750 ms maximum
LED	Relay Status: Red LED On = Activated Time Delay: Pink LED Flashing = Timing
Wire Length	16 in., 600V rated
Enclosure	Gray, Plenum, NEMA 1
Operating Temperature	–30°F to 140°F (–34.4°C to 60°C)
Humidity	5% to 95% non-condensing
Dimensions	4 in. H x 4 in. W x 1.8 in. D with 0.5 in. NPT nipple
Standards Compliance:	
UL Listed	UL916 Energy Management, UL864 Fire
CSFM	7300-1555:0100

Ordering Information

Part Number	Description
453-117-00	Relay, Time Delay, SPDT, 24 VAC 50-60 Hz, 10A Contacts, gray enclosure

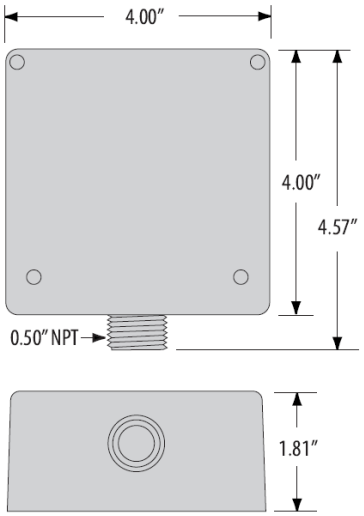
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

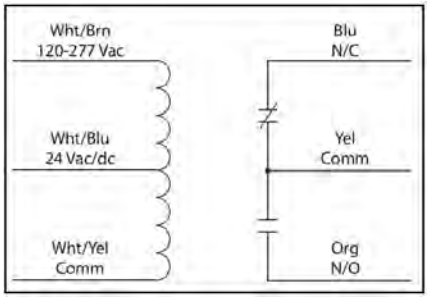
Supplemental Equipment

Diagrams

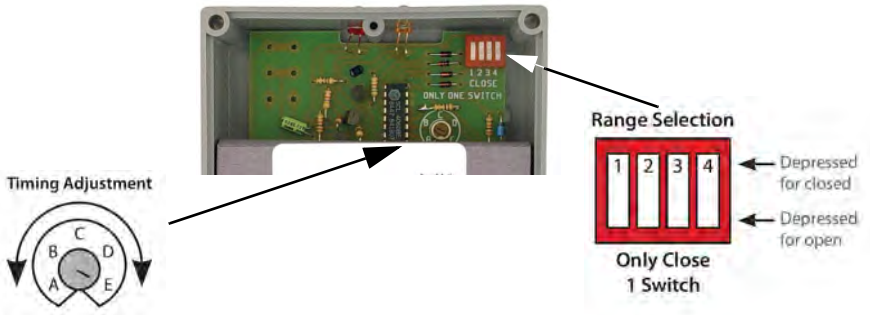
Dimensions



Wiring



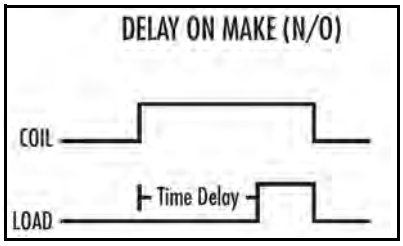
Timing Adjustment, Range Selection and Timing Table

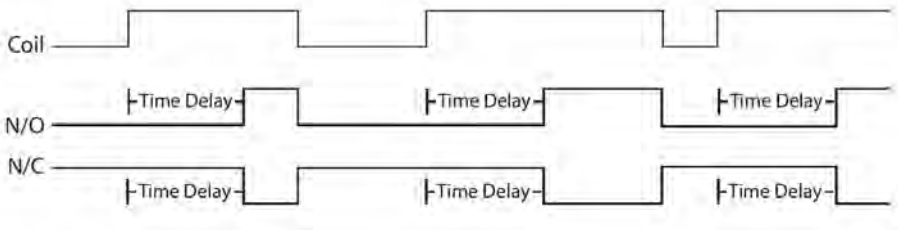


TIMING TABLE

Switch Ranges	Close Dip Switch	Potentiometer Setting A ⟷ B ⟷ C ⟷ D ⟷ E				
6s-20s	1	6s	9s	13s	16s	20s
22s-1min15s	2	22s	36s	50s	1min4s	1min15s
1min30s-5min	3	1min30s	2min10s	3min20s	4min16s	5min
6min-20min	4	6min	9min	13min20s	17min20s	20min

Timing Diagram





Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

AC and DC Surge Protection

Supplemental Equipment Catalog Section
14

AC and DC Surge Protection

Surge Protector, Transient, 2-Outlet Direct Plug In. 210-505-00
Surge Protector Kit, 120 VAC, Transient 210-509-00, 210-510-00
Surge Protector, Signal Line 210-511-00
Surge Protector, Initiating/Indicating Circuit, 24 VDC 210-514-00
Surge Protectors, 120 VAC, 240 VAC, and 120/240 VAC. 210-524-00, 210-555-00, 210-556-00
Surge Protector, 4-Wire Leased Line, 5V, SPD 210-526-00
Surge Suppressor, RJ-45 Ethernet 210-540-00
Surge Protector Module and Base 210-549-xx, 210-550-xx, 210-551-xx
Surge Protector, Series Wired, Single Phase 210-562-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Surge Protector, Transient, 2-Outlet Direct Plug In
210-505-00

Description

This Transient, 2-outlet, Direct Plug-in, Surge Protector protects computer peripherals and audio/visual equipment against surges, spikes and line noise. The integrated 15A Circuit Breaker protects all outlets and shuts down connected equipment in the event of an overload. Automatic shutoff permanently cuts power to outlets if protection circuit is incapacitated, preventing equipment damage and indicating replacement is required.

Features

- Indoor, Surge Protection Device (SPD)
- Two NEMA 5-15R surge-protected outlets
- 1,410 joules surge protection rating
- Safe thermal fusing prevents unsafe conditions during extreme extended overvoltages and catastrophic occurrences
- Isolated filter banks remove damaging line noise
- Diagnostic LEDs confirm power, protection and line fault status
- Plugs directly into outlet without a power cord

Specifications

Nominal Input Voltage	120 VAC
Frequency Compatibility	50/60 Hz
Output	1800 watts
Circuit Breaker (amps)	15A
Input Plug Type	NEMA 5-15P
EMI/RFI Noise Filter	40–80 dB
Clamping Voltage	140 Vrms
AC Suppression Response Time	NM = 0 ns. CM = < 1 ns
AC Suppression Surge Current Rating	48,000A
Protection Mode	Full normal: H-N Common mode: N-G/H-G
Housing	Black, metal
Mounting	Direct plug-in format with retaining bracket supports wall mounting directly to standard AC wall socket
Dimensions	4 in. H x 2.5 in. W x 2.5 in. D (10.16 cm x 6.35 cm x 6.35 cm)
Weight	0.8 lb (0.36 kg)
Standards Compliance	
UL	Tested to UL 1449 3rd Edition Safety Standards
IEEE	587 Category A and B Surge Suppression Specifications
ANSI	C62.41

Ordering Information

Part Number	Description
210-505-00	Surge Protector Kit, 15A/120 VAC, Plug-in, 4 in. H x 2.5 in. W x 2.5 in. D

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

Surge Protector Kit, 120 VAC, Transient
210-509-00, 210-510-00

Description

These Surge Protector Kits provide AC Surge Protection for equipment that operates on 120 VAC, Single-Phase, electrical service. These surge protectors provide protection against electrical transient surges generated by external lightning and internal switching events.

P/N 210-509-00

P/N 210-510-00

Features

- Indoor, Surge Protection Device (SPD)
- 100% Silicon Avalanche Suppressor Diode (SASD) protection
- Suppression Status Lamp
- Hardwired

Specifications

210-509-00

Electrical Configuration	120 VAC 60 Hz single-phase, 15A Fused 6 in., 14 AWG - Line and Load bidirectional protection
Maximum Continuous Operating Voltage (MCOV)	L-N 138 VAC
Nominal Discharge Current Rating (In)	0.7 kA
Response Time	5 nanoseconds
Protection Mode	L-N/G
Housing Material and Plating	Noryl N190X
Mounting	Panel mount
Operating Temperature	–22°F to 149°F (–30°C to 65°C)
Humidity	90% non-condensing
Dimensions	6.5 in. H x 3 in. W x 2.7 in. D (165.1 mm x 76.2 mm x 68.58 mm)
Weight	0.7 lb (317.51 g)

P/N 210-510-00

Electrical Configuration	120 VAC 60 Hz single-phase, 15A Pigtail, color-coded leads
Maximum Continuous Operating Voltage (MCOV)	L-N 138 VAC
Nominal Discharge Current Rating (In)	0.7 kA
Voltage Protection Level	8/20 µs L-N 330 @ 500A Vpk
Protection Mode	L-N/G
Housing Material and Plating	Noryl N190X
Mounting	Panel or Wall-mount
Operating Temperature	–40°F to 158°F (–40°C to 70°C)
Humidity	90% non-condensing
Dimensions	2.2 in. H x 2.2 in. W x 0.88 in. D (55.88 mm x 55.88 mm x 22.35 mm)
Weight	0.2 lb (90.72 g)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Ordering Information

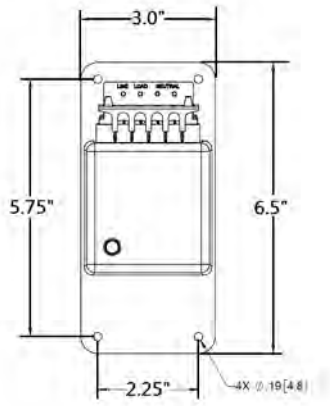
Part Number	Description
210-509-00	Surge Protector Kit, Transient, 120 VAC 60 Hz Single Phase, 15A, Terminal Block, 6.5 in. H x 3 in. W x 2.7 in. D

Part Number	Description
210-510-00	Surge Protector Kit, Transient, 120 VAC 60 Hz Single Phase, 15A Fused, Pigtail, 2.2 in. H x 2.2 in. W x 0.88 in. D

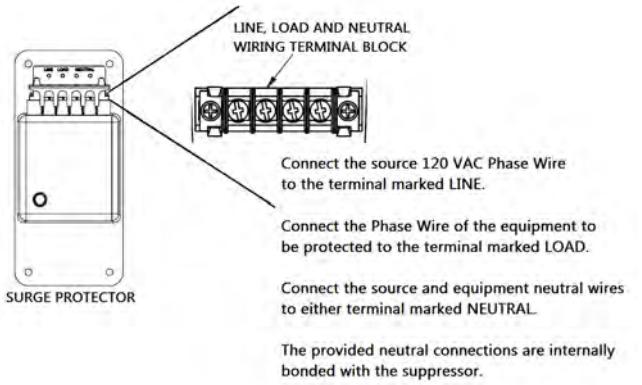
Diagrams

P/N 210-509-00

Dimensions

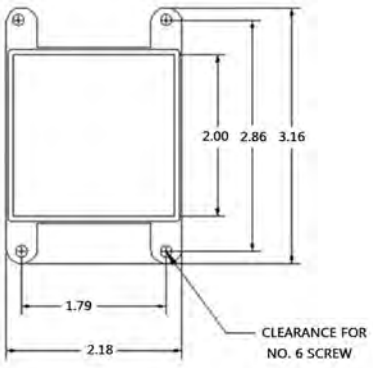


Wiring Diagram

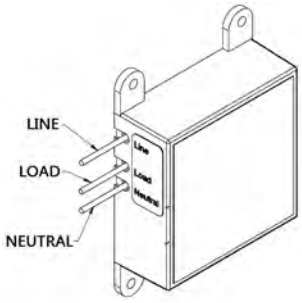


P/N 210-510-00

Dimensions



Wiring Diagram



Connect the source 120 VAC Phase Wire to the lead marked LINE (Black).

Connect the 120 VAC Phase Wire of the equipment to be protected to the lead marked LOAD (Red).

Connect the source and equipment neutral wires to the lead marked NEUTRAL (White).

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Surge Protector, Signal Line
210-511-00

Description

The Signal Line Surge Protector protects critical equipment in RS-422 protocol data networks while remaining transparent to data throughput. This surge protector provides effective protection against electrical transient surges that are generated by external lightning events and internal switching events.

Features

- Indoor, 4 Line Surge Protection Device (SPD)
- Silicon Avalanche Suppressor Diode (SASD) protection
- Screw Terminal Connectors
- 4X Wall-mounting Tabs

Specifications

Voltage	27 VDC (P/N 210-511-00)
Surge Current Rating	134 A @ 10/1000 µs (P/N 210-511-00)
Protection Mode	L-G
Data Rate	1.5 Mbps
Response Time	5 ns
Ports	1
Mounting	Wall-mount
Grounding	6-32 Stud, 14 AWG max.
Operating Temperature	–40°F to 185°F (–40°C to 85°C)
Dimensions	2.2 in. H x 3.16 in. W x 1.44 in. D (55.88 mm x 80.26 mm x 36.58 mm)
Weight	0.15 lb (68.04 g)

Ordering Information

Part Number	Description
210-511-00	Surge Protector, Signal Line, 27 VDC

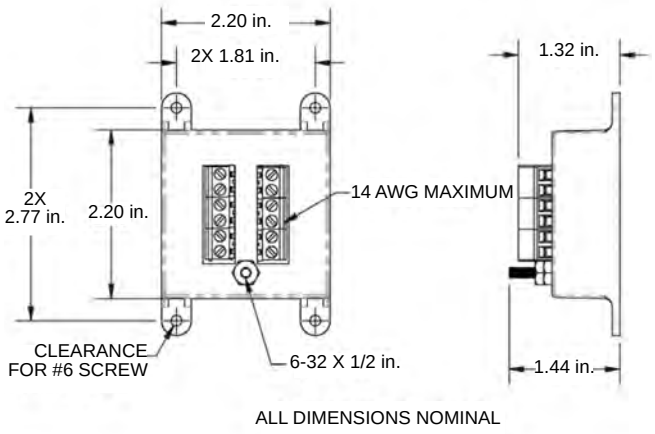
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

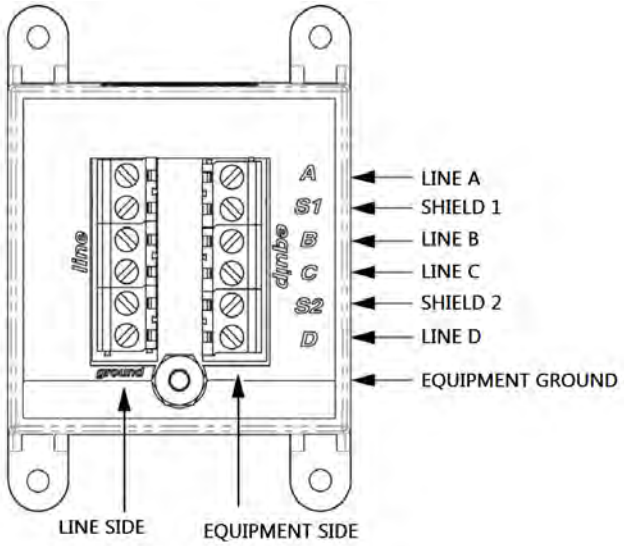
Diagrams

Dimensions



ALL DIMENSIONS NOMINAL

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Surge Protector, Initiating/Indicating Circuit, 24 VDC

210-514-00

Description

This Initiating/Indicating Circuit Surge Protector Device (SPD) protects critical equipment in CATV Repeaters/ Amplifiers protocol data networks while remaining transparent to data throughput. This surge protector protects against electrical transient surges that are generated by external lightning events and internal switching events.

Features

- Indoor, Isolated Loop Circuit Protector
- 100% Silicon Avalanche Suppressor Diode (SASD) protection
- Low Frequency DC, Communications Pairs
- Wired Lead Connectivity
- IP20 Environmental Protection Rating

Specifications

Voltage	24 VDC
Application	RS-422
Protected Pins	[1,2], [3,6], [4,5], [7,8]
Surge Current Rating	67A @ 10/1000 µs
Voltage Protection Level	48 Vpk @ 67A @ 10/1000 µs
Protection Mode	L-L
Connectors	Three 6 in. Wired Leads
Ports	1
Mounting	4X Wall-mounting tabs
Operating Temperature	–22°F to 149°F (–30°C to 65°C)
Dimensions	2.2 in. H x 3.16 in. W x 0.88 in. D (55.88 mm x 80.26 mm x 22.35 mm)
Weight	0.15 lb (68.04 g)
Standards Compliance:	Listed to UL 497B
UL	E220064

Ordering Information

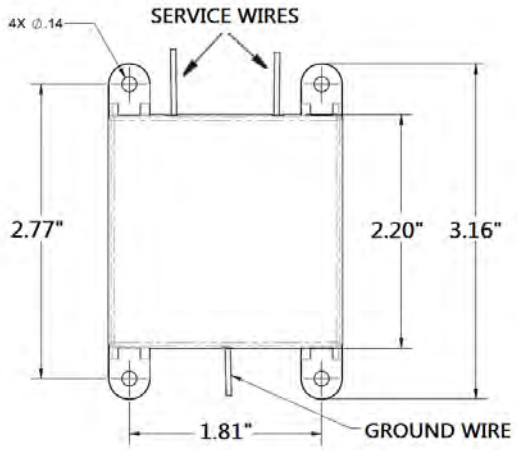
Part Number	Description
210-514-00	Surge Protector, initiating/indicating circuit, 24 VDC, CATV Repeaters/Amplifier data protocols

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

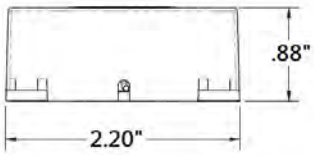
Detect Manage Record

Diagrams

Dimensions

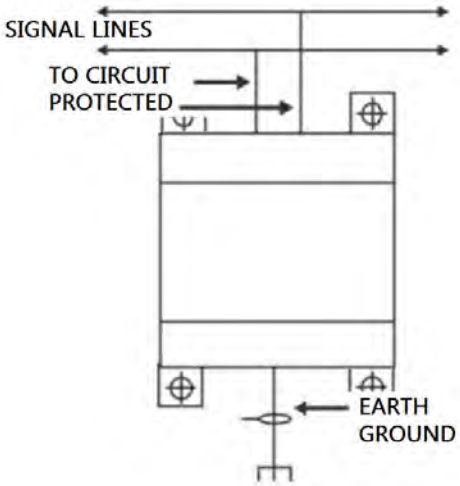


FRONT VIEW



SIDE VIEW

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Surge Protectors, 120 VAC, 240 VAC, and 120/240 VAC

210-524-00, 210-555-00, 210-556-00

P/N 210-524-00

P/N 210-555-00

P/N 210-556-00

Features

- Surge Protectors protect fire alarm panels and other dedicated branch circuit loads
- Approved for 20A circuit breakers
- Small size allows for mounting in many locations
- NEMA 4X Weatherproof enclosure
- Diagnostic LED indicates ground presence, system power and SPD function

Specifications

Voltage:	*P/N 210-524-00*	Single Phase, 120VAC, 2 Wire
	P/N 210-555-00	Single Phase, 240 VAC, 2 Wire
	P/N 210-556-00	Dual Phase, 120/240 VAC, 3 Wire
MCVO:	*P/N 210-524-00*	150 V
	P/N 210-555-00	320 V
	P/N 210-556-00	150/320 V
Voltage Protection Rating:		
	P/N 210-524-00	700 V L-G, 700 V L-N, 1,500 V N-G
	P/N 210-555-00	1,200 V L-G, 1,200 V L-N, 2,000 V N-G
	P/N 210-556-00	700 V L-G, L-N, 1,500 V L-L, 1,500 V N-G

Surge Current Rating:

P/N 210-524-00	50,000A
P/N 210-555-00	50,000A
P/N 210-556-00	100,000A
Short Circuit Current Rating	10kA
*Nominal Discharge Current Rating (*In*)*	10kA

SPD Type:

P/N 210-524-00)	Type 2 SPD for hardwired parallel installation on 120 VAC single branch circuit (P/N 210-524-00)
(P/N 210-555-00)	Type 1 and Type 2 SPD for hardwired parallel installation on 240 VAC single branch circuits (
(P/N-210-556-00)	Type 1 and Type 2 SPD for hardwired parallel installation on 120/240 dual phase circuits with a neutral leg
Connection	3/4 in. Parallel Wired
Temperature Range	–31°F to 176°F (–35°C to 80°C)
Maximum Humidity	95% non-condensing
Dimensions	3.5 in. L x 1.89 in. W x 3.4 in. H (88.9 mm x 48.3 mm x 86.4 mm)
Weight	0.55 lb (0.25 kg)

Standards Compliance:

UL	E328921 UL 1449 4th Edition, cUL
ANSI/IEEE	C62.41 and C62.45 Category B Standards

Ordering Information

Part Number	Description
210-524-00	Surge Protector, 120VAC, Hardwired, Single Phase, 10kA
210-555-00	Surge Protector, 240VAC, Hardwired, Single Phase, 10kA
210-556-00	Surge Protector, 120/240 VAC, Hardwired, Dual Phase, 10kA

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Supplemental Equipment

Surge Protector, 4-Wire Leased Line, 5V, SPD
210-526-00

Description

The 5 volt, 4-wire Leased Line Surge Protector provides effective protection against electrical transient surges that are generated both by external lightning events and by internal switching events. This surge suppressor supports long-term system reliability by absorbing high amounts of transient energy while maintaining a very low clamping voltage.

Features

- Indoor, Leased Line Surge Protection Device (SPD)
- 100% Silicon Avalanche Suppressor Diode (SASD) protection
- Specialized for Marine Applications
- Screw Terminal connections clearly identified for equipment, signal line and ground

Specifications

Service Voltage	5V
Leakage Current	5 µA
Surge Current Rating	100 A @ 10/1000 *µs*
Voltage Protection Level	7.5V @ 100A 10/1000 *µs*
Protection Mode	L-G
Impedance (data)	33 ohms per line (peak)
Response Time	5 ns
Connectors	Screw Terminal
Ports	Eight
Mounting	Wall-mount
Grounding	6 - 32 Stud, Terminal Ring #22 - #16 AWG
Operating Temperature	–22°F to 149°F (–30°C to 65°C)
Dimensions	2.2 in. H x 3.16 in. W x 1.43 in. D (55.88 mm x 80.26 mm x 36.32 mm)
Weight	0.18 lb (81.65 g)

Ordering Information

Part Number	Description
210-526-00	Surge Protector, 4-wire Leased Line, 5V

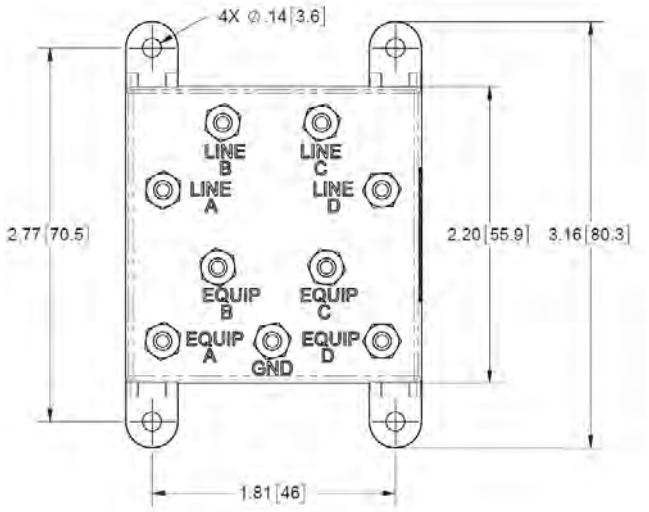
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

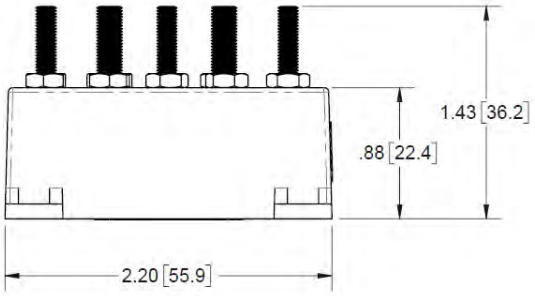
Detect Manage Record

Supplemental Equipment

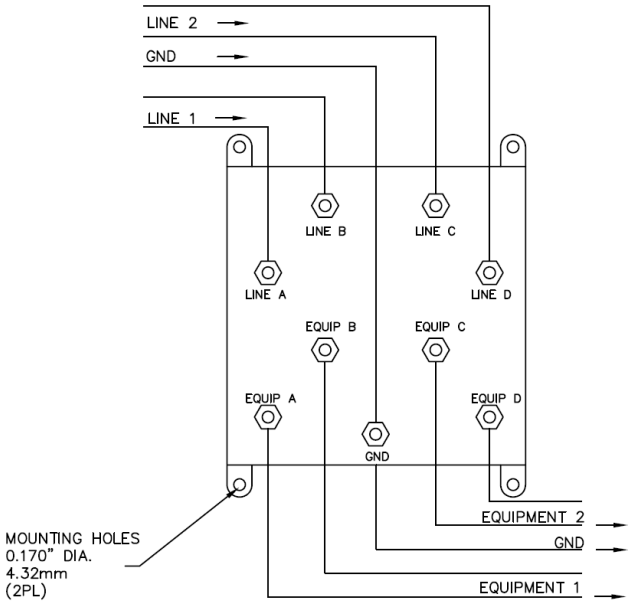
Diagrams

Dimensions





Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Surge Suppressor, RJ-45 Ethernet
210-540-00

Description

The surge suppressor provides a path to ground (Protective Earth) that protects connected radio equipment from near-miss lightning strikes.

The surge suppressor has two separate protection circuits. The Ethernet suppressor circuit comprises of a common mode and differential protection scheme across both pairs of data lines (pins 1 and 2, and 3 and 6) Power lines are also protected against surges in common mode and differentially.

Features

- Protects all varieties of power configurations - Offers full isolation between the four power pins (pins 4, 5, 7, and 8)
- Simplified installation and setup - Ground washer is shipped in the isolated position for easy installation

Specifications

Operating Temperature	–40°F to 140°F (–40°C to 60°C)
Storage Temperature	–40°F to 185°F (–40°C to 85°C)
Energy Dissipation (Data and Powerlines)	2.1 Joules
Ethernet Max. Common Mode Voltage	75V
Ethernet Max. Common Mode Current	200A
DC Power Line Max. Common Mode Voltage	93V
DC Power Line Max. Common Mode Current	16A
Dimensions	5.1 in. H x 3.5 in. W x 1.6 in. D
Weight	0.5 lb
Physical Connections	2 x RJ45

Ordering Information

Part Number	Description
210-540-00	Surge Suppressor, RJ-45, Ethernet, 160–170V 60Hz

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

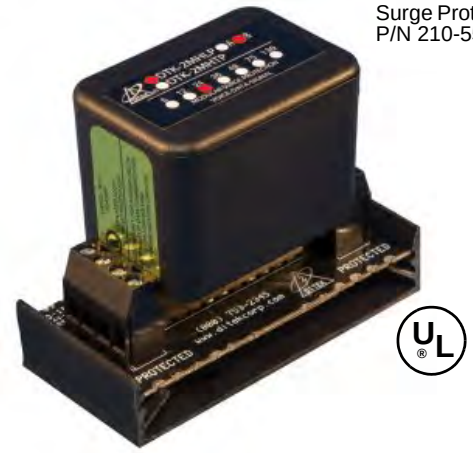
Supplemental Equipment

Surge Protector Module and Base

210-549-xx, 210-550-xx, 210-551-xx

Description

The Surge Protector Module is designed with ease of installation in mind. Because of the Surge Protector Module's modular edge card connection design, it can be removed from its base and replaced even when system power is applied.



Surge Protector Module
P/N 210-551-00 shown

The Surge Protector Module is capable of protecting two circuit pairs, but can be ganged together with additional modules in a mounting track to protect up to ten circuit pairs with a common ground.

Operation of this Surge Protector is automatic and has no visible effect on the operation of the equipment or the dedicated circuit it is connected to. The Surge Protector continuously monitors line voltage; if the protector "sees" voltage above its rated level it will go into a low impedance state providing the voltage surge with a direct path to ground. Once the surge is routed to the ground, the surge protector returns to its normal state.

If the Surge Protector fails, this indicates it has protected the connected equipment or circuit from a voltage surge greater than the surge protector could dissipate. The Surge Protector is not repairable; and the protected circuit or equipment must not be placed back into service until the Surge Protector has been replaced.

Features

- Multi-stage, SAD technology, and hybrid design provide excellent surge protection
- Designed for easy installation
- Field replaceable, and can be added and removed from base with power applied
- Hard-wire mounting base
- Modular edge card connection design
- Protects two circuit pairs per module; when used with mounting track (P/N 210-546-05) up to 10 pairs can be protected with a common ground
- Suitable for use on AC and DC circuits
- Provides protection for:
  - 4–20 mA current loops
  - Fire Alarm Control Panel NACs
  - SLC and IDC loops

Specifications

Maximum Continuous Current	5As
Surge Current Rating	20 kA
Data Rate	200 kbps (5V) to 2 Mbps (130V)
Service Voltage	12V (P/N 210-550-xx) 24V (P/N 210-551-xx) 75V (P/N 210-549-xx)
MCOV	18V (P/N 210-550-xx) 33V (P/N 210-551-xx) 90V (P/N 210-549-xx)
Clamping Voltage	21.6V (P/N 210-550-xx) 39V (P/N 210-551-xx) 108V (P/N 210-549-xx)
Protection Modes	Line-Ground
Base Connection	10 AWG max. screw terminals
Housing	ABS
Operating Temperature	–40°F to 158°F (–40°C to 70°C)
Maximum Humidity	95% non-condensing

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Dimensions and Weight:

Module 2.1 in. L x 1.4 in. W x 1.9 in. H
(53 mm x 36 mm x 48 mm)
Weight 1.2 oz (34 g)

Module with Base 3.25 in. L x 1.5 in. W x 2.6 in. H
(83 mm x 38 mm x 66 mm)
Weight 2.8 oz (79 g)

Standards Compliance:

UL Listed UL497B

Ordering Information

Part Number	Description
210-550-00	Surge Protector Module and Base, 12 VDC, protects two circuit pairs, plug-in base
210-550-01	Surge Protector Module, 12 VDC, without base, protects two circuit pairs (replacement module for P/N 210-550-00)
210-551-00	Surge Protector Module and Base, 24 VDC, protects two circuit pairs, plug-in base
210-551-01	Surge Protector Module, 24VDC, without base, protects two circuit pairs (replacement module for P/N 210-551-00)
210-549-00	Surge Protector Module and Base, 75 VDC, protects two circuit pairs, plug-in base
210-549-01	Surge Protector Module, 75 VDC, without base, protects two circuit pairs (replacement module for P/N 210-549-00)

Associated Parts

Part Number	Description
210-546-00	Surge Protector Mounting Base, with track, holds four Surge Protector Module; for use with P/Ns 210-550-01, 210-551-01, and 210-549-01
210-546-05	Surge Protector Mounting Base, with track, holds five Surge Protector Modules; for use with P/Ns 210-550-01, 210-551-01, and 210-549-01

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Surge Protector, Series Wired, Single Phase

210-562-00

Description

This series wired surge protector provides effective protection for 120 VAC power circuits so that control panels and other critical equipment receive maximum load protection. Remote notification of status concerning surge protection is available via dry contacts. Clean power is also provided to connected equipment by the EMI/RFI filtering.

Features

- Series wired and compact design
- Multi-stage hybrid circuit
- Diagnostic LED for power indication and SPD function
- Form C dry contacts for remote monitoring

Specifications

Voltage Configuration	120 VAC
MCOV	150V
Surge Current Rating	50,000A
Voltage Protection Rating	600V L-G, L-N 1000V N-G
Max Continuous Current	20A
SCCR	10,000A
Nominal Disharge Current Rating	10 kA
Operating Frequency	50 Hz – 60 Hz
EMI/RFI Filtering Attenuation	Up to 35 dB, 100 kHz – 100 MHz
Protection Modes	L-N, L-G, N-G
Connection Method	Hardwired studs, series wired
Housing	ABS
Operating Temperature	–32°F to 104°F (0°C to 40°C)
Relative Humidity	95% maximum non-condensing
Dimensions	6.87 in. L x 3.5 in. W x 2.5 in. H (17.45 cm x 8.9 cm x 6.35 cm)
Weight	12.16 oz (0.35 kg)
Standards Compliance:	
UL Listed	UL1449, File E328921

Ordering Information

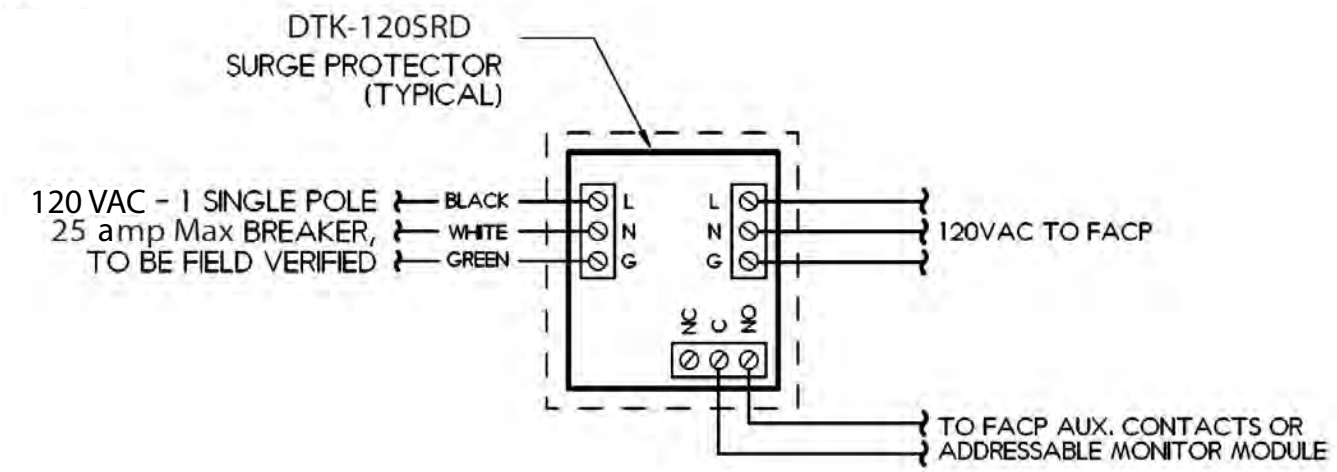
Part Number	Description
210-562-00	Surge Protector, Series Wired, Single Phase

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

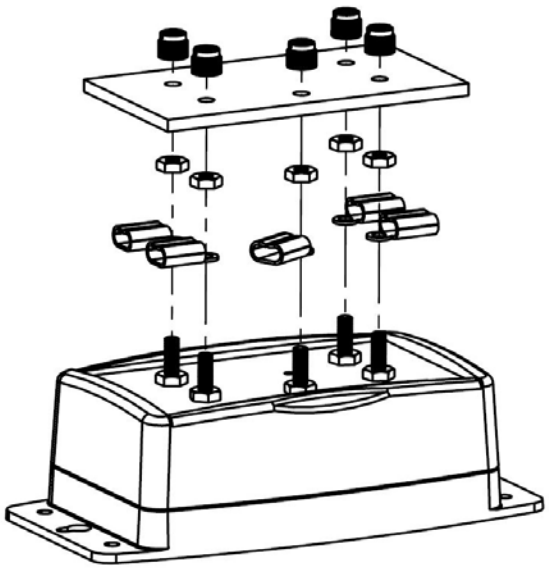
Detect Manage Record

Supplemental Equipment

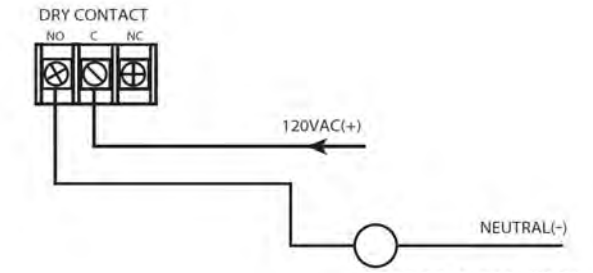
Wiring

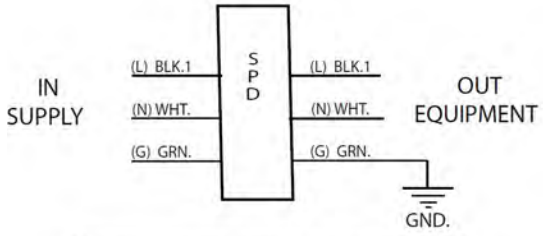


Installation



Dry Contact





EXPECTED SYSTEM VOLTAGES			
120 VAC	L-N	L-G	N-G
VOLTAGES	120	120	0

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Enclosure Heater

Supplemental Equipment Catalog Section
14

Enclosure Heater

Silicone Rubber Enclosure Heater 532-001-00, 532-002-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Supplemental Equipment

Silicone Rubber Enclosure Heater

532-001-00, 532-002-00

Description

This silicone rubber enclosure heater is a rugged, lightweight, thin and flexible heater that allows heat to be put where it is needed. The heater is constructed with a wire-wound element or an etched foil element. The fiberglass-reinforced silicone rubber gives the heater dimensional stability without sacrificing flexibility and because very little material separates the element from the part, heat transfer is rapid and efficient.

Features

- Moisture and chemical-resistant silicone rubber material
- Delivers low mass and easily repeatable distributed watt densities
- Thermostat on heater
- Freeze protection
- Condensation prevention
- Vulcanizing adhesives or fasteners
- Air-sensing thermostat senses air temperature with nominal settng of 40°F/55°F

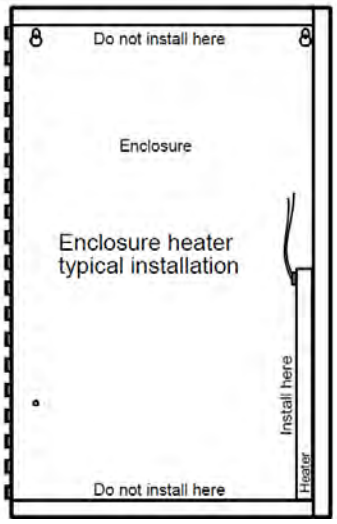
Specifications

Volts	120 VAC
Watts	50 (P/N 532-001-00) 100 (P/N 532-002-00)
Wire Wound Elements	Rated at 5 in.^{2} (0.78 W/cm^2)
Max. Watt Densities	80 W/in.^{2} (125 W/cm^2)
Dimensions	5 in. L x 2 in. W (P/N 532-001-00) 10 in. L x 2 in. W (P/N 532-002-00)
Element Thickness	Wire Wound: 0.055 in. (1.4 mm) Etched Fill: 0.22 in. (0.56 mm)
Lead Length	12 in. (305 mm) (P/N 532-001-00) 24 in. (610 mm) (P/N 532-002-00)
Lead other	Color: White Material: PTFE, insulated, flexible plated copper. Lead connections are insulated.
Thermostat	40°F/55°F
Ambient Temperature	80°F (26.7°C) minimum
Operating Temperature	500°F (260°C) maximum

Ordering Information

Part Number	Description
532-001-00	Silicon Rubber Enclosure Heater, 50 W heater, thermostat, for use in small enclosure
532-002-00	Silicon Rubber Enclosure Heater, 100 W heater, thermostat, for use in large enclosure

Enclosure Installation



For optimum heat circulation, mount heater toward the rear of the enclosure on the side panel that is most accessible to 120 VAC power.

Ensure installation method does not damage, or cause the heater to come into contact with other enclosure components.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Section 15. Test Equipment

Test Equipment

Programmable Scanner 196-100-00
Signal Direction Finder (SDF) 225-791-00
Signal Receiving Device (SRD) 225-793-xx
Wattmeter Kit, 25–1,000 MHz, 5 to 500 Watt, Fixed Element RF 290-050-01
Analog/Digital Multimeter 290-701-01
RF Communications Service Monitor Kit 297-002-00
Dynamic Battery Analyzer 297-300-00
Dual Mode Battery Analyzer 297-301-00

Monaco FACP, BT-X, Repeater Planner Programmer Suite

Monaco Planner Suite/Programmer 225-163-00
BT-XM In-Building MNS Communicator Tester 227-451-xx

Click to go back to "Table of Contents - Index by Product Name"

Test Equipment Catalog Section
15

Test Equipment

Programmable Scanner 196-100-00
Signal Direction Finder (SDF) 225-791-00
Signal Receiving Device (SRD) 225-793-xx
Wattmeter Kit, 25–1,000 MHz, 5 to 500 Watt, Fixed Element RF 290-050-01
Analog/Digital Multimeter 290-701-01
RF Communications Service Monitor Kit 297-002-00
Dynamic Battery Analyzer 297-300-00
Dual Mode Battery Analyzer 297-301-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Test Equipment

Programmable Scanner
196-100-00

Description

This handheld radio Scanner covers 12 bands, from 25 to 512 MHz. It scans 60–180 channels per second and also provides direct channel access.

The integral keypad allows you to program 300 channels to any VHF or UHF frequency. Ten channels can be selected for priority monitoring (every two seconds). The keypad also provides scan, delay, lockout, and search controls and a lock to prevent accidental reprogramming of the scanner. An illuminated (backlit) LCD provides frequency and operating information. The Scanner is certified in accordance with FCC rules and regulations Part 15.

The Scanner features Close Call™ RF Capture Technology, a setting where the scanner detects and displays the frequency of a strong, nearby radio transmission. Unlike regular scanning, Close Call™ doesn't need to be tuned to a specific frequency to check for a transmission. Instead, Close Call™ detects the source of the strong signal, and immediately tunes to the source's frequency. Close Call™ can operate as the primary means of scanning (with normal scanning turned off), the secondary scanner (with normal scanning turned on), or Close Call can be turned off during normal scanning.

The Scanner can be used with Monaco's Radio Alarm Central Receiving Systems to monitor system transmissions or other RF activity on the system frequency. It is provided with an ac adaptor/charger, flexible BNC type antenna, and belt clip.

Features

- 300 channels / 10 banks
- Covers 12 bands
- Pager Screen function
- Full-frequency LCD display with backlight
- Close Call TM RF Capture Technology
- AC or DC Tuning
- Extended memory backup
- Built-in scan delay
- Channel lockout
- Keypad lock
- Low battery indicator
- Manual channel access
- Key Confirmation tones
- Priority Channels feature

Specifications

Power Input	13.8 Vdc, center positive
Audio Output	360 mW
Internal Speaker	24 ohms
Search Rate	Normal - 90 steps per second Hyper - 270 steps per second (max)
Channel Scan Rate	90 per second (maximum)
Scan Delay	2 seconds
Size	2.75 in. W × 4.5 in. H × 1.25 in. D
Weight	6.17 oz.
Operating Temperature	0°F to 140° F (–18°C to 60° C)
Antenna	BNC Type - 50 W Impedance

Ordering Information

Part Number	Description
196-100-00	Programmable Scanner, 300 channel, LB/HB, UHF and VHF

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

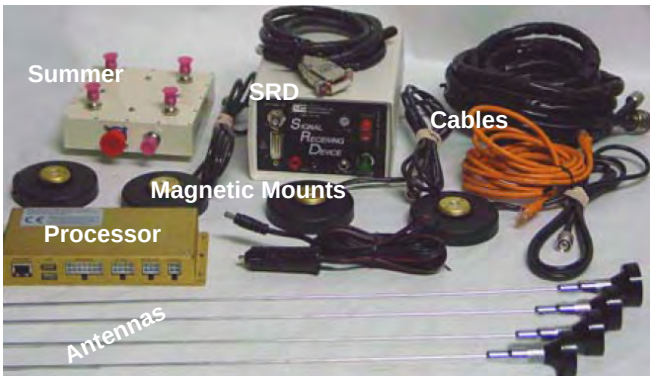
Test Equipment

Signal Direction Finder (SDF)

225-791-00

Description

The Signal Direction Finder (SDF) along with the Signal Receiving Device (SRD) is used to locate the source of a radio signal causing RF carrier alarms at the Central Receiving System.



Features

- Signal Direction Finder (SDF) Kit comes with
  - Antenna Kit with four antennas and four magnetic mounts
  - Processor for SDF signal information
  - SDF Summer that combines the SDF Signal data from antennas
  - Connectivity Cables that connect:
    - SDF Summer to SDF Processor and the SRD
    - SDF Processor to a laptop computer
    - SDF Processor to the SRD
    - SDF Processor to the power source

Specifications

Voltage Range	11–14 VDC
Power	6.5 W @ 12 VDC (processor and antennas)
Interfaces	Two USB Host Ethernet (RJ45) Receiver Audio and RSSI 3.5 mm Speaker Output
Frequency Range	125–1,000 MHz
Accuracy	1 degree rms (eight element antenna) 2.5 degree rms (four element antenna)
Resolution	0.1 degree
Sampling Rate	Two samples per second (adjustable)
Sensitivity	–123 dBm (FM receiver dependent)
Averaging	Adjustable from 1 to 20 samples
RF Pulse Detection	80 ms minimum
Commutation Frequency	Adjustable (250, 500, 1000, 2000 Hz)
Antennas	136–500M 1/4 wave whip with magnetic base
Summer	Mounts on top of vehicle Operates with four 1/4 wave magnetic mount antennas
Laptop (not included)	Runs Series 7000 (MPT) UI software Connects to Processor
Temperature Range	Processor: 32°F to 158°F (0°C to 70°C) Antenna: –40°F to 185°F (–40°C to 85°C)
Standards Compliance	
Per EN	EN 61000-6-2 EN 61000-6-4 EN 301 489-1

Ordering Information

Part Number	Description
225-791-00	Signal Direction Finder (SDF) Kit, enclosed in two rugged carrying cases. Requires Signal Receiving Device (P/N 225-793-xx)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

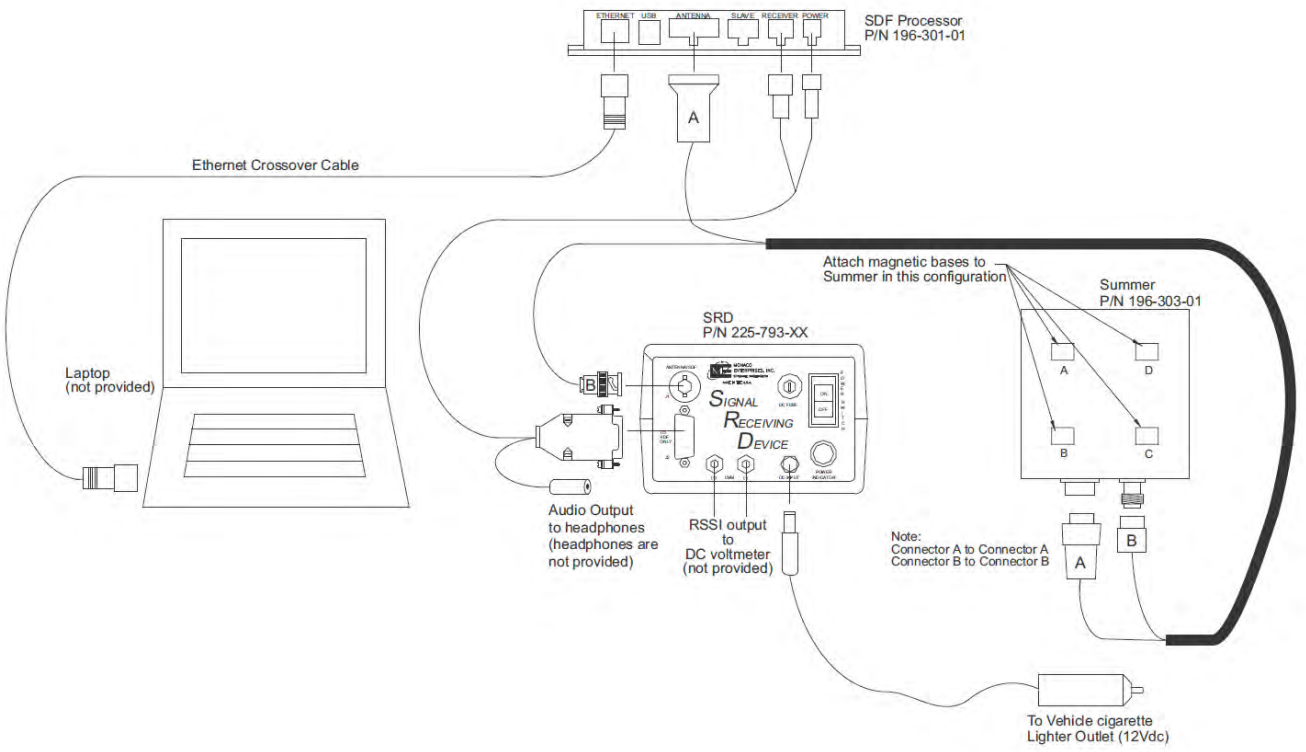
Detect Manage Record

Test Equipment

Associated Parts

Part Number	Description
225-793-xx	Signal Receiving Device (SRD), includes adaptor power cable, 1/4 wave antenna whip, magnetic base, and case

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Test Equipment

Signal Receiving Device (SRD)

225-793-xx

Description

The Signal Receiving Device (SRD) is a self-contained narrowband transceiver. When used with a digital multimeter the SRD assists in determining antenna installation and alignment. When used with a Signal Direction Finder (SDF) the SRD is used in locating a radio signal source.

Features

- Factory tuned to the Central Receiving System operating frequency
- Receives any narrowband or wideband RF signal within approximately 10 kHz of its frequency
- Measures RF field strength
- Signal displays on an attached multimeter
- Sets on vehicle roof using magnetic base

Specifications

Fuse	Slow Blow, 1A/250V
Battery	Internal - connected to 12 VDC vehicle power outlet (through cigarette lighter or use of an adaptor power cable [included])
Antenna Whip	1/4 wave, omnidirectional (to be cut for 136–174 MHz VHF or 406–470 MHz UHF) Antenna Height 22 in., Power Rating 200 W
Magnetic Base	Mounting: 5/16 in. x 24 in. THDS roof-mount, 3.5 in. x 3 in. with a pull strength of 50 lb and includes 12 ft. of coax

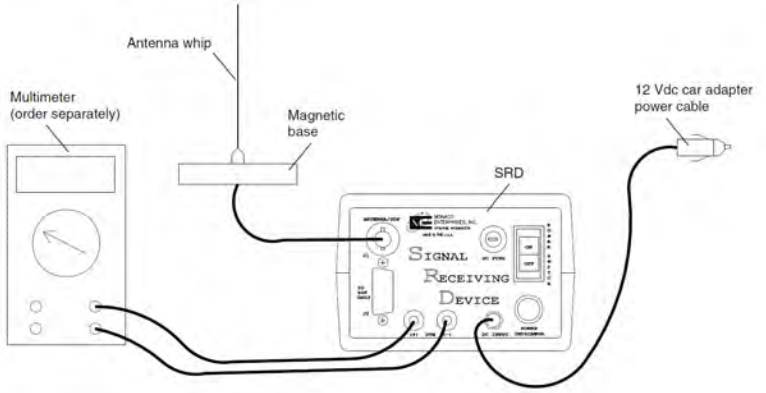
Ordering Information

Part Number	Description
225-793-xx	Signal Receiving Device (SRD), includes adaptor power cable, 1/4 wave antenna whip, magnetic base, and case

Associated Parts

Part Number	Description
225-791-00	Signal Direction Finder (SDF) Kit, enclosed in two rugged carrying cases; requires Signal Receiving Device (SRD) (P/N 225-793-xx)
290-701-01	Analog/Digital Multimeter
501-123-00	Fuse, slow-blow, 1A, 250V, 1/4 in. x 1 1/4 in.
400-703-00	Battery, SLA, rechargeable, 12V/1.4 Ah, quick connect, 3.78 in. L x 1.69 in. W x 2.28 in. H, 1.2 lb

Wiring Diagram



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Test Equipment

Wattmeter Kit, 25–1,000 MHz, 5 to 500 Watt, Fixed Element RF

290-050-01

Features

- Fixed 25–1,000 MHz, 5 to 500 watt, Fixed Element RF Wattmeter
- Measures RF Power and Load Match in 50 ohm coaxial transmission lines
- Uses a Single Broadband Element with 5-position Range Switch
- Can be used with CW, AM, FM, and TV modulation
- Portable
- Microammeter is specially shock mounted
- Aluminum housing

Specifications

Power Range	5, 15, 50, 150, 500 watt
Power Rating	500 watt, 25–800 MHz 150 watt, 800–1,000 MHz
Frequency Range	25–1,000 MHz
Insertion VSWR	UHF Connector: 25–512 MHz, 1.08 max. 512–1000 MHz, 1.12 max. N Connector: 25–512 MHz, 1.05 max. 512–1000 MHz, 1.07 max.
Insertion Loss	UHF Connector: 25–512 MHz, 0.1 dB max. 512–1000 MHz, 0.15 dB max. N Connector: 25–512 MHz, 0.1 dB max. 512–1000 MHz, 0.13 dB max.
Accuracy	25-100 MHz, ± 7% of full scale (with correction factor) 100–512 MHz, ± 6% of full scale 512–1000 MHz, ± 7% of full scale
Connectors	QC Type (Female N normally supplied)
Finish	Light Grey, powder coat
Dimensions	6 7/8 in. H x 5 1/8 in. W x 3 5/8 in. D (175 mm x 130 mm x 92 mm) Includes connectors
Weight	4 lb (1.8 kg) with N Connectors

Ordering Information

Part Number	Description
290-050-01	RF Power Wattmeter with 50 ohm RF load resistor, coaxial interconnect cable, UHF/BNC Connector Adaptors, and a carrying case

Associated Parts

Part Number	Description
299-008-00	Spare RF Coaxial Load, 25 watt with N male connector
299-006-01	RF Attenuator Sampler Kit, with RF attenuator element, –50 dB attenuation, 25–1,000 MHz, and case
626-071-00	Adaptor, N female to UHF male, required to connect coaxial RF load to Wattmeter

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Test Equipment

Analog/Digital Multimeter
290-701-01

Features

- Accurate current, voltage and frequency measurements on variable signal devices
- Offers true RMS AC voltage and current for measuring non-linear signals
- Captures intermittents as short as 250 µs
- Two level backlight
- IP30 rating

Specifications

Voltage AC/DC	1000 V RMS - maximum between any terminal and earth ground
Current AC/DC	10 A
Resistance	50 Mohms
Frequency	200 kHz
Capacitance	10,000 µF
Temperature	1994°F (1,090°C)
Conductance	60 ns
Fuse Protection	0.44A, 1000 V IR 10 kA 11A, 1000 V IR 17 kA
Battery Type	9 V zinc, NEDA 1604 or IEC 6F22
Battery Life	400 hours typical with alkaline (and backlight off)
Vibration	Per MIL-PRF-28800 Class 2 instrument
Shock	1 meter drop (per IEC 61010-1:2001)
Digital Display	6000 counts, updates 4/sec has 19,999 counts in high-res mode
Analog Bargraph Display	33 segments, updates 40/sec, frequency: 19,999 counts, updates 3/sec at >10 Hz
Operating Temperature	–4°F to 131°F (–20°C to 55°C)
Storage Temperature	–40°F to 140°F (–40°C to 60°C)
Altitude	Operating: 2,000 m, Storage: 10,000 m
Relative Humidity	0% to 90% 32°F to 95°F (0°C to 35°C) 0% to 70% 95°F to 131°F (35°F to 55°C)
Dimensions	1.25 in. H x 3.41 in. W x 7.35 in. L (3.1 cm x 8.6 cm x 18.6 cm)
Dimensions with Holster and Flex Stand	2.06 in. H x 3.86 in. W x 7.93 in. L (5.2 cm x 9.8 cm x 20.1 cm)
Weight	12.5 oz (.35 kg)
Weight with Holster and Flex Stand	22.0 oz (.62 kg)
Standards Compliance:	
UL listed	UL61010-1
ANSI/ISA	S82.01-204
CSA	22.2 No. 1010.1:2004 to 1000 V Overvoltage Category III
IEC	Digital Multimeter Specifications 5 664 to 600 Overvoltage Category IV
IEC	61010-1: Pollution Degree 2 61010-2-033: CAT IV 600 V / CAT III 1000 V
Electromagnetic Compatibility (EMC):	
International	IEC 61326-1: Portable Electromagnetic Environment: IEC 61326-2-2 CISPR 11: Group 1 ,Class A
Korea (KCC)	Class A equipment
USA (FCC)	47 CFR 15 subpart B - this product exempt device per clause 15.103

Ordering Information

Part Number	Description
290-701-01	Analog/Digital Multimeter

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Test Equipment

RF Communications Service Monitor Kit
297-002-00

Description

The portable RF Communications Service Monitor measures and monitors communications equipment from 100 kHz to 1.0 GHz with 0.1 ppm accuracy. The Full duplex design enables independent and separate measurement and testing of transmitter and receiver circuits simultaneously.

Features

- Built-in features include:
  - Power Meter and Dummy Load
  - Sweep Generator with sweep features of linear, octave and decade up to 10,000 points
  - SINAD Meter checks true SINAD receiver sensitivity and provides audio loop-back for equipment being tested
  - Self-calibrating RSSI Meter tests filter designs, performance, and cable characteristics
  - RS-232 Control serial interface
  - Battery Meter displays remaining battery charge
- Receives and displays AM and FM Modulation for transmitter testing
- Instantaneous reading of RF output power in either watts or dBm
- Scanner Mode scans through a sequence of 100 stores
- Elastomeric Touch Keypad

Specifications

Primary Power	100-240 VAC 50/60 Hz power Li-ion battery
Display	16 x 140 pixels, high contrast dual vacuum fluorescent graphical displays
Power Meter	Displays power from +23 dBm to +50 dBm, ±0.5 dB (200 mW —100 W)
Dummy Load	100 W 30 dB feed through attenuator with sample port on rear, 25% duty cycle full power
Attenuator Output	–30 dB sample port from load for external equipment
Audio Generator	0.1 H to 3 kHz test tones CTS and DPL encode tones
Frequency Range	Receives: 100 kHz to 1 GHz in 10 Hz steps Generates: 100 kHz to 1 GHz in 1 Hz steps Frequency Counter: 100 kHz to 1 GHz Audio Counter: 60 Hz 30 3000 Hz
FM	Bandwidth: 0.1 Hz to 75 kHz Modulation: ± 75 kHz max. in 0.1 Hz to 0.1 kHz, 10 Hz steps to 10 kHz, 100 Hz steps to 75 kHz
AM	Bandwidth: 10 Hz–10 kHz Modulation: 0%–75% in 1% steps to -100 dBm, 0%–50% to –140 dBm
SINAD Meter	Displays reading from –30 dB to 0 dB of SINAD
Self-Calibrating RSSI Meter	80 dB of range on receiver side –40 dBm to –102 dBm
Memories	100 sequences of 100 registers plus system memories
Dimensions	6 in. H x 11.94 in. W x 14.75 in. D (152 mm x 303 mm x 375 mm)
Weight	14 lb (6.5 kg)

Ordering Information

Part Number	Description
297-002-00	RF Communications Service Monitor Kit, includes 10 VAC EIA cord, BNC-BNC test cable, whip antenna, and a BP3010A Li-Ion battery

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Test Equipment

Dynamic Battery Analyzer
297-300-00

Features

- Tests 6 and 12 volt SLA batteries, sizes 2 to 24 Ah
- Analyzer powered by battery under test
- Microprocessor controlled
- Automatic selection of battery voltage
- Static Test monitors battery and charging circuit voltage; displays text results with color background
- Load Test evaluates battery condition; displays text results with color background
- Rugged, die-cast aluminum enclosure with strong polycarbonate graphic overlay

Specifications

Input Voltage from Battery	5 to 16 VDC
Load Current	30 mA during static test, 3.5A max, during dynamic test
Dynamic Load Current	1 to 3.5A, dependent on Ah
Dynamic Load Time Interval	120 to 270 seconds, dependent on battery voltage and Ah selection (all intervals ±1%)
Static Indicator Transition Voltages	6V: <6.05 too low to test 6.05–6.75 normal charged battery 6.75–7.1 normal charging voltage >7.1 overcharging, open battery 12V: <12.10 too low to test 12.1–13.5 normal charged battery 13.5–14.2 normal charging voltage >14.2 overcharging, open battery All transitions have 50 mV hysteresis
Input Terminals	Standard Banana Jacks, color coded
Test Leads	• 48 in., high voltage cable, color coded • Stranded, tinned, copper conductor with soldered connections • Plated alligator clips with color coded vinyl insulating boots • Plated right angle banana plugs
Battery Condition LED Display	Green - good Yellow - marginal Red - bad
Operating Temperature	0°F to 140°F (–18°C to 60°C)
Finish	MIL-spec black epoxy paint
Dimensions	2.25 in. H x 3.75 in. W x 4.75 in. L (51 mm x 95 mm x 121 mm)
Weight	1 lb (.45 kg) includes test leads
Shipping Weight	2 lb (.9 kg)

Ordering Information

Part Number	Description
297-300-00	Dynamic Battery Analyzer Kit, 6 VDC and 12 VDC, 2 to 24 Ah, with case and leads **NOTE** Monaco recommends this analyzer be limited to use with batteries of 6 or 12 volts 24 Ah or less in capacity. For batteries over 24 Ah, use Dual Mode Battery Analyzer (P/N 297-301-00).

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Test Equipment

Dual Mode Battery Analyzer
297-301-00

Features

- Tests 6 and 12V SLA batteries, sizes 4 to 100 Ah
- Analyzer powered by battery under test
- Microprocessor controlled
- Thermo laser gun
- Pre-load Static Test determines voltage of battery
- Dynamic Load Test evaluates battery condition; displays text results with color background
- Additional test to evaluate battery capacity
- Unit is contained in an unbreakable, waterproof, carrying case with foam padding for protection

Specifications

Input Voltage from Battery	5 to 15 VDC Auto-select for 6V or 12V
Testing Range	4 to 110 Ah, 12V 4 to 60 Ah, 6V
Load Current	200 mA during static test, 30A max, during dynamic test Actual load is approximately 1/2 Ah rating
Dynamic Load Time Interval	60 to 120 seconds Approximately 50 to 100 seconds for Ah determination
Test Leads	• 48 in., high flex instrumentation cable • Stranded, copper conductor with soldered connections • Heavy duty copper alligator clips with color coded vinyl insulating boots • Military grade connector assembly
Input Connection	MIL Spec 97 Series Connector set
Displays	Two Line vacuum florescent for prompts and data display Five LEDs for battery voltage and load test results
Data Input	12 button keypad with vacuum florescent for Ah, prompts, battery temperature and data
Operating Temperature	32°F to 140°F (0°C to 60°C)
Relative Humidity	90%
Battery Temperature Input	Non-contact infrared thermometer for reading Keypad entry for temperature
Dimensions	5 in. H x 11.5 in. W x 11 in. D (127 mm x 292.1 mm x 279.4 mm)
Weight	7.7 lb (3.5 kg) includes test leads 16.7 lb (7.6 kg) in carrying case
Shipping Weight	18 lb (8.2 kg)

Ordering Information

Part Number	Description
297-301-00	Dual Mode Battery Analyzer, 6 VDC and 12 VDC, 4 to 100 Ah, with case and leads

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Test Equipment Catalog Section
15

Monaco FACP, BT-X, Repeater Planner Programmer Suite

Monaco Planner Suite/Programmer 225-163-00
BT-XM In-Building MNS Communicator Tester 227-451-xx

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

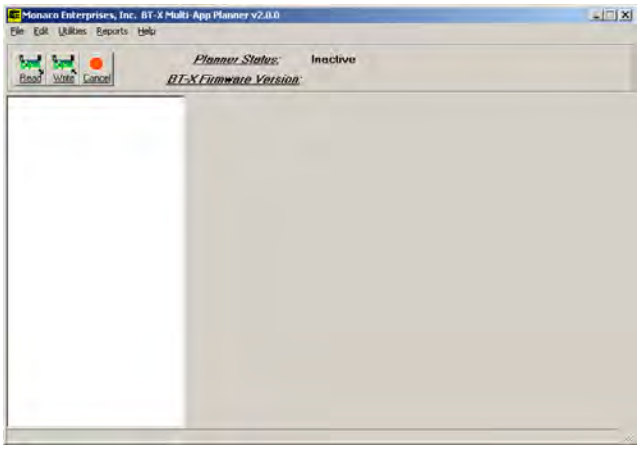
Test Equipment

Monaco Planner Suite/Programmer
225-163-00

Description

The Monaco Planner Suite Programmer is a dedicated kit for programming and maintaining Monaco Enterprises' panels and repeaters compatible with the D-21 Central Receiving System. The Suite can program:

- Addressable Fire Alarm Control Panels (FACPs)
- Conventional FACPs
- Combination Fire Alarm MNS Voice Evacuation Panel
- BT-X building transceivers
- Repeaters.



The Monaco Planner Suite Programmer kit includes:

- Portable CPU programmer with a built-in RS-232 Port, including pre-installed Planners.
- Planner software on CDs with documentation
- Interface cables to connect the portable CPU programmer to panels and repeaters.

Features

- Pre-installed planner software for the following panels:
  - M-2 Conventional Fire Alarm Control Panel (FACP)
  - MAAP-2 Addressable Point Reporting FACP
  - MAAP(+) Addressable FACP
  - MAAP-X Fire Alarm MNS Voice Evacuation Panel
  - BT-X building transceivers
  - D-700R repeater
  - RFM-XR repeater
- Monaco panel databases are backed up on the CPU programmer hard-drive, separate from the panels, for maintenance, replacement/upgrade, and configuration programming changes.
- Integrated RS-232 port for reliable connection to panels.
- Portable for in-field use

Ordering Information

Part Number	Description
225-163-00	Planner Suite/Programmer with interface cables for use with: Monaco FACP/MNS, BT-X building transceiver, D-21 compatible repeaters

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Test Equipment

BT-XM In-Building MNS Communicator Tester

227-451-xx

Description

The Monaco Mass Notification System (MNS) tester is a portable, BT-XM installed in a rugged carrying case.

The tester unit provides the ability to test the D-21 configuration of the four on-board BT-XM zones and D-21 MNS output before installing and configuring the building's actual BT-XM. In troubleshooting, the unit also allows "dividing the system" to help determine if an issue is on the D-21 end or the BT-XM end.

Features

- Toggle switches to stimulate zones
- Speaker plays live voice MNS messages from the D-21; relay board LEDs indicate prerecorded MNS message output for a separate MNS panel
- Audio jack for speaker headphones

Specifications

AC Input	115/230 VAC, 50/60 Hz
DC Output	• Power supply output: 16 VDC, non-adjustable • Battery charger output: 13.8 VDC float; 14.5 VDC boost • Nominal Amps, 6 zone cards: 175 mA, 1.5A transmit
Battery	• 12V/1.4 Ah • Low battery signal: 11.5 VDC • Low battery disconnect: 9.75 VDC
Radio	• FM narrowband • FSK modulation • Duty cycle 50%, 30-second max. transmit • Output impedance: 50 ohms
Operating Temperature	–22°F to 140°F (–30°C to 60°C)
Relative Humidity	0% to 90% non-condensing

NOTE Existing antenna must be in place.

Ordering Information

Part Number	Description
227-451-xx*	BT-XM MNS live voice and prerecorded message tester, portable, narrowband radio, relay board, audio board, zone switches, and MNS audio output (headphone jack and speaker)
***Specify frequency (-xx) when ordering.**	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Section 16. Cables

Fire – Reserved

MNS – Reserved

Signaling Line Circuit (SLC)

Cable, Fire Alarm. 621-02x-00, 621-040-00, 621-06x-00, 621-07x-00

Communication

Cable, Audio, Control, Communications, Instrumentation 621-026-00
Cable, RS-485, Plenum and Non-Plenum 621-083-00, 621-084-00

CAT5

Cable, CAT5E Network. 624-026-00

CAT6

Cable, CAT6 Plenum and Non-Plenum. 624-03x-00, 624-04x-00
Cable, CAT6A OSP Broadband. 624-050-00

Click to go back to "Table of Contents - Index by Product Name"

Cable Catalog Section
16

Fire – Reserved

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

MNS – Reserved

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Cable Catalog Section
16

Signaling Line Circuit (SLC)

Cable, Fire Alarm. 621-02x-00, 621-040-00, 621-06x-00, 621-07x-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Cable

Cable, Fire Alarm

621-02x-00, 621-040-00, 621-06x-00, 621-07x-00

Description

These power limited, fire-resistant fire alarm cables meet National Electric Code (NEC) requirements for power-limited applications. Refer to Article 760, paragraphs 51 and 53.

Cables are UL Listed and marked as FPL, FPLP, or FPLR:

FPL General-purpose—not for risers, ducts, plenums, or spaces used for environmental air. FPL cables are rated for 140°F (60°C).

FPLP Suitable for ducts, plenums, and other environmental airspaces. This cable has low smoke-producing characteristics and is rated for 167°F (75°C).

FPLR Suitable for vertical runs in a shaft or from a floor.

Wire Gauge

Select cables according to current and the two-way lineal distance to each device (critical in 24 VDC circuits that feed audible/visual signaling devices). The wire lengths shown in this chart include to-and-from length of both cable conductors.

Current Draw	AWG Wire Size (Solid)			
	#18	#16	#14	#12
200 mA	1,720 ft.	2,640 ft.	4,365 ft.	6,875 ft.
400 mA	860 ft.	1,320 ft.	2,180 ft.	3,435 ft.
600 mA	570 ft.	880 ft.	1,455 ft.	2,300 ft.
800 mA	430 ft.	660 ft.	1,090 ft.	1715 ft.
1A	340 ft.	525 ft.	870 ft.	1380 ft.

Ordering Information

NOTES

1. All cables are unshielded solid copper.
2. Monaco ships all cable on 1,000 ft. spools.

Part Number	Description
621-020-00	Cable, FPLR: • 2-conductor, 18 AWG • PVC insulation, red PVC jacket • Cable Diameter: 0.158 in. • Temperature Rating: 32°F to 167°F (0°C to 75°C) • Nominal DC Resistance, 68°F: 6.52 ohms/1,000 ft.
621-022-00	Cable, FPLR: • 2-conductor, 14 AWG • PVC insulation, red PVC jacket, zip cord • Cable Diameter: 0.206 in. • Temperature Rating: 32°F to 167°F (0°C to 75°C) • Nominal DC Resistance, 68°F: 2.57 ohms/1,000 ft.
621-040-00*	Cable, FPLR: • 4-conductor, 18 AWG • Red PVC jacket, zip cord • Cable Diameter: 0.184 in. • Temperature Rating: 32°F to 167°F (0°C to 75°C) • Nominal DC Resistance, 68°F: 6.4 ohms/1,000 ft.
621-060-00	Cable, FPLR: • 6-conductor, 18 AWG • Polypropylene insulation, PVC jacket; zip cord • Cable Diameter: 0.208 in. • Temperature Rating: 32°F to 167°F (0°C to 75°C) • Nominal DC Resistance, 68°F: 6.4 ohms/1,000 ft.
621-062-00	Cable, FPLR: • 4-conductor, 14 AWG • Red PVC jacket, zip cord • Cable Diameter: 0.24 in. • Temperature Rating: –4°F to 167°F (–20°C to 75°C) • Nominal DC Resistance, 68°F: 2.57 ohms/1,000 ft.
621-063-00*	Cable, FPLP: • 2-conductor, 18 AWG • Low-smoke PVC insulation and red PVC jacket • Cable Diameter: 0.158 in. • Temperature Rating: 32°F to 167°F (0°C to 75°C) • Nominal DC Resistance, 68°F: 6.52 ohms/1,000 ft.
621-064-00	Cable, FPLP: • 4-conductor, 18 AWG • Low-smoke PVC insulation and jacket; zip cord • Cable Diameter: 0.184 in. • Temperature Rating: 32°F to 167°F (0°C to 75°C) • Nominal DC Resistance, 68°F: 6.4 ohms/1,000 ft.
*Suitable for SLC wiring	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Cable

Part Number	Description
621-065-00	Cable, FPLP: • 6-conductor, 18 AWG • Low-smoke PVC insulation and jacket; zip cord • Cable Diameter: 0.211 in. • Temperature Rating: 32°F to 167°F (0°C to 75°C) • Nominal DC Resistance, 68°F: 6.4 ohms/1,000 ft.
621-066-00	Cable, FPLP: • 2-conductor, 14 AWG • Low-smoke PVC insulation and red PVC jacket • Cable Diameter: 0.206 in. • Temperature Rating: 32°F to 167°F (0°C to 75°C) • Nominal DC Resistance, 68°F: 2.6 ohms/1,000 ft.
621-067-00	Cable, FPLP: • 4-conductor, 14 AWG • Low-smoke PVC insulation and jacket; zip cord • Cable Diameter: 0.242 in. • Temperature Rating: 32°F to 167°F (0°C to 75°C) • Nominal DC Resistance, 68°F: 2.43 ohms/1,000 ft.
621-068-00*	Cable, FPLR: • 2-conductor, 12 AWG • Polypropylene insulation, red PVC jacket • Cable Diameter: 0.244 in. • Temperature Rating: –4°F to 140°F (–20°C to 60°C) • Nominal DC Resistance, 68°F: 1.53 ohms/1,000 ft.
621-069-00*	Cable, FPLR: • 2-conductor, 14 AWG • Red PVC jacket • Cable Diameter: 0.210 in. • Temperature Rating: –4°F to 140°F (–20°C to 60°C) • Nominal DC Resistance, 68°F: 2.57 ohms/1,000 ft.

Part Number	Description
621-070-00*	Cable, FPLR: • 2-conductor, 16 AWG • Red PVC jacket • Cable Diameter: 0.178 in. • Temperature Rating: 32°F to 167°F (0°C to 75°C) • Nominal DC Resistance, 68°F: 4.10 ohms/1,000 ft.
621-071-00*	Cable, FPLR: • 2-conductor, 18 AWG • Low-smoke PVC insulation and red PVC jacket • Cable Diameter: 0.158 in. • Temperature Rating: 32°F to 167°F (0°C to 75°C) • Nominal DC Resistance, 68°F: 6.52 ohms/1,000 ft.
621-072-00*	Cable, FPLP: • 2-conductor, 16 AWG • PVC insulation and jacket • Cable Diameter: 0.178 in. • Temperature Rating: 32°F to 167°F (0°C to 75°C) • Nominal DC Resistance, 68°F: 4.1 ohms/1,000 ft.
621-073-00*	Cable, FPLP: • 2-conductor, 12 AWG • PVC insulation and jacket • Cable Diameter: 0.239 in. • Temperature Rating: 32°F to 167°F (0°C to 75°C) • Nominal DC Resistance 68°F: 1.8 ohms/1,000 ft.
*Suitable for SLC wiring	

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Communication

Cable Catalog Section
16

Communication

Cable, Audio, Control, Communications, Instrumentation 621-026-00
Cable, RS-485, Plenum and Non-Plenum 621-083-00, 621-084-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Cable

Cable, Audio, Control, Communications, Instrumentation
621-026-00

Description

This is stranded, six-conductor, tinned copper cable, insulated, unshielded, and jacketed in gray PVC. Four conductors are 22 AWG, two are 18 AWG.

NOTE This cable is not rated for plenum runs.

Ordering Information

Part Number	Description
621-026-00	Cable for audio, control, communications, instrumentation 6-conductor: two at 18 AWG, four at 22 AWG PVC insulation, grey PVC jacket, unshielded

Specifications

Stranding	18 AWG: 19 x 30 22 AWG: 7 x 30
Conductors	Tinned copper
Insulation, Outer Jacket	PVC
Color Coding	Red: 22 AWG Green: 22 AWG Brown: 22 AWG Blue: 22 AWG White: 18 AWG Black: 18 AWG
Nominal Diameter	0.236 in.
Minimum Bend Radius	2.5 in.
DC Resistance (68°F)	18 AWG: 15.5 ohms per 1,000 ft. 22 AWG: 6.8 ohms per 1,000 ft.
Recommended Current	18 AWG: 2.5A per conductor at 77°F 22 AWG: 5.6A per conductor at 77°F
Operating Temperature	–4°F to 176°F
Compliance	• UL Flame Test (UL 1685 FT4) • NEC/(UL): GMG • AWM: UL Style 2576 (150V 176°F)

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Cable

Cable, RS-485, Plenum and Non-Plenum

621-083-00, 621-084-00

Features

- Multi-conductor
- Low capacitance
- Suitable for EIA RS-485 applications
- Flammability tested

Specifications

Stranding	24 AWG, 7 x 32 Tinned Copper
Color Coding	White/Blue and Blue/White
Insulation	Plenum: Foam Fluoride Ethylene Propylene (FFEP) Non-plenum: Polyethylene (PE)
Materials:	
Outer Shield	Tape: Aluminum/Polyester Braid: Tinned Copper
Outer Jacket	Plenum: low smoke PVC Non-plenum: PVC
Cable:	
Length	1,000 ft.
Minimum Bend Radius	Plenum: 2.25 in. Non-plenum: 2.5 in.
Capacitance:	
Conductor to Conductor	Plenum: 12pF/ft Non-plenum: 12.8pF/ft
Conductor to Shield	Plenum: 22 pF/ft. Non-plenum: 23 pF/ft.
Maximum Recommended Current:	
Plenum	4A per conductor at 25°C Ambient
Non-plenum	2.1A per conductor at 25°C Ambient (10°C temperature rise)
Voltage Rating	300 Vrms (CM)
Impedance	120 ohms
DC Resistance	24 ohms/1,000 ft.
Flammability:	
Plenum	(UL910) NFPA 262 Plenum Flame Test
Non-plenum	UL 1685 (UL loading)

Ordering Information

Part Number	Description
621-083-00	RS485 Cable - Plenum Rated • Two conductors • 24 AWG twisted pair with drain and shield • FFEP • Low Smoke PVC outer jacket • Cable Diameter: 0.204 in. • Temperature Range: 0°C to 75°C • Impedance: 120 ohms
621-084-00	RS485 Cable - Non-plenum Rated • Two conductors • 24 AWG twisted pair with drain and shield • PE • PVC outer jacket • Cable Diameter: 0.232 in. • Temperature Range: –30°C to 80°C • Impedance: 120 ohms

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Cable Catalog Section
16

CAT5

Cable, CAT5E Network. 624-026-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Cable

Cable, CAT5E Network
624-026-00

Description

These cables are designed to meet advanced UTP horizontal cable application. This cable is intended for high speed data applications up to 1 Gpps.

Features

- RoHS compliant
- Increases network efficiency and uptime

Specifications

Category	5E
Diameter	0.2 in. (5.08 mm)
Conductor Size	24 AWG
Conductor Type	Solid
Shielded	Unshielded twisted pair
Jacket Color	Yellow

Ordering Information

NOTE Monaco ships all cable on 1,000 ft. spools.

Part Number	Description
624-026-00	CAT5E Cable • 4-conductor, 24 AWG • PVC insulation, yellow PVC jacket • Cable Diameter: 0.187 in. • Temperature Rating: –14°F to 167° F (–10°C to 75° C) • Nominal DC Resistance: 9.38 ohms/328 ft. (100 m) • Length: 1,000 ft. • Riser

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Cable Catalog Section
16

CAT6

Cable, CAT6 Plenum and Non-Plenum 624-03x-00, 624-04x-00
Cable, CAT6A OSP Broadband. 624-050-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Cable

Cable, CAT6 Plenum and Non-Plenum

624-03x-00, 624-04x-00

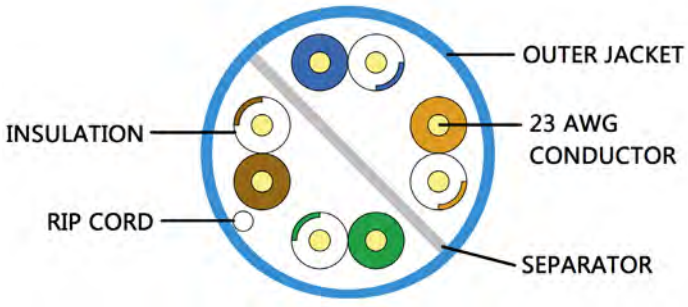
Features

- Category 6, Plenum and Non-Plenum Cables
- PVC Jacket - blue, white, yellow, green, and purple
- Performance to 350 MHz
- Divider separator designed for consistent electrical performance
- Rip cord applied longitudinally under jacket

Specifications

Application	1000BASE-T (Gigabit Ethernet), 100 BASE-TX, 10BASE-T
Conductors	23 AWG, solid bare annealed copper
Shield	U/UTP Unshielded Twisted Pair
Conductor Pair Count	4 Pair
Pair Color Coding	• Pair 1: Blue-White/Blue • Pair 2: Orange-White/Orange • Pair 3: Green-White/Green • Pair 4: Brown-White/Brown
Jacket	Plenum: Low Smoke, Flame-Retardant PVC Non-Plenum: Flame-Retardant PVC
Insulation	Plenum: Fluoropolymer/Dual-Layer Polyolefin Non-Plenum: Polyolefin
Length	1,000 ft.
Cable Type	GenSPEED® 6 CAT6
Maximum Pull Force	Plenum and Non-Plenum: 32 lb
Nominal Cable Diameter	Plenum: 0.205 in. (5.207 mm) Non-Plenum: 0.22 in. (5.588 mm)
Minimum Bend Radius	Plenum and Non-Plenum: 1 in.
Cable Weight	Plenum: 25 lb/1,000 ft. Non-Plenum: 24 lb/1,000 ft.
Temperature Rating	–4°F to 167°F (–20°C to 75°C)
Impedance	Frequency 1-350 MHz 100 ± 15 ohms
DC Resistance	ohms/328 ft (100 m) @ 68°F (28°C) 9.38 max., 7.50 nominal
Velocity of Propagation	% Speed of Light Plenum: 70 nominal Non-Plenum: 68 nominal
Standards Compliance:	
NEC/CEC	Plenum: Type CMP (NFPA 262) Non-Plenum: Type CMR (UL 1666)
UL Listed	UL 444
ANSI/TIA	854: 1000BASE-TX
ANSI/TIA	568-C.2, 862 Building Automation
ICEA	S-102-700 (Category 6) S-116-732 (Category 6 and 6A)
ROHS	Compliant Directive 2011/65/EU

Cross Section



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Cable

Ordering Information

NOTE Monaco ships all cable on 1,000 ft. spools.

Plenum Cables

Part Number	Description
624-044-00	CAT6 Cable - Plenum Rated, Green Jacket • 1000BASE-T, 100BASE-TX, 10BASE-T • 23 AWG solid bare annealed copper • U/UTP Unshielded Twisted Pair • Jacket: Low Smoke, Flame-Retardant PVC • Nominal Cable Diameter: 0.205 in (5.207 mm) • Impedance: 100 ± 15 ohms
624-045-00	CAT6 Cable - Plenum Rated, Purple Jacket • 1000BASE-T, 100BASE-TX, 10BASE-T • 23 AWG solid bare annealed copper • U/UTP Unshielded Twisted Pair • Jacket: Low Smoke, Flame-Retardant PVC • Nominal Cable Diameter: 0.205 in (5.207 mm) • Impedance: 100 ± 15 ohms
624-046-00	CAT6 Cable - Plenum Rated, Yellow Jacket • 1000BASE-T, 100BASE-TX, 10BASE-T • 23 AWG solid bare annealed copper • U/UTP Unshielded Twisted Pair • Jacket: Low Smoke, Flame-Retardant PVC • Nominal Cable Diameter: 0.205 in (5.207 mm) • Impedance: 100 ± 15 ohms
624-047-00	CAT6 Cable - Plenum Rated, White Jacket • 1000BASE-T, 100BASE-TX, 10BASE-T • 23 AWG solid bare annealed copper • U/UTP Unshielded Twisted Pair • Jacket: Low Smoke, Flame-Retardant PVC • Nominal Cable Diameter: 0.205 in (5.207 mm) • Impedance: 100 ± 15 ohms
624-049-00	CAT6 Cable - Plenum Rated, Blue Jacket • 1000BASE-T, 100BASE-TX, 10BASE-T • 23 AWG solid bare annealed copper • U/UTP Unshielded Twisted Pair • Jacket: Low Smoke, Flame-Retardant PVC • Nominal Cable Diameter: 0.205 in (5.207 mm) • Impedance: 100 ± 15 ohms

Non-Plenum (Riser) Cables

Part Number	Description
624-034-00	CAT6 Cable - Non-Plenum Rated, Green Jacket • 1000BASE-T, 100BASE-TX, 10BASE-T • 23 AWG solid bare annealed copper • U/UTP Unshielded Twisted Pair • Jacket: Flame-Retardant PVC • Nominal Cable Diameter: 0.220 in (5.588 mm) • Impedance: 100 ± 15 ohms
624-035-00	CAT6 Cable - Non-Plenum Rated, Purple Jacket • 1000BASE-T, 100BASE-TX, 10BASE-T • 23 AWG solid bare annealed copper • U/UTP Unshielded Twisted Pair • Jacket: Flame-Retardant PVC • Nominal Cable Diameter: 0.220 in (5.588 mm) • Impedance: 100 ± 15 ohms
624-036-00	CAT6 Cable - Non-Plenum Rated, Yellow Jacket • 1000BASE-T, 100BASE-TX, 10BASE-T • 23 AWG solid bare annealed copper • U/UTP Unshielded Twisted Pair • Jacket: Flame-Retardant PVC • Nominal Cable Diameter: 0.220 in (5.588 mm) • Impedance: 100 ± 15 ohms
624-037-00	CAT6 Cable - Non-Plenum Rated, White Jacket • 1000BASE-T, 100BASE-TX, 10BASE-T • 23 AWG solid bare annealed copper • U/UTP Unshielded Twisted Pair • Jacket: Flame-Retardant PVC • Nominal Cable Diameter: 0.220 in (5.588 mm) • Impedance: 100 ± 15 ohms
624-039-00	CAT6 Cable - Non-Plenum Rated, Blue Jacket • 1000BASE-T, 100BASE-TX, 10BASE-T • 23 AWG solid bare annealed copper • U/UTP Unshielded Twisted Pair • Jacket: Flame-Retardant PVC • Nominal Cable Diameter: 0.220 in (5.588 mm) • Impedance: 100 ± 15 ohms

Associated Part

Part Number	Description
624-050-00	CAT6A Cable - OSP Broadband, Black Jacket • 10BASE-T through 10GBASE-T Ethernet • 23 AWG solid annealed copper • U/FTP - Unshielded/Foiled Twisted Pair • Jacket: OSP-grade Polyethelyne • Nominal Cable Diameter: 0.39 in (9.906 mm) • Impedance: 100 ± 15 ohms

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Cable

Cable, CAT6A OSP Broadband
624-050-00

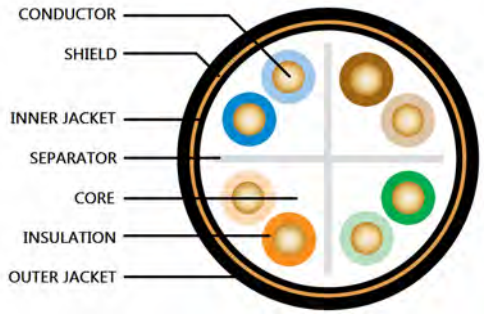
Features

- Outdoor, Category 6A data cable
- Sunlight and weather resistant outer jacket
- Transmission performance characterized to 500 MHz
- Dry block between shield/armor and inner jacket
- Lashed aerial, underground conduit or low-risk direct burial

Specifications

Application	10BASE-T through 10GBASE-T Ethernet
Conductors	23 AWG solid annealed copper
Shield	U/FTP - Unshielded/Foiled Twisted Pair
Conductor Pair Count	Four pair
Color Coding	• Green-green • Brown-brown • Orange-orange • Blue-blue
Jacket	Black, Polyethylene
Insulation	Polyolefin
Separator	Polyolefin cross-web
Dry Water Block	SAP powder
Core	PFM gel filled, water repellent
Length	1,000 ft.
Cable Type	OSP Broadband, CAT6A
Maximum Pull Force	25 lb (110 N)
Nominal Cable Diameter	0.39 in. (9.906 mm)
Cable Weight	72 lb/1,000 ft.
Temperature Rating	–40°F to 176°F (–40°C to 80°C)
Impedance	100 ± 15 ohms
Velocity of Propagation	68% (% speed of light)
Standards Compliance:	
Fire Rating	General Purpose
ANSI/TIA	568-C.2
ANSI/ICEA	S-107-704-2006
RoHS	Compliant

Cross Section



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Cable

Ordering Information

NOTE Monaco ships all cable on 1,000 ft. spools.

Part Number	Description
624-050-00	CAT6A Cable - OSP Broadband, Black Jacket • 10BASE-T through 10GBASE-T Ethernet • 23 AWG solid annealed copper • U/FTP - Unshielded/Foiled Twisted Pair • Jacket: OSP-grade Polyethylene • Nominal Cable Diameter: 0.39 in. (9.906 mm) • Impedance: 100 ± 15 ohms

Associated Parts

Plenum Cables

Part Number	Description
624-044-00	CAT6 Cable - Plenum Rated, Green Jacket • 1000BASE-T, 100BASE-TX, 10BASE-T • 23 AWG solid bare annealed copper • U/UTP Unshielded Twisted Pair • Jacket: Low Smoke, Flame-retardant PVC • Nominal Cable Diameter: 0.205 in. (5.207 mm) • Impedance: 100 ± 15 ohms
624-045-00	CAT6 Cable - Plenum Rated, Purple Jacket • 1000BASE-T, 100BASE-TX, 10BASE-T • 23 AWG solid bare annealed copper • U/UTP Unshielded Twisted Pair • Jacket: Low Smoke, Flame-retardant PVC • Nominal Cable Diameter: 0.205 in. (5.207 mm) • Impedance: 100 ± 15 ohms
624-046-00	CAT6 Cable - Plenum Rated, Yellow Jacket • 1000BASE-T, 100BASE-TX, 10BASE-T • 23 AWG solid bare annealed copper • U/UTP Unshielded Twisted Pair • Jacket: Low Smoke, Flame-retardant PVC • Nominal Cable Diameter: 0.205 in. (5.207 mm) • Impedance: 100 ± 15 ohms
624-047-00	CAT6 Cable - Plenum Rated, White Jacket • 1000BASE-T, 100BASE-TX, 10BASE-T • 23 AWG solid bare annealed copper • U/UTP Unshielded Twisted Pair • Jacket: Low Smoke, Flame-retardant PVC • Nominal Cable Diameter: 0.205 in. (5.207 mm) • Impedance: 100 ± 15 ohms
624-049-00	CAT6 Cable - Plenum Rated, Blue Jacket • 1000BASE-T, 100BASE-TX, 10BASE-T • 23 AWG solid bare annealed copper • U/UTP Unshielded Twisted Pair • Jacket: Low Smoke, Flame-retardant PVC • Nominal Cable Diameter: 0.205 in. (5.207 mm) • Impedance: 100 ± 15 ohms

Non-Plenum (Riser) Cables

Part Number	Description
624-034-00	CAT6 Cable - Non-Plenum Rated, Green Jacket • 1000BASE-T, 100BASE-TX, 10BASE-T • 23 AWG solid bare annealed copper • U/UTP Unshielded Twisted Pair • Jacket: Flame-retardant PVC • Nominal Cable Diameter: 0.220 in. (5.588 mm) • Impedance: 100 ± 15 ohms
624-035-00	CAT6 Cable - Non-Plenum Rated, Purple Jacket • 1000BASE-T, 100BASE-TX, 10BASE-T • 23 AWG solid bare annealed copper • U/UTP Unshielded Twisted Pair • Jacket: Flame-retardant PVC • Nominal Cable Diameter: 0.220 in. (5.588 mm) • Impedance: 100 ± 15 ohms
624-036-00	CAT6 Cable - Non-Plenum Rated, Yellow Jacket • 1000BASE-T, 100BASE-TX, 10BASE-T • 23 AWG solid bare annealed copper • U/UTP Unshielded Twisted Pair • Jacket: Flame-retardant PVC • Nominal Cable Diameter: 0.220 in. (5.588 mm) • Impedance: 100 ± 15 ohms
624-037-00	CAT6 Cable - Non-Plenum Rated, White Jacket • 1000BASE-T, 100BASE-TX, 10BASE-T • 23 AWG solid bare annealed copper • U/UTP Unshielded Twisted Pair • Jacket: Flame-retardant PVC • Nominal Cable Diameter: 0.220 in. (5.588 mm) • Impedance: 100 ± 15 ohms
624-039-00	CAT6 Cable - Non-Plenum Rated, Blue Jacket • 1000BASE-T, 100BASE-TX, 10BASE-T • 23 AWG solid bare annealed copper • U/UTP Unshielded Twisted Pair • Jacket: Flame-retardant PVC • Nominal Cable Diameter: 0.220 in. (5.588 mm) • Impedance: 100 ± 15 ohms

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Antenna Systems Catalog Section 17

Section 17. Antenna Systems

VHF Antennas

VHF Antenna, Omnidirectional 190-211-0x, 190-212-00, 190-400-00, 190-418-xx
VHF Antenna, Omnidirectional, Collinear, 136–174 MHz 190-244-00, 190-245-00, 190-246-00, 190-247-00
VHF Antenna, Yagi Directional 190-401-xx

UHF Antennas

UHF Antenna, Omnidirectional 190-216-xx, 190-249-00, 190-403-xx, 190-409-xx, 190-417-xx
UHF Antenna, Omnidirectional, Collinear, 400–470 MHz 190-241-00, 190-242-00, 190-243-00
UHF Antenna, Yagi Directional 190-410-xx

Antenna Mounting Hardware

Antenna Mounting Hardware 199-008-00, 199-010-00, 199-011-00, 199-012-00
Antenna Mount Clamp Set 199-056-00

Coaxial Cables

Coaxial Cable, 50 ohms, Mini RG-8X 620-023-00, 625-100-0X, 626-000-0X
Coaxial Cable, 50 ohms, Low-Loss 620-026-00
Coaxial Cable, 50 ohm, 1/4 in. Heliax, Superflex 620-029-00
Coaxial Cable, 50 ohm, 1/2 in. Heliax, Superflex 620-030-00
Coaxial Cable, 50 ohms, 1/2 in. Heliax, LDF 620-031-00
Coaxial Cable, 50 ohms, 5/8 in. Heliax, LDF 620-032-00
Coaxial Cable, 50 ohms, 7/8 in. Heliax, Foam 620-033-00

Coaxial Connectors, Adaptors

Ground Rod and Clamp, Copper, for Lightning 661-000-00, 661-001-00
Air Terminal Hardware, Copper, for Lightning 661-002-00, 661-004-00

Crimp Kit

Coaxial Cable Tool Kit 303-000-00

Lightning Arrestors

Lightning Arrestors and Kits 198-021-xx, 198-022-xx

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Antenna Systems Catalog Section 17

VHF Antennas

VHF Antenna, Omnidirectional 190-211-0x, 190-212-00, 190-400-00, 190-418-xx
VHF Antenna, Omnidirectional, Collinear, 136–174 MHz 190-244-00, 190-245-00, 190-246-00, 190-247-00
VHF Antenna, Yagi Directional 190-401-xx

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

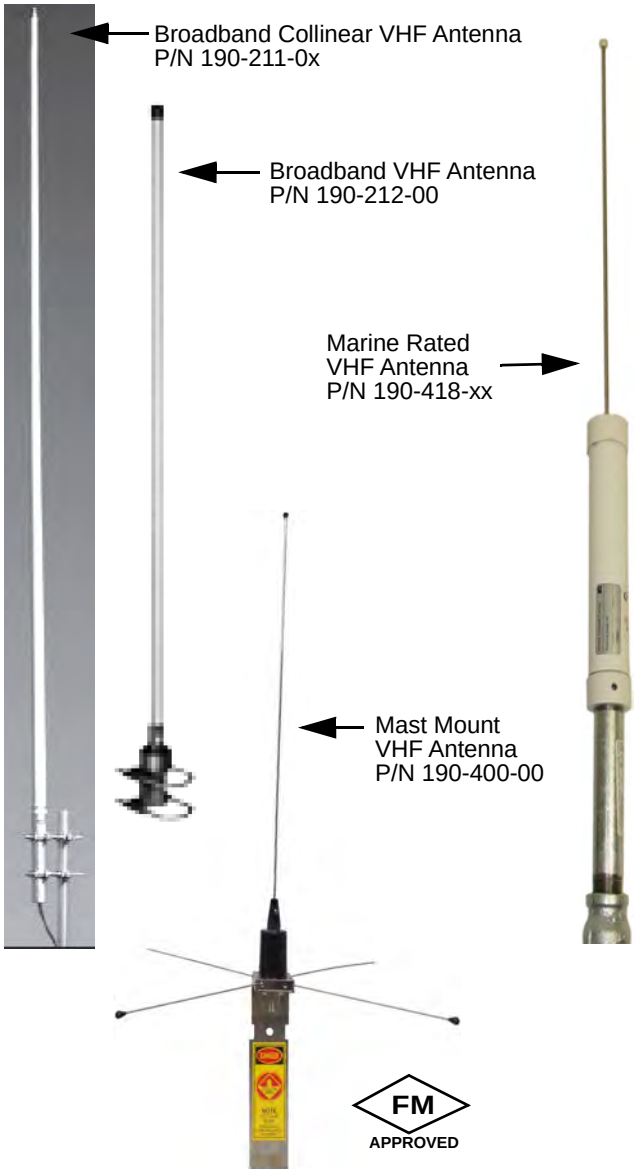
Antenna Systems

VHF Antenna, Omnidirectional

190-211-0x, 190-212-00, 190-400-00, 190-418-xx

Description

These Omnidirectional VHF antennas transmit and receive VHF signals in any horizontal direction between a transceiver and radio frequency modem connected to the Central Receiving System.



Broadband Collinear Antennas P/N 190-211-0x

These antennas are built to withstand corrosive gases, ultraviolet radiation, icing, salt spray, acid rain, and windblown abrasives. All junctions are fully soldered to prevent RF intermodulation.

Weather Resistant Antenna P/N 190-212-00

These rugged construction, small size antennas feature a broad frequency band. Radiating elements are constructed of copper alloy, encased in a weather resistant low loss fiberglass radome. Ideal for use as emergency backup antennas. Their size and mounting fixtures allow for easy storage and fast installation.

BSA-1 VHF Omnidirectional Antenna P/N 190-400-00

These are the primary antennas used with BTs, M-Panels, M Addressable Panels, and RFMs that operate in the VHF frequency range.

Marine Rated VHF Antenna P/N 190-418-xx

The Marine Rated VHF antenna is a painted aluminum tube with a large diameter, high tensile strength, stainless steel whip rod with a protective ball at the tip.

During operation, this antenna exhibits an excellent propagation pattern with a low angle of radiation. Corrosion resistant materials provide years of optimum performance under the most severe weather and vibration conditions.

Specifications

P/N 190-211-0x*

Description	VHF, Omnidirectional Broadband Collinear Antenna
Material	Heavy Duty Fiberglass
Frequency	138–175 MHz, 8 bands

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Antenna Systems

Connector	Recessed, Type N Female
Polarization	Vertical
Power Rating	500 W
Gain	6 dBd
Impedance	50 ohms nominal
VSWR	1.5 to 1 or less
Beam Width	20 degrees
Lightning Protection	DC ground
Dimensions	P/N 190-211-01 and P/N 190-211-02: 256 in. x 2.75 in. (650 cm x 7 cm) Other Antennas: 244 in. x 2.75 in. (620 cm x 7 cm)
Weight	43 lb (20 kg) (antenna and clamps)
Wind Rating	150 mph (241 km/h) without ice, 125 mph (201 km/h) with 0.5 in. ice Bending moment at top clamp: P/N 190-211-01 and P/N 190-211-02: 1,090 ft-lb; Other Antennas: 1,010 ft-lb

** "-0x" indicates frequency*

P/N 190-212-00

Description	VHF, Omnidirectional Fixed, Weather Resistant Antenna
Material	Fiberglass Radome
Frequency	118–174 MHz Specify frequency when ordering.
Connector	Bottom location, Type N Female
Polarization	Vertical
Power Rating	100 W
Gain	0 dBd
Impedance	50 ohms nominal
VSWR	1.5 to 1 or less
Beam Width	80 degrees
Lightning Protection	Direct ground
Overall Height	4.7 ft. (1.43 m)
Weight	1.6 lb (1 kg) (without mounting hardware)
Wind Rating	125 mph (200 km/h) Max Wind Loading Area: 0.3 sq. ft. Bending moment 1 in. below top mounting pipe, Nm: 25.3 ft-lb Wind load, side, N: 10.34 ft-lb

P/N 190-400-00

Description	VHF, Omnidirectional BSA-1, Mast Mount Antenna
Material	Stainless Steel
Frequency	136–174 MHz Must be cut to frequency. Monaco trimming service available.
Connector	PL-259 Female
Polarization	Vertical
Gain	3 dBd, 5/8 wave ground plane
Impedance	50 ohms nominal
VSWR	1.5 to 1 or less
Wind Rating	100 mph (161 km/h)
Standards Compliance	FM Approval BSA-1 antenna is standard for frequencies in the VHF range.

P/N 190-418-xx*

Description	VHF, Omnidirectional Marine Rated Antenna
Material	Aluminum
Frequency	122–300 MHz
Connector	PL-259 Female
Power Rating	100 W maximum
Gain	0 dBd
Impedance	50 ohms nominal
VSWR	1.5 to 1 or less
Overall Height	4.5 ft. (1.38 m)
Weight	≈2.5 lb (≈1.1 kg)
Wind Rating	100 mph (161 km/h)

** "-xx" indicates frequency*

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Ordering Information

Antenna

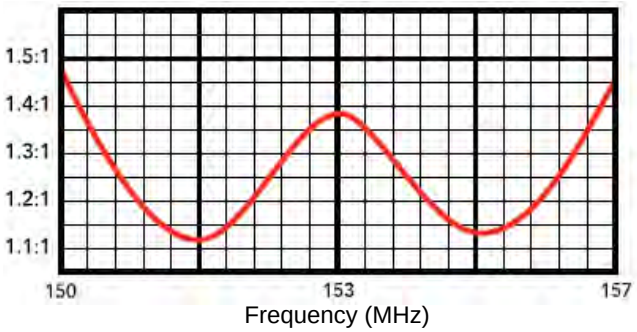
Part Number	Description
190-211-01	VHF Antenna, omnidirectional, 6 dBd gain, fiberglass, 138–144 MHz, N female, includes mounting clamps and N male jumper; see **NOTE**
190-211-02	VHF Antenna, omnidirectional, 6 dBd gain, fiberglass, 144–151 MHz, includes mounting clamps and N male jumper; see **NOTE**
190-211-03	VHF Antenna, omnidirectional, 6 dBd gain, fiberglass, 150–157 MHz, N female, includes mounting clamps and N male jumper; see **NOTE**
190-211-04	VHF Antenna, omnidirectional, 6 dBd gain, fiberglass, 156–164 MHz, N female, includes mounting clamps and N male jumper; see **NOTE**
190-211-05	VHF Antenna, omnidirectional, 6 dBd gain, fiberglass, 158–166 MHz, N female, includes mounting clamps and N male jumper; see **NOTE**
190-211-06	VHF Antenna, omnidirectional, 6 dBd gain, fiberglass, 161–168 MHz, N female, includes mounting clamps and N male jumper; see **NOTE**
190-211-07	VHF Antenna, omnidirectional, 6 dBd gain, fiberglass, 167–172.5 MHz, N female, includes mounting clamps and N male jumper; see **NOTE**
190-211-08	VHF Antenna, omnidirectional, 6 dBd gain, fiberglass, 171–175 MHz, N female, includes mounting clamps and N male jumper; see **NOTE**
190-212-00	VHF Antenna, omnidirectional, 0 dBd gain, fiberglass, 118–174 MHz, N female, weather resistant; must specify frequency when ordering
190-400-00	BSA-1 VHF Antenna, omnidirectional, 3 dBd gain, 136–174 MHz, PL-259 female, mounting hardware, ground clamp, coaxial cable seal; Must be cut to frequency—Optional Monaco trimming service available, P/N 199-910-00
190-418-xx	VHF Antenna kit, omnidirectional, 0 dBd gain, marine rated, 122–300 MHz, PL-259 female; specify frequency (-xx) when ordering
NOTE Broadband collinear antennas include a dual clamp set (for mounting to a 1.5–3.5 in. outside diameter support pipe) and a 24 in. removable RG-213 N male jumper.	

Associated Parts

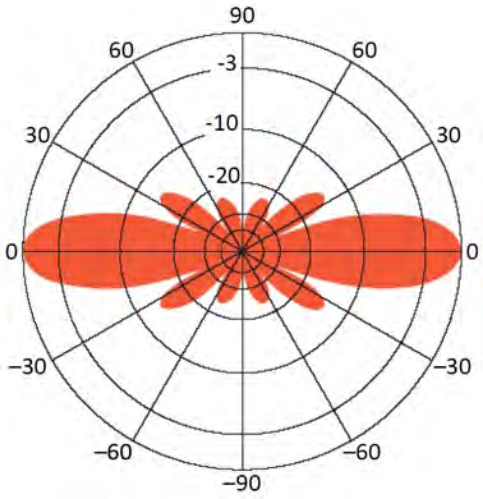
Part Number	Description
199-001-00	Spare 54 in. Antenna Whip for P/N 190-400-00; customer must cut antenna whip to frequency
199-002-00	Spare VHF Coil for P/N 190-400-00
643-554-00	Adaptor PL-259 female to N male
164-004-03	Coaxial Seal, 10 in. long
199-057-00	Antenna Mounting Kit, low profile, marine rated, 4 ft. gold stanchion and clamp set

Broadband Collinear Antennas

Typical VSWR Response, P/N 190-211-0x



Vertical Plane Radiation Pattern, P/N 190-211-0x

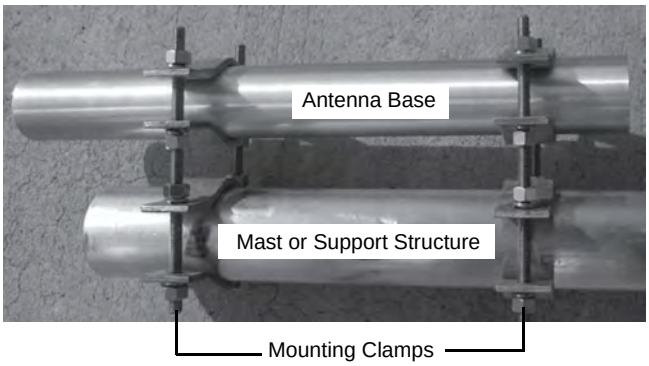


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Antenna Systems

Mounting Clamps



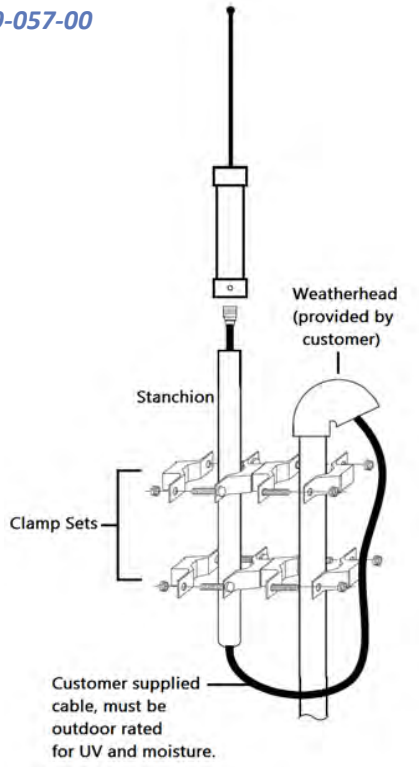
Broadband collinear antennas (190-211-0x) include a dual-clamp set for mounting to a 1.5 in. to 3.5 in. (OD) support pipe and a 24 in. removable N male jumper. Stand-off and top mounts are also available.

Requires a lightning surge protector for additional surge protection.

Antenna Components

Optional Mounting Components

P/N 199-057-00

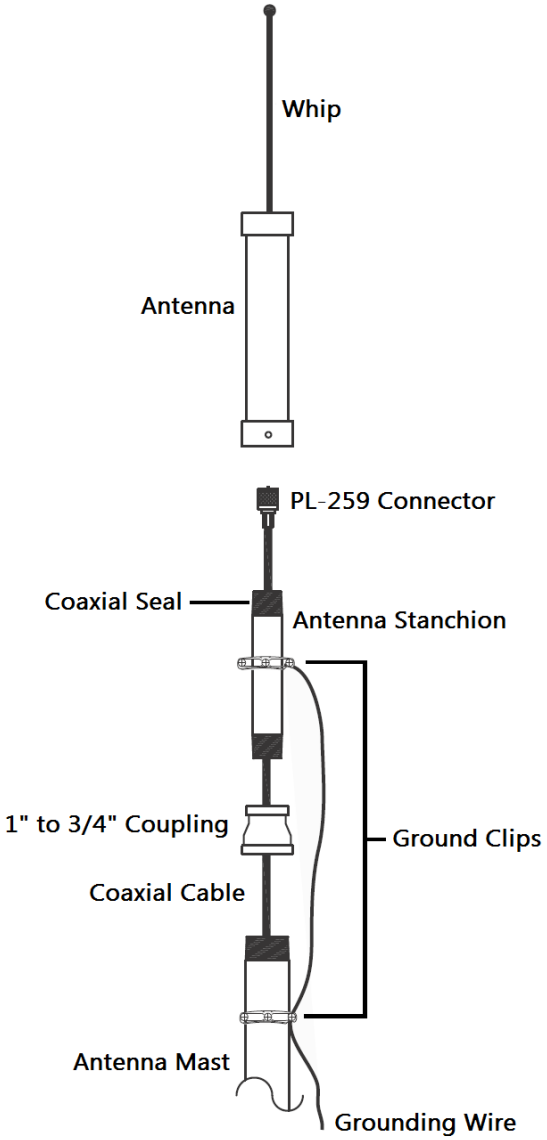


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Antenna Systems

Standard Components



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

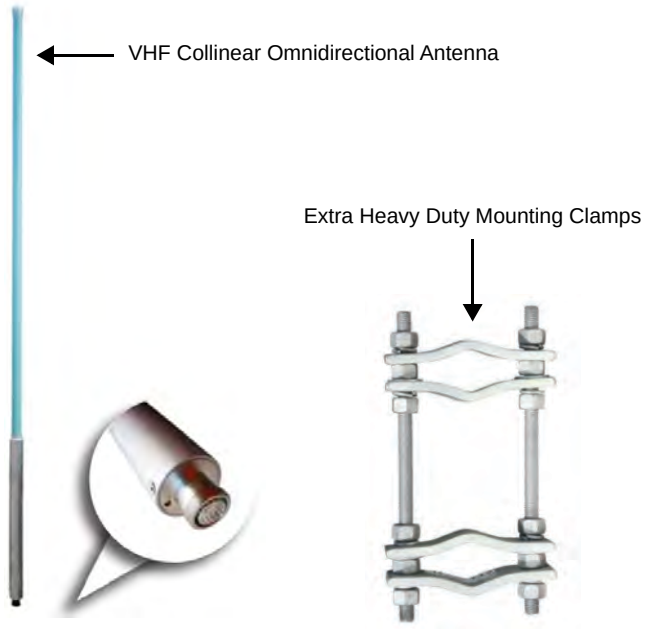
Antenna Systems

VHF Antenna, Omnidirectional, Collinear, 136–174 MHz

190-244-00, 190-245-00, 190-246-00, 190-247-00

Description

This range of collinear antennas have been specifically designed for VHF applications requiring high performance and strong bandwidth.



Features

- Excellent bandwidth
- DC grounded for lightning protection
- Excellent peak instantaneous power (PIP)

Specifications

Antennas

Description	VHF Collinear Omnidirectional Antenna
Material	Fiberglass Radome
Frequency	P/N 190-244-00: 162–174 MHz P/N 190-245-00: 156–166 MHz P/N 190-246-00: 150–160 MHz P/N 190-247-00: 136–155 MHz
Connector	N Female
Power Rating	P/N 190-247-00: 400 watts Other Antennas: 350 watts
Gain	6 dBd
Nominal Impedance	50 ohms
VSWR	<1.5:1
PIP	25 kW
Vertical Beamwidth	17 degrees
Horizontal Beamwidth	Omni ± 0.5 dB
Wind Rating	P/N 190-247-00: 135 mph (217.3 kph) Other Antennas: >150 mph (>241.4 kph)
Length	P/N 190-244-00: 236.22 in. (600 cm) Other Antennas: 255.9 in. (650 cm)
Radome Diameter	3 in (7.6 cm)
Weight	P/N 190-244-00: 41.88 lb (19 kg) P/N 190-245-00: 44.09 lb (20 kg) P/N 190-246-00: 46.29 lb (21 kg) P/N 190-247-00: 50.7 lb (23 kg)

Mounting Clamps

Weight	4.2 lb (1.9 kg) per clamp
Finish	Galvanized Body and Fastener
Boom Size	0.8 in. (2 cm) minimum, 3 in. (7.5 cm) maximum
Application	Extra heavy duty mounting of two in-line tubular sections

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Ordering Information

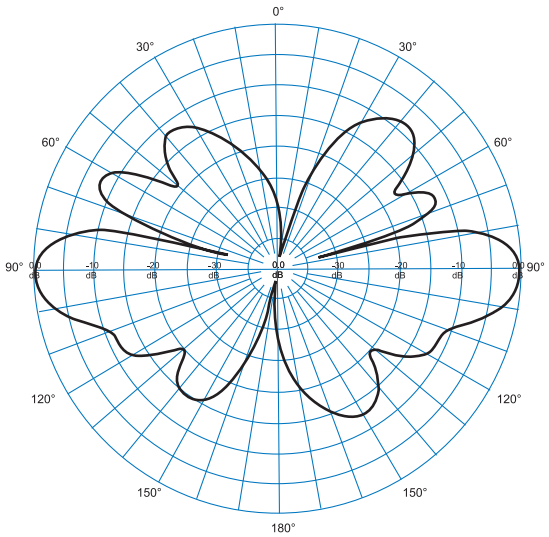
Part Number	Description
190-244-00	VHF Antenna, Omnidirectional, Collinear, 162–174 MHz, 6 dBd gain, fiberglass, N female, includes two mounting clamps
190-245-00	VHF Antenna, Omnidirectional, Collinear, 156–166 MHz, 6 dBd gain, fiberglass, N female, includes two mounting clamps
190-246-00	VHF Antenna, Omnidirectional, Collinear, 150–160 MHz, 6 dBd gain, fiberglass, N female, includes two mounting clamps
190-247-00	VHF Antenna, Omnidirectional, Collinear, 136–155 MHz, 6 dBd gain, fiberglass, N female, includes two mounting clamps

Associated Parts

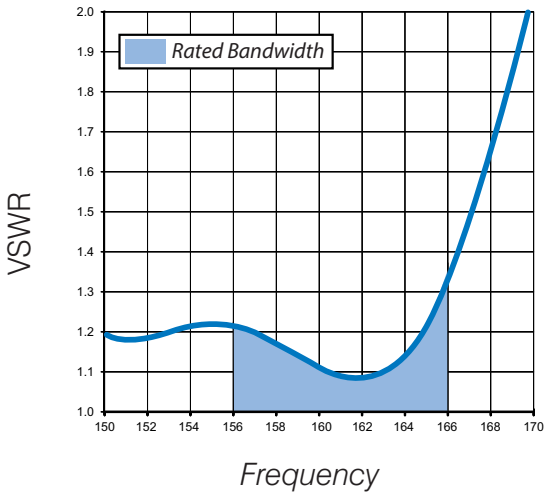
Part Number	Description
643-554-00	Adaptor PL-259 female to N male
164-004-03	Coaxial Seal, 10 in. long

Graphs

Typical E Plane



Typical VSWR Response (P/N 190-245-00)



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

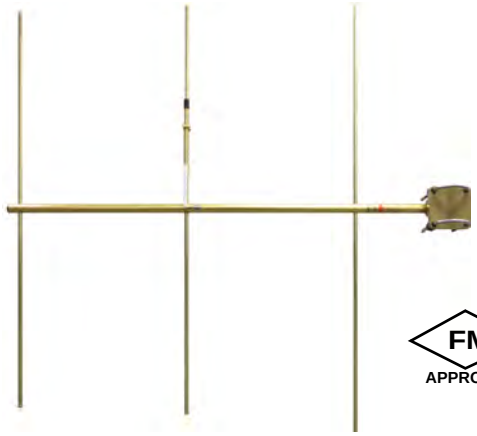
Antenna Systems

VHF Antenna, Yagi Directional

190-401-xx

Description

These directional antennas transmit and receive VHF signals between a transceiver and the radio frequency modem connected to the Central Receiving System.



Gold anodized Yagi Directional antennas, transmit and receive in one direction; used to transmit VHF signals over longer distances or in areas where significant interference exists.

Customer tuning required, comes with N female connector with PL-259 female adaptor, weather seal, and aluminum mounting kit with stainless steel hardware.

Specifications

P/N 190-401-xx*	VHF, Yagi Directional BSA-2
Material	Aluminum
Frequency	P/N 190-401-10: 136–142 MHz P/N 190-401-11: 142–150 MHz P/N 190-401-12: 150–158 MHz P/N 190-401-13: 158–166 MHz P/N 190-401-14: 166–174 MHz
Connector	N Female (RF adaptor for PL-259 Female included)
Polarization	Vertical
Power	300 W Maximum
Gain	7.1 dBd
Front to Back Ratio	17 dBd
Impedance	50 ohms nominal
VSWR	2 to 1 or less
Wind Rating	150 mph (241 km/h) without ice, 80 mph (129 km/h) with 0.5 in. ice
Beam Width	Horizontal: 78 degrees Vertical: 74 degrees
Tuning	See cutting chart that ships with antenna
Standards Compliance	FM Approval, BSA-2 directional antenna is optional for use in the VHF range

* "-xx" indicates frequency

Ordering Information

Part Number	Description
190-401-10	BSA-2, VHF 3-element Yagi Directional Antenna, 136–142 MHz, N female connector with PL-259 female adaptor, mounting hardware, and coaxial cable seal; customer must cut to frequency
190-401-11	BSA-2, VHF 3-element Yagi Directional Antenna, 142–150 MHz, N female connector with PL-259 female adaptor, mounting hardware, and coaxial cable seal; customer must cut to frequency
190-401-12	BSA-2, VHF 3-element Yagi Directional Antenna, 150–158 MHz, N female connector with PL-259 female adaptor, mounting hardware, and coaxial cable seal; customer must cut to frequency
190-401-13	BSA-2, VHF 3-element Yagi Directional Antenna, 158–166 MHz, N female connector with PL-259 female adaptor, mounting hardware, and coaxial cable seal; customer must cut to frequency
190-401-14	BSA-2, VHF 3-element Yagi Directional Antenna, 166–174 MHz, N female connector with PL-259 female adaptor, mounting hardware, and coaxial cable seal; customer must cut to frequency

Associated Parts

Part Number	Description
643-554-00	Adaptor PL-259 female to N male
164-004-03	Coaxial Seal, 10 in. long

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Antenna Systems Catalog Section
17

UHF Antennas

UHF Antenna, Omnidirectional 190-216-xx, 190-249-00, 190-403-xx, 190-409-xx, 190-417-xx
UHF Antenna, Omnidirectional, Collinear, 400–470 MHz 190-241-00, 190-242-00, 190-243-00
UHF Antenna, Yagi Directional 190-410-xx

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

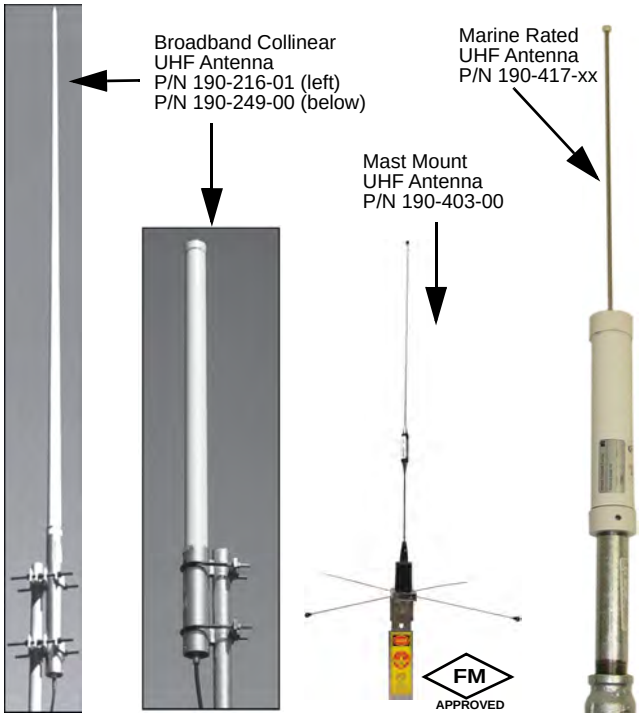
Antenna Systems

UHF Antenna, Omnidirectional

190-216-xx, 190-249-00, 190-403-xx, 190-409-xx, 190-417-xx

Description

UHF Omnidirectional antennas transmit and receive signals between an UHF transceiver and the radio frequency modem that is connected to the Central Receiving System.



Broadband Collinear Antennas P/N 190-216-xx and P/N 190-249-00

These antennas are built to withstand corrosive gases, ultraviolet radiation, icing, salt spray, acid rain, and windblown abrasives. The antennas can mount to the top or side of a tower. All junctions are fully soldered to prevent RF intermodulation

BSA-3 and BSA-8 Antennas P/N 190-403-xx and P/N 190-409-xx

These are the primary antennas used with BTs, M-Panels, M Addressable Panels, and RFMs that operate in the UHF frequency range.

Marine Rated Antennas P/N 190-417-xx

The Marine Rated Antennas have a large diameter, high tensile strength, stainless steel whip rod with a protective ball at the tip. During operation, this antenna exhibits an excellent propagation pattern with a low angle of radiation. Corrosion resistant materials provide years of optimum performance under the most severe weather and vibration conditions.

NOTE UHF antennas require low loss cabling. N-type and BNC connectors are preferred, except when the antenna has only a PL-259 connector.

Specifications

*P/N 190-216-xx**

Description	UHF, Omnidirectional Broadband Collinear Antenna
Material	Heavy Duty Fiberglass
Frequency	P/N 190-216-01: 405–440 MHZ P/N 190-216-02: 445–480 MHz
Connector	Recessed, Type N Female
Power Rating	500 W
Gain	6 dBd
Impedance	50 ohms nominal
VSWR	1.5 to 1 or less
Beam Width	18 degrees
Lightning Protection	DC ground
Dimensions	P/N 190-216-01: 101 in. x 2.375 in. (256.54 cm x 6.03 cm) P/N 190-216-02: 94 in. x 2.375 in. (238.76 cm x 6.03 cm)
Weight	P/N 190-216-01: 22 lb (10 kg) P/N 190-216-02: 21 lb (9.5 kg)
Wind Rating	P/N 190-216-01: 185 mph (298 km/h) without ice, 155 mph (249 km/h) with 0.5 in. ice P/N 190-216-02: 150 mph (241 km/h) without ice, 125 mph (201 km/h) with 0.5 in. ice

* "xx" indicates the frequency

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Antenna Systems

P/N 190-249-00

Description	UHF, Omnidirectional, Broadband Collinear Mast Mount Antenna
Material	Brass and Copper elements
Frequency	406–512 MHz
Connector	Recessed N Female
Power Rating	500 W
Gain	2.5 dBd
Impedance	50 ohms nominal
VSWR	1.5 to 1 or less
Vertical Beam Width	38 degrees
Dimensions	42 in. L x 2.75 in. OD (106.7 cm x 7.0 cm)
Tower Weight (antenna + clamps)	9 lb (4.1 kg)
Wind Rating	200 mph (321 km/h) without ice, 150 mph (241 km/h) with 0.5 in. ice

*P/N 190-403-xx**

Description	UHF, Omnidirectional BSA-3, Mast Mount Antenna
Material	Stainless Steel
Frequency	406–420 MHz, 420–440 MHz, 450–470 MHz Must be cut to frequency. Optional Monaco trimming service available.
Connector	PL-259 Female
Polarization	Vertical
Gain	3.4 dBd, 5/8 wave ground plane
Impedance	50 ohms nominal
VSWR	1.5 to 1 or less
Wind Rating	100 mph (161 km/h)
Standards Compliance	FM Approval BSA-3 antenna is standard for frequencies in the UHF range

***** "xx" indicates the frequency.

*P/N 190-409-xx**

Description	UHF, Omnidirectional BSA-8, Magnetic Mount Antenna
Material	Stainless Steel
Frequency	406–420 MHz, 420–430 MHz, 450–470 MHz Customer must cut to frequency
Connector	BNC Male
Polarization	Vertical
Gain	3.4 dBd, 5/8 wave ground plane
Impedance	50 ohms nominal
VSWR	1.5 to 1 or less
Wind Rating	100 mph (161 km/h)

***** "xx" indicates the frequency.

*P/N 190-417-xx**

Description	UHF, Omnidirectional Marine Rated Antenna
Material	Anodized Aluminum/Stainless Steel
Frequency	300 MHz–3 GHz
Connector	PL-259 Female
Power Rating	100 W maximum
Gain	0 dBd
Impedance	50 ohms nominal
VSWR	1.15 to 1 or less
Beam Width	87 degrees
Height	25 in. (63.5 cm)
Weight	≈2.5 lb (≈1.1 kg)
Wind Rating	100 mph (161 km/h)

***** "xx" indicates frequency

Ordering Information

Part Number	Description
190-216-01	UHF Antenna, omnidirectional, 6 dBd gain, fiberglass, 405–440 MHz continuous, N female, includes mounting clamps and N male jumper; see **NOTE**
190-216-02	UHF Antenna, omnidirectional, 6 dBd gain, fiberglass, 445–480 MHz continuous, N female, includes mounting clamps and N male jumper; see **NOTE**

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Part Number	Description
190-249-00	UHF Antenna, omnidirectional, 2.5 dBd gain, fiberglass, 406–512 MHz continuous, includes mounting clamps and N male jumper; see **NOTE**
190-403-01	BSA-3 UHF Antenna, omnidirectional, 3.4 dbd gain, 406–420 MHz, PL-259 female connector, mounting hardware, ground clamp, coaxial seal, must be cut to frequency; optional Monaco trimming service available, P/N 199-910-00
190-403-02	BSA-3 UHF Antenna, omnidirectional, 3.4 dbd gain, 420–440 MHz, PL-259 female connector, mounting hardware, ground clamp, coaxial seal, must be cut to frequency; optional Monaco trimming service available, P/N 199-910-00
190-403-04	BSA-3 UHF Antenna, omnidirectional, 3.4 dbd gain, 450–470 MHz, PL-259 female connector, mounting hardware, ground clamp, coaxial seal, must be cut to frequency; optional Monaco trimming service available, P/N 199-910-00
190-409-01	BSA-8 UHF Antenna, omnidirectional, 3.4 dbd gain, 406–420 MHz, magnetic-mount, portable, BNC male connector; customer must cut to frequency
190-409-02	BSA-8 UHF Antenna, omnidirectional, 3.4 dbd gain, 420–430 MHz, magnetic-mount, portable, BNC male connector; customer must cut to frequency
190-409-04	BSA-8 UHF Antenna, omnidirectional, 3.4 dbd gain, 450–470 MHz, magnetic-mount, portable, BNC male connector; customer must cut to frequency
190-417-xx	UHF Antenna Kit, omnidirectional, 0 dbd gain, marine rated, 300 MHz – 3 GHz; specify frequency (-xx) when ordering
NOTE Broadband collinear antennas include a dual clamp set (for mounting to a 1.5 in. to 3.5 in. outside diameter support pipe) and a 24 in. removable RG-213 N male jumper.	

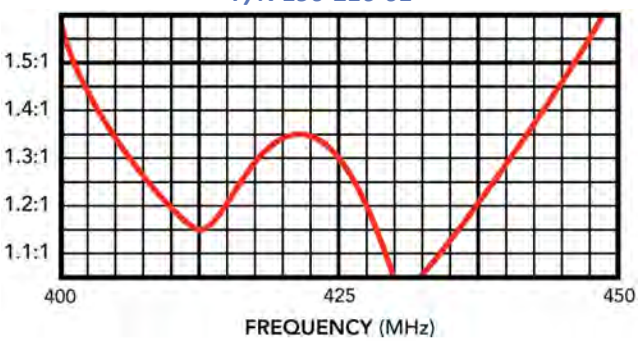
Associated Parts

Part Number	Description
190-414-00	Spare BSA-3 UHF Omnidirectional Antenna Whip and nose cone, only for replacing P/N 190-403-01 antenna whips, upgrades antenna whip Type I and Type II to current Type III design; customer must cut to frequency
643-554-00	Adaptor PL-259 female to N male
164-004-03	Coaxial Seal, 10 in. long
199-057-00	Antenna Mounting Kit, low profile, marine rated, 4 ft. gold stanchion and clamp set

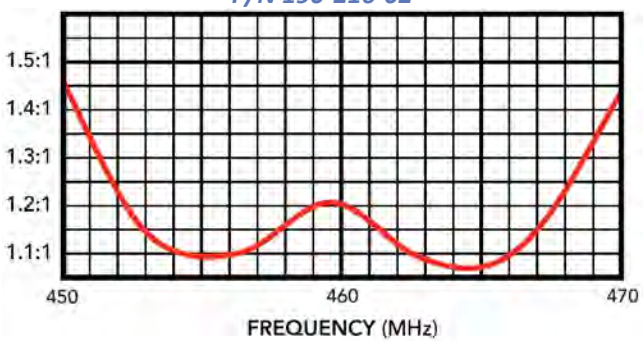
Performance Graphs

VSWR vs Frequency: Typical Radiation Pattern

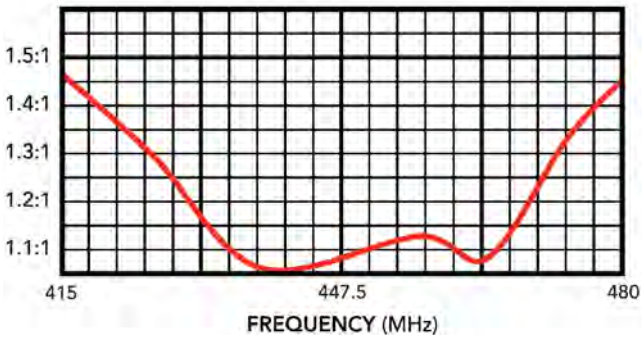
P/N 190-216-01



P/N 190-216-02



P/N 190-249-00

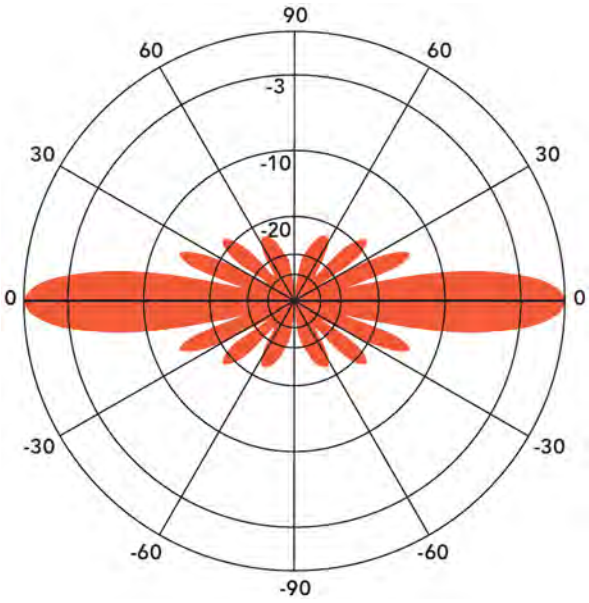


Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

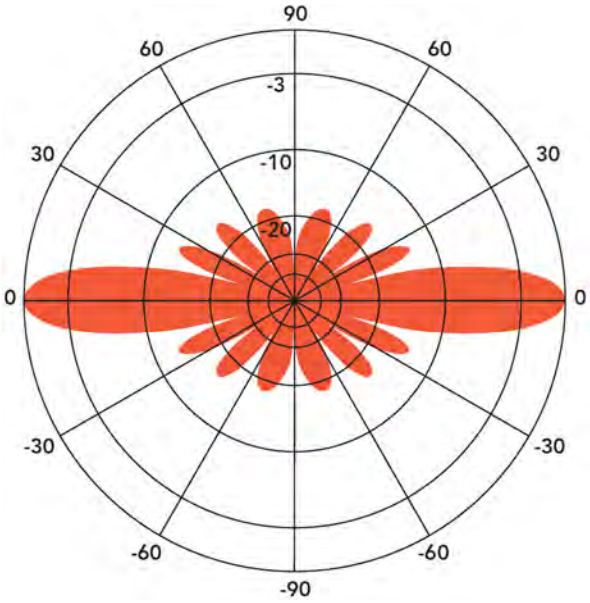
Detect Manage Record

Vertical Radiation Pattern for Vertical Polarization

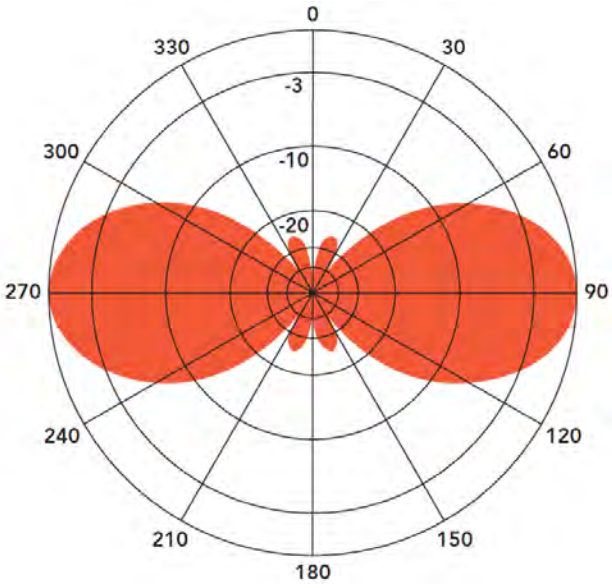
P/N 190-216-01



P/N 190-216-02



P/N 190-249-00



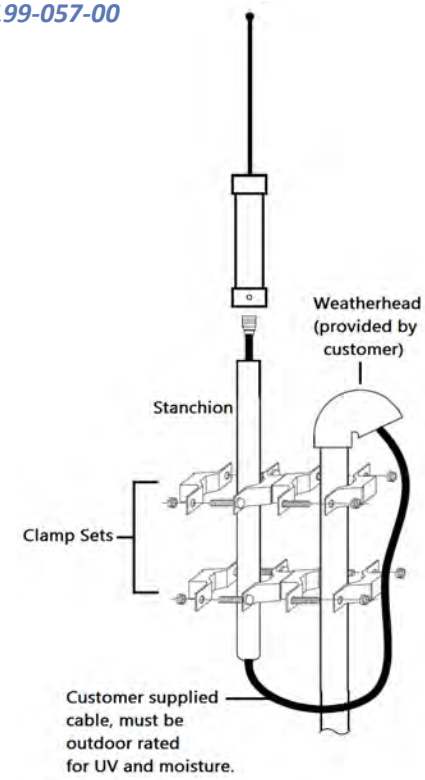
Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

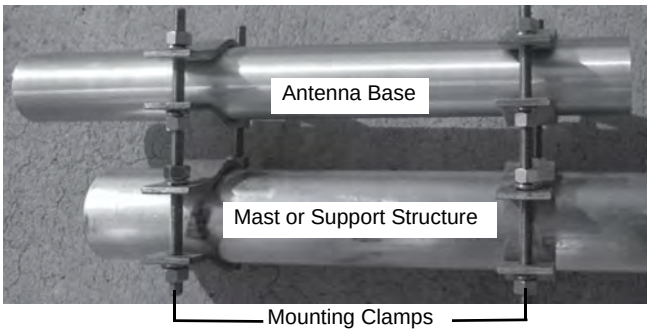
Antenna Systems

Antenna Components

Optional Mounting Components
P/N 199-057-00



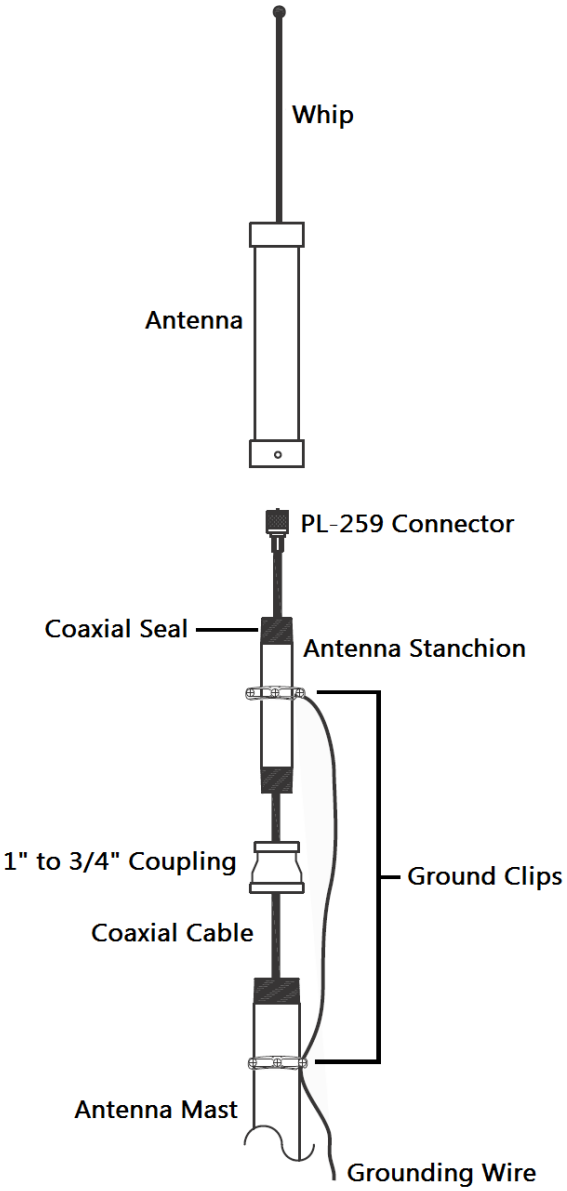
Mounting Clamps for P/N 190-216-xx, P/N 190-249-00



Broadband collinear antennas include a dual-clamp set for mounting to a 1.5 in. to 3.5 in. (OD) support pipe and a 24 in. removable N male jumper. Stand-off and top mounts are also available.

Requires a lightning surge protector for additional surge protection.

Standard Components



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

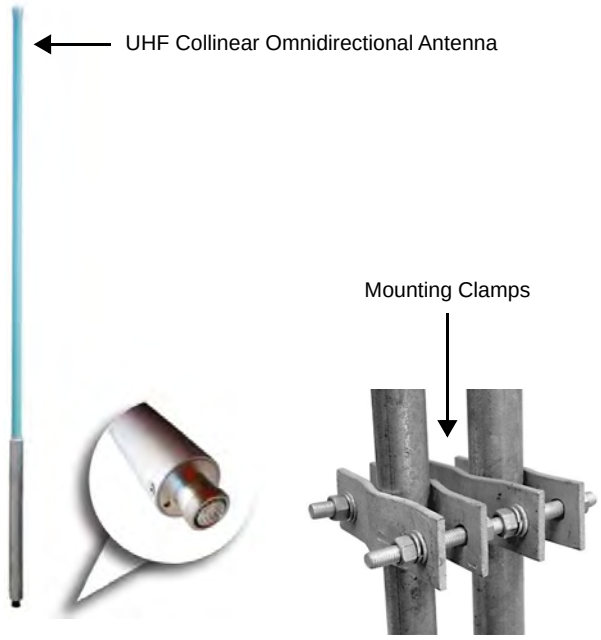
Antenna Systems

UHF Antenna, Omnidirectional, Collinear, 400–470 MHz

190-241-00, 190-242-00, 190-243-00

Description

This range of collinear antennas have been specifically designed for UHF applications requiring high performance and strong bandwidth.



Features

- Excellent bandwidth
- DC grounded for lightning protection
- Excellent peak instantaneous power (PIP)

Specifications

Antennas

Description	UHF Collinear Omnidirectional Antennas
Material	Fiberglass Radome
Frequency	P/N 190-241-00: 450–470 MHz P/N 190-242-00: 400–420 MHz P/N 190-243-00: 410–430 MHz
Connector	N Female
Power Rating	250 watts
Gain	7 dBd
Nominal Impedance	50 ohms
VSWR	<1.5:1
PIP	25 kW
Vertical Beamwidth	12.5 degrees
Horizontal Beamwidth	Omni ± 0.5 dB
Wind Rating	>150 mph (>241.4 kph)
Length	P/N 190-241-00: 111 in. (282 cm) P/N 190-242-00: 122 in. (310 cm) P/N 190-243-00: 119 in. (302.3 cm)
Radome Diameter	1.5 in. (3.81 cm)
Weight	P/N 190-241-00: 8 lb (3.6 kg) P/N 190-242-00, P/N 190-243-00: 9 lb (4 kg)

Mounting Clamps

Weight	4.2 lb (1.9 kg) per clamp
Finish	Galvanized Body and Fastener
Boom Size	0.8 in. (2 cm) minimum, 3 in. (7.5 cm) maximum
Application	In-line mounting of two tubular sections

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Ordering Information

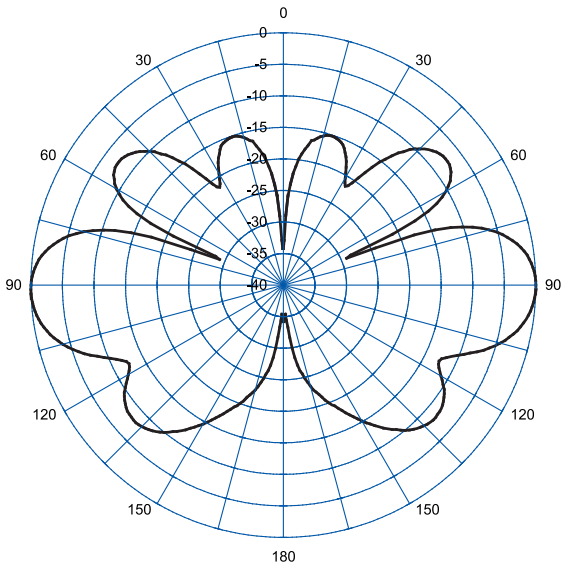
Part Number	Description
190-241-00	UHF Antenna, Omnidirectional, Collinear, 450–470 MHz, 7 dBd gain, fiberglass, N female, includes two mounting clamps
190-242-00	UHF Antenna, Omnidirectional, Collinear, 400–420 MHz, 7 dBd gain, fiberglass, N female, includes two mounting clamps
190-243-00	UHF antenna, Omnidirectional, Collinear, 410–430 MHz, 7 dBd gain, fiberglass, N female, includes two mounting clamps

Associated Parts

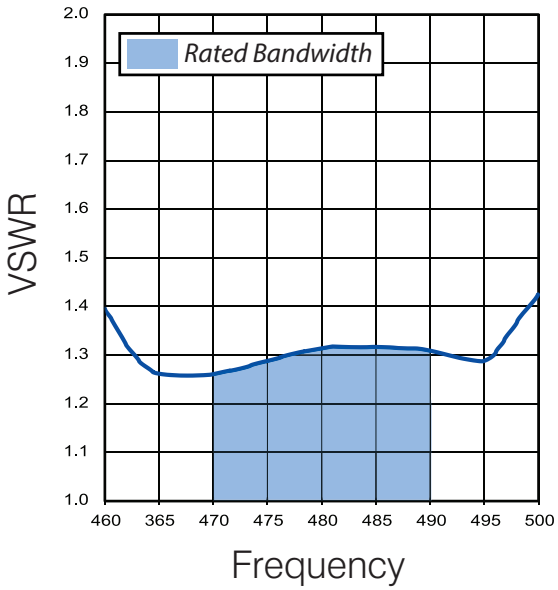
Part Number	Description
643-554-00	Adaptor PL-259 Female to N Male
164-004-03	Coaxial Seal, 10 in. long

Graphs

Typical E Plane



Typical VSWR Response



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Antenna Systems

UHF Antenna, Yagi Directional

190-410-xx

Description

These Yagi Directional antennas transmit and receive UHF signals between a transceiver and radio frequency modem connected to the Central Receiving System. They transmit and receive in one direction over longer distances or in areas of significant interference.

FM APPROVED

Specifications

*P/N 190-410-xx**	UHF, Yagi Directional BSA-9
Material	Aluminum
Mounting	Mast Mounting Antenna comes pre-drilled for included U-bolt mounting hardware which allows the antenna to be mounted to a 1 in. to 2 in. antenna mast.
Frequency	P/N 190-410-01: 406–430 MHz P/N 190-410-02: 450–470 MHz P/N 190-410-03: 420–440 MHz
Connector	PL-259 female
Polarization	Vertical
Gain	9.2 dBd
Impedance	50 ohms nominal
VSWR	1.5 to 1 maximum
Horizontal Beam Width	P/N 190-410-01: 54 degrees P/N 190-410-02: 53 degrees P/N 190-410-03: 56 degrees
Vertical Beam Width	P/N 190-410-01: 47 degrees P/N 190-410-02: 46 degrees P/N 190-410-03: 48 degrees
Wind Rating	100 mph
Standards Compliance	FM Approval BSA-9 directional antenna is optional for use in the UHF range.

* "xx" indicates the frequency.

Ordering Information

Part Number	Description
190-410-01	BSA-9 UHF 5-element Yagi Directional, 406–430 MHz, N female connector with PL-259 female adaptor, mounting hardware, ground clamp, coaxial cable seal
190-410-02	BSA-9 UHF 5-element Yagi Directional, 450–470 MHz, N female connector with PL-259 female adaptor, mounting hardware, ground clamp, coaxial cable seal
190-410-03	BSA-9 UHF 5-element Yagi Directional, 420–440 MHz, PL-259 female connector, mounting hardware, ground clamp, coaxial cable seal

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Antenna Systems Catalog Section
17

Antenna Mounting Hardware

Antenna Mounting Hardware. 199-008-00, 199-010-00, 199-011-00, 199-012-00
Antenna Mount Clamp Set. 199-056-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Antenna Systems

Antenna Mounting Hardware

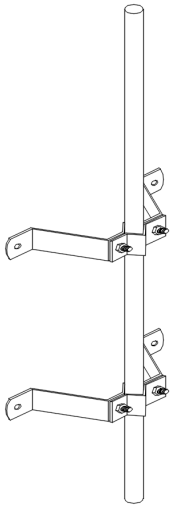
199-008-00, 199-010-00, 199-011-00, 199-012-00

Description

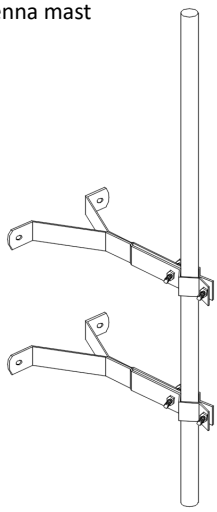
Mounting methods depend on antenna location and desired height.

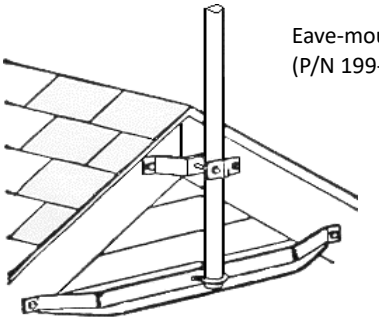
Wall-mount Pairs:

U-bracket, 4 in.
(P/N 199-010-00)
Approximate 4 in.
offset to center of a
1 in. antenna mast



Y-bracket, 7 in.
(P/N 199-011-00)
Approximate 7 in.
offset to center of a
1 in. antenna mast





Eave-mount Pair
(P/N 199-012-00)

Tripod-mount
(P/N 199-008-00)

Ordering Information

Part Number	Description
199-008-00	Tripod-mount, 3 ft., heavy duty, use with up to 1.75 in. diameter mast
199-010-00	Wall-mount, 4 in., U-bracket pair, lag bolts, approximate 4 in. offset to center of a 1 in. antenna mast
199-011-00	Wall-mount, 7 in., Y-bracket pair, lag bolts, approximate 7 in. offset to center of a 1 in. antenna mast
199-012-00	Eaves-mount Pair, adjustable 45 in. to 60 in. heavy-duty, lag bolts, use with up to 1.5 in. diameter mast

Associated Parts

Part Number	Description
199-013-00	Accessory Pad Kit for Tripod-mount, three 2 in. × 0.25 in. pitch pads, six lag bolts

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Antenna Systems

Antenna Mount Clamp Set
199-056-00

Features

- Clamp designed to secure an antenna to a pipe, wooden pole, tower leg, or mast
- Can rotate jaws 90 degrees to mount onto a vertical or horizontal mounting surface
- Outdoor Application

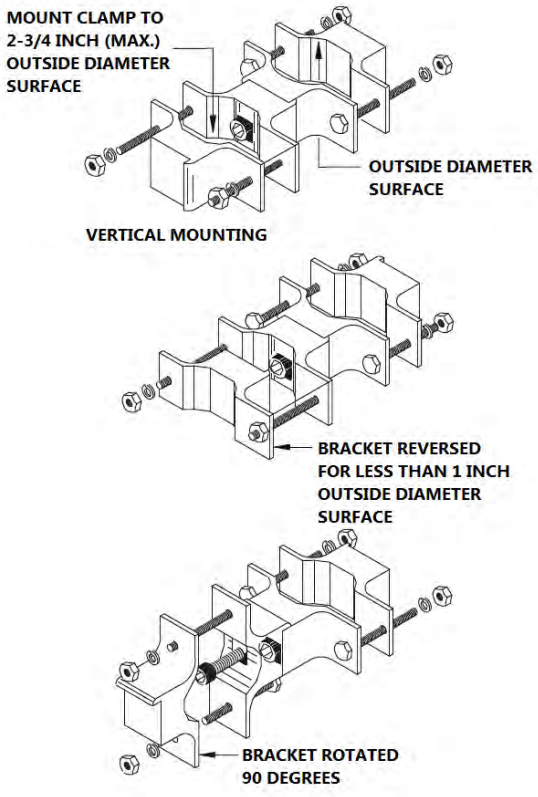
Specifications

Clamp Material	Gold iridite aluminum alloy
Conductor Material	Bare Copper
Conductor Type	Solid
Dielectric Material	FEP-Fluorinated Ethylene Propylene
Impedance	50 ohm
Compatible Diameter	1 in. to 2.8 in. (25.4 mm to 71.1 mm)
Standards Compliance	ISO 9001:2015

Ordering Information

Part Number	Description
199-056-00	Antenna Mount Clamp Set

Mounting Diagrams



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Coaxial Cables

Coaxial Cable, 50 ohms, Mini RG-8X. 620-023-00, 625-100-0X, 626-000-0X
Coaxial Cable, 50 ohms, Low-Loss. 620-026-00
Coaxial Cable, 50 ohm, 1/4 in. Heliax, Superflex 620-029-00
Coaxial Cable, 50 ohm, 1/2 in. Heliax, Superflex 620-030-00
Coaxial Cable, 50 ohms, 5/8 in. Heliax, LDF 620-032-00
Coaxial Cable, 50 ohms, 1/2 in. Heliax, LDF 620-031-00
Coaxial Cable, 50 ohms, 7/8 in. Heliax, Foam 620-033-00

Click to go back to "Table of Contents - Index by Product Name"

Antenna Systems

Coaxial Cable, 50 ohms, Mini RG-8X
620-023-00, 625-100-0X, 626-000-0X

Description

The miniature 50 ohm coaxial cable is standard in most VHF applications. These types are available:

Preassembled Type I

Terminated with a BNC male connector on one end and a PL-259 male connector on the other end, this type connects the lightning arrestor to the building transceiver or the radio frequency modem.

Preassembled Type II

Terminated with a PL-259 male connector on each end, this type connects the antenna to the lightning arrestor.

Bulk Cable and Connectors

Assembled in the field

Specifications

Nominal Impedance	50 ohms
Nominal Inductance	0.065 µH/ft
Nominal Capacitance	24.8 pF/ft
Nominal Attenuation	100 MHz: 3.1 dB/100 ft. 200 MHz: 4.5 dB/100 ft.
Bend Radius	2.5 in. minimum
Outside Diameter	0.242 in.
Power Rating	200 MHz: 190 W maximum 400 MHz: 110 W maximum
AWG Stranding	16 AWG stranded (19 x 29) solid 0.058 in. bare copper conductor
Dielectric	0.155 in. diameter, foam
Shield Material	Braid bare copper, 95%
Jacket Material	PVC
Operating Temperature	–40°F to 176°F (–40°C to 80°C)
UL Temperature	80°C (UL AWM Style 1354)
UL Flammability	UL1685 UL Loading

Ordering Information

Bulk Cable

Part Number	Description
620-023-00	Coaxial Cable, 50 ohms mini RG-8X, bulk (no connectors), specify length in feet

Preassembled Type I Coaxial Cable

Part Number	Description
626-000-07	Coaxial Cable, 50 ohms mini RG-8X, preassembled Type I, 5 ft.
626-000-06	Coaxial Cable, 50 ohms mini RG-8X, preassembled Type I, 15 ft.
626-000-05	Coaxial Cable, 50 ohms mini RG-8X, preassembled Type I, 20 ft.
626-000-02	Coaxial Cable, 50 ohms mini RG-8X, preassembled Type I, 40 ft.
626-000-01	Coaxial Cable, 50 ohms mini RG-8X, preassembled Type I, 60 ft.
626-000-03	Coaxial Cable, 50 ohms mini RG-8X, preassembled Type I, 80 ft.
626-000-04	Coaxial Cable, 50 ohms mini RG-8X, preassembled Type I, 100 ft.

Preassembled Type II Coaxial Cable

Part Number	Description
625-100-05	Coaxial Cable, 50 ohms mini RG-8X, preassembled Type II, 2 ft.
625-100-06	Coaxial Cable, 50 ohms mini RG-8X, preassembled Type II, 15 ft.
625-100-00	Coaxial Cable, 50 ohms mini RG-8X, preassembled Type II, 20 ft.
625-100-01	Coaxial Cable, 50 ohms mini RG-8X, preassembled Type II, 40 ft.
625-100-02	Coaxial Cable, 50 ohms mini RG-8X, preassembled Type II, 60 ft.
625-100-03	Coaxial Cable, 50 ohms mini RG-8X, preassembled Type II, 80 ft.
625-100-04	Coaxial Cable, 50 ohms mini RG-8X, preassembled Type II, 100 ft.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Antenna Systems

Associated Parts

Part Number	Description
643-553-00	Connector, crimp, Type PL-259 male
643-527-00	Connector, crimp, Type BNC male
643-556-00	Connector, crimp, Type N male
164-004-00	Coaxial Seal, package of four 12 ft. rolls
303-000-00	Coaxial Cable Tool Kit: crimper, die sets, strippers for mini- and low-loss cable
302-104-00	Replacement Blade Set for cable strippers

Application

The coaxial cable routes from the antenna to the lightning arrestor (static discharge unit) and from the lightning arrestor to the building transceiver (BT) or M-2/MAAP or RFM. Antenna connections must be weatherproofed with a sealant (P/N 164-004-00).

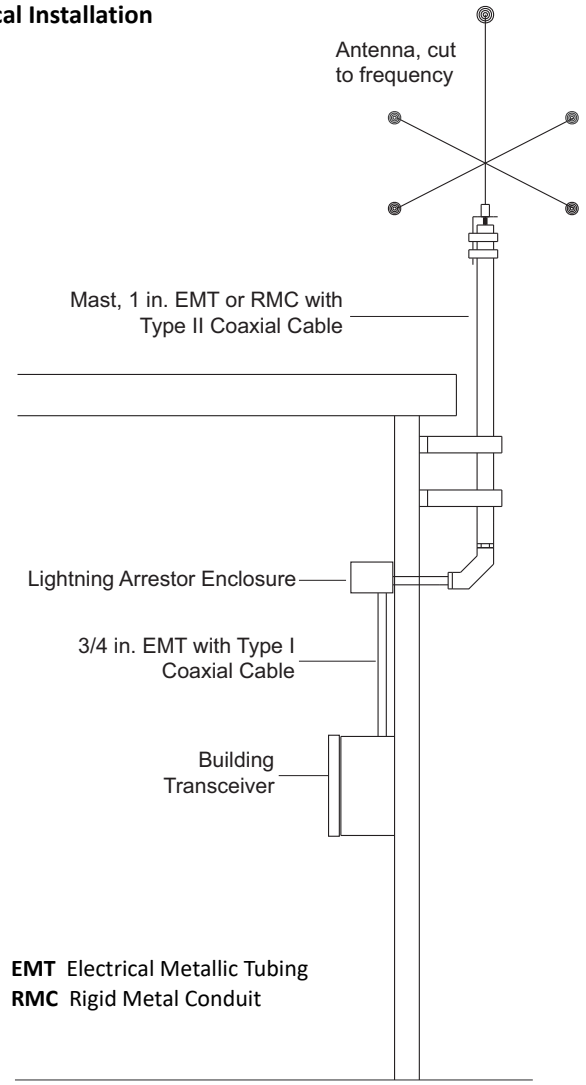
Application considerations:

- Monaco recommends enclosing the coaxial cable in its own conduit. The conduit penetrating the building should be, at minimum, a 3/4 in. rigid metal conduit.
- If possible, the lightning arrestor enclosure should be located so that the penetrating conduit directly enters the enclosure on the inside of the building. If the location prevents, the enclosure must be as near as possible to the conduit penetration point.

The coaxial cable should only be long enough to reach the BT, M-2/MAAP, or RFM with a 12 to 18 in. service loop that complies with the 2.5 in. minimum bend radius specification. Excess cable increases line loss of the RF signal from the transceiver and decreases output at the antenna. Monaco recommends the total coaxial cable run be no more than 100 ft. If necessary, the coaxial cable assembly should be cut and reterminated to provide the correct length.

Important! The installer must reterminate connectors carefully. Incorrect retermination can severely damage the transceiver.

Typical Installation



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Antenna Systems

Coaxial Cable, 50 ohms, Low-Loss
620-026-00

Description

All Monaco antenna installations require a 50 ohm coaxial cable. The low-loss coaxial cable is used in UHF and VHF antenna system installations where signal strength is critical. A typical cable run is 100 ft. or less for UHF and 200 ft. or less for VHF. The cable comes in bulk for field assembly.

Specifications

Nominal Impedance	50 ohms
Nominal Inductance	0.059 µH/ft
Nominal Capacitance	24.6 pF/ft
Minimum Bend Radius	4 in.
Outside Diameter	0.405 in.
Power	600 W max.
AWG Stranding	10 AWG, solid bare copper
Dielectric	Semi-solid polyethylene
Outer Shield Jacket	PVC
Operating Temperature	–40°F to 176°F (–40°C to 80°C)

Attenuation (Nominal)

Frequency (MHz)	Attenuation (dB/100 ft.)
100	1.4
200	1.8
400	2.6
700	3.6

Ordering Information

Part Number	Description
620-026-00	Coaxial Cable, 50 ohms, low-loss, specify length in feet

Connectors and Adaptors

Part Number	Description
643-555-00	Connector Crimp Type N male (three required per BT)
643-530-00	Coaxial Cable Connector Kit: four connector crimp, Type PL-259 male connectors; one kit required per BT
643-530-01	Connector Crimp Type PL-259 male
643-548-00	Adaptor Straight BNC male to Type N female
643-557-00	Connector Compression Type BNC male, center crimp or solder pin
643-526-00	Adaptor Right-angle BNC male to BNC female
643-529-00	Adaptor Straight BNC male to Type PL-259 female

Associated Parts

Part Number	Description
303-000-00	Coaxial Cable Tool Kit: crimper, die sets, strippers for mini- and low-loss cable
302-104-00	Replacement Blade Set for cable strippers
164-004-00	Coaxial Seal, package of four 12 ft. rolls
164-004-03	Coaxial Seal, 10 in. long
227-625-00	BT-X Low-loss Cable Kit, Type N female

Application

The coaxial cable connects the antenna to the lightning arrestor, and the lightning arrestor connects to the transceiver with RF connectors. The antenna connection must be weatherproofed with a sealant (P/N 164-004-00).

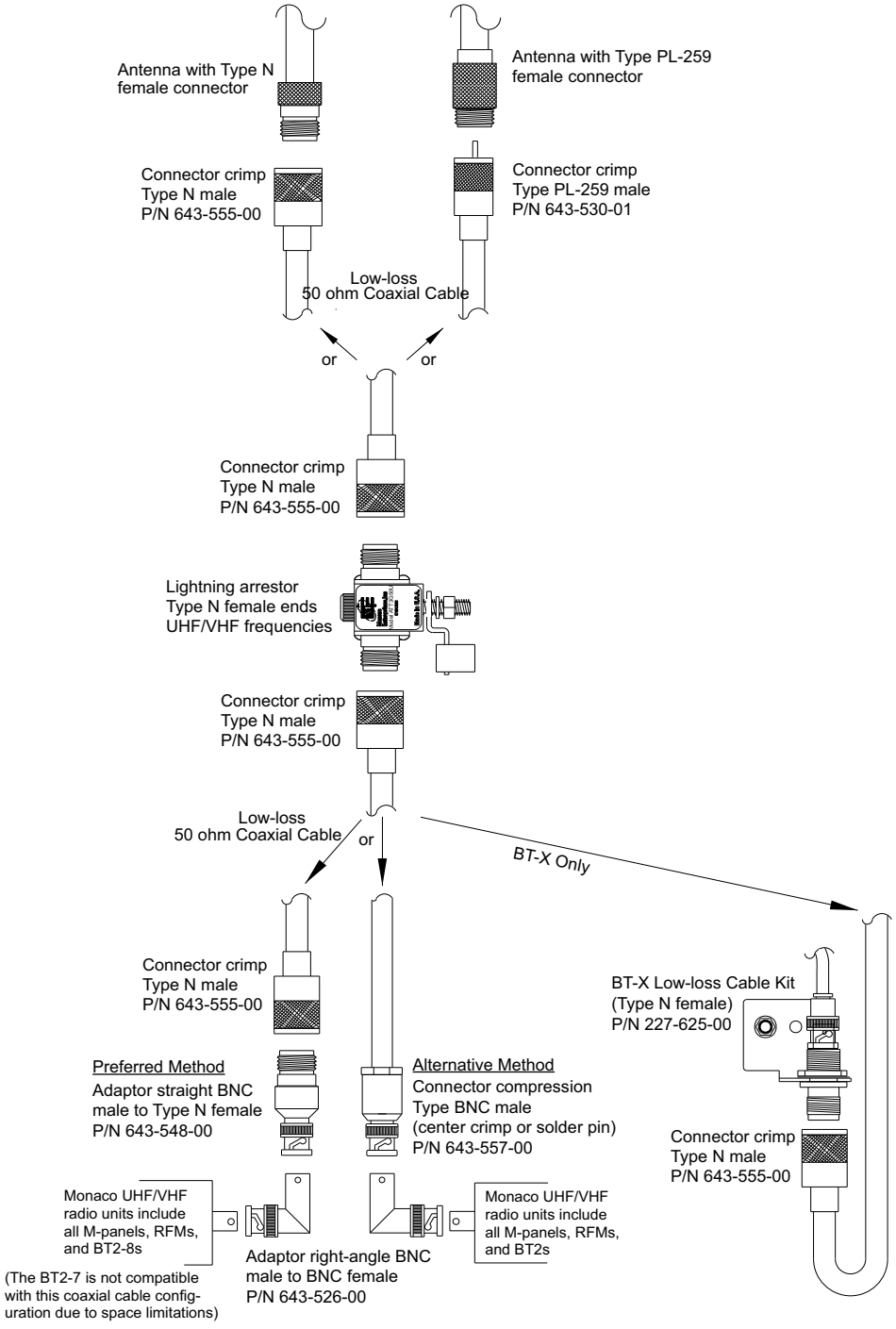
Run the coaxial cable in its own conduit (should be 3/4 in. rigid metallic). This conduit should enter the lightning arrestor enclosure at the point of building penetration. If this is not possible, the lightning arrestor enclosure should be as near as possible to the conduit penetration. Provide a drip loop where the cable enters conduit (or, if conduit cannot be used, where cable enters the building) to prevent rain or moisture from entering.

A 12 to 18 in. service loop on each side of the lightning arrestor is recommended. Excess cable increases line loss of the signal to and from the transceiver, which can result in communication issues and a potential unit “No Reply.”

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

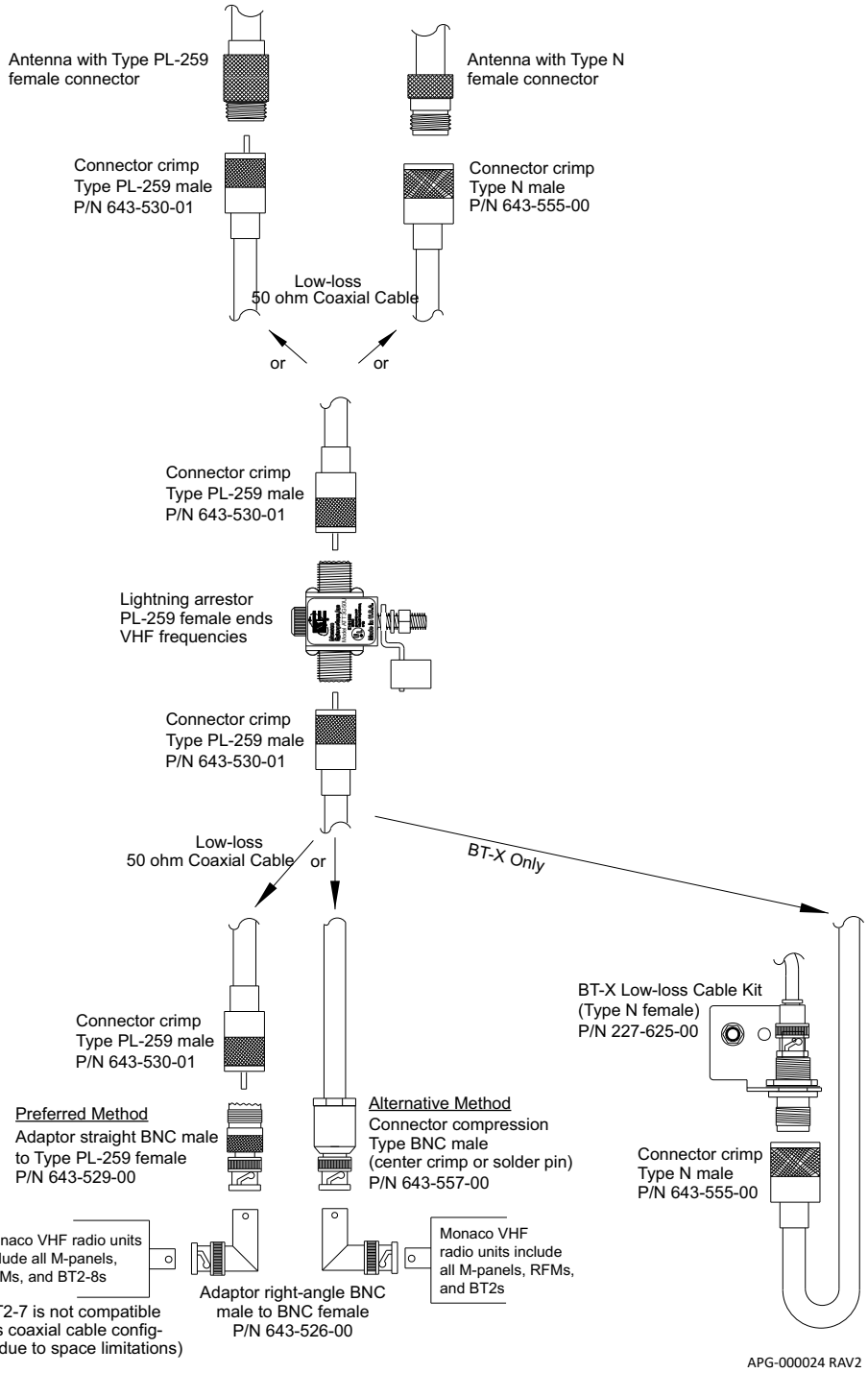
Application Drawing, UHF



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Application Drawing, VHF



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Antenna Systems

Coaxial Cable, 50 ohm, 1/4 in. Heliax, Superflex
620-029-00

Description

The 1/4 in. Heliax Superflex Coaxial Cable is a high-grade cable used in UHF and VHF antenna installations. A typical cable run is 90 ft. or less for UHF and 180 ft. or less for VHF. This cable pulls easily through conduit. Check the connector type for your antenna before ordering adaptors or connectors.

Specifications

Impedance	50 ohms ± 1 ohm
Inductance	0.061 µH/ft. (0.2 µH/m)
Capacitance	24.201 pF/ft. (79.4 pF/m)
Inner Conductor DC Resistance	3 ohms/1,000 ft. (9.843 ohms/m)
Outer Conductor DC Resistance	2.199 ohms/1,000 ft. (7.216 ohms/m)
Inner Conductor Material	Copper-Clad Aluminum Wire
Outer Conductor Material	Corrugated Copper
Jacket Material	PE
Dielectric Material	Foam PE
Outside Diameter	0.25 in. (6.35 mm)
Cable Weight	0.047 lb per ft. (0.07 kg per m)
Bend Radius	1 in. (25.4 mm)
Number of Bends	20 typical, 15 minimum
Peak Power	6.4 kW
Operating Frequency Band	1 to 18,000 MHz
Operating Temperature	–67°F to 185°F (–55°C to 85°C)

Attenuation (Nominal)

Frequency (MHz)	Attenuation (dB/100 ft.)
100	1.795
150	2.210
200	2.563
400	3.673
450	3.906
500	4.128

Ordering Information

IMPORTANT! If the antenna has an N-type connector, the antenna mast must be 1 in. electrical metallic tubing (EMT). Monaco's installation guidelines require that coaxial cable and connectors fit inside the antenna mast. The inside diameter of 3/4 in. rigid metal conduit is too small for N-type connectors. (However, PL-259 and BNC-type connectors will fit inside 3/4 in. rigid conduit.)

Cable

Part Number	Description
620-029-00	Coaxial Cable, 50 ohm, 1/4 in. Heliax, Superflex; specify length in feet **NOTE** Cable order is non-cancellable and non-refundable.

Connectors and Adaptors

Part Number	Description
643-526-00	Adaptor, right-angle BNC male to BNC female
643-545-00	Connector, compression Type N male
643-546-00	Connector, compression Type BNC male
643-547-00	Connector, solder Type PL-259
643-548-00	Adaptor, straight BNC male to Type N female
643-569-00	Adaptor, straight N female to PL-259 male

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Associated Parts

Part Number	Description
227-625-00	BT-X Low-loss Cable Kit, Type N female
164-004-00	Coaxial Seal, package of four 12 ft. rolls
198-020-00	Lightning Arrestor Replacement ARC Plug/Gas Tube Cartridge for arrestors (P/N 198-022-00)
198-022-00	Lightning Arrestor Kit with N-type UHF/VHF UL Listed Arrestor, with two 10 in. strip coaxial seals, mounting bracket, and terminal lug with hardware
198-022-01	Lightning Arrestor Kit with N-type UHF/VHF UL Listed Arrestor, with two 10 in. strip coaxial seals, mounting bracket, terminal lug with hardware, and 8 in. x 8 in. x 6 in. NEMA 3R enclosure (P/N 081-076-01)
302-101-00	Cutting Tool for 1/4 in. and 1/2 in. FSJ series Heliax
302-102-00	Five Pack Replacement Blades for P/N 302-101-00

Application

The coaxial cable is routed from the antenna to the lightning arrestor (static discharge unit) and from the lightning arrestor to the building transceiver (BT), conventional or addressable panel, or RFM, etc. The connections at the antenna and lightning arrestor must be weatherproofed with sealant P/N 164-004-00.

Monaco recommends the coaxial cable be enclosed in its own conduit.

Minimum 3/4 in. conduit allows clearance for connectors—see **"IMPORTANT!"** on the preceding page for the exception. Conduit should enter a transceiver enclosure either through the side or the bottom.

The 1/4 in. Superflex Heliax Cable should be long enough to reach its connection from the lightning arrestor with a 1 ft. service loop; the total cable run from transceiver to antenna can be no more than 90 ft. (UHF) or 180 ft. (VHF) with a minimum bend radius of 1 in. Excess cable in an arrestor enclosure should be no more than 36 in. (two 18 in. service loops).

Excess cable increases line loss of the RF signal to and from the transceiver, which can result in a unit "No Reply." If necessary, the coaxial cable should be cut and reterminated to the correct length.

Reterminate connectors correctly!

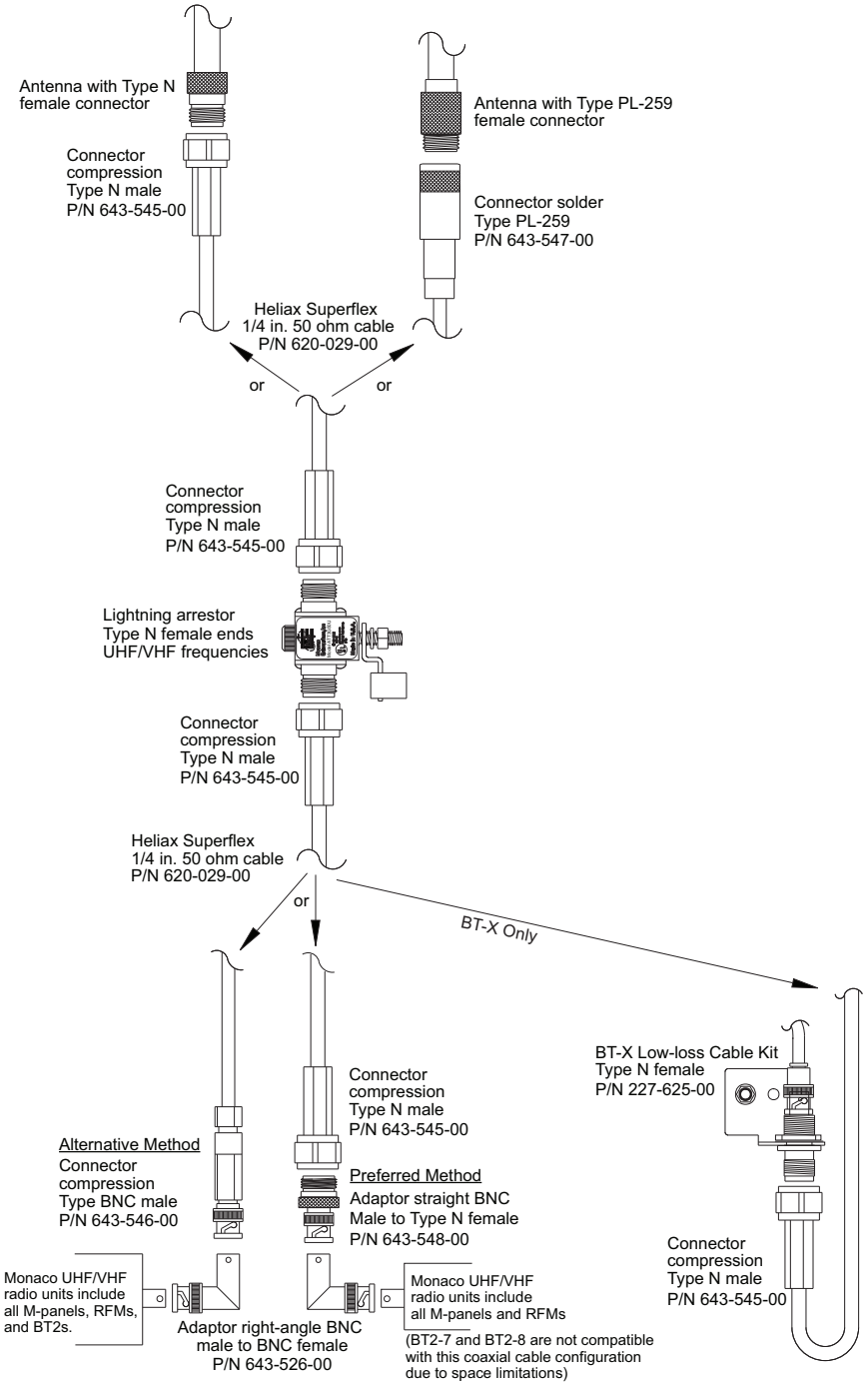
Incorrect retermination can cause severe damage to the transceiver and adversely affect transmission and reception.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Antenna Systems

Application Drawing



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Antenna Systems

Coaxial Cable, 50 ohm, 1/2 in. Heliax, Superflex
620-030-00

Description

This 1/2 in. Heliax Coaxial Cable is high-grade cable used in UHF and VHF antenna installations. A typical cable run is 110 ft. or less for UHF and 220 ft. or less for VHF. This cable pulls easily through conduit, but note the cautionary statements in this sheet. Check the connector type for your antenna before ordering adaptors or connectors.

Specifications

Impedance	50 ohms ± 1 ohm
Inductance	0.063 µH/ft. (0.207 µH/m)
Capacitance	25.207 pF/ft. (82.7 pF/m)
Inner Conductor DC Resistance	0.82 ohms/1,000 ft. (2.69 ohms/km)
Outer Conductor DC Resistance	1.56 ohms/1,000 ft. (5.12 ohms/km)
Inner Conductor Material	Copper-Clad Aluminum Wire
Outer Conductor Material	Corrugated Copper
Jacket Material	PE
Dielectric Material	Foam PE
Outside Diameter	0.5 in. (12.7 mm)
Cable Weight	0.14 lb per ft. (0.21 kg per m)
Bend Radius	1.25 in. (31.75 mm) minimum
Number of Bends	50 typical, 20 minimum
Peak Power	22.5 kW
Operating Frequency Band	1 to 10,200 MHz
Operating Temperature	–67°F to 185°F (–55°C to 85°C)

Attenuation (Nominal)

Frequency (MHz)	Attenuation (dB/100 ft.)
100	1.038
150	1.285
200	1.496
400	2.170
450	2.314
500	2.451

Ordering Information

IMPORTANT! If the antenna has an N-type connector, the antenna mast must be 1 in. electrical metallic tubing (EMT). Monaco's installation guidelines require that coaxial cable and connectors fit inside the antenna mast. The inside diameter of 3/4 in. rigid metal conduit is too small for N-type connectors. (However, PL-259 and BNC-type connectors will fit inside 3/4 in. rigid conduit.)

Cable

Part Number	Description
620-030-00	Coaxial Cable, 50 ohm, 1/2 in. Heliax, Superflex; specify length in feet **NOTE** Cable is special order—non-cancellable and non-returnable.

Adaptors and Connectors

Part Number	Description
643-526-00	Adaptor, right-angle BNC male to BNC female
643-548-00	Adaptor, straight BNC male to Type N female
643-549-00	Connector, compression Type N male
643-569-00	Adaptor, straight N female to PL-259 male

Associated Parts

Part Number	Description
164-004-00	Coaxial Seal, package of four 12 ft. rolls
198-020-00	Lightning Arrestor Replacement ARC Plug/Gas Tube Cartridge for arrestors (P/N 198-022-00)
198-022-00	Lightning Arrestor Kit with N-type UHF/VHF UL Listed Arrestor, with two 10 in. strip coaxial seals, mounting bracket, and terminal lug with hardware
198-022-01	Lightning Arrestor Kit with N-type UHF/VHF UL Listed Arrestor, with two 10 in. strip coaxial seals, mounting bracket, terminal lug with hardware, and 8 in. x 8 in. x 6 in. NEMA 3R enclosure (P/N 081-076-01)
302-101-00	Cutting Tool for 1/4 in. and 1/2 in. FSJ series Heliax
302-102-00	Five Pack Replacement Blades for P/N 302-101-00

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Antenna Systems

Application

The coaxial cable is routed from the antenna to the lightning arrestor (static discharge unit) and from the lightning arrestor to the building transceiver (BT), conventional or addressable panel, or RFM, etc. The connections at the antenna and lightning arrestor must be weatherproofed with sealant (P/N 164-004-00).

Monaco recommends the coaxial cable be enclosed in its own conduit.

A minimum 3/4 in. conduit allows clearance for connectors—see **"IMPORTANT!"** on the preceding page for the exception. The conduit should enter a transceiver enclosure through the side or through the bottom.

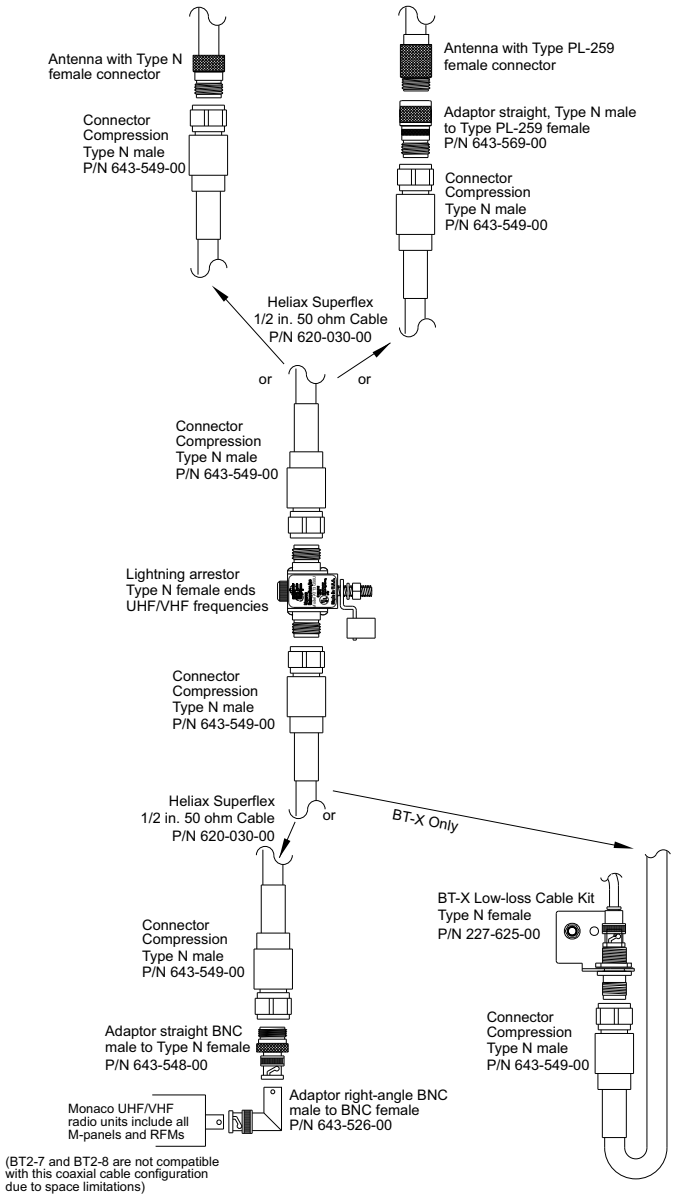
The 1/2 in. Superflex Heliax Cable should be long enough to reach its connection from the lightning arrestor with a 1 ft. service loop; the total cable run from transceiver to antenna can be no more than 110 ft. (UHF) or 220 ft. (VHF) with a minimum bend radius of 1.25 in. Excess cable in an arrestor enclosure should be no more than 36 in. (two 18 in. service loops).

Excess cable increases line loss of the RF signal to and from the transceiver, which can result in a unit "No Reply." If necessary, the coaxial cable should be cut and reterminated to the correct length.

Reterminate connectors correctly!

Incorrect retermination can cause severe damage to the transceiver and adversely affect transmission and reception.

Application Drawing



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Antenna Systems

Coaxial Cable, 50 ohms, 1/2 in. Heliax, LDF
620-031-00

Features

- 1/2 in. Coaxial Wireless Cable
- Heliax Low Density Foam
- Designed for repeated bends

Specifications

Impedance	50 ohms ± 1 ohm
Inductance	0.058 µH/ft (0.19 µH/m)
Capacitance	23.1 pF/ft (75.8 pF/m)
Inner Conductor DC Resistance	0.45 ohms/kft (1.48 ohms/km)
Outer Conductor DC Resistance	0.82 ohms/kft (2.69 ohms/km)
Inner Conductor Material	Copper-clad aluminum wire
Outer Conductor Material	Corrugated copper
Jacket	Black PE
Dielectric	Foam PE
Outside Diameter	1/2 in.
Weight	0.15 lb/ft (0.22 kg/m)
Bend Radius	5 in. (127 mm) - multiple bends 2 in. (50.8 mm) - single bend
Power	40 kW
Operating Frequency Band	1–8800 MHz
Operating Temperature	–67°F to 185°F (–55°C to 85°C)

Attenuation (Nominal)

Frequency (MHz)	Attenuation (dB/100 ft.)
108	0.688
150	0.815
174	0.88
400	1.36
450	1.447
500	1.53

Ordering Information

IMPORTANT! If the antenna has an N-type connector, the antenna mast must be 1 in. electrical metallic tubing (EMT). Monaco's installation guidelines require that the coaxial cable and connectors fit inside the antenna mast.

The inside diameter of the 3/4 in. rigid metal conduit is too small for N-type connectors. However, PL-259 and BNC type connectors will fit inside the 3/4 in. rigid conduit.

Cable

Part Number	Description
620-031-00	1/2 in. Heliax, Low-density Foam, 50 ohms **IMPORTANT!** Cable is special order—non-cancellable and non-returnable!

Adaptors and Connectors

Part Number	Description
643-572-00	Connector 1/2 in. Heliax male positive stop
643-526-00	Adaptor Right-angle BNC male to BNC female
643-548-00	Adaptor Straight BNC male to Type N female
643-569-00	Adaptor Straight N female to PL-259 male

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Antenna Systems

Associated Parts

Part Number	Description
164-004-00	Coaxial Seal, package of four 12 ft. rolls
198-022-01	Lightning Arrestor Kit with N-Type UHF/VHF UL Listed Arrestor, with two 10 in. strip coaxial seals, mounting bracket, terminal lug with hardware, and 8 in. x 8 in. x 6 in. NEMA 3R enclosure (P/N 081-076-01)
198-022-00	Lightning Arrestor Kit with N-Type UHF/VHF UL Listed Arrestor, with two 10 in. strip coaxial seals, mounting bracket, and terminal lug with hardware.
198-020-00	Lightning Arrestor Replacement ARC Plug/Gas Tube Cartridge for arrestors (P/N 198-022-00)
629-003-00	Cable Termination Kit, N male connector for 1/2 in. Heliax
227-625-00	BT-X Low-loss Cable Kit, Type N female

Application

The coaxial cable is routed from the antenna to the lightning arrestor (static discharge unit) and from the lightning arrestor to the building transceiver (BT), or conventional/addressable panel, or RFM, etc. The connections at the antenna and lightning arrestor must be weatherproofed with sealant (P/N 164-004-00).

Monaco recommends the coaxial cable be enclosed in its own conduit.

A minimum 3/4 in. conduit allows clearance for connectors— see "**IMPORTANT!**" on the preceding page for the exception. The conduit should enter a transceiver enclosure either through the side or the bottom.

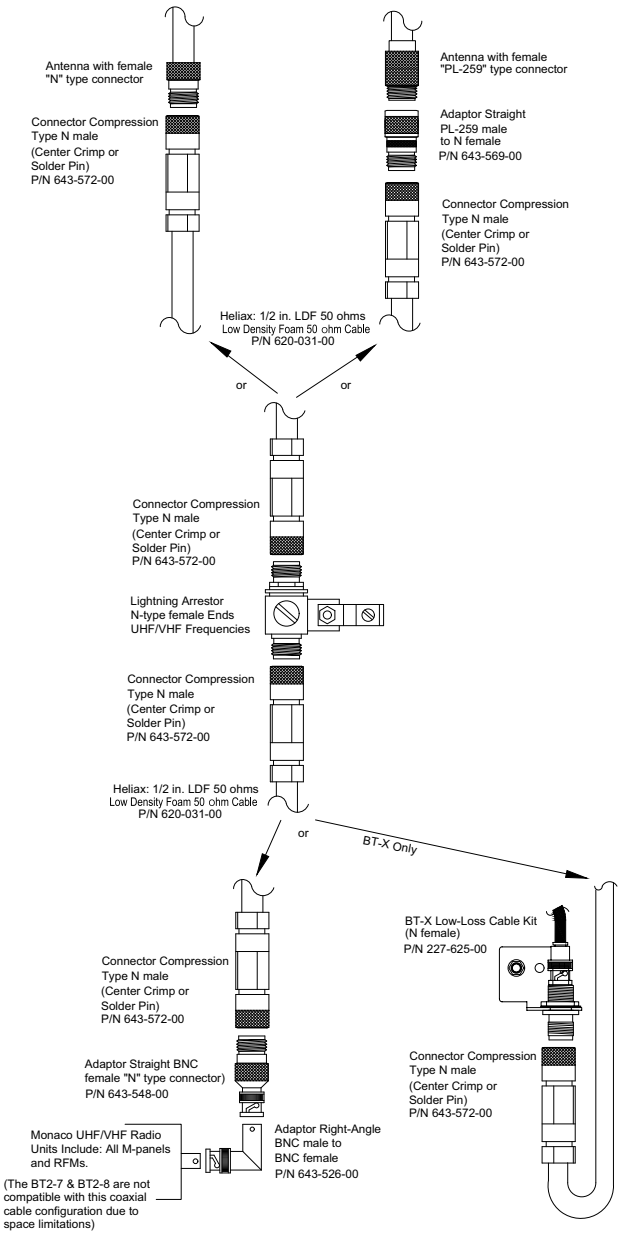
A 12 to 18 in. service loop on each side of the lightning arrestor is recommended for the 1/2 in. LDF Heliax cable; the total cable run from transceiver to antenna can be no more than 225 ft. (UHF) or 300 ft. (VHF), with a minimum single bend radius of 2 in. or a minimum multiple bend radius of 5 in. Excess cable in an arrestor enclosure should be no more than 36 in. in two 18 in. service loops.

Excess cable increases line loss of the RF signal to and from the transceiver which can result in communication issues and a potential unit "No Reply." If necessary, the coaxial cable should be cut and reterminated to the correct length.

Reterminate connectors correctly!

Incorrect retermination can cause severe damage to the transceiver and adversely affect transmission and reception.

Application Drawing



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Antenna Systems

Coaxial Cable, 50 ohms, 5/8 in. Heliax, LDF
620-032-00

Features

- 5/8 in. Coaxial Wireless Cable
- Heliax, Low Density Foam
- Designed for repeated bends

Specifications

Impedance	50 ohms ± 1 ohm
Inductance	0.057 µH/ft (0.187 µH/m)
Capacitance	23.2 pF/ft (76.1 pF/m)
Inner Conductor DC Resistance	0.22 ohms/kft (0.722 ohms/km)
Outer Conductor DC Resistance	0.42 ohms/kft (1.378 ohms/km)
Inner Conductor Material	Copper-clad aluminum wire
Outer Conductor Material	Corrugated copper
Jacket	Black PE
Dielectric	Foam PE
Outside Diameter	5/8 in.
Weight	0.27 lb/ft (0.4 kg/m)
Bend Radius	8 in. (203.2 mm) - multiple bends
Power	62 kW
Operating Frequency Band	1–6100 MHz
Operating Temperature	–67°F to 185°F (–55°C to 85°C)

Attenuation (Nominal)

Frequency (MHz)	Attenuation (dB/100 ft.)
108	0.493
150	0.586
174	0.633
400	0.989
450	1.054
500	1.117

Ordering Information

IMPORTANT! If the antenna has an N-type connector, the antenna mast must be 1 in. electrical metallic tubing (EMT). Monaco's installation guidelines require that the coaxial cable and connectors fit inside the antenna mast.

The inside diameter of the 3/4 in. rigid metal conduit is too small for N-type connectors. However, PL-259 and BNC type connectors will fit inside the 3/4 in. rigid conduit.

Cable

Part Number	Description
620-032-00	Coaxial Cable, 50 ohms, 5/8 in. Heliax, Low Density Foam **IMPORTANT!** Cable is special order—non-cancellable and non-returnable!

Adaptors and Connectors

Part Number	Description
643-573-00	Connector Compression Type N male 5/8 in. Heliax connector (center crimp or solder pin)
643-526-00	Adapter Right-angle BNC male to BNC female
643-548-00	Adaptor Straight BNC male to Type N female
643-569-00	Adaptor Straight N female to PL-259 male

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Associated Parts

Part Number	Description
164-004-00	Coaxial Seal, package of four 12-ft rolls
198-022-01	Lightning Arrestor Kit with N-Type UHF/VHF UL Listed Arrestor, with two 10 in. strip coaxial seals, mounting bracket, terminal lug with hardware and 8 in. x 8 in. x 6 in. NEMA 3R enclosure (P/N 081-076-01)
198-022-00	Lightning Arrestor Kit with N-Type UHF/VHF UL Listed Arrestor, with two 10 in. strip coaxial seals, mounting bracket, and terminal lug with hardware
198-020-00	Lightning Arrestor Replacement ARC Plug/Gas Tube Cartridge for arrestors (P/N 198-022-00)
629-004-00	Cable Termination Kit, N male connector for 5/8 in. Heliax
227-625-00	BT-X Low-loss Cable Kit, Type N female

Application

The coaxial cable is routed from the antenna to the lightning arrestor (static discharge unit) and from the lightning arrestor to the building transceiver (BT), or conventional/addressable panel, or RFM, etc. The connections at the antenna and lightning arrestor must be weatherproofed with sealant (P/N 164-004-00).

Monaco recommends the coaxial cable be enclosed in its own conduit.

The minimum 3/4 in. conduit allows clearance for connectors— see the NOTE on the preceding page for the exception. Conduit should enter a transceiver enclosure either through the side or the bottom.

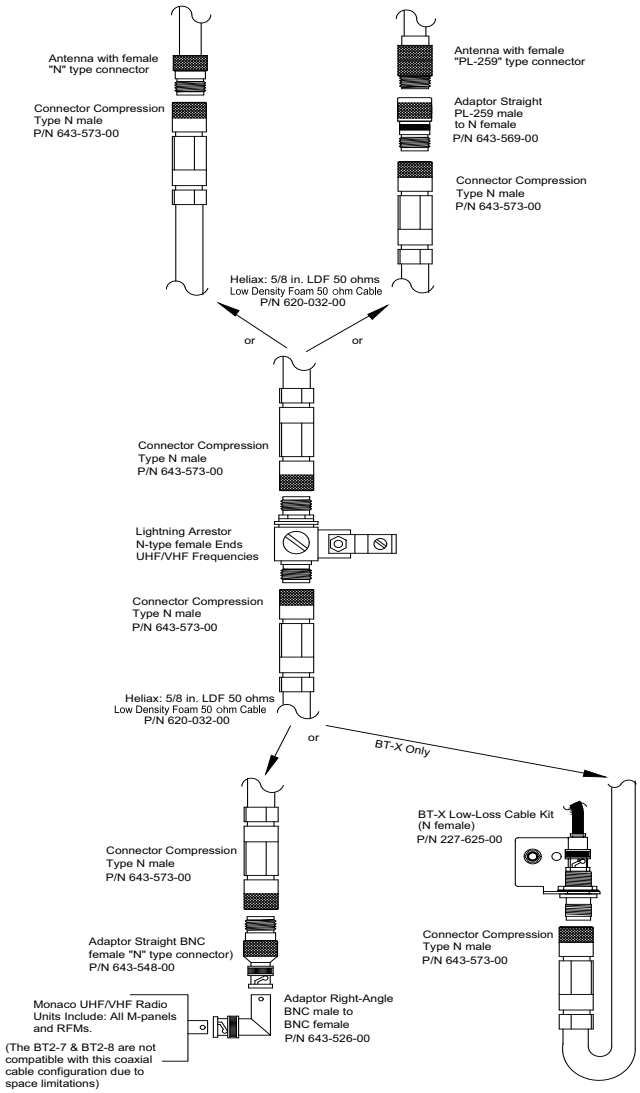
The 5/8 in. LDF Heliax cable should be long enough to reach its connection from the lightning arrestor with a 1 ft. service loop; the total cable run from transceiver to antenna can be no more than 110 ft. (UHF) or 220 ft. (VHF), with a minimum single bend radius of 3 in. and a minimum multiple bend radius of 8 in. Excess cable in an arrestor enclosure should be no more than 36 in. in two 18 in. service loops.

Excess cable increases line loss of the RF signal to and from the transceiver which can result in a unit “No Reply.” If necessary, the coaxial cable should be cut and reterminated to the correct length.

Reterminate connectors correctly!

Incorrect retermination can cause severe damage to the transceiver and adversely affect transmission and reception.

Application Drawing



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Antenna Systems

Coaxial Cable, 50 ohms, 7/8 in. Heliax, Foam
620-033-00

Features

- 7/8 in., Coaxial Wireless Cable
- Heliax, foam
- Designed for repeated bends

Specifications

Impedance	50 ohms, ± 1 ohm
Inductance	0.056 µH/ft (0.184 µH/m)
Capacitance	22 pF/ft (73 pF/m)
Inner Conductor DC Resistance	0.44 ohms/kft (1.435 ohms/km)
Outer Conductor DC Resistance	0.34 ohms/kft (1.116 ohms/km)
Inner Conductor Material	Copper tube
Outer Conductor Material	Corrugated copper
Jacket	Black PE
Dielectric	Foam PE
Outside Diameter	7/8 in.
Weight	0.3 lb/ft (0.45 kg/m)
Bend Radius	single: 5 in. (127 mm)
Number of Bends	30 typical, 15 minimum
Operating Frequency Band	1–5000 MHz
Power	91 kW
UL Temperature Rating	–67°F to 185°F (–55°C to 85°C)

Attenuation (Nominal)

Frequency (MHz)	Attenuation (dB/100 ft.)
100	0.354
150	0.437
200	0.507
400	0.731
450	0.778
700	0.986

Ordering Information

IMPORTANT Monaco's recommended minimum mast requirement is 1 in. EMT tubing.

Cable

Part Number	Description
620-033-00	Coaxial Cable, 50 ohms, 7/8 in. Heliax, Foam **IMPORTANT!** Cable is special order—non-cancellable and non-returnable!

Connectors and Adaptors

Part Number	Description
643-574-00	Connector Compression Type N male (center crimp or solder pin)
643-526-00	Adaptor Right-angle BNC male to BNC female
643-548-00	Adaptor Straight BNC male to Type N female
643-569-00	Adaptor Straight N female to PL259 male

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Antenna Systems

Associated Parts

Part Number	Description
164-004-00	Coaxial Seal, package of four 12 ft. rolls
198-022-01	Lightning Arrestor Kit with N-Type UHF/VHF UL Listed Arrestor, with two 10 in. strip coaxial seals, mounting bracket, terminal lug with hardware and 8 in. x 8 in. x 6 in. NEMA 3R enclosure (P/N 081-076-01)
198-022-00	Lightning Arrestor Kit with N-type UHF/VHF, UL Listed Arrestor, with two 10 in. strip coaxial seals, mounting bracket, and terminal lug with hardware
198-020-00	Lightning Arrestor Replacement ARC Plug/Gas Tube Cartridge for arrestors (P/N 198-022-00)
629-005-00	Cable Termination Kit, N male connector for 7/8 in. Heliax
227-625-00	BT-X Low-loss Cable Kit, Type N female **NOTE** Comes with UHF BT-X; must be ordered separately for VHF BT-X.

Application

The coaxial cable is routed from the antenna to the lightning arrestor (static discharge unit) and from the lightning arrestor to the building transceiver (BT), or conventional/addressable panel, or RFM, etc. The connections at the antenna and lightning arrestor must be weatherproofed with sealant (P/N 164-004-00).

Monaco recommends the coaxial cable be enclosed in conduit where physical protection is required.

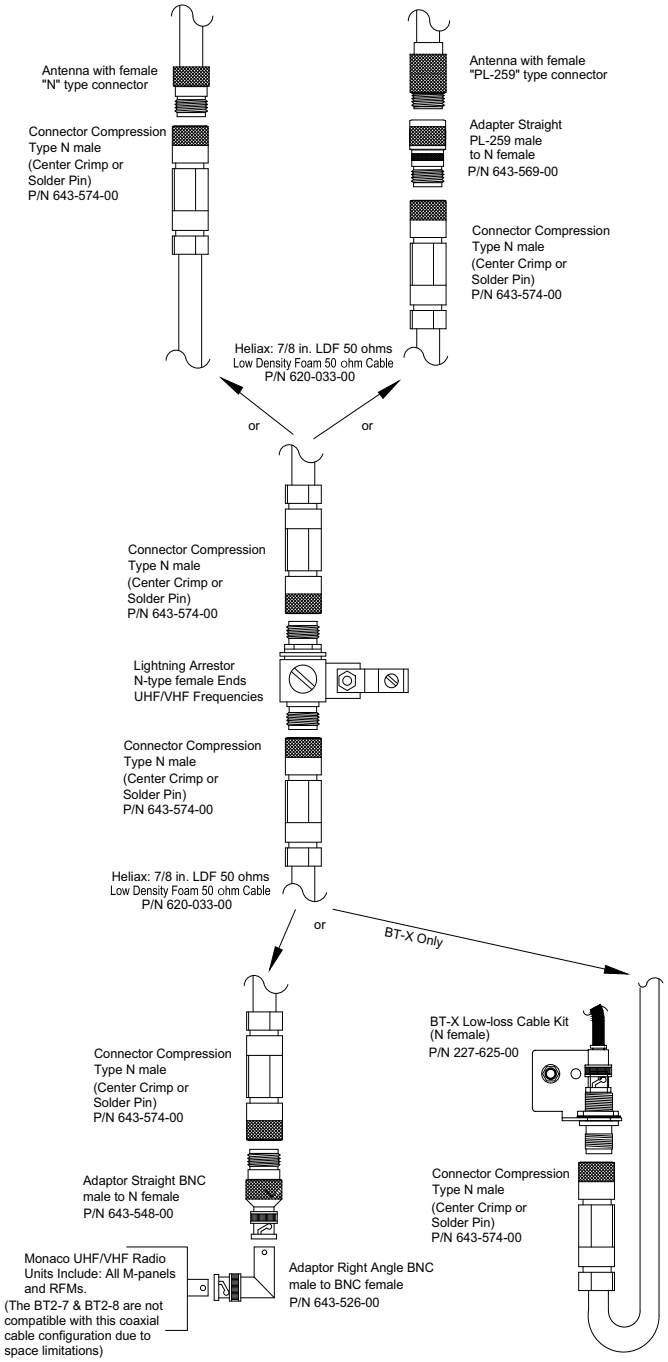
The 7/8 in. Heliax cable total run from transceiver to antenna can be no more than 400 ft. (UHF) or 550 ft. (VHF) with a minimum single bend radius of 5 in. and a minimum multiple bend radius of 10 in.

Excess cable increases line loss of the RF signal to and from the transceiver which can result in a unit “No Reply.” If necessary, the coaxial cable should be cut and reterminated to the correct length.

Reterminate connectors correctly!

Incorrect retermination can cause severe damage to the transceiver and adversely affect transmission and reception.

Application Drawing



Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Coaxial Connectors, Adaptors

Ground Rod and Clamp, Copper, for Lightning 661-000-00, 661-001-00
Air Terminal Hardware, Copper, for Lightning. 661-002-00, 661-004-00

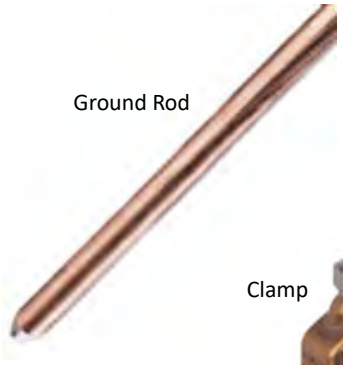
Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Antenna Systems

Ground Rod and Clamp, Copper, for Lightning

661-000-00, 661-001-00



Ground Rod Clamp

Material	Copper
Conductor Size	10 AWG Solid to 2 AWG Stranded
Installation	Hex Head Bolt
Mounting	Horizontal or vertical
Dimensions	5/8 in. L x 1 1.16 in. W x 1-15/16 in. H
Thread Size	3/8 - 16 UNC - 2A

Ordering Information

Part Number	Description
661-000-00	Ground Rod, 0.75 in. x 10 ft. copper-weld, UL rated
661-001-00	Ground Rod Clamp, 0.75 in., copper-weld, UL rated

Specifications

Ground Rod

Material	Copper bonded steel
Tensile Strength	80,000 PSI min.
Rod Type	Pointed
Dimensions	Diameter: 0.681 in. actual, 3.4 in. nominal Length: 10 ft.
Plating Thickness	10 mil
Weight	12.6 lb

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Antenna Systems

Air Terminal Hardware, Copper, for Lightning

661-002-00, 661-004-00

Air Terminal
Bare copper rod with threaded base.

Mounting Base
Positive single-bolt tension for multi-directional cable clamping.

Specifications

Air Terminal

Material	Bare copper
Point Type	Blunt
Dimensions	Diameter: 1/2 in. Height: 15 in.
Thread Size	1/2 UNC
Weight	0.91 lb

Mounting Base

Material	Bare Copper
Conductor Size	Class 1–Class 2 (4/0 max.)
Mounting Hole Size	1/4 in.
Mounting	Horizontal or vertical
Dimensions	3.07 in. W x 2.9 in. D x 1 in. H
Weight	0.835 lb

Ordering Information

Part Number	Description
661-002-00	Air Terminal, copper, threaded base, 15 in. x 1/2 in.
661-004-00	Mounting Base, copper, for air terminal 1/2 in.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Antenna Systems Catalog Section
17

Crimp Kit

Coaxial Cable Tool Kit 303-000-00

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

Central Receiving Systems

Coaxial Cable Tool Kit
303-000-00

Description

The Coaxial Cable Tool Kit is used to terminate mini RG-8/X and low-loss coaxial cables with crimp-style connectors.

Features

- Crimper
- Die set 4005-01
- Die set 4005-02
- Stripper LC CST-58/59
- Stripper LC CST-11

Specifications

Crimper:

Material	High-carbon, heat-treated, stamped steel

Die Set 4005-01:

For Use With	Mini RG-8/X cable
Cavity Dimensions	0.052 in., 0.068 in., 0.1 in., 0.213 in., and 0.255 in. (1.32 mm, 1.73 mm, 2.54 mm, 5.41 mm, and 6.5 mm)

Die Set 4005-02:

For Use With	Low-loss cable
Cavity Dimensions	0.1 in., 0.128 in., and 0.429 in. (2.54 mm, 3.25 mm, and 10.9 mm)

Strippers:

For Use With	Stripper LC CST-58/59: mini RG-8/X cable Stripper LC CST-11: low-loss cable
Weight	1.7 oz (50 g)
Dimensions	4.25 in. H x 1.52 in. W x 0.09 in. D (108 mm x 39 mm x 2.29 mm)

Ordering Information

Part Number	Description
303-000-00	Coaxial Cable Tool Kit: crimper, die sets, and strippers for mini RG-8/X and low-loss cables

Associated Parts

Part Number	Description
302-104-00	Replacement Blade Set for cable strippers
302-200-00	Replacement Crimper, Dies, and Case
302-100-00	Replacement Stripper LC CST-11 for low-loss cable
302-103-00	Replacement Stripper LC CST-58/59 for mini RG-8/X cable

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Lightning Arrestors

Antenna Systems Catalog Section
17

Lightning Arrestors

Lightning Arrestors and Kits 198-021-xx, 198-022-xx

Click to go back to "Table of Contents - Index by Product Name"

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect
Manage
Record

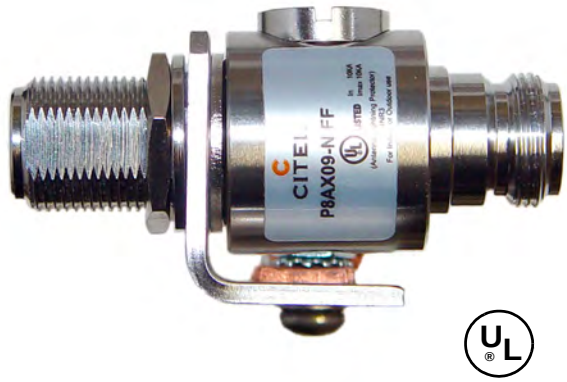
Antenna Systems

Lightning Arrestors and Kits

198-021-xx, 198-022-xx

Description

Monaco's Lightning Arrestor Kits contain UL listed lightning arrestors with an arc-plug/gas tube cartridge that protects electronic equipment by carrying excess voltages or currents generated by lightning or static buildup to earth ground.



The lightning arrestor connects to the coaxial cable between the antenna and the building transceiver (BT), or radio frequency modem (RFM). The Lightning Arrestor Kit may be located outside or inside, depending on the grounding system of the building. It must be installed as near as possible to the point where the coaxial cable enters the building. It may not be near combustible material nor in a classified hazardous location as defined in NFPA 70 (NEC) Article 500.

The lightning arrestor uses a unique isolated ground system that permits direct earth connection while preventing arc energy from being coupled to the equipment. It must be grounded in accordance with NFPA 70 (NEC) Section 810-21.

An arc-plug/gas tube cartridge, consisting of two metal electrodes sealed in a gas-filled ceramic cylinder, is the basis of static discharge. A sufficient voltage across the cartridge element causes an arc to form between the electrodes, which act as voltage- dependent switches, capable of carrying large currents for brief periods of time. Excess voltages or currents from lightning proximity are discharged through the arrestor arc-plug/gas tube cartridge to the grounding system.

The PL-259 lightning arrestor in kit P/Ns 198-021-xx and the N-type lightning arrestor in kit P/Ns 198-022-xx allow easy replacement of the arc-plug/gas tube cartridge in the field. The cartridge is installed in a threaded hole and makes a solderless, pressure-fit connection. No disassembly or disconnection from the coaxial cable is necessary for replacement.

CAUTION! An arrestor does not protect against a direct lightning strike.

Specifications

Insertion Loss	<0.2 dB
Frequency Range	PL-259 arrestor in kit P/Ns 198-021-xx: 0–500 MHz, VHF N arrestor in kit P/Ns 198-022-xx: 0–3,000 MHz, VHF and UHF
Connector	Arrestor is bidirectional and can be installed in either direction 50 ohms; connector style depends on arrestor
Unit Impedance	50 ohms
VSWR	1.2 to 1 or less
Nominal Discharge Current	5 kA (8/20µs test x 10 - C2 category)
Maximum Discharge Current	20 kA (maximum withstand at 8/20µs)
Protection Level	<800V
Standards Compliance	IEC61643-21 / EN61643-21 / UL497C / UL497E
Arrestor:	UL Listed:
P8AX09-N/FF	E349646
P8AX09-U/FF	E349646

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Ordering Information

Lightning Arrestors

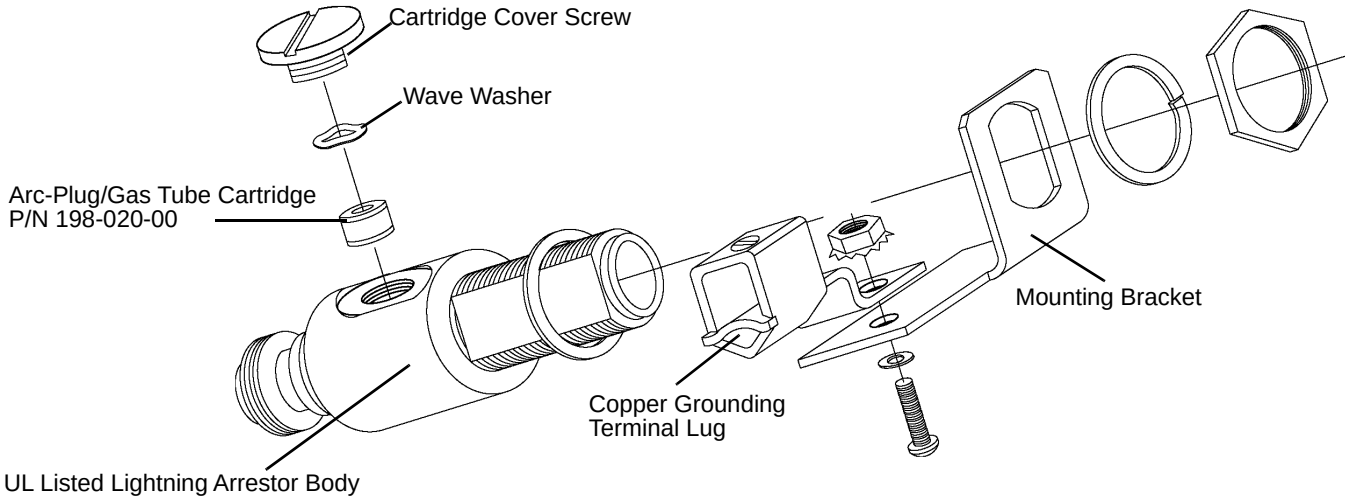
Part Number	Description
198-021-00	Lightning Arrestor Kit with PL-259 VHF UL Listed Arrestor, with two 10 in. strip coaxial seals, mounting bracket, and terminal lug with hardware
198-021-01	Lightning Arrestor Kit with PL-259 VHF UL Listed Arrestor, with two 10 in. strip coaxial seals, mounting bracket, terminal lug with hardware, and 8 in. x 8 in. x 6 in. NEMA 3R enclosure (P/N 081-076-01)
198-022-00	Lightning Arrestor Kit with N-Type UHF/VHF UL Listed Arrestor, with two 10 in. strip coaxial seals, mounting bracket, and terminal lug with hardware
198-022-01	Lightning Arrestor Kit with N-Type UHF/VHF UL Listed Arrestor, with two 10 in. strip coaxial seals, mounting bracket, terminal lug with hardware, and 8 in. x 8 in. x 6 in. NEMA 3R enclosure (P/N 081-076-01)

Associated Parts

Part Number	Description
198-019-01	Lightning Arrestor with PL-259 female connectors; replacement part only for P/N 198-021-00
198-017-01	Lightning Arrestor with N-type female connectors; replacement part only for P/N 198-022-00
198-020-00	Lightning Arrestor Replacement ARC Plug/Gas Tube Cartridge for arrestors (P/N 198-022-00)
081-076-01	Lightning Arrestor Enclosure, NEMA 3R rain-tight, 8 in. x 8 in. x 6 in., UL rated
081-225-00	Lightning Arrestor Enclosure, NEMA 3R rain-tight, 12 in. x 12 in. x 6 in., UL rated
661-000-00*	Ground Rod, 0.75 in. x 10 ft. copper-weld, UL rated
661-001-00*	Ground Rod Clamp, 0.75 in. copper-weld, UL rated
164-004-00	Coaxial Seal, package of four 12 ft. rolls
164-004-03	Coaxial Seal, 10 in. long
***Drop-ship is the only available shipping method.**	

Drawings

Lightning Arrestor Kit Standard Components



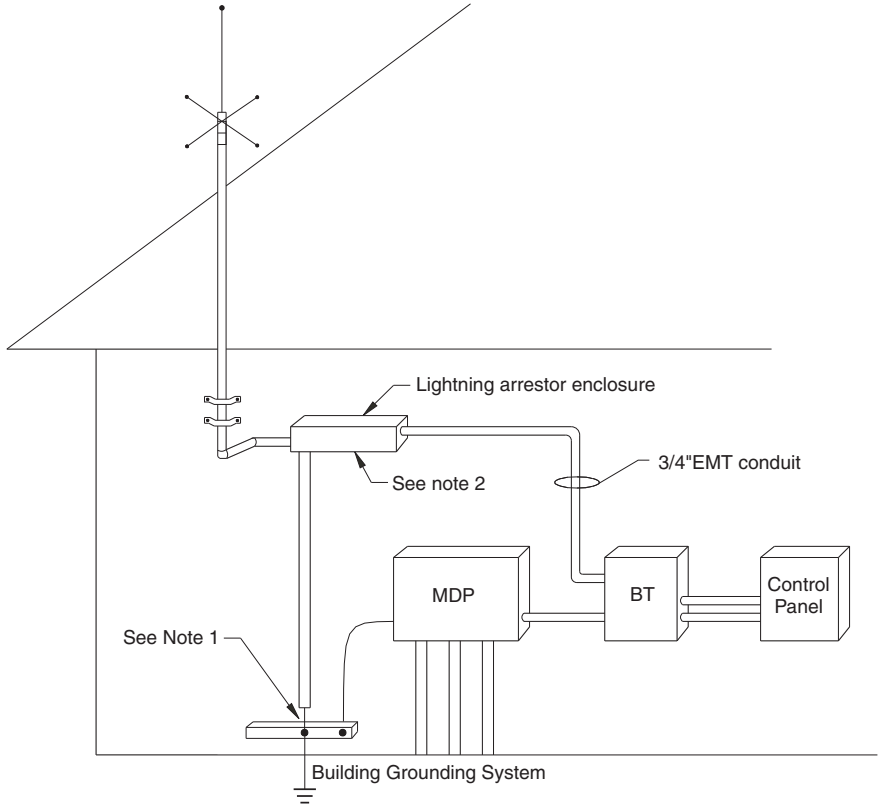
- P/N 198-019-01 with PL-259 female connector, or
- P/N 198-017-01 with N-type female connector

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Installation Diagram

Typical Lightning Arrestor Kit installation where building grounding system is accessible and adequate.



Notes

1. Lightning Arrestor Kit to be connected to main building ground per NFPA 70 (NEC) Article 810-21.
2. Bond all conduit together with grounding bushings to building grounding system. Minimum ground wire size is 10 AWG.
3. For complete installation details, refer to the installation manuals and applicable codes and standards.

Monaco Enterprises, Inc.
P.O. Box 14129, Spokane Valley, WA 99214-0129; 14820 E. Sprague Ave., Spokane Valley, WA 99216-2149
Phone (509) 926-6277 **Fax** (509) 924-4980 **E-mail** service@monaco-inc.com **Web** www.monaco-inc.com

Detect Manage Record

Index by Product Part Number

LEGEND		
Entry Contents (Format)	**Relevance**	**Example**
Part Number, Description (Bold)	Product index entry	**176-214-00, BT-X Relay Board**
Description, Part Number (Regular, Indented)	Cut sheet referencing the entry above	BT-XF, 227-60x-xx

008-008-00, M Conventional Upgrade Thumb Drive
M Conventional Planner Kit, 207-813-00
081-076-01, Lightning Arrestor Enclosure, NEMA 3R
Lightning Arrestors and Kits, 198-021-xx, 198-022-xx
081-155-00, NEMA 1 enclosure, two 12V/18 Ah batteries
Enclosure w Batteries, 081-15x-0x, 081-17x-00, 081-182-00
081-156-00, NEMA 1 enclosure, two 12V/26 Ah batteries
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
Enclosure w Batteries, 081-15x-0x, 081-17x-00, 081-182-00
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx
MAAP-X Upgrade, 227-912-xx
Remote Display Unit, 710-070-01,710-070-02
081-156-01, NEMA 1 enclosure, two 12V/26 Ah batteries
Enclosure w Batteries, 081-15x-0x 081-17x-00 081-182-00
081-172-00, NEMA 3R enclosure, four 12V/18 Ah batteries
Enclosure w Batteries, 081-15x-0x, 081-17x-00, 081-182-00
081-177-00, NEMA 1 enclosure, two 12V/40 Ah batteries
Enclosure w Batteries, 081-15x-0x, 081-17x-00, 081-182-00
081-182-00, NEMA 1 enclosure, two 12V/75 Ah batteries
Enclosure w Batteries, 081-15x-0x, 081-17x-00, 081-182-00
081-214-02, Rack Shelf, 2U
081-215-01, Rack Shelf, black 19 in., 1U
081-225-00, Lightning Arrestor Enclosure, NEMA 3R
Lightning Arrestors and Kits, 198-021-xx, 198-022-xx
081-243-00, Cabinet Fire Alarm Terminal, 32 Pt
081-261-01, Cabinet, Record Document Storage with Monaco Key
081-262-00, Enclosure, Rail-mount, Steel, Powder Coated
081-264-00, NEMA 4X Text Display Enclosure
MAAP-X Text Display, 710-075-01
082-431-00, Mounting track, 2 in. W x 2.75 in. L
Relay, SPDT, 453-114-00
085-153-00, Speaker Bird Screen
Wide Area Mass Notification Speaker Station, 227-671-xx, 227-634-xx, 227-661-xx, 124-080-00
085-214-01, Rack Blank Panel
Rack blank panels, 085-214-0x
085-214-02, Rack Blank Panel
KVM Extender Tray, 200-477-00
Rack blank panels, 085-214-0x
085-214-03, Rack Blank Panel
Rack blank panels, 085-214-0x
085-214-04, Rack Blank Panel
Rack blank panels, 085-214-0x
085-214-05, Rack Blank Panel
Rack blank panels, 085-214-0x

085-214-06, Rack Blank Panel
Rack blank panels, 085-214-0x
085-573-00, Mounting Plate Adaptor
Weatherproof Horn Speaker, 124-042-00
085-800-01, RFM Rack Mount Kit, Single 2U
RFM-XH Modem, 227-323-00
RFM-XHR Modem, 227-317-xx
085-800-02, RFM Rack Mount Kit, Dual 4U
085-800-04, RFM Rack Mount Kit, Single, for adjust rails
RFM-XH Modem, 227-323-00
RFM-XHR Modem, 227-317-xx
086-210-01, Adaptor Plate
BT2 to BT-X Conversion Kit, 227-647-xx
086-244-00, Optional Pole-Mount Bracket for 4-speaker hanging pendant cluster
Indoor/Outdoor PA Speaker, 124-077-00
086-265-00, Ceiling-mount Bracket
MAAP-X Text Display, 710-075-01
089-010-00, Pole mount Kit
BT-XF Pull Station, Single Action, 227-665-xx
097-500-00, Keylock Assembly
MNS Panels, 703-228-00, 703-228-01
097-523-00, Turn Latch Lock Kit
MAAP-X LOC/RDU, 710-072-01 710-072-02
104-011-00, Rack Cabinet, 40U
104-012-00, Rack Cabinet, 24U
122-012-00, MAAP-X Microphone
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
MAAP-X LOC/RDU, 710-072-01 710-072-02
MAAP-X Upgrade, 227-912-xx
122-012-05, MAAP-X MNS Microphone
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
MAAP-X LOC/RDU, 710-072-01 710-072-02
MAAP-X Upgrade, 227-912-xx
122-012-06, MAAP-X Paging Microphone
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
MAAP-X LOC Keypad, 710-072-51 710-072-52
MAAP-X LOC/RDU, 710-072-01 710-072-02
MAAP-X Upgrade, 227-912-xx
122-018-01, Replacement Desktop PTT Microphone
D-21 System VoIP Desktop Microphone Link Assembly, 122-018-05
D-21 VoIP Link Assembly, 122-018-04
Door Station Camera, 192-296-01
122-018-04, D-21 System VoIP Desktop Microphone Link Assembly
122-018-05, D-21 System VoIP Desktop Microphone Link Assembly
Live Voice Input Radio Switch, 194-541-01
124-042-00, Horn Speaker, weatherproof
124-050-00, Cluster Speakers, 4-Horn Speaker System
124-051-00, Cluster Speakers, 2-Horn Speaker System
124-052-00, Cluster Speakers, 3-Horn Speaker System
124-069-00, Speaker, White, Type II, Square, Surface-mount
124-072-00, Outdoor Speaker, White, Wall-Mount, Type I, no letter

124-072-50, Outdoor Speaker, Red, Wall-Mount, Type I, no letter
124-077-00, Outdoor PA Speaker, white, multi-surface-mount
124-080-00, ASC Mass Notification Speaker Station, 1600 W
Wide Area Mass Notification Speaker Station, 227-671-xx, 227-634-xx, 227-661-xx, 124-080-00
124-087-01, Outdoor PA Speaker Horn, Surface-Mount, Bidirectional Bells, Grey
124-089-00, Indoor PA Speaker, 2 ft. Square, White, Ceiling Tile
124-090-00, Indoor PA Speaker, 8 in. Round, White, Ceiling-Mount
124-091-00, Indoor Speaker, White, Wall-Mount, Type I, no letter
Univ Expander Plate, 369-036-00
Univ Expander Plate, 369-037-00
124-092-00, Indoor Speaker, Red, Wall-Mount, Type I, no letter
Univ Expander Plate, 369-036-00
Univ Expander Plate, 369-037-00
124-093-00, Indoor Speaker, Red, Ceiling-Mount, Type I, no letter
124-094-00, Indoor Speaker, White, Ceiling-Mount, Type I, no letter
124-095-00, Indoor Speaker, White, Ceiling-Mount, Type I, 8 in., no letter
124-097-00, Explosion-proof Speaker, Red, surface-mount
124-098-00, Selectable Output Speaker, Outdoor
129-048-00, 8 in. speaker support tile bridge
Indoor Speaker Strobe, 580-074-00
Indoor Speaker Strobe, 580-099-00
129-049-00, Back Box, 8 in.
Indoor Speaker Strobe, 580-074-00
Indoor Speaker Strobe, 580-099-00
129-057-01, Audio Isolator Transformer Module
RFM King-Fisher Assembly, 227-333-NR
164-004-00, Coaxial Seal 12 ft. rolls
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x
Coaxial Cable, 620-026-00
Coaxial Cable, 620-029-00
Coaxial Cable, 620-030-00
Coaxial Cable, 620-031-00
Coaxial Cable, 620-032-00
Coaxial Cable, 620-033-00
Lightning Arrestors and Kits, 198-021-xx, 198-022-xx
164-004-03, Coaxial Seal, 10 in. long
Coaxial Cable, 620-026-00
Lightning Arrestors and Kits, 198-021-xx, 198-022-xx
UHF Collinear Omnidirectional Antennas, 190-241-00, 190-242-00, 190-243-00
UHF Omni Antenna, 190-216-xx, 190-403-xx, 190-409-xx, 190-417-xx
VHF Collinear Omnidirectional Antennas, 190-244-00, 190-245-00, 190-246-00, 190-247-00
VHF Omni Antenna, 190-211-0x, 190-212-00, 190-400-00, 190-418-xx
VHF Yagi Directional Antenna, 190-401-xx
175-047-00, 4-Zone Alarm Interface PCB
Interface PCB, Alarm, Alarm/Trouble, 175-047-00, 176-133-00, 176-177-00, 790-026-00
176-133-00, 4-Zone Expansion Module
Interface PCB, Alarm, Alarm/Trouble, 175-047-00, 176-133-00, 176-177-00, 790-026-00
176-184-01, M-2 CPU Replacement Kit
M-2 Conv FACP w Integrated Radio Transceiver, 227-5xx-xx
176-184-03, M-2 CPU and FSK Replacement Kit
M-2 Conv FACP w Integrated Radio Transceiver, 227-5xx-xx

176-185-00, M Conv FACP Expansion Backplane
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx
M-2 Conv FACP w Integrated Radio Transceiver, 227-5xx-xx
M2 FACP, 227-55x-MN 227-56x-MN 227-570-MN

176-186-00, Zone Expansion Card (ZEC)
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx
M-2 Conv FACP w Integrated Radio Transceiver, 227-5xx-xx
M2 FACP, 227-55x-MN 227-56x-MN 227-570-MN

176-187-00, Auxiliary Output Card (AOC)
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx
M-2 Conv FACP w Integrated Radio Transceiver, 227-5xx-xx
M2 FACP, 227-55x-MN 227-56x-MN 227-570-MN

176-193-01, Analog Addressable Controller (AAC)
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx

176-194-00, Addressable Driver Card (ADC)
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx
MAAP-X Expansion Backplane, 176-273-99
MAAP-X Sub-Panel, 700-101-00
MAAP-X Upgrade, 227-912-xx

176-197-00, Universal Input Card (UIC)
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx
M-2 Conv FACP w Integrated Radio Transceiver, 227-5xx-xx
M2 FACP, 227-55x-MN 227-56x-MN 227-570-MN

176-206-00, BT-XF Fire Zone Card
BT2 to BT-X Conversion Kit, 227-647-xx
BT2-3 to BT-X Conv Kit, 227-646-xx
BT-XF, 227-60x-xx
BT-XM In-Bldg Mass Notification Communicator, 227-621-xx 227-622-xx, 227-623-xx

176-206-01, BT-XS Security Zone Card
BT2 to BT-X Conversion Kit, 227-647-xx
BT2-3 to BT-X Conv Kit, 227-646-xx
BT-XS Security, 227-6xx-xx

176-208-00, BT-X Audio Board
BT2 to BT-X Conversion Kit, 227-647-xx
BT2-3 to BT-X Conv Kit, 227-646-xx
BT-XF Outdoor Pull Station, Single Action, 227-668-xx
BT-XF, 227-60x-xx
BT-XM In-Bldg Mass Notification Communicator, 227-621-xx 227-622-xx, 227-623-xx
BT-XM2 Interface Conv Kits 227-371-02, 227-372-0x, 227-623-MN, 227-811-MN
BT-XS Security, 227-6xx-xx

176-212-00, BT-X Zone Expansion Backplane
BT2 to BT-X Conversion Kit, 227-647-xx
BT2-3 to BT-X Conv Kit, 227-646-xx
BT-XF, 227-60x-xx
BT-XM In-Bldg Mass Notification Communicator, 227-621-xx 227-622-xx, 227-623-xx
BT-XS Security, 227-6xx-xx

176-214-00, BT-X Relay Board
BT2 to BT-X Conversion Kit, 227-647-xx
BT2-3 to BT-X Conv Kit, 227-646-xx
BT-XF, 227-60x-xx
BT-XM In-Bldg Mass Notification Communicator, 227-621-xx 227-622-xx, 227-623-xx
BT-XM2 Interface Conv Kits 227-371-02, 227-372-0x, 227-623-MN, 227-811-MN
BT-XS Security, 227-6xx-xx
M2 FACP, 227-55x-MN 227-56x-MN 227-570-MN

176-257-00, Current In-rush Limiter
Conv Duct Smoke Detect, 723-368-00

176-268-00, Multiplexer Assembly RS-422 to RS-485
Remote Display Unit, 710-070-01,710-070-02

176-272-00, Speaker Output Card (SOC)
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
MAAP-X Expansion Backplane, 176-273-99
MAAP-X Sub-Panel, 700-101-00
MAAP-X Upgrade, 227-912-xx

176-273-99, MAAP-X Expansion Backplane Assembly

176-279-00, Addressable Driver Card (ADC II)
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
MAAP-X Expansion Backplane, 176-273-99
MAAP-X Sub-Panel, 700-101-00
MAAP-X Upgrade, 227-912-xx

176-286-02, LOC Multiplexer, RS-422 to RS-485
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
MAAP-X Expansion Backplane, 176-273-99
MAAP-X LOC Keypad, 710-072-51 710-072-52
MAAP-X LOC/RDU, 710-072-01 710-072-02
MAAP-X Sub-Panel, 700-101-00
MAAP-X Upgrade, 227-912-xx

176-286-03, MAAP-X Text Display Multiplexer Kit
MAAP-X Expansion Backplane, 176-273-99
MAAP-X Sub-Panel, 700-101-00
MAAP-X Text Display, 710-075-01

176-296-01, Audio Output Limiter 60V P-P
Audio Booster Panels, 703-16x-00 703-20x-00

176-297-01, Sub-Panel LOC Surge Protector PCB Kit
MAAP-X Expansion Backplane, 176-273-99
MAAP-X LOC Keypad, 710-072-51 710-072-52
MAAP-X LOC/RDU, 710-072-01 710-072-02
MAAP-X Sub-Panel, 700-101-00

176-422-99, BT-XM Factory MNS Upgrade
BT2 to BT-X Conversion Kit, 227-647-xx
BT2-3 to BT-X Conv Kit, 227-646-xx

190-211-01, VHF Antenna, Omnidirectional, 6dBd Gain, 138–144 MHz
VHF Omni Antenna, 190-211-0x, 190-212-00, 190-400-00, 190-418-xx

190-211-02, VHF Antenna, Omnidirectional, 6dBd Gain, 144–151 MHz
VHF Omni Antenna, 190-211-0x, 190-212-00, 190-400-00, 190-418-xx

190-211-03, VHF Antenna, Omnidirectional, 6dBd Gain, 150–157 MHz
VHF Omni Antenna, 190-211-0x, 190-212-00, 190-400-00, 190-418-xx

190-211-04, VHF Antenna, Omnidirectional, 6dBd Gain, 156–164 MHz
VHF Omni Antenna, 190-211-0x, 190-212-00, 190-400-00, 190-418-xx
190-211-05, VHF Antenna, Omnidirectional, 6dBd Gain, 158–166 MHz
VHF Omni Antenna, 190-211-0x, 190-212-00, 190-400-00, 190-418-xx
190-211-06, VHF Antenna, Omnidirectional, 6dBd Gain, 161–168 MHz
VHF Omni Antenna, 190-211-0x, 190-212-00, 190-400-00, 190-418-xx
190-211-07, VHF Antenna, Omnidirectional, 6dBd Gain, 167–172.5 MHz
VHF Omni Antenna, 190-211-0x, 190-212-00, 190-400-00, 190-418-xx
190-211-08, VHF Antenna, Omnidirectional, 6dBd Gain, 171–175 MHz
VHF Omni Antenna, 190-211-0x, 190-212-00, 190-400-00, 190-418-xx
190-212-00, VHF Antenna, Omnidirectional, 2.1dBd Gain, 118–174 MHz
VHF Omni Antenna, 190-211-0x, 190-212-00, 190-400-00, 190-418-xx
190-216-01, UHF Antenna, Omnidirectional, 6dBd Gain, 405–440 MHz continuous
UHF Omni Antenna, 190-216-xx, 190-403-xx, 190-409-xx, 190-417-xx
190-216-02, UHF Antenna, Omnidirectional, 6dBd Gain, 445–480 MHz continuous
UHF Omni Antenna, 190-216-xx, 190-403-xx, 190-409-xx, 190-417-xx
190-241-00, UHF Antenna, Omnidirectional, Collinear, 7 dBd Gain, 450–470 MHz
UHF Collinear Omnidirectional Antennas, 190-241-00, 190-242-00, 190-243-00
190-242-00, UHF Antenna, Omnidirectional, Collinear, 7 dBd Gain, 400–420 MHz
UHF Collinear Omnidirectional Antennas, 190-241-00, 190-242-00, 190-243-00
190-243-00, UHF Antenna, Omnidirectional, Collinear, 7 dBd Gain, 410–430 MHz
UHF Collinear Omnidirectional Antennas, 190-241-00, 190-242-00, 190-243-00
190-244-00, VHF Antenna, Omnidirectional, Collinear, 6 dBd Gain, 162–174 MHz
VHF Collinear Omnidirectional Antennas, 190-244-00, 190-245-00, 190-246-00, 190-247-00
190-245-00, VHF Antenna, Omnidirectional, Collinear, 6 dBd Gain, 156–166 MHz
VHF Collinear Omnidirectional Antennas, 190-244-00, 190-245-00, 190-246-00, 190-247-00
190-246-00, VHF Antenna, Omnidirectional, Collinear, 6 dBd Gain, 150–160 MHz
VHF Collinear Omnidirectional Antennas, 190-244-00, 190-245-00, 190-246-00, 190-247-00
190-247-00, VHF Antenna, Omnidirectional, Collinear, 6 dBd Gain, 136–155 MHz
VHF Collinear Omnidirectional Antennas, 190-244-00, 190-245-00, 190-246-00, 190-247-00
190-249-00, UHF Antenna, Omnidirectional, 2.5 dBd gain, 406–512 MHz continuous
UHF Omni Antenna, 190-216-xx, 190-403-xx, 190-409-xx, 190-417-xx
190-400-00, BSA-1 VHF Antenna, Omnidirectional, 136–174 MHz
BT2 to BT-X Conversion Kit, 227-647-xx
BT2-3 to BT-X Conv Kit, 227-646-xx
VHF Omni Antenna, 190-211-0x, 190-212-00, 190-400-00, 190-418-xx
190-401-10, VHF Antenna, Yagi Directional, BSA-2, 3 element, 136–142 MHz
VHF Yagi Directional Antenna, 190-401-xx
190-401-11, VHF Antenna, Yagi Directional, BSA-2, 3 element, 142–150 MHz
VHF Yagi Directional Antenna, 190-401-xx
190-401-12, VHF Antenna, Yagi Directional, BSA-2, 3 element, 150–158 MHz
VHF Yagi Directional Antenna, 190-401-xx
190-401-13, VHF Antenna, Yagi Directional, BSA-2, 3 element, 158–166 MHz
VHF Yagi Directional Antenna, 190-401-xx
190-401-14, VHF Antenna, Yagi Directional, BSA-2, 3 element, 166–174 MHz
VHF Yagi Directional Antenna, 190-401-xx
190-403-01, UHF Antenna, Omnidirectional, BSA-3, 406–420 MHz
UHF Omni Antenna, 190-216-xx, 190-403-xx, 190-409-xx, 190-417-xx
190-403-02, UHF Antenna, Omnidirectional, BSA-3, 420–440 MHz
UHF Omni Antenna, 190-216-xx, 190-403-xx, 190-409-xx, 190-417-xx
190-403-04, UHF Antenna, Omnidirectional, BSA-3, 450–470 MHz
UHF Omni Antenna, 190-216-xx, 190-403-xx, 190-409-xx, 190-417-xx

190-409-01, UHF Antenna, Omnidirectional, BSA-8, 406–420 MHz
UHF Omni Antenna, 190-216-xx, 190-403-xx, 190-409-xx, 190-417-xx
190-409-02, UHF Antenna, Omnidirectional, BSA-8, 420–430 MHz
UHF Omni Antenna, 190-216-xx, 190-403-xx, 190-409-xx, 190-417-xx
190-409-04, UHF Antenna, Omnidirectional, BSA-8, 450–470 MHz
UHF Omni Antenna, 190-216-xx, 190-403-xx, 190-409-xx, 190-417-xx
190-410-01, UHF Antenna, Yagi directional, BSA-9, 5 element, 406–430 MHz
UHF Yagi directional Antenna, 190-410-xx
190-410-02, UHF Antenna, Yagi directional, BSA-9, 5 element, 450–470 MHz
UHF Yagi directional Antenna, 190-410-xx
190-410-03, UHF Antenna, Yagi directional, BSA-9, 5 element, 420–440 MHz
UHF Yagi directional Antenna, 190-410-xx
190-414-00, Spare BSA-3 UHF Omnidirectional Antenna Whip and Nose Cone
UHF Omni Antenna, 190-216-xx, 190-403-xx, 190-409-xx, 190-417-xx
190-417-00, UHF Antenna, Omnidirectional, Marine Rated, 300 MHz–3 GHz
UHF Omni Antenna, 190-216-xx, 190-403-xx, 190-409-xx, 190-417-xx
190-418-xx, VHF Antenna, Omnidirectional, Marine Rated, 122–300 MHz
VHF Omni Antenna, 190-211-0x, 190-212-00, 190-400-00, 190-418-xx
192-048-01, Monitor, 23.5 in., IPS
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
192-055-10, Monitor, 55 in. LED
D-21 Remote Display Controller, 227-063-01
D-21 View Generator, 227-062-30
192-060-10, Monitor, 49 in. LED
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
192-279-11, Outdoor Network Camera, Fixed
192-296-01, Door Station Camera, Indoor/Outdoor
192-854-02, Tilt Wall-mount
Monitor, 55 in., 192-055-10
192-877-00, Camera Conduit Box, Wall-mount
Outdoor Network Camera, 192-279-11
194-509-01, Radio Interface Module, Digital Signal Processor, 4-wire
194-512-10, D-21 System VoIP Desktop Module Assembly
D-21 System VoIP Desktop Microphone Link Assembly, 122-018-05
D-21 VoIP Link Assembly, 122-018-04
Live Voice Input Radio Switch, 194-541-01
194-518-01, NTP Time Server, Desktop
194-518-11, NTP Time Server, Rack Mount
194-523-01, VoIP Module Audio Signal
Live Voice Input Radio Switch, 194-541-01
194-527-01, Spare Fiber Optic to Ethernet Converter
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
BT-XF, 227-60x-xx
194-527-07, MAAP-X EN Fiber Optic to Ethernet Converter
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
194-527-08, BT-XF EN Fiber Optic to Ethernet Converter
BT-XF, 227-60x-xx
194-532-00, 4-wire Data Fiber Optic Media Converter
194-534-00, Fiber Optic Media Converter, single mode ST
194-535-02, MAAP-X Sub-Panel Audio Unidirectional Kit
MAAP-X Sub-Panel, 700-101-00

194-535-03, MAAP-X Sub-Panel Audio Bidirectional Kit
MAAP-X Sub-Panel, 700-101-00
194-538-02, MAAP-X Sub-Panel LOC RS-485 Communication Kit
MAAP-X Sub-Panel, 700-101-00
194-539-00, VIM-Z1 Module PCB Assembly
Live Voice Input Radio Switch, 194-541-01
194-540-00, PTSN Telephone Interface Module
Live Voice Input Radio Switch, 194-541-01
194-541-01, Live Voice Input Radio Switch for MNS
194-810-01, Multiplexer, RS-232 to four RS-485 ports
Text Annunciator, 710-054-01
194-810-24, Multiplexer, mounting accessories
Text Annunciator, 710-054-01
196-100-00, Programmable Scanner
196-400-00, Contact Mapping Receiver
197-700-00, Contact Mapping Transmitter
198-016-00, Lightning Arrestor
Wide Area Mass Notification Speaker Station, 227-671-xx, 227-634-xx, 227-661-xx, 124-080-00
198-017-01, Lightning Arrestor Replacement Part
Lightning Arrestors and Kits, 198-021-xx, 198-022-xx
198-019-01, Lightning Arrestor Replacement Part
Lightning Arrestors and Kits, 198-021-xx, 198-022-xx
198-020-00, Lightning Arrestor Replacement ARC Plug/Gas Tube
Coaxial Cable, 620-029-00
Coaxial Cable, 620-030-00
Coaxial Cable, 620-031-00
Coaxial Cable, 620-032-00
Coaxial Cable, 620-033-00
Lightning Arrestors and Kits, 198-021-xx, 198-022-xx
198-021-00, Lightning Arrestor Kit with PL-259 VHF Arrestor
Lightning Arrestors and Kits,198-021-xx, 198-022-xx
198-021-01, Lightning Arrestor Kit with PL-259 VHF Arrestor, NEMA 3R Enclosure
Lightning Arrestors and Kits,198-021-xx, 198-022-xx
198-022-00, Lightning Arrestor Kit
Coaxial Cable, 620-029-00
Coaxial Cable, 620-030-00
Coaxial Cable, 620-031-00
Coaxial Cable, 620-032-00
Coaxial Cable, 620-033-00
Lightning Arrestors and Kits,198-021-xx, 198-022-xx
198-022-01, Lightning Arrestor Kit
Coaxial Cable, 620-029-00
Coaxial Cable, 620-030-00
Coaxial Cable, 620-031-00
Coaxial Cable, 620-032-00
Coaxial Cable, 620-033-00
Lightning Arrestors and Kits,198-021-xx, 198-022-xx
199-001-00, Spare 54 in. Antenna Whip
BT2 to BT-X Conversion Kit, 227-647-xx
BT2-3 to BT-X Conv Kit, 227-646-xx
VHF Omni Antenna, 190-211-0x, 190-212-00, 190-400-00, 190-418-xx

199-002-00, Spare VHF Coil
VHF Omni Antenna, 190-211-0x, 190-212-00, 190-400-00, 190-418-xx
199-008-00, Tripod Mount
Antenna Mount Hardware, 199-008-00, 199-010-00, 199-011-00, 199-012-00
199-010-00, Wall-mount, 4 in. U bracket pair
Antenna Mount Hardware, 199-008-00, 199-010-00, 199-011-00, 199-012-00
199-011-00, Wall-mount, 7 in. Y bracket pair
Antenna Mount Hardware, 199-008-00, 199-010-00, 199-011-00, 199-012-00
199-012-00, Eaves-mount, adjustable 45 to 60 in. heavy duty
Antenna Mount Hardware, 199-008-00, 199-010-00, 199-011-00, 199-012-00
199-013-00, Accessory Pad Kit
Antenna Mount Hardware, 199-008-00, 199-010-00, 199-011-00, 199-012-00
199-056-00, Antenna Mount Clamp Set
199-057-00, Antenna Mounting Kit
UHF Omni Antenna, 190-216-xx, 190-403-xx, 190-409-xx, 190-417-xx
VHF Omni Antenna, 190-211-0x, 190-212-00, 190-400-00, 190-418-xx
199-061-00, Antenna Kit
BT-XF Pull Station, Single Action, 227-665-xx
200-438-00, Switch, 5-Port, Industrial
200-442-11, Ethernet Firewall, 8-port
D-21 Active911, 207-973-22
200-442-21, Ethernet Firewall, 8-port
200-444-02, Fiber Module, Transceiver, Hot Plug for DoDIN Switch
Switch Assembly, 12 Port, 200-485-01
200-444-06, Fiber Transceiver Module, 1310 nm
Ethernet Switch Assembly, 200-491-01
RFM-X Ethernet Network, 227-317-N1
200-444-07, Fiber Transceiver Module, 1490 nm
RFM-X Ethernet Network, 227-317-N1
200-457-00, Fiber Module, Optical Transceiver, Hot Plug
200-459-01, Ethernet Switch, Managed, 8-port, L2
200-461-00, KVM Switch, USB, 8 Port
200-464-03, KVM Drawer, integrated 8-port KVM switch
KVMA Extender Kit, 200-476-01, 200-476-02
200-467-00, USB HUB Cable for Broadcast MNS Server
Live Voice Input Radio Switch, 194-541-01
200-470-04, Cable Kit for local rack-mount server
200-471-11, Ethernet Switch Assy, 24 Port
RFM-X Ethernet Network Assy, 4X, 227-325-N1
200-476-01, KVMA Single Monitor Extender Kit
200-476-02, KVMA Dual Monitor Extender Kit
200-477-00, KVM Rack-mount Extender Tray
KVMA Extender Kit, 200-476-01, 200-476-02
200-481-01, Switch Assembly, 24 Port, 4SFP, Managed, 1U, Layer 2, POE, DoDIN
200-482-01, Ethernet Switch Assembly, 48 Port, 2 SFP+, Managed, Layer 2, 1U, DoDIN
200-484-01, Ethernet Switch Assembly, 12 port, 1 GIG Ethernet SFP, Managed, 1U, DoDIN
200-485-01, Switch Assembly, 12 Port, 2 SFPs, Managed, Layer 3, 1U, DoDIN APL
200-490-02, MAAP-X Panel Ethernet Kit 2FO/3CO
MAAP-X Expansion Backplane, 176-273-99
MAAP-X Sub-Panel, 700-101-00
200-491-01, Switch Assembly, 24 Port, 8 SFPs, Managed, Layer 2/3, 1U, DoDIN APL
RFM-X Ethernet Network, 227-317-N1

200-495-02, MAAP-X Panel Ethernet Kit 4FO/4CO
MAAP-X Expansion Backplane, 176-273-99
MAAP-X Sub-Panel, 700-101-00
200-498-01, Ethernet Switch Assembly, 24 Port, 4 SFP+, Managed, Layer 2/3, 1U, DoDIN
200-501-01, Ethernet Switch Assembly, 48 Port, 4 SFP+, Managed, Layer 2/3, 1U, DoDIN
203-021-00 Extended Warranty
DVR, 203-033-01
DVR, 203-058-08, 203-058-16
203-022-00 Digital Input Card, 8 channel
DVR, 203-033-01
DVR, 203-058-08, 203-058-16
203-023-00 Digital Input Card, 16 channel
DVR, 203-033-01
DVR, 203-058-08, 203-058-16
203-024-00 Digital Input Card, 24 channel
DVR, 203-033-01
DVR, 203-058-08, 203-058-16
203-025-00 Analog Input Card, 8 channel
DVR, 203-033-01
DVR, 203-058-08, 203-058-16
203-026-00 Analog Input Card, 16 channel
DVR, 203-033-01
DVR, 203-058-08, 203-058-16
203-027-00 Analog Input Card, 24 channel
DVR, 203-033-01
DVR, 203-058-08, 203-058-16
203-030-01 Touchscreen Control Panel Option for 3U DVR
DVR, 203-033-01
DVR, 203-058-08, 203-058-16
203-031-00 T1/E1/ISDN Quick Install Kit (per line)
DVR, 203-033-01
DVR, 203-058-08, 203-058-16
203-033-01, Digital Voice Recorder, 3U
DVR, 203-058-08, 203-058-16
203-035-00 Dual T1/E1/ISDN Input Card
DVR, 203-033-01
DVR, 203-058-08, 203-058-16
203-036-00 Single T1/E1/ISDN Input Card
DVR, 203-033-01
DVR, 203-058-08, 203-058-16
203-055-01, D-21 MNS Message Broadcast System
Live Voice Input Radio Switch, 194-541-01
203-058-08, DVR, 3U, 8 analog, 8 digital
203-058-16, DVR, 3U, 16 analog, 16 digital
204-004-00, Device Server
RFM-XHR Modem, 227-317-xx
204-016-01, Dual-port RFM-XR Device Server, 100 Base-T
RFM-XR Repeaters, 227-329-xx 227-358-xx 227-359-xx
205-046-00, Smart Label Printer
DVR, 203-033-01
DVR, 203-058-08, 203-058-16

205-052-01, RAID HDD Upgrade
DVR, 203-033-01
DVR, 203-058-08, 203-058-16
205-053-01, 250 GB HDD
DVR, 203-033-01
DVR, 203-058-08, 203-058-16
205-064-01, Color Laserjet Printer with Ethernet Adaptor
205-065-00, DVD-RAM for DVR
DVR, 203-033-01
DVR, 203-058-08, 203-058-16
207-045-00, RFM-XR Planner Kit
RFM-XR Repeaters, 227-329-xx 227-358-xx 227-359-xx
207-546-25, Text to Speech Broadcast Site License
D-21 Tone Alert Panel, 227-095-00
207-572-00, D-21 Anyconnect License
Firewall, 200-442-21
207-574-00, License, 11 Channel Pack
DVR, 203-033-01
DVR, 203-058-08, 203-058-16
207-574-01, License, Additional Pack
DVR, 203-033-01
DVR, 203-058-08, 203-058-16
207-607-00, BT-X Planner Kit
BT2 to BT-X Conversion Kit, 227-647-xx
BT2-3 to BT-X Conv Kit, 227-646-xx
BT-XF to BT-XM Upgrade, 227-422-99
BT-XF, 227-60x-xx
BT-XM In-Bldg Mass Notification Communicator, 227-621-xx 227-622-xx, 227-623-xx
BT-XS Security, 227-6xx-xx
207-610-00, BT-X/WAC Planner Support Kit
Wide Area Mass Notification Speaker Station, 227-671-xx, 227-634-xx, 227-661-xx, 124-080-00
207-617-00, MAP+ Planner Kit
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx
207-625-00, MAAP-X Planner Kit
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
MAAP-X Expansion Backplane, 176-273-99
MAAP-X Sub-Panel, 700-101-00
MAAP-X Upgrade, 227-912-xx
207-627-00, MAAP-X Text Display Address Programing Utility Planner Kit
MAAP-X Text Display, 710-075-01
207-813-00, M Conventional Planner Kit - thumb drive
M-2 Conv FACP w Integrated Radio Transceiver, 227-5xx-xx
M2 FACP, 227-55x-MN 227-56x-MN 227-570-MN
207-830-00, D-21 License, Fire Client
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
207-831-00, D-21 License, Security Client
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
207-832-00, D-21 License, Fire and Security Client
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
207-833-00, D-21 License, Fire Client w/Maps
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx

207-834-00, D-21 License, Security Mgmnt Client w/Maps
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
207-835-00, D-21 License, Fire and Security Client w/Maps
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
207-842-00, D-21 License, Mass Notification Client
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
207-843-00, D-21 License, Mass Notification System
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
207-849-00, D-21 License, MNS Mass Notif Sys (Maps)
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
207-860-01, D-21 License, Automatic Vehicle Location
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
207-862-00, D-21 License, Mobile Client
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
207-863-00, D-21 Fire Client Upgrade
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
207-864-00, D-21 Security Client Upgrade
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
207-878-00, D-21 License, Server
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
207-878-01, D-21 License, Option Key
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
207-880-00, D-21 License, Mobile Data Display
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
207-882-00, D-21 License, E911 Interface Comm
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
207-884-00, GPIO Interface Communicator Kit
207-886-00, Remote Interface Driver License
D-21 Tone Alert Panel, 227-095-00
207-905-00, Server Text to Speech Support Kit
D-21 Tone Alert Panel, 227-095-00
207-913-00, D-21 Mobile Law Enforcement Client Kit
D-21 Mobile Tablet, 227-099-30
207-940-00, D-21 License, D-21 Command Decision Display Tools
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
207-940-01, D-21 License, Map Tools
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
207-946-00, D-21 System Point Reporting Upgrade Kit with Licensing Upgrade Key
207-973-20, D-21 Support Kit, Communicator
D-21 Active911, 207-973-22
D-21 Station Alerting System Color Annunciator, 710-073-00, 710-073-01, 369-035-00, 369-035-01
207-973-22, D-21 Active911
207-973-25, D-21 Support Kit, Activation Screen
D-21 Station Alerting System Color Annunciator, 710-073-00, 710-073-01, 369-035-00, 369-035-01
207-981-10, D-21 EM Fire Software Kit
D-21 Mobile Laptop WIN10, 227-098-30
D-21 Mobile Tablet, 227-099-30
208-008-01, DVD-RAM 9.4 GB Cartridge
DVR, 203-033-01

209-050-00, Label Refills
DVR, 203-033-01
DVR, 203-058-08, 203-058-16
209-054-00, 3U Voice Recorder Chassis rack-mount kit
DVR, 203-033-01
DVR, 203-058-08, 203-058-16
209-057-00, D-21 Rack Mount Kit
D-21 View Generator, 227-062-30
210-505-00, Surge Protector, Transient, 2-Outlet Plug In
210-509-00, Surge Protector Kit, Transient, 120 VAC, Single-Phase, 15A
210-510-00, Surge Protector Kit, Transient, 120 VAC, Single-Phase, 15A Fused
MNS Panels, 703-228-00, 703-228-01
210-511-00, Surge Protector, Signal Line, 27 VDC
210-514-00, Surge Protector, initiating/indicating circuit, 24 VDC
210-524-00, Surge Protector, 120 VAC
Surge Protectors, 210-524-00, 210-555-00, 210-556-00
210-526-00, Surge Suppressor, 4-wire, leased line, 5V
210-540-00, Surge Suppressor
210-544-00, Transient Protector
Alarm Bell, 581-423-00, 581-451-00
210-546-00, Surge Protector Mount Base, track, for four modules
Surge Protector Module and Base, 210-549-xx, 210-550-xx, 210-551-xx
210-546-05, Surge Protector Mount Base, track, for five modules
Surge Protector Module and Base, 210-549-xx, 210-550-xx, 210-551-xx
210-549-00, Surge Protector Module and Base, 75 VDC
210-549-01, Surge Protector Module, No Base, 75 VDC
210-550-00, Surge Protector Module and Base, 12 VDC
210-550-01, Surge Protector Module, No Base, 12 VDC
210-551-00, Surge Protector Module and Base, 24 VDC
210-551-01, Surge Protector Module, No Base, 24 VDC
210-555-00, Surge Protector, 240 VAC
Surge Protectors, 210-524-00, 210-555-00, 210-556-00
210-556-00, Surge Protector, 120/240 VAC
Surge Protectors, 210-524-00, 210-555-00, 210-556-00
210-562-00, Surge Protector, 120 VAC
225-163-00, Monaco Planner Suite/Programmer
BT2 to BT-X Conversion Kit, 227-647-xx
BT2-3 to BT-X Conv Kit, 227-646-xx
BT-XF, 227-60x-xx
BT-XM In-Bldg Mass Notification Communicator, 227-621-xx 227-622-xx, 227-623-xx
BT-XS Security, 227-6xx-xx
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx
M-2 Conv FACP w Integrated Radio Transceiver, 227-5xx-xx
M2 FACP, 227-55x-MN 227-56x-MN 227-570-MN
225-791-00, Signal Direction Finder (SDF)
SRD, 225-793-xx
225-793-xx, Signal Receiving Device (SRD)
SDF, 225-791-00
226-529-00, M Serial Data Kit
M Conventional Planner Kit, 207-813-00
227-010-10, D-21 Comm Tower
D-21 Active911, 207-973-22

227-010-12, D-21 Comm Rack-mount (4U)
227-010-14, D-21 Comm Rack (14U) Server
227-011-10, D-21G (Graphics) Comm Tower
227-011-12, D-21G Comm Rack-mount (4U)
227-012-10, D-21M (Maps) Comm Tower
227-012-12, D-21M Comm Rack-mount (4U)
227-020-10, D-21 Alarm/Dispatch Tower
227-020-13, D-21 Alarm/Dispatch Rack (4U)
227-020-62, EM, Repair by Replace, MMS Server Rack-mount
227-020-63, EM, Repair by Replace, MMS NAS Drive Rack-mount
227-020-71, EM, Repair by Replace, View Generator
227-020-81, Standard, Repair by Replace, Server/Client Rack-mount
227-020-82, Standard, Repair by Replace, Client Rack-mount
227-020-83, Standard, Repair by Replace, Server Rack-mount
227-020-84, Standard, Repair by Replace, Client Tower
227-020-85, Standard, Repair by Replace, Server Tower
227-020-86, Standard, Repair by Replace, Server/Client Tower
227-020-88, EM, Repair by Replace, MMS Client Tower
227-020-89, EM, Repair by Replace, MMS Client Rack-mount
227-020-94, Standard, Repair by Replace, View Generator
227-020-97, EM, Repair by Replace, Mobile Fire - Laptop
227-020-98, EM, Repair by Replace, Mobile Cops - Laptop
227-020-99, EM, Repair by Replace, Mobile Fire - Tablet
227-045-01, D-21 General Purpose Input-Output, 32 DPDT, 10A outputs
D-21 Station Alerting System Color Annunciator, 710-073-00, 710-073-01, 369-035-00, 369-035-01
227-056-00, General Purpose Input-Output, 16 input, 16 relay output
227-062-30, D-21 View Generator, WIN 10
D-21 Remote Display Controller, 227-063-01
227-063-01, D-21 Remote Display Controller
227-095-00, D-21 Tone Alert Panel
227-095-10, Tone Alert Panel Upgrade
D-21 Tone Alert Panel, 227-095-00
227-098-30, D-21 EM Mobile Client Laptop WIN10
227-099-30, D-21 EM Mobile Client Tablet, WIN 10
227-245-xx, BT2-8 Building Transceiver, narrowband, 16 zones, NEMA 1
BT2-8 Building Transceiver, 227-245-xx, 227-246-xx, 227-247-xx, 227-271-xx
227-246-xx, BT2-8 Building Transceiver, narrowband, 16 zones, NEMA 3R
BT2-8 Building Transceiver, 227-245-xx, 227-246-xx, 227-247-xx, 227-271-xx
227-247-xx, BT2-8 Building Transceiver, narrowband, 32 zones, NEMA 1
BT2-8 Building Transceiver, 227-245-xx, 227-246-xx, 227-247-xx, 227-271-xx
227-255-xx, BT2-8 Electronics Pkg
BT2-8 Building Transceiver, 227-245-xx, 227-246-xx, 227-247-xx, 227-271-xx
227-259-00, BT2-8 16 Zone Expander Assy
BT2-8 Building Transceiver, 227-245-xx, 227-246-xx, 227-247-xx, 227-271-xx
227-271-xx, BT2-8 Bldg Transc, narrowband, 16 zones, NEMA 1 flush-mount
BT2-8 Building Transceiver, 227-245-xx, 227-246-xx, 227-247-xx, 227-271-xx
227-312-00, RFM 7000H Harlow Modem
227-317-CE, RFM-XHR Radio Frequency Modem, Europe w hardwire options
227-317-N1, RFM-X Ethernet Network Assembly, Rackmount

227-317-xx, RFM-XHR Radio Frequency Modem w hardwire option
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
RFM-XHR-HP Radio Frequency Modem, 227-334-xx
227-323-00, RFM-XH Hardwire Modem
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
227-325-N1, RFM-X Ethernet Network Assembly, 4X
227-325-xx, RFM-X Radio Frequency Modem in NEMA 4X Enclosure
227-327-00, RFM Rack Mount Kit, Single 2U with on/off switch
RFM-XHR Modem, 227-317-xx
227-329-CE, RFM-XR single repeater, NEMA 4X, Europe option
RFM-XR Repeaters, 227-329-xx 227-358-xx 227-359-xx
227-329-xx, RFM-XR single repeater, NEMA 4X
RFM-XR Repeaters, 227-329-xx 227-358-xx 227-359-xx
227-333-NR, D-21 RFM King-Fisher Assembly
227-358-CE, RFM-XR(2) redundant repeater, NEMA 4X, Europe option
RFM-XR Repeaters, 227-329-xx 227-358-xx 227-359-xx
227-358-xx, RFM-XR(2) redundant repeater, NEMA 4X
RFM-XR Repeaters, 227-329-xx 227-358-xx 227-359-xx
227-359-CE, RFM-XR, Electronics Pkg, Europe Option
RFM-XR Repeaters, 227-329-xx 227-358-xx 227-359-xx
227-359-xx, RFM-XR, Electronics Pkg
RFM-XR Repeaters, 227-329-xx 227-358-xx 227-359-xx
227-371-02, M-2 to M-2 Conventional FACP Conversion Kit for MNS Operation
M2 FACP, 227-55x-MN 227-56x-MN 227-570-MN
227-372-02, MAAP-2 to MAAP-2 Conventional FACP Conversion Kit for MNS Operation
227-372-03, MAAP(+) Conversion Kit for MNS Operation
227-422-99, BT-XF to BT-XM Upgrade Kit
227-451-xx, BT-XM In-Bldg MNS Communication Tester
227-550-MN, M-2 FACP, MNS 19x18x3.6 NEMA 1 surface-mount
227-550-xx, M-2 Conv NEMA1, surface-mount, narrowband
227-551-MN, M-2 FACP, MNS, 28x18x3.6 NEMA 1 surface-mount
227-551-xx, M-2 Conv NEMA 1, surface-mount, narrowband
227-552-MN, M-2 FACP, MNS, 43x18x3.6 NEMA 1 surface-mount
227-552-xx, M-2 Conv NEMA 1, surface-mount, narrowband
227-554-MN, M-2 FACP, MNS, 60”x18x3.6 NEMA 1 surface-mount

227-554-xx, M-2 Conv NEMA 1, surface-mount, narrowband
227-558-xx, Narrowband Electronics Pkg
M-2 Conv FACP w Integrated Radio Transceiver, 227-5xx-xx
227-560-MN, M-2 FACP, MNS, 19x18x3.6 NEMA 1 flush-mount

227-560-xx, M-2 Conv NEMA 1, flush-mount, narrowband
227-561-MN, M-2 FACP, MNS, 28x18x3.6 NEMA 1 flush-mount
227-561-xx, M-2 Conv NEMA 1, flush-mount, narrowband
227-562-MN, M-2 FACP, MNS, 43x18x3.6 NEMA 1 flush-mount
227-562-xx, M-2 Conv NEMA 1, flush-mount, narrowband
227-563-MN, M-2 FACP, MNS, 24x24x28 NEMA 3R
227-563-xx, M-2 Conv NEMA 3R, narrowband
227-564-MN, M-2 FACP, MNS, 60x18x3.6 NEMA1 flush-mount
227-564-xx, M-2 Conv NEMA1, flush-mount, narrowband
227-570-MN, M-2 FACP, MNS, 20x16x6 NEMA 3R
227-570-xx, M-2 Conv NEMA 3R, narrowband

227-571-xx, M-2 Narrowband Upgrade Kit, Type 1
M-2 Conv FACP w Integrated Radio Transceiver, 227-5xx-xx
227-574-00, MAAP Serial Interface Kit
BT-X Plannert, 207-607-00
BT-XF, 227-60x-xx
BT-XM2 Interface Conv Kits 227-371-02, 227-372-0x, 227-623-MN, 227-811-MN
BT-XS Security, 227-6xx-xx
MAAP-X Planner, 207-625-00
MAP+ Planner, 207-617-00
227-587-xx, M-2 Conv NEMA 4X, narrowband
227-600-xx, BT-XF, 4-28 zones, narrowband, single wide
BT-XF, 227-60x-xx
227-601-xx, BT-XF, 4-28 zones, narrowband, single wide, NEMA 3R
BT-XF, 227-60x-xx
227-603-xx, BT-XF, 4-60 zones, narrowband, double wide
BT-XF, 227-60x-xx
227-605-00, BT-XFH, 4-28 zones, no radio, single wide, audio board
BT-XF, 227-60x-xx
227-605-EN, BT-XFH EN, 4-28 zones, no radio, single wide, audio board
BT-XF, 227-60x-xx
227-606-00, BT-XFH, 4-60 zones, no radio, double wide, audio board
BT-XF, 227-60x-xx
227-606-EN, BT-XFH EN, 4-60 zones, no radio, double-wide, audio board
BT-XF, 227-60x-xx
227-607-00, BT-XFH, 4-28 zones, no radio, single wide, NEMA 3R audio board
BT-XF, 227-60x-xx
227-610-xx, BT-XS, 0-24 zones, radio blue single wide
BT-XS Security, 227-6xx-xx
227-611-xx, BT-XS, 0-24 zones, radio, blue NEMR 3R
BT-XS Security, 227-6xx-xx
227-613-xx, BT-XS, 0-56 zones, radio, blue double wide
BT-XS Security, 227-6xx-xx
227-615-00, BT-XHS, 0-24 zones, hardwire, blue single wide
BT-XS Security, 227-6xx-xx
227-616-00, BT-XHS, 0-56 zones, hardwire, blue double wide
BT-XS Security, 227-6xx-xx
227-617-00, BT-XS I button keypad option
BT-XS Security, 227-6xx-xx
227-617-01, BT-XS I button remote keypad option
BT-XS Security, 227-6xx-xx
227-621-xx, BT-XM In-Bldg Mass Notif Comm, radio, hardwire capable, double wide NEMA 1
227-622-xx, BT-XM In-Bldg Mass Notif Communicator, radio, hardwire capable, NEMA 3R
227-623-MN, BT-XM to BT-XM2 Conversion Kit
M2 FACP, 227-55x-MN 227-56x-MN 227-570-MN
227-623-xx, BT-XM In-Building Mass Notification Communicator
M2 FACP, 227-55x-MN 227-56x-MN 227-570-MN

227-625-00, BT-X Low Loss Cable Kit
BT2 to BT-X Conversion Kit, 227-647-xx
BT2-3 to BT-X Conv Kit, 227-646-xx
Coaxial Cable, 620-026-00
Coaxial Cable, 620-029-00
Coaxial Cable, 620-031-00
Coaxial Cable, 620-032-00
Coaxial Cable, 620-033-00

227-627-01, BT-X LCD Keypad
BT-XS Security, 227-6xx-xx

227-630-xx, BT-X Electronics Package
BT-XF, 227-60x-xx
BT-XM In-Bldg Mass Notification Communicator, 227-621-xx 227-622-xx, 227-623-xx
BT-XS Security, 227-6xx-xx

227-634-CE, BT-X WAC/ASC CE
Wide Area Mass Notification Speaker Station, 227-671-xx, 227-634-xx, 227-661-xx, 124-080-00

227-634-xx, BT-X WAC/ASC
Wide Area Mass Notification Speaker Station, 227-671-xx, 227-634-xx, 227-661-xx, 124-080-00

227-646-xx, BT2-3 to BT-X Conversion Kit, large or small enclosure

227-647-xx, BT-2 to BT-X Conversion Kit, standard enclosure

227-648-xx, BT-XHS, 0-24 zones, radio/hardwire dual comm, blue single wide
BT-XS Security, 227-6xx-xx

227-649-xx, BT-XHS, 0-56 zones, radio/hardwire dual comm, blue double wide
BT-XS Security, 227-6xx-xx

227-661-xx, Replacement BT-X WAC/ASC electronic package
Wide Area Mass Notification Speaker Station, 227-671-xx, 227-634-xx, 227-661-xx, 124-080-00

227-665-xx, BT-XF Outdoor Pull Station, AC Powered, Single Action, NEMA-4X enclosure

227-668-xx, BT-XF Outdoor Pull Station, Solar Power, Single Action, NEMA 4X Grey Enclosure

227-671-xx, BT-X WAC/ASC with integral BT-X Wide Area Controller
Wide Area Mass Notification Speaker Station, 227-671-xx, 227-634-xx, 227-661-xx, 124-080-00

227-811-MN, MAAP(+) Electronics Pkg
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx

227-811-xx, MAAP+ Electronics Pkg Upgrade
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx

227-855-EN, Hard-wire Only (Ethernet) Units
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx

227-855-MN, Non-radio unit supporting D-21 MNS
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx

227-855-xx, Integrated radio unit, NEMA 1 surface-mount
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx

227-856-EN, Hard-wire Only (Ethernet) Units
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx

227-856-MN, Non-radio unit supporting D-21 MNS
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx

227-856-xx, Integrated radio unit, NEMA 1 surface-mount
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx

227-857-MN, Non-radio unit supporting D-21 MNS
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx

227-857-xx, Integrated radio unit, NEMA 1 surface-mount
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx

227-865-EN, Hard-wire Only (Ethernet) Units
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx
227-865-MN, Non-radio unit supporting D-21 MNS
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx
227-865-xx, Integrated radio unit, NEMA 1 flush-mount
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx
227-866-EN, Hard-wire Only (Ethernet) Units
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx
227-866-MN, Non-radio unit supporting D-21 MNS
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx
227-866-xx, Integrated radio unit, NEMA 1 flush-mount
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx
227-868-xx, Integrated radio unit, NEMA 4X stainless steel
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx
227-869-xx, Integrated radio unit, NEMA 3R red enclosure
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx
227-912-NR, MAAP-X Upgrade Package, Standalone, No Radio
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
227-912-xx, MAAP-X Upgrade Package
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
227-955-EN, Hardwire Only MAAP-X FAC MNS Evac, surface-mount
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
227-955-NR, Standalone-No Radio MAAP-X FAC MNS Evac, surface-mount
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
227-955-xx, Integrated Radio MAAP-X FAC MNS surface-mount
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
MAAP-X LOC Keypad, 710-072-51 710-072-52
MAAP-X LOC/RDU, 710-072-01 710-072-02
227-956-EN, Hardwire Only MAAP-X FAC MNS Evac, surface-mount
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
227-956-NR, Standalone-No Radio MAAP-X FAC MNS Evac, surface-mount
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
227-956-xx, Integrated Radio MAAP-X FAC MNS Evac, surface-mount
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
227-957-xx, Integrated Radio MAAP-X FAC MNS Evac, surface-mount
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
227-965-EN, Hardwire Only MAAP-X FAC MNS Evac, flush-mount
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
227-965-NR, Standalone-No Radio MAAP-X FAC MNS Evac, flush-mount
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
227-965-xx, Integrated Radio MAAP-X FAC MNS Evac, flush-mount
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
MAAP-X LOC Keypad, 710-072-51 710-072-52
MAAP-X LOC/RDU, 710-072-01 710-072-02
227-966-EN, Hardwire Only MAAP-X FAC MNS Evac, flush-mount
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
227-966-NR, Standalone-No Radio MAAP-X FAC MNS Evac, flush-mount
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
227-966-xx, Integrated Radio MAAP-X FAC MNS Evac, flush-mount
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
227-968-xx, Integrated Radio MAAP-X FAC MNS Evac, surface-mount
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx

227-969-xx, Integrated Radio MAAP-X FAC MNS Evac, surface-mount
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
290-050-01, Wattmeter Kit, 25–1000 MHz, 5–500 W, Fixed Element RF
290-701-01, Analog/Digital Multimeter
SRD, 225-793-xx
297-002-00, RF Communications Service Monitor Kit
297-300-00, Dynamic Battery Analyzer
297-301-00, Dual Mode Battery Analyzer
299-006-01, RF Attenuator Sampler Kit
Wattmeter Kit, 290-050-01
299-008-00, Spare RF Coaxial Load
Wattmeter Kit, 290-050-01
299-016-01, D-21 Weather Station Kit
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
302-100-00, Replacement Stripper for low-loss cable
Coaxial Cable Tool Kit, 303-000-00
302-101-00, Cutting Tool
Coaxial Cable, 620-029-00
Coaxial Cable, 620-030-00
302-102-00, Replacement Blades
Coaxial Cable, 620-029-00
Coaxial Cable, 620-030-00
302-103-00, Replacement Stripper for mini RG-8/X cable
Coaxial Cable Tool Kit, 303-000-00
302-104-00, Replacement Blade
Coaxial Cable Tool Kit, 303-000-00
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x
Coaxial Cable, 620-026-00
302-200-00, Replacement Crimper, Dies, and Case
Coaxial Cable Tool Kit, 303-000-00
303-000-00, Coaxial Cable Tool Kit
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x
Coaxial Cable, 620-026-00
326-M00-01, MNS Standard Message SD Card
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
MAAP-X Upgrade, 227-912-xx
326-M10-01, MNS Custom Message Set Field Installation Kit
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
MAAP-X Upgrade, 227-912-xx
365-012-00, Lens, Amber
Indoor Chime Strobe, 587-008-00
Indoor Horn Strobe, 585-101-00
Indoor Horn Strobe, 585-103-00
Indoor Horn Strobe, 585-106-00
Indoor Horn Strobe, 585-107-00
Indoor Speaker Strobe, 580-114-00
Indoor Speaker Strobe, 580-115-00
Indoor Strobe, 367-101-00
Indoor Strobe, 367-104-00

365-013-00, Lens, Amber
Drop-in Speaker Strobe, 580-119-00
Indoor Horn Strobe, 585-099-00
Indoor Horn Strobe, 585-105-00
Indoor Horn Strobe, 585-108-00
Indoor Horn Strobe, 585-109-00
Indoor Speaker Strobe, 580-112-00
Indoor Speaker Strobe, 580-113-00
Indoor Speaker Strobe, 580-118-00
Indoor Strobe, 367-102-00
Indoor Strobe, 367-103-00
Indoor Strobe, 367-105-00

365-014-00, Lens, Blue
Indoor Chime Strobe, 587-008-00
Indoor Horn Strobe, 585-101-00
Indoor Horn Strobe, 585-103-00
Indoor Horn Strobe, 585-106-00
Indoor Horn Strobe, 585-107-00
Indoor Speaker Strobe, 580-114-00
Indoor Speaker Strobe, 580-115-00
Indoor Strobe, 367-101-00
Indoor Strobe, 367-104-00
Univ Expander Plate, 369-036-00
Univ Expander Plate, 369-037-00

365-015-00, Lens, Green
Indoor Chime Strobe, 587-008-00
Indoor Horn Strobe, 585-101-00
Indoor Horn Strobe, 585-103-00
Indoor Horn Strobe, 585-106-00
Indoor Horn Strobe, 585-107-00
Indoor Speaker Strobe, 580-114-00
Indoor Speaker Strobe, 580-115-00
Indoor Strobe, 367-101-00
Indoor Strobe, 367-104-00
Univ Expander Plate, 369-036-00
Univ Expander Plate, 369-037-00

365-016-00, Lens, Red
Indoor Chime Strobe, 587-008-00
Indoor Horn Strobe, 585-101-00
Indoor Horn Strobe, 585-103-00
Indoor Horn Strobe, 585-106-00
Indoor Horn Strobe, 585-107-00
Indoor Speaker Strobe, 580-114-00
Indoor Speaker Strobe, 580-115-00
Indoor Strobe, 367-101-00
Indoor Strobe, 367-104-00
Univ Expander Plate, 369-036-00
Univ Expander Plate, 369-037-00

365-017-00, Lens, Blue

Drop-in Speaker Strobe, 580-119-00
Indoor Horn Strobe, 585-099-00
Indoor Horn Strobe, 585-105-00
Indoor Horn Strobe, 585-108-00
Indoor Horn Strobe, 585-109-00
Indoor Speaker Strobe, 580-112-00
Indoor Speaker Strobe, 580-113-00
Indoor Speaker Strobe, 580-118-00
Indoor Strobe, 367-102-00
Indoor Strobe, 367-103-00
Indoor Strobe, 367-105-00

365-018-00, Lens, Green

Drop-in Speaker Strobe, 580-119-00
Indoor Horn Strobe, 585-099-00
Indoor Horn Strobe, 585-105-00
Indoor Horn Strobe, 585-108-00
Indoor Horn Strobe, 585-109-00
Indoor Speaker Strobe, 580-112-00
Indoor Speaker Strobe, 580-113-00
Indoor Speaker Strobe, 580-118-00
Indoor Strobe, 367-102-00
Indoor Strobe, 367-103-00
Indoor Strobe, 367-105-00

365-019-00, Lens, Red

Drop-in Speaker Strobe, 580-119-00
Indoor Horn Strobe, 585-099-00
Indoor Horn Strobe, 585-105-00
Indoor Horn Strobe, 585-108-00
Indoor Horn Strobe, 585-109-00
Indoor Speaker Strobe, 580-112-00
Indoor Speaker Strobe, 580-113-00
Indoor Speaker Strobe, 580-118-00
Indoor Strobe, 367-102-00
Indoor Strobe, 367-103-00
Indoor Strobe, 367-105-00

367-033-00, Explosion-proof Strobe Light, clear lens

367-036-00, Sync module, Type II

Indoor Horn Strobe, 4-Wire, 585-065-00
Indoor Speaker Strobe, 580-05x-xx, 580-06x-00, 580-07x-00, 580-081-02
Indoor Speaker Strobe, 580-064-00
Indoor Speaker Strobe, 580-068-00
Indoor Speaker Strobe, 580-074-00
Indoor Speaker Strobe, 580-077-00
Indoor Speaker Strobe, 580-079-00
Indoor Speaker Strobe, 580-081-00
Indoor Speaker Strobe, 580-099-00
Indoor Speaker Strobe, 580-120-00
Indoor Strobe Plate, 367-049-00
Indoor Strobe, 367-057-00
Indoor Strobe, 367-075-00
Indoor Strobe, 367-089-00
Indoor Strobe, 367-090-00
Indoor Strobe, 367-091-00
Indoor Strobe, 367-092-00
Indoor Strobe, Square Ceiling-Mount, 367-059-00, 367-064-00
Indoor Strobe, Type II, 367-058-00
Indoor/Outdoor Strobe, 367-050-10
Outdoor Horn Strobe, 585-059-00
Outdoor Speaker Strobe, 580-075-00
Outdoor Speaker Strobe, 580-078-00
Outdoor Strobe, 367-050-00
Speaker Strobe, Indoor, 580-062-00
Strobe, 367-096-00

367-047-00, Sync module, Type I

Drop-in Speaker Strobe, 580-119-00
Indoor Chime Strobe, 587-008-00
Indoor Chime, 587-009-00
Indoor Horn Strobe, 585-098-00
Indoor Horn Strobe, 585-099-00
Indoor Horn Strobe, 585-101-00
Indoor Horn Strobe, 585-102-00
Indoor Horn Strobe, 585-103-00
Indoor Horn Strobe, 585-105-00
Indoor Horn Strobe, 585-106-00
Indoor Horn Strobe, 585-107-00
Indoor Horn Strobe, 585-108-00
Indoor Horn Strobe, 585-109-00
Indoor Horn, 585-100-00
Indoor Horn, 585-104-00
Indoor Mini Horn, 585-081-00
Indoor Speaker Strobe, 580-104-00
Indoor Speaker Strobe, 580-107-00
Indoor Speaker Strobe, 580-108-00
Indoor Speaker Strobe, 580-110-00
Indoor Speaker Strobe, 580-111-00
Indoor Speaker Strobe, 580-112-00
Indoor Speaker Strobe, 580-113-00
Indoor Speaker Strobe, 580-114-00
Indoor Speaker Strobe, 580-115-00
Indoor Speaker Strobe, 580-118-00
Indoor Strobe, 367-097-00
Indoor Strobe, 367-098-00
Indoor Strobe, 367-099-00
Indoor Strobe, 367-100-00
Indoor Strobe, 367-101-00
Indoor Strobe, 367-102-00
Indoor Strobe, 367-103-00
Indoor Strobe, 367-104-00
Indoor Strobe, 367-105-00
Outdoor Horn Strobe, 585-068-00
Outdoor Horn Strobe, 585-069-00
Outdoor Horn Strobe, 585-097-00
Outdoor Horn Strobe, 585-097-01
Outdoor Horn, 585-067-01
Outdoor Speaker Strobe, 580-087-00
Outdoor Speaker Strobe, 580-088-00
Outdoor Speaker Strobe, 580-105-00
Outdoor Speaker Strobe, 580-106-00
Outdoor Strobe, 367-066-00
Outdoor Strobe, 367-066-01
Outdoor Strobe, 367-066-02
Outdoor Strobe, 367-066-03
Univ Expander Plate, 369-036-00
Univ Expander Plate, 369-037-00

367-049-00, Indoor Strobe Plate, Red, Wall-Mount, Type II, FIRE letter, clear lens
Sync module, Type II, 367-036-00
367-049-02, Indoor Strobe Plate, White, Wall-Mount, Type II, no letter, amber lens
Sync module, Type II, 367-036-00
367-050-00, Outdoor Strobe, Red, Wall-Mount, Type II, FIRE letter, clear lens
367-050-10, Indoor/Outdoor Strobe, White, Wall-Mount, Type II, FIRE letter, clear lens
367-057-00, Indoor Strobe, White, Wall-Mount, Type II, no letter, clear lens
367-058-00, Indoor Strobe, White, Ceiling Mount, Type II, no letter, clear lens
367-059-00, Indoor Strobe, White, Square Ceiling-Mount, Type II, no letter, amber lens
367-064-00, Indoor Strobe, White, Square Ceiling-Mount, Type II, no letter, blue lens
367-066-00, Outdoor Strobe, Red, Wall-Mount, Type I, FIRE letter, clear lens
367-066-01, Outdoor Strobe, White, Wall-Mount, Type I, FIRE letter, clear lens
367-066-02, Outdoor Strobe, White, Wall-Mount, Type I, FIRE letter, clear lens
367-066-03, Outdoor Strobe, White, Wall-Mount, Type I, no letter, clear lens
367-075-00, Indoor Strobe, Square, White, Wall-Mount, Type II, Black ALERT letter, amber lens
367-088-00, Indoor/Outdoor Strobe for Hazardous Locations, 285 Candela, Explosion-proof
367-089-00, Indoor Strobe, Square, White, Ceiling-Mount, Type II, no letter, amber lens
367-090-00, Indoor Strobe, Square, Red, Ceiling-Mount, Type II, FIRE letter, clear lens
367-091-00, Indoor Strobe, White, Ceiling-Mount, Type II, FIRE letter, clear lens
367-092-00, Indoor Strobe, Red, Wall-Mount, Type II, FIRE letter, clear lens
367-096-00, Strobe, White, Wall-mount, ALERT letter, amber lens
367-097-00, Indoor Strobe, Red, Wall-Mount, Type I, FIRE letter, clear lens
367-098-00, Indoor Strobe, White, Wall-Mount, Type I, ALERT letter, amber lens
367-099-00, Indoor Strobe, White, Wall-Mount, Type I, ALERT letter, clear lens
Univ Expander Plate, 369-036-00
Univ Expander Plate, 369-037-00
367-100-00, Indoor Strobe, White, Wall-Mount, Type I, FIRE letter, clear lens
Univ Expander Plate, 369-036-00
Univ Expander Plate, 369-037-00
367-101-00, Indoor Strobe, White, Wall-Mount, Type I, no letter, clear lens
Univ Expander Plate, 369-036-00
Univ Expander Plate, 369-037-00
367-102-00, Indoor Strobe, Red, Ceiling-Mount, Type I, FIRE letter, clear lens
367-103-00, Indoor Strobe, White, Ceiling-Mount, Type I, FIRE letter, clear lens
367-104-00, Indoor Strobe, Red, Wall-Mount, Type I, no letter, clear lens
367-105-00, Indoor Strobe, White, Ceiling-Mount, Type I, ALERT letter, clear lens
369-014-00, Pendant Mounting Bracket
Strobe Light, 367-033-00
369-017-00, Stanchion Mounting Bracket
Strobe Light, 367-033-00
369-018-00, Ceiling Mounting Bracket
Strobe Light, 367-033-00
369-019-00, Wall-mount Elbow
Strobe Light, 367-033-00
369-022-00, Strobe attachment, amber lens
Indoor Speaker Strobe, 580-104-00
Outdoor Speaker Strobe, 580-106-00
369-023-00, Strobe attachment, amber lens
Outdoor Horn Strobe, 585-068-00
Outdoor Speaker Strobe, 580-105-00
Outdoor Strobe, 367-066-01

369-025-00, Lens, Blue
Indoor Speaker Strobe, 580-104-00
Outdoor Speaker Strobe, 580-106-00
369-025-01, Lens, Blue
Outdoor Horn Strobe, 585-068-00
Outdoor Strobe, 367-066-01
369-026-00, Lens, Red
Indoor Speaker Strobe, 580-104-00
Outdoor Speaker Strobe, 580-106-00
369-026-01, Lens, Red
Outdoor Horn Strobe, 585-068-00
Outdoor Strobe, 367-066-01
369-027-00, Lens, Green
Indoor Speaker Strobe, 580-104-00
Outdoor Speaker Strobe, 580-106-00
369-027-01, Lens, Green
Outdoor Horn Strobe, 585-068-00
Outdoor Strobe, 367-066-01
369-034-05, Wall-mount Base for LED Light Stack
D-21 Station Alerting System Color Annunciator, 710-073-00, 710-073-01, 369-035-00, 369-035-01
369-035-00, Color Light Stack, Flat Base
D-21 Station Alerting System Color Annunciator, 710-073-00, 710-073-01, 369-035-00, 369-035-01
369-035-01, Color Light Stack, Wall-mount Base
D-21 Station Alerting System Color Annunciator, 710-073-00, 710-073-01, 369-035-00, 369-035-01
369-036-00, Universal Expander Plate, White, Type I, Indoor, no letter, clear lens
369-037-00, Universal Expander Plate, White, Type I, Indoor, ALERT letter, amber lens
392-100-00, Switch, Service Bypass Panel, 120 VAC, 20A
400-701-00, Battery, SLA 12V/26 Ah quick connect
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx
400-703-00, Battery, SLA 12V/1.4 Ah quick connect
SRD, 225-793-xx
400-704-00, Battery, SLA 12V/8 Ah quick connect
D-21 Tone Alert Panel, 227-095-00
MAAP-X Text Display, 710-075-01
MNS Panels, 703-228-00, 703-228-01
NAC Power Extender 6.5A, 404-164-00
NAC Power Extender, 404-126-00 404-126-01
Power Supply/Battery Charger 3A, 404-095-00
Power Supply/Battery Charger, 10A/8A, 115 VAC, 60 Hz, 404-190-00
Power Supply/Battery Charger, 10A/8A, 220 VAC, 50/60 Hz, 404-194-00
400-712-00, Battery, SLA 12V/18 Ah quick connect
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx
M-2 Conv FACP w Integrated Radio Transceiver, 227-5xx-xx
M2 FACP, 227-55x-MN 227-56x-MN 227-570-MN
RFM-XR Repeaters, 227-329-xx 227-358-xx 227-359-xx
400-712-00, Battery, SLA, 12V/18 Ah, quick connect
MAAP-X Upgrade, 227-912-xx

400-713-00, Battery, SLA 12V/12 Ah quick connect
Audio Booster Panels, 703-16x-00 703-20x-00
BT2-8 Building Transceiver, 227-245-xx, 227-246-xx, 227-247-xx, 227-271-xx
BT-XF Pull Station, Single Action, 227-665-xx
BT-XF, 227-60x-xx
BT-XM In-Bldg Mass Notification Communicator, 227-621-xx 227-622-xx, 227-623-xx
BT-XS Security, 227-6xx-xx
GPIO, 227-045-01, 227-056-00
MAAP-X Text Display, 710-075-01
MNS Panels, 703-228-00, 703-228-01
NAC Power Extender 6.5A, 404-164-00
NAC Power Extender, 404-126-00 404-126-01
Power Supply/Battery Charger 6A, 404-150-00
Power Supply/Battery Charger 8A/10A 115VAC, 404-098-00
Power Supply/Battery Charger 8A/10A 230VAC, 404-098-00
Power Supply/Battery Charger, 10A/8A, 115 VAC, 60 Hz, 404-190-00
Power Supply/Battery Charger, 10A/8A, 220 VAC, 50/60 Hz, 404-194-00
Wide Area Mass Notification Speaker Station, 227-671-xx, 227-634-xx, 227-661-xx, 124-080-00
400-714-00, Battery, SLA 12V/40 Ah nut and bolt
400-716-00, Battery, SLA 12V/75 Ah universal terminal
400-717-00, Battery, SLA 12V/100 Ah universal terminal
400-718-00, Battery, SLA 12V/100 Ah universal terminal
Wide Area Mass Notification Speaker Station, 227-671-xx, 227-634-xx, 227-661-xx, 124-080-00
400-720-00, Battery, SLA 12V/3.3 Ah quick connect
403-018-10, UPS External Battery - use with P/N 404-099-10
UPS, Network Devices, 404-099-10
403-020-00, UPS External Battery Pack
UPS Battery Backup, 404-112-01
403-022-00, External Battery Pack
UPS, 404-105-00
403-099-20, Cartridge Replacement Battery - use with P/N 404-099-10
UPS, Network Devices, 404-099-10
404-064-01, UPS Kit, 1200W, 120V
404-073-00, NAC Power Extender, 120 VAC, 50/60 Hz, 24 VDC, 6A
404-090-00, BT-X Power Supply
BT-XF, 227-60x-xx
RFM-XR Repeaters, 227-329-xx 227-358-xx 227-359-xx
404-093-00, NAC Power Extender
Text Annunciator, 710-054-01
404-095-00, Power Supply/Battery Charger, 24VDC @ 3A, 115 VAC
404-098-00, Power Supply/Battery Charger, 24 VDC @ 8A/10A, 115 VAC 60 Hz, red enclosure
404-098-10, Power Supply/Battery Charger, 24 VDC @ 8A/10A, 230 VAC 50/60 Hz, red enclosure
404-099-10, UPS, Network Devices, 2000 VA, 1800W, 120 VAC, Tower, Rack--mount
404-105-00, UPS 1500VA 120VAC, Rack Tower
404-111-10, 1KVA rack mount kit, UPS, 800W, rail
404-111-11, 1KVA rack mount kit, UPS, 800W, no rail
404-112-00, UPS Tower Case
KVMA Extender Kit, 200-476-01, 200-476-02
404-112-01, UPS Battery Backup Kit
404-114-01, UPS 400W

404-119-00, NAC Power Extender
Indoor Horn Strobe, 4-Wire, 585-065-00
Indoor Horn Strobe, 585-018-00
Indoor Speaker Strobe, 580-05x-xx, 580-06x-00, 580-07x-00, 580-081-02
Indoor Speaker Strobe, 580-064-00
Indoor Speaker Strobe, 580-068-00
Indoor Speaker Strobe, 580-074-00
Indoor Speaker Strobe, 580-077-00
Indoor Speaker Strobe, 580-079-00
Indoor Speaker Strobe, 580-081-00
Indoor Speaker Strobe, 580-099-00
Indoor Speaker Strobe, 580-120-00
Indoor Strobe Plate, 367-049-00
Indoor Strobe, 367-057-00
Indoor Strobe, 367-075-00
Indoor Strobe, 367-089-00
Indoor Strobe, 367-090-00
Indoor Strobe, Square Ceiling-Mount, 367-059-00, 367-064-00
Indoor Strobe, Type II, 367-058-00
Indoor/Outdoor Strobe, 367-050-10
Outdoor Horn Strobe, 585-059-00
Outdoor Speaker Strobe, 580-075-00
Outdoor Speaker Strobe, 580-078-00
Outdoor Strobe, 367-050-00
Speaker Strobe, Indoor, 580-062-00
Strobe, 367-096-00
404-126-00, NAC Power Extender, 120 VAC, 60 Hz
404-126-01, NAC Power Extender, 220 VAC, 50/60 Hz
404-127-01, Uninterruptible Power Supply
Monitor, 55 in., 192-055-10
404-150-00, Power Supply/Battery Charger, 12/24 VDC at 6A, 115 VAC 60 Hz or 230 VAC
404-164-00, NAC Power Extender, 220 VAC, 50/60 Hz, 24 VDC, 6.5A
404-167-00, D-21 System UPS Network Monitoring for D-21 Workstation Desks
404-168-00, D-21 System UPS Network Monitoring for Racks
404-173-01, UPS Kit
D-21 Station Alerting System Color Annunciator, 710-073-00, 710-073-01, 369-035-00, 369-035-01
404-190-00, Power Supply/Battery Charger, 10/8A, 115 VAC, 60 Hz
MAAP-X Text Display, 710-075-01
Text Annunciator, 710-054-01
404-194-00, Power Supply/Battery Charger, 10/8A, 220 VAC, 50/60 Hz
MAAP-X Text Display, 710-075-01
Text Annunciator, 710-054-01
409-005-00, AC Adaptor Plug
KVMA Extender Kit, 200-476-01, 200-476-02
451-700-00, SPDT Relay, grey enclosure
451-700-01, SPDT Relay
Relay Control Module, AP/CLIP, Type II, 729-221-00
Smoke Detector, 723-370-00, 723-371-00
453-100-00, Relay, SPDT, 24 VDC, 7A contacts, track mount
453-102-00, Relay, SPDT, 24 VDC, 7A contacts, track mount
453-103-00, Relay, SPDT, 24 VDC, 7A contacts, enclosure
453-104-00, DPDT, 24 VDC, 7A contacts, track mount

453-105-00, DPDT, 24 VDC, 7A contacts, enclosure
453-106-00, Relay, SPDT, 24 VDC/VAC, 10A contacts, grey enclosure
453-106-01, Relay, SPDT, 24 VDC/VAC, 10A contacts, red enclosure
453-107-00, Relay, SPDT, 24 VDC/VAC, 10A contacts, grey enclosure
453-107-01, Relay, SPDT, 24 VDC/VAC, 10A contacts, red enclosure
453-110-00, Relay, DPDT, 24 VDC/VAC 10A contacts, grey enclosure
453-110-01, Relay, DPDT, 24 VDC/VAC, 10A contacts, red enclosure
453-111-00, Relay, SPDT, 10-30 VDC, 10A contacts, grey enclosure
453-111-01, Relay, SPDT, 10-30 VDC, 10A contacts, red enclosure
Door Station Camera, 192-296-01
453-114-00, Relay, SPDT, 24 VDC/VAC, 10A contacts, track mount
453-117-00, Relay, Time Delay, SPDT, 10A
501-123-00, Fuse, slow-blow
Current In-rush Limiter, 176-257-00
SRD, 225-793-xx
510-319-10, Key Switch, FACP Suspend on Test
513-410-00, Tamper Switch Kit
BT2-8 Building Transceiver, 227-245-xx, 227-246-xx, 227-247-xx, 227-271-xx
513-411-00, M Tamper Switch Kit
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx
M-2 Conv FACP w Integrated Radio Transceiver, 227-5xx-xx
M2 FACP, 227-55x-MN 227-56x-MN 227-570-MN
513-411-00, M-2 Tamper Switch Kit
GPIO, 227-045-01, 227-056-00
513-411-01, MAAP-X Tamper Switch Kit
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
MAAP-X Upgrade, 227-912-xx
513-412-00, BT-X Enclosure Tamper Switch
BT-XF, 227-60x-xx
BT-XM In-Bldg Mass Notification Communicator, 227-621-xx 227-622-xx, 227-623-xx
514-000-00, OS&Y Gate Valve Switch, 1 SPDT, 10A, 125/250VAC
514-000-01, OS&Y Gate Valve Switch, 2 SPDT, 10A, 125/250VAC
514-001-00, Conventional Pressure-Type Waterflow Switch, 1 SPDT, 10A 125V, 4–8 PSI
514-003-00, Conventional Pressure-Type Supervisory Switch
517-016-00, Tilt Switch
BT2-8 Building Transceiver, 227-245-xx, 227-246-xx, 227-247-xx, 227-271-xx
M-2 Conv FACP w Integrated Radio Transceiver, 227-5xx-xx
M2 FACP, 227-55x-MN 227-56x-MN 227-570-MN
532-001-00, Silicon Rubber Enclosure Heater, 50 W heater
532-002-00, Silicon Rubber Enclosure Heater, 100 W heater
580-055-01, Indoor Speaker Strobe, FIRE letter, clear lens
Indoor Speaker Strobe, 580-05x-xx, 580-06x-00, 580-07x-00, 580-081-02
580-058-00, Indoor Speaker Strobe, weatherproof, no letter, clear lens
Indoor Speaker Strobe, 580-05x-xx, 580-06x-00, 580-07x-00, 580-081-02
580-062-00, Speaker Strobe, Indoor, White
580-063-00, Indoor Speaker Strobe, no letter, clear lens
Indoor Speaker Strobe, 580-05x-xx, 580-06x-00, 580-07x-00, 580-081-02
580-064-00, Indoor Speaker Strobe, White, Ceiling-Mount, Type II, no letter, amber lens
580-065-00, Indoor Speaker Strobe, no letter, amber lens
Indoor Speaker Strobe, 580-05x-xx, 580-06x-00, 580-07x-00, 580-081-02
580-068-00, Indoor Speaker Strobe, White, Wall-Mount, Type II

580-074-00, Indoor Speaker Strobe, 8 in., White, Ceiling-Mount, Type II, no letter, amber lens
580-075-00, Outdoor Speaker Strobe, White, Wall-Mount, 180cd, Type II, no letter, amber lens
Indoor Speaker Strobe, 580-05x-xx, 580-06x-00, 580-07x-00, 580-081-02
580-077-00, Indoor Speaker Strobe, White, Ceiling-Mount, Type II, no letters, amber lens
580-078-00, Outdoor Speaker Strobe, weatherproof, ALERT letter, clear lens
Indoor Speaker Strobe, 580-05x-xx, 580-06x-00, 580-07x-00, 580-081-02
580-079-00, Indoor Speaker Strobe, Self-Amp, White, Ceiling-Mount, Type II, ALERT letter, clear lens
580-081-00, Indoor Speaker Strobe, White, Wall-Mount, Type II, ALERT letter, clear lens
Indoor Speaker Strobe, 580-05x-xx, 580-06x-00, 580-07x-00, 580-081-02
580-087-00, Outdoor Speaker Strobe, White, Wall-Mount, Type I, FIRE letter, clear lens
580-088-00, Outdoor Speaker Strobe, Red, Wall-Mount, Type I, FIRE letter, clear lens
580-099-00, Indoor Speaker Strobe, White, Ceiling-mount, Type I, FIRE letter, clear lens
580-104-00, Indoor Speaker Strobe, White, Ceiling-Mount, Type I, no letter, clear lens
580-105-00, Outdoor Speaker Strobe, White, Wall-Mount, Type I, ALERT letter, clear lens
580-106-00, Outdoor Speaker Strobe, White, Ceiling-Mount, Type I, ALERT letter, clear lens
580-107-00, Indoor Speaker Strobe, Red, Wall-Mount, Type I, FIRE letter, clear lens
580-108-00, Indoor Speaker Strobe, White, Wall-Mount, Type I, FIRE letter, clear lens
Univ Expander Plate, 369-036-00
Univ Expander Plate, 369-037-00
580-110-00, Indoor Speaker Strobe, White, Wall-Mount, Type I, ALERT letter, amber lens
580-111-00, Indoor Speaker Strobe, White, Wall-Mount, Type I, ALERT letter, clear lens
Univ Expander Plate, 369-036-00
Univ Expander Plate, 369-037-00
580-112-00, Indoor Speaker Strobe, White, Ceiling-Mount, Type I, ALERT letter, clear lens
580-113-00, Indoor Speaker Strobe, White, Ceiling-Mount, Type I, no letter, clear lens
580-114-00, Indoor Speaker Strobe, White, Wall-Mount, Type I, no letter, clear lens
Univ Expander Plate, 369-036-00
Univ Expander Plate, 369-037-00
580-115-00, Indoor Speaker Strobe, Red, Wall-Mount, Type I, no letter, clear lens
580-117-00, Speaker Strobe for Hazardous Locations, black housing with blue lens
580-117-01, Speaker Strobe LED, Hazardous Locations, black housing, low profile blue lens
580-117-02, Speaker Strobe LED, Hazardous Locations, black housing, low profile amber lens
580-117-03, Speaker Strobe LED, Hazardous Locations, black housing, low profile clear lens
580-118-00, Indoor Speaker Strobe, White, Ceiling-Mount, Type I, FIRE letter, clear lens
580-119-00, Drop-in Speaker Strobe, White, Ceiling-mount Tile, Type I
580-120-00, Indoor Speaker Strobe, White, Ceiling Mount, Type II, FIRE letter, clear lens
581-422-00, Motorized 6 in. Vibrating Alarm Bell
581-423-00, Vibrating Alarm Bell, Explosion Proof, 6 in.
Alarm Bell, 581-423-00, 581-451-00
581-451-00, Vibrating Alarm Bell, Explosion Proof, 8 in.
Alarm Bell, 581-423-00, 581-451-00
581-473-00, Motorized 10 in. Vibrating Alarm Bell
585-018-00, Indoor Horn Strobe, Multitone, Red, Wall-Mount, Type II, FIRE letter, clear lens
585-059-00, Outdoor Horn Strobe, Red, Wall-Mount, Type II, multitone, clear lens
585-065-00, Indoor Horn Strobe, 4-Wire, Red, Wall-Mount, Type II, multitone, clear lens
585-067-01, Outdoor Horn, Red, Wall-Mount, Type I, no letter
585-068-00, Outdoor Horn Strobe, 4-Wire, Red, Wall-Mount, Type I, FIRE letter, clear lens
585-069-00, Outdoor Horn Strobe, Red, Wall-Mount, Type I, FIRE letter, clear lens
585-081-00, Indoor Mini Horn, Red, Wall-Mount, Type I
585-097-00, Outdoor Horn Strobe, White, High Candela, Wall-Mount, Type I, FIRE letter, clear lens

585-097-01, Outdoor Horn Strobe, Red, High Candela, Wall-Mount, Type I, FIRE letter, clear lens
585-098-00, Indoor Horn Strobe, Red, Wall-Mount, Type I, FIRE letter, clear lens
585-099-00, Indoor Horn Strobe, Red, Ceiling-Mount, Type I, FIRE letter, clear lens
585-100-00, Indoor Horn, Red, Wall-Mount, Type I, no letter
Univ Expander Plate, 369-036-00
Univ Expander Plate, 369-037-00
585-101-00, Indoor Horn Strobe, Red, Wall-Mount, Type I, no letter, clear lens
585-102-00, Indoor Horn Strobe, White, Wall-Mount, Type I, FIRE letter, clear lens
Univ Expander Plate, 369-036-00
Univ Expander Plate, 369-037-00
585-103-00, Indoor Horn Strobe, White, Wall-Mount, Type I, no letter, clear lens
Univ Expander Plate, 369-036-00
Univ Expander Plate, 369-037-00
585-104-00, Indoor Horn, White, Wall-Mount, Type I, no letter
Univ Expander Plate, 369-036-00
Univ Expander Plate, 369-037-00
585-105-00, Indoor Horn Strobe, White, Ceiling-Mount, Type I, FIRE letter, clear lens
585-106-00, Indoor Horn Strobe, 4-wire, White, Wall-Mount, Type I, FIRE letter, clear lens
585-107-00, Indoor Horn Strobe, 4-wire, Red, Wall-Mount, Type I, FIRE letter, clear lens
585-108-00, Indoor Horn Strobe, 4-wire, White, Ceiling-Mount, Type I, FIRE letter, clear lens
585-109-00, Indoor Horn Strobe, Red, 4-Wire, Ceiling-Mount, Type I, FIRE letter, clear lens
585-110-00, Indoor/Outdoor Explosion-proof Horn, Red
585-111-00, Explosion-proof Horn Strobe, Hazardous Location, grey with clear lens
587-008-00, Indoor Chime Strobe, Red, Wall-Mount, Type I, no letter, clear lens
587-009-00, Indoor Chime, Red, Wall-Mount, Type I, no letter
588-000-01, Back Box, weatherproof
Alarm Bell, 581-422-00, 581-473-00
588-005-00, Back Box, surface-mount
Alarm Bell, 581-422-00, 581-473-00
Indoor Horn Strobe, 4-Wire, 585-065-00
Indoor Strobe Plate, 367-049-00
588-006-00, Adaptor Plate
Alarm Bell, 581-422-00, 581-473-00
588-013-01, Back Box, surface-mount
Indoor Speaker Strobe, 580-05x-xx, 580-06x-00, 580-07x-00, 580-081-02
Indoor Speaker Strobe, 580-079-00
Indoor Speaker Strobe, 580-081-00
Indoor Speaker Strobe, 580-120-00
588-014-00, Back Box, surface-mount
Indoor Horn Strobe, 4-Wire, 585-065-00
Outdoor Horn Strobe, 585-059-00
588-021-00, Back Box, surface-mount
Indoor Strobe, 367-075-00
Indoor Strobe, 367-089-00
Indoor Strobe, 367-090-00
588-026-00, Back Box, surface-mount
Outdoor Strobe, 367-050-00
588-026-01, Back Box, surface-mount
Indoor/Outdoor Strobe, 367-050-10
Strobe, 367-096-00

588-027-00, 4 in. speaker support tile bridge
Indoor Speaker Strobe, 580-064-00
Indoor Speaker Strobe, 580-077-00
Indoor Speaker Strobe, 580-079-00
Indoor Speaker Strobe, 580-120-00
Speaker Strobe, Indoor, 580-062-00

588-028-00, Back Box, surface mount
Indoor Speaker Strobe, 580-05x-xx, 580-06x-00, 580-07x-00, 580-081-02
Outdoor Speaker Strobe, 580-075-00
Outdoor Speaker Strobe, 580-078-00

588-033-00, Back Box, surface-mount
Indoor Speaker Strobe, 580-068-00

588-038-00, Back Box, Metal, wall-mount
Outdoor Horn Strobe, 585-068-00
Outdoor Horn Strobe, 585-069-00
Outdoor Horn Strobe, 585-097-01
Outdoor Horn, 585-067-01
Outdoor Strobe, 367-066-00

588-055-00, Back box, Metal Option, Wall- or Ceiling-mount, White
Speaker, 124-069-00

588-056-00, Back Box, Metal, wall-mount
Outdoor Speaker Strobe, 580-087-00
Outdoor Speaker Strobe, 580-105-00
Speaker, 124-072-00

588-056-01, Back Box, Metal, wall-mount
Outdoor Speaker Strobe, 580-088-00
Outdoor Speaker, 124-072-50

588-059-00, Trim Ring, White
Outdoor Horn Strobe, 585-097-00
Outdoor Speaker Strobe, 580-087-00
Outdoor Speaker Strobe, 580-105-00
Outdoor Strobe, 367-066-01
Outdoor Strobe, 367-066-02
Outdoor Strobe, 367-066-03
Speaker, 124-072-00

588-059-50, Trim Ring, Red
Outdoor Horn Strobe, 585-068-00
Outdoor Horn Strobe, 585-069-00
Outdoor Horn Strobe, 585-097-01
Outdoor Horn, 585-067-01
Outdoor Speaker Strobe, 580-088-00
Outdoor Speaker, 124-072-50
Outdoor Strobe, 367-066-00

588-060-00, Trim Ring, White
Indoor Speaker Strobe, 580-104-00
Outdoor Speaker Strobe, 580-106-00

588-061-00, Back Box, surface-mount
Weatherproof Horn Speaker, 124-042-00

588-076-00, Replacement Plate for 725-602-00
Conv Carbon Monoxide Detector, 725-602-00, 725-602-01

588-077-00, Back Box, Metal, wall-mount
Outdoor Horn Strobe, 585-097-00
Outdoor Strobe, 367-066-01
Outdoor Strobe, 367-066-02
Outdoor Strobe, 367-066-03
588-082-00, Back Box, surface-mount
Conv Pull Station, 708-031-00
588-083-00, Back Box, weatherproof
Conv Pull Station, 708-031-00
588-089-00, Back Box, Metal, ceiling-mount
Outdoor Speaker Strobe, 580-106-00
Selectable Output Speaker, 124-098-00
588-090-00, Back Box, surface-mount
Indoor Chime Strobe, 587-008-00
Indoor Chime, 587-009-00
Indoor Horn Strobe, 585-098-00
Indoor Horn Strobe, 585-101-00
Indoor Horn Strobe, 585-107-00
Indoor Horn, 585-100-00
Indoor Strobe, 367-097-00
Indoor Strobe, 367-104-00
588-091-00, Back Box, wall-mount
Indoor Horn Strobe, 585-102-00
Indoor Horn Strobe, 585-103-00
Indoor Horn Strobe, 585-106-00
Indoor Horn, 585-104-00
Indoor Strobe, 367-098-00
Indoor Strobe, 367-099-00
Indoor Strobe, 367-100-00
Indoor Strobe, 367-101-00
Univ Expander Plate Backbox Skirt, 588-101-00
Univ Expander Plate, 369-036-00
Univ Expander Plate, 369-037-00
588-092-00, Back Box, wall-mount
Indoor Speaker Strobe, 580-107-00
Indoor Speaker Strobe, 580-115-00
Indoor Speaker, 124-092-00
588-093-00, Back Box, wall-mount
Indoor Speaker Strobe, 580-108-00
Indoor Speaker Strobe, 580-110-00
Indoor Speaker Strobe, 580-111-00
Indoor Speaker Strobe, 580-114-00
Indoor Speaker, 124-091-00
Univ Expander Plate Backbox Skirt, 588-101-00
Univ Expander Plate, 369-036-00
Univ Expander Plate, 369-037-00

588-094-00, Back Box, surface mount
- Indoor Horn Strobe, 585-105-00
- Indoor Horn Strobe, 585-108-00
- Indoor Speaker Strobe, 580-112-00
- Indoor Speaker Strobe, 580-113-00
- Indoor Speaker Strobe, 580-118-00
- Indoor Speaker, 124-094-00
- Indoor Strobe, 367-103-00
- Indoor Strobe, 367-105-00

588-095-00, Trim Ring, White
- Indoor Horn Strobe, 585-105-00
- Indoor Horn Strobe, 585-108-00
- Indoor Speaker Strobe, 580-112-00
- Indoor Speaker Strobe, 580-113-00
- Indoor Speaker Strobe, 580-118-00
- Indoor Speaker, 124-094-00
- Indoor Strobe, 367-103-00
- Indoor Strobe, 367-105-00

588-096-00, Trim Ring, Red
- Indoor Horn Strobe, 585-099-00
- Indoor Horn Strobe, 585-109-00
- Indoor Speaker, 124-093-00
- Indoor Strobe, 367-102-00

588-097-00, Back Box, surface-mount
- Indoor Horn Strobe, 585-099-00
- Indoor Horn Strobe, 585-109-00
- Indoor Speaker, 124-093-00
- Indoor Strobe, 367-102-00

588-098-00, Trim Ring, Red
- Indoor Chime Strobe, 587-008-00
- Indoor Chime, 587-009-00
- Indoor Horn Strobe, 585-098-00
- Indoor Horn Strobe, 585-101-00
- Indoor Horn Strobe, 585-107-00
- Indoor Horn, 585-100-00
- Indoor Speaker Strobe, 580-107-00
- Indoor Speaker Strobe, 580-115-00
- Indoor Speaker, 124-092-00
- Indoor Strobe, 367-097-00
- Indoor Strobe, 367-104-00

588-099-00, Trim Ring, White
Indoor Horn Strobe, 585-102-00
Indoor Horn Strobe, 585-103-00
Indoor Horn Strobe, 585-106-00
Indoor Horn, 585-104-00
Indoor Speaker Strobe, 580-108-00
Indoor Speaker Strobe, 580-110-00
Indoor Speaker Strobe, 580-111-00
Indoor Speaker Strobe, 580-114-00
Indoor Speaker, 124-091-00
Indoor Strobe, 367-098-00
Indoor Strobe, 367-099-00
Indoor Strobe, 367-100-00
Indoor Strobe, 367-101-00

588-100-00, Bracket, Tile Support
Indoor Speaker, 124-095-00

588-101-00, Univ Expander Plate Back Box Skirt, White, Wall-mount
Univ Expander Plate, 369-036-00
Univ Expander Plate, 369-037-00

588-102-00, Back Box, surface mount
Conv Pull Station, 708-026-01

588-103-00, Hub Cover, 3/4 in.
Conv Heat Detect, 721-110-00
Conv Heat Detector, 721-109-00

589-003-00, Decals, Red
Outdoor Strobe, 367-066-01
Speaker, 124-072-00

589-004-00, Decals, Red
Indoor Speaker Strobe, 580-104-00
Outdoor Speaker Strobe, 580-106-00

589-005-00, Decals, White
Outdoor Horn Strobe, 585-068-00
Outdoor Horn, 585-067-01
Outdoor Speaker, 124-072-50

589-007-00, Bezel, red, AGENT letter
Indoor Horn Strobe, 585-099-00
Indoor Horn Strobe, 585-109-00
Indoor Strobe, 367-102-00

589-008-00, Bezel, white, no letter
Indoor Horn Strobe, 585-105-00
Indoor Horn Strobe, 585-108-00
Indoor Strobe, 367-103-00
Indoor Strobe, 367-105-00

589-009-00, Bezel, red, ALERT letter
Indoor Horn Strobe, 585-099-00
Indoor Horn Strobe, 585-109-00
Indoor Strobe, 367-102-00

589-010-00, Bezel, red, EVAC letter
Indoor Horn Strobe, 585-099-00
Indoor Horn Strobe, 585-109-00
Indoor Strobe, 367-102-00

589-012-00, Bezel, red, no letter
Indoor Horn Strobe, 585-099-00
Indoor Horn Strobe, 585-109-00
Indoor Strobe, 367-102-00
589-013-00, Bezel, white, AGENT letter
Indoor Horn Strobe, 585-105-00
Indoor Horn Strobe, 585-108-00
Indoor Strobe, 367-103-00
Indoor Strobe, 367-105-00
589-014-00, Bezel, white, ALERT letter
Indoor Horn Strobe, 585-105-00
Indoor Horn Strobe, 585-108-00
Indoor Strobe, 367-103-00
Indoor Strobe, 367-105-00
589-015-00, Bezel, white, EVAC letter
Indoor Horn Strobe, 585-105-00
Indoor Horn Strobe, 585-108-00
Indoor Strobe, 367-103-00
Indoor Strobe, 367-105-00
589-016-00, Bezel, white, FIRE letter
Indoor Strobe, 367-105-00
589-017-00, Bezel, red, AGENT letter
Indoor Speaker Strobe, 580-115-00
589-018-00, Bezel, red, ALERT letter
Indoor Speaker Strobe, 580-115-00
589-019-00, Bezel, red, EVAC letter
Indoor Speaker Strobe, 580-115-00
589-020-00, Bezel, red, FIRE letter
Indoor Speaker Strobe, 580-115-00
589-021-00, Bezel, red, no letter
Indoor Speaker Strobe, 580-107-00
589-022-00, Bezel, white, AGENT letter
Indoor Speaker Strobe, 580-114-00
589-023-00, Bezel, white, ALERT letter
Indoor Speaker Strobe, 580-114-00
589-024-00, Bezel, white, EVAC letter
Indoor Speaker Strobe, 580-114-00
589-025-00, Bezel, white, FIRE letter
Indoor Speaker Strobe, 580-114-00
589-026-00, Bezel, white, no letter
Indoor Speaker Strobe, 580-108-00
Indoor Speaker Strobe, 580-110-00
Indoor Speaker Strobe, 580-111-00
589-027-00, Bezel, white, EVAC letter
Indoor Speaker Strobe, 580-113-00
589-031-00, Bezel, white, AGENT letter
Indoor Speaker Strobe, 580-113-00
589-032-00, Bezel, white, ALERT letter
Indoor Speaker Strobe, 580-113-00
589-033-00, Bezel, white, FIRE letter
Indoor Speaker Strobe, 580-113-00

589-034-00, Bezel, white, no letter
Indoor Speaker Strobe, 580-112-00
589-037-00, Bezel, white, AGENT letter
Indoor Horn Strobe, 585-103-00
Indoor Horn Strobe, 585-106-00
Indoor Horn, 585-104-00
Indoor Strobe, 367-101-00
589-038-00, Bezel, white, ALERT letter
Indoor Horn Strobe, 585-103-00
Indoor Horn Strobe, 585-106-00
Indoor Horn, 585-104-00
Indoor Strobe, 367-101-00
Univ Expander Plate, 369-036-00
589-039-00, Bezel, white, EVAC letter
Indoor Horn Strobe, 585-103-00
Indoor Horn Strobe, 585-106-00
Indoor Horn, 585-104-00
Indoor Strobe, 367-101-00
Univ Expander Plate, 369-036-00
589-040-00, Bezel, white, FIRE letter
Indoor Horn Strobe, 585-103-00
Indoor Horn, 585-104-00
Indoor Strobe, 367-101-00
Univ Expander Plate, 369-036-00
589-041-00, Bezel, white, no letter
Indoor Horn Strobe, 585-102-00
Indoor Horn Strobe, 585-106-00
Indoor Strobe, 367-098-00
Indoor Strobe, 367-099-00
Indoor Strobe, 367-100-00
589-042-00, Bezel, red, AGENT letter
Indoor Chime Strobe, 587-008-00
Indoor Chime, 587-009-00
Indoor Horn Strobe, 585-101-00
Indoor Horn Strobe, 585-107-00
Indoor Horn, 585-100-00
Indoor Strobe, 367-104-00
589-043-00, Bezel, red, ALERT letter
Indoor Chime Strobe, 587-008-00
Indoor Chime, 587-009-00
Indoor Horn Strobe, 585-101-00
Indoor Horn Strobe, 585-107-00
Indoor Horn, 585-100-00
Indoor Strobe, 367-104-00
589-044-00, Bezel, red, EVAC letter
Indoor Chime Strobe, 587-008-00
Indoor Chime, 587-009-00
Indoor Horn Strobe, 585-101-00
Indoor Horn Strobe, 585-107-00
Indoor Horn, 585-100-00
Indoor Strobe, 367-104-00

589-045-00, Bezel, red, FIRE letter
Indoor Chime Strobe, 587-008-00
Indoor Chime, 587-009-00
Indoor Horn Strobe, 585-101-00
Indoor Horn, 585-100-00
Indoor Strobe, 367-104-00
589-046-00, Bezel, red, no letter
Indoor Horn Strobe, 585-098-00
Indoor Horn Strobe, 585-107-00
Indoor Strobe, 367-097-00
589-047-00, Replacement tube, Xenon strobe
Explosion-proof Horn Strobe, 585-111-00
620-023-00, Coax Cable bulk
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x
620-026-00, Cable, 50 Ohm, Low Loss
620-029-00, Coaxial Cable, 50 Ohm, 1/4 in. Heliax, Superflex
620-030-00, Coaxial Cable, 50 Ohm, 1/2 in. Heliax, Superflex
620-031-00, Coaxial Cable, 50 Ohm, 1/2 in. Heliax, LDF
620-032-00, Coaxial Cable, 50 Ohm, 5/8 in. Heliax, LDF
620-033-00, Coaxial Cable, 50 Ohm, 7/8 in. Heliax, Foam
621-020-00, Cable, FPLR 2-conductor 18 AWG
Cable, 621-02x-00 621-040-00 621-06x-00 621-07x-00
621-022-00, Cable, FPLR 2-conductor 14 AWG
Cable, 621-02x-00 621-040-00 621-06x-00 621-07x-00
621-025-00, 22 AWG 4-wire cable, twisted pair with drain and shield
MAAP-X LOC Keypad, 710-072-51 710-072-52
MAAP-X LOC/RDU, 710-072-01 710-072-02
Remote Display Unit, 710-070-01,710-070-02
621-026-00, Cable for audio, control, communications, instrumentation
621-040-00, Cable, FPLR 4-conductor 18 AWG
Cable, 621-02x-00 621-040-00 621-06x-00 621-07x-00
621-060-00, Cable, FPLR 6-conductor 18 AWG
Cable, 621-02x-00 621-040-00 621-06x-00 621-07x-00
621-062-00, Cable, FPLR 4-conductor 14 AWG
Cable, 621-02x-00 621-040-00 621-06x-00 621-07x-00
621-063-00, Cable, FPLP 2-conductor 18 AWG
Cable, 621-02x-00 621-040-00 621-06x-00 621-07x-00
621-064-00, Cable, FPLP 4-conductor 18 AWG
Cable, 621-02x-00 621-040-00 621-06x-00 621-07x-00
621-065-00, Cable, FPLP 6-conductor 18 AWG
Cable, 621-02x-00 621-040-00 621-06x-00 621-07x-00
621-066-00, Cable, FPLP 2-conductor 14 AWG
Cable, 621-02x-00 621-040-00 621-06x-00 621-07x-00
621-067-00, Cable, FPLP 4-conductor 14 AWG
Cable, 621-02x-00 621-040-00 621-06x-00 621-07x-00
621-068-00, Cable, FPLR 2-conductor 12 AWG
Cable, 621-02x-00 621-040-00 621-06x-00 621-07x-00
621-069-00, Cable, FPLR 2-conductor 14 AWG
Cable, 621-02x-00 621-040-00 621-06x-00 621-07x-00
621-070-00, Cable, FPLR 2-conductor 16 AWG
Cable, 621-02x-00 621-040-00 621-06x-00 621-07x-00

621-071-00, Cable, FPLR 2-conductor 18 AWG
Cable, 621-02x-00 621-040-00 621-06x-00 621-07x-00
621-072-00, Cable, FPLP 2-conductor 16 AWG
Cable, 621-02x-00 621-040-00 621-06x-00 621-07x-00
621-073-00, Cable, FPLP 2-conductor 12 AWG
Cable, 621-02x-00 621-040-00 621-06x-00 621-07x-00
621-083-00, Cable, RS-485, Plenum
Cable, 621-083-00, 621-084-00
MAAP-X LOC Keypad, 710-072-51 710-072-52
MAAP-X LOC/RDU, 710-072-01 710-072-02
621-084-00, Cable, RS-485, Non-plenum
Cable, 621-083-00, 621-084-00
MAAP-X LOC Keypad, 710-072-51 710-072-52
MAAP-X LOC/RDU, 710-072-01 710-072-02
621-085-00, Wire, plenum, unshielded, 1,000 ft.
D-21 Station Alerting System Color Annunciator, 710-073-00, 710-073-01, 369-035-00, 369-035-01
624-015-00, Cable for D-21 Weather Station
D-21 Incident and EM Mgmnt, 227-010-xx, 227-011-xx, 227-012-xx, 227-020-xx
624-026-00, Cable, CAT5E 4-conductor 24 AWG
624-034-00, CAT 6 Cable, non-plenum, green jacket, 23 AWG
Cable CAT6, 624-03x-00 624-04x-00
Cable CAT6A, 624-050-00
624-035-00, CAT 6 Cable, non-plenum, purple jacket, 23 AWG
Cable CAT6, 624-03x-00 624-04x-00
Cable CAT6A, 624-050-00
624-036-00, CAT 6 Cable, non-plenum, yellow jacket, 23 AWG
Cable CAT6, 624-03x-00 624-04x-00
Cable CAT6A, 624-050-00
624-037-00, CAT 6 Cable, non-plenum, white jacket, 23 AWG
Cable CAT6, 624-03x-00 624-04x-00
Cable CAT6A, 624-050-00
624-039-00, CAT 6 Cable, non-plenum, blue jacket, 23 AWG
Cable CAT6, 624-03x-00 624-04x-00
Cable CAT6A, 624-050-00
624-044-00, CAT 6 Cable, plenum, green jacket, 23 AWG
Cable CAT6, 624-03x-00 624-04x-00
Cable CAT6A, 624-050-00
624-045-00, CAT 6 Cable, plenum, purple jacket, 23 AWG
Cable CAT6, 624-03x-00 624-04x-00
Cable CAT6A, 624-050-00
624-046-00, CAT 6 Cable, plenum, yellow jacket, 23 AWG
Cable CAT6, 624-03x-00 624-04x-00
Cable CAT6A, 624-050-00
624-047-00, CAT 6 Cable, plenum, white jacket, 23 AWG
Cable CAT6, 624-03x-00 624-04x-00
Cable CAT6A, 624-050-00
624-049-00, CAT 6 Cable, plenum, blue jacket, 23 AWG
Cable CAT6, 624-03x-00 624-04x-00
Cable CAT6A, 624-050-00
624-050-00, CAT6A Cable, OSP Broadband, black jacket, 23 AWG
Cable CAT6, 624-03x-00 624-04x-00

625-100-00, Coax Cable, Type II, preassembled, 20 ft.
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x
625-100-01, Coax Cable, Type II, preassembled, 40 ft.
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x
625-100-02, Coax Cable, Type II, preassembled, 60 ft.
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x
625-100-03, Coax Cable, Type II, preassembled, 80 ft.
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x
625-100-04, Coax Cable, Type II, preassembled, 100 ft.
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x
625-100-05, Coax Cable, Type II, preassembled, 2 ft.
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x
625-100-06, Coax Cable, Type II, preassembled, 15 ft.
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x
625-111-00, RFM to Device Server Serial Cable
Device Server, 204-004-00
625-123-01, RFM-X RS-232/power 100 Base-T server cable
Device Server, 204-004-00
RFM-XH Modem, 227-323-00
RFM-XHR Modem, 227-317-xx
625-178-00, Live Voice Radio Switch to VoIP Module Audio Input Cable
Live Voice Input Radio Switch, 194-541-01
625-178-01, VoIP Module to Sound Card Cable
Live Voice Input Radio Switch, 194-541-01
625-179-00, VoIP Module Audio to RFM-X Module Audio Converter Cable
Live Voice Input Radio Switch, 194-541-01
625-179-01, VoIP Module Audio to Radio Switch Audio Converter Cable
Live Voice Input Radio Switch, 194-541-01
625-214-00, King-Fisher Interface Cable and Bracket
RFM King-Fisher Assembly, 227-333-NR
626-000-01, Coax Cable, Type I, preassembled, 60 ft.
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x
626-000-02, Coax Cable, Type I, preassembled, 40 ft.
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x
626-000-03, Coax Cable, Type I, preassembled, 80 ft.
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x
626-000-04, Coax Cable, Type I, preassembled, 100 ft.
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x
626-000-05, Coax Cable, Type I, preassembled, 20 ft.
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x
626-000-06, Coax Cable, Type I, preassembled, 15 ft.
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x
626-000-07, Coax Cable, Type I, preassembled, 5 ft.
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x
626-071-00, Adaptor N female to UHF male
Wattmeter Kit, 290-050-01
626-096-00, AC Power Cord, European
KVMA Extender Kit, 200-476-01, 200-476-02
626-098-00, AC Power Cord, UK
KVMA Extender Kit, 200-476-01, 200-476-02

626-099-00, Type L Cord Jumper
KVMA Extender Kit, 200-476-01, 200-476-02
626-266-00, BT-X 24 in. Cable
BT2 to BT-X Conversion Kit, 227-647-xx
626-277-00, USB Cable, Sound Card to USB Hub
Live Voice Input Radio Switch, 194-541-01
629-003-00, Cable Termination Kit, N male connector for 1/2 in. Heliax
Coaxial Cable, 620-031-00
629-004-00, Cable Termination Kit for 5/8 in.
Coaxial Cable, 620-032-00
629-005-00, Cable Termination Kit
Coaxial Cable, 620-033-00
630-011-00, BT-XS Keypad Interface Harness
BT-XS Security, 227-6xx-xx
640-540-01, XLR Adaptor for Desktop Microphone in Two-way Audio Communication
Door Station Camera, 192-296-01
643-526-00, Adaptor, Right-Angle BNC male to BNC female
Coaxial Cable, 620-026-00
Coaxial Cable, 620-029-00
Coaxial Cable, 620-030-00
Coaxial Cable, 620-031-00
Coaxial Cable, 620-032-00
Coaxial Cable, 620-033-00
643-527-00, Connector, crimp, Type BNC male
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x
643-529-00, Adaptor Straight BNC male to PL-259 Female
Coaxial Cable, 620-026-00
643-530-00, Coaxial Cable Connector Kit, PL-259 male
Coaxial Cable, 620-026-00
643-531-00, Connector Crimp, PL-259 male
Coaxial Cable, 620-026-00
643-545-00, Connector Compression N male
Coaxial Cable, 620-029-00
643-546-00, Connector Compression BNC male
Coaxial Cable, 620-029-00
643-547-00, Connector Solder PL-259
Coaxial Cable, 620-029-00
643-548-00, Adaptor, Straight BNC male to N female
Coaxial Cable, 620-026-00
Coaxial Cable, 620-029-00
Coaxial Cable, 620-030-00
Coaxial Cable, 620-031-00
Coaxial Cable, 620-032-00
Coaxial Cable, 620-033-00
643-549-00, Connector Compression N male
Coaxial Cable, 620-030-00
643-553-00, Connector, crimp, Type PL-259 male
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x

643-554-00, Adaptor, PL-259 Female to N Male
UHF Collinear Omnidirectional Antennas, 190-241-00, 190-242-00, 190-243-00
UHF Omni Antenna, 190-216-xx, 190-403-xx, 190-409-xx, 190-417-xx
VHF Collinear Omnidirectional Antennas, 190-244-00, 190-245-00, 190-246-00, 190-247-00
VHF Omni Antenna, 190-211-0x, 190-212-00, 190-400-00, 190-418-xx
VHF Yagi Directional Antenna, 190-401-xx

643-555-00, Connector Crimp
Coaxial Cable, 620-026-00

643-556-00, Connector, crimp, Type N male
Coaxial Cable, 50 Ohm, Mini RG-8X, 620-023-00, 625-100-0x, 626-000-0x

643-557-00, Connector Compression
Coaxial Cable, 620-026-00

643-569-00, Adaptor, Straight N female to PL-259 male
Coaxial Cable, 620-029-00
Coaxial Cable, 620-030-00
Coaxial Cable, 620-031-00
Coaxial Cable, 620-032-00
Coaxial Cable, 620-033-00

643-572-00, Connector 1/2 in heliax male positive stop
Coaxial Cable, 620-031-00

643-573-00, Connector Compression N male for 5/8 in.
Coaxial Cable, 620-032-00

643-574-00, Connector Compression N male for 7/8 in.
Coaxial Cable, 620-033-00

649-118-00, USB to RS-232 serial port adaptor
BT-X Planner, 207-607-00
BT-XM In-Bldg Mass Notification Communicator, 227-621-xx 227-622-xx, 227-623-xx
M Conventional Planner Kit, 207-813-00
M+ Point Report Addr FACP, 227-85x-xx, 227-86x-xx
MAAP-X Planner, 207-625-00
MAP+ Planner, 207-617-00

661-000-00, Ground Rod
Lightning Arrestors and Kits, 198-021-xx, 198-022-xx

661-001-00, Ground Rod Clamp
Lightning Arrestors and Kits, 198-021-xx, 198-022-xx

661-002-00, Copper threaded base

661-004-00, Copper mounting base

665-535-00, Ceiling-mount Junction Box for LED Light Stack
D-21 Station Alerting System Color Annunciator, 710-073-00, 710-073-01, 369-035-00, 369-035-01

700-101-00, MAAP-X Sub-Panel Assembly

703-161-00, MNS Push Button
MNS Panels, 703-228-00, 703-228-01

703-163-00, Audio Splitter
Audio Booster Panels, 703-16x-00 703-20x-00
MNS Panels, 703-228-00, 703-228-01

703-164-00, Audio Booster 160W, 120 VAC
Audio Booster Panels, 703-16x-00 703-20x-00
MNS Panels, 703-228-00, 703-228-01

703-165-00, Audio Booster 320W, 120 VAC
Audio Booster Panels, 703-16x-00 703-20x-00
MNS Panels, 703-228-00, 703-228-01

703-166-00, Volume Control
Audio Booster Panels, 703-16x-00 703-20x-00
MNS Panels, 703-228-00, 703-228-01
703-167-00, Audio Booster 80W, 120 VAC
Audio Booster Panels, 703-16x-00 703-20x-00
MNS Panels, 703-228-00, 703-228-01
703-168-00, Remote Microphone Expander
MNS Panels, 703-228-00, 703-228-01
703-169-00, Remote Microphone
MNS Panels, 703-228-00, 703-228-01
703-171-00, Addressable Splitter
MNS Panels, 703-228-00, 703-228-01
703-172-00, Telephone Controller
MNS Panels, 703-228-00, 703-228-01
703-181-00, Message Kit
MNS Panels, 703-228-00, 703-228-01
703-188-00, Remote Microphone and LOC, surface-mount
MNS Panels, 703-228-00, 703-228-01
703-192-00, Speaker Splitter Mounting Bracket
Audio Booster Panels, 703-16x-00 703-20x-00
MNS Panels, 703-228-00, 703-228-01
703-193-00, Remote Microphone and LOC, flush-mount
MNS Panels, 703-228-00, 703-228-01
703-194-00, HVAC Emergency Shut-Off Switch
MNS Panels, 703-228-00, 703-228-01
703-206-00, Audio Booster 160W, 240 VAC
Audio Booster Panels, 703-16x-00 703-20x-00
MNS Panels, 703-228-00, 703-228-01
703-207-00, Audio/Strobe Booster 80W, 240 VAC
Audio Booster Panels, 703-16x-00 703-20x-00
MNS Panels, 703-228-00, 703-228-01
703-208-00, Audio Booster 320W, 240 VAC
Audio Booster Panels, 703-16x-00 703-20x-00
MNS Panels, 703-228-00, 703-228-01
703-228-00, Single Channel, 40W, MNS Panel, 120 VAC
MNS Panels, 703-228-00, 703-228-01
703-228-01, Single Channel, 40W, MNS Panel, 240 VAC
MNS Panels, 703-228-00, 703-228-01
703-238-00, USB to XLR Adaptor for Desktop Microphone in Two-way Audio Communication
Door Station Camera, 192-296-01
708-015-01, Fire Alarm Pull Station
Conv Pull Station, 708-015-01, 708-015-03
708-015-03, Foam Release Fire Alarm Pull Station
Conv Pull Station, 708-015-01, 708-015-03
708-022-00, Conventional Pull Station, Single Action, SPST, NO wire leads
708-025-01, Conventional Pull Station, Single Action, Single Pole
708-025-03, Conventional Pull Station, Single Action, DPST
708-026-01, Conventional Pull Station, Double Action, Single Pole
708-031-00, Conventional Pull Station, Double/Single Action, Single Pole
708-032-01, HVAC Shutdown Kit
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
MAAP-X LOC Keypad, 710-072-51 710-072-52
MAAP-X LOC/RDU, 710-072-01 710-072-02

709-020-00, Weatherproofing gasket
HVAC Shutdown Kit, 708-032-01
709-023-00, Surface-mount Spacer
HVAC Shutdown Kit, 708-032-01
709-024-00, Spacer conduit knockout gasket
HVAC Shutdown Kit, 708-032-01
709-026-00, Back Box, surface-mount
Conv Pull Station 708-022-00
Conv Pull Station, 708-025-01
Conv Pull Station, 708-025-03
709-029-00, Back Box, weatherproof
Conv Pull Station 708-022-00
Conv Pull Station, 708-025-01
Conv Pull Station, 708-025-03
709-031-00, Backplate
HVAC Shutdown Kit, 708-032-01
709-034-00, Trim Ring
Conv Pull Station, 708-026-01
709-046-00, Plastic breakrod
Conv Pull Station, 708-031-00
709-047-00, Locator Light Kit
BT-XF Pull Station, Single Action, 227-665-xx
710-054-01, Remote Text Annunciator
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
MAAP-X Upgrade, 227-912-xx
710-057-00, Emergency Message Display
710-070-01, Remote Display Unit, surface-mount
710-070-02, Remote Display Unit, flush-mount
710-072-01, MAAP-X LOC/RDU Touch Screen, surface-mount
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
MAAP-X Expansion Backplane, 176-273-99
MAAP-X LOC/RDU, 710-072-01 710-072-02
MAAP-X Sub-Panel, 700-101-00
MAAP-X Upgrade, 227-912-xx
710-072-02, MAAP-X LOC/RDU Touch Screen, flush-mount
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
MAAP-X Expansion Backplane, 176-273-99
MAAP-X LOC/RDU, 710-072-01 710-072-02
MAAP-X Sub-Panel, 700-101-00
MAAP-X Upgrade, 227-912-xx
710-072-51, MAAP-X LOC Keypad, MNS surface-mount
MAAP-X LOC Keypad, 710-072-51 710-072-52
710-072-52, MAAP-X LOC Keypad, MNS flush-mount
MAAP-X LOC Keypad, 710-072-51 710-072-52
710-073-00, Color Annunciator Controller, 240 VAC
D-21 Station Alerting System Color Annunciator, 710-073-00, 710-073-01, 369-035-00, 369-035-01
710-073-01, Color Annunciator Controller, 120 VAC
D-21 Station Alerting System Color Annunciator, 710-073-00, 710-073-01, 369-035-00, 369-035-01
710-075-01, MAAP-X Text Display, 24 VDC, two line, multicolor
Addr MAAP-X FAC MNS, 227-95x-xx, 227-96x-xx
MAAP-X Expansion Backplane, 176-273-99
MAAP-X Sub-Panel, 700-101-00
MAAP-X Upgrade, 227-912-xx

721-107-00, Conventional Heat Detector, 194F Fixed Temperature Rate Compensation
721-108-00, Conventional Heat Detector, 194F Fixed Temp Rate Compensation, weatherproof
721-109-00, Conventional Heat Detector, 135 Fixed Temp Rate Compensation, Explosion Proof
721-110-00, Conventional Heat Detector, 194F Fixed Temp Rate Compensation, Explosion Proof
721-117-00, Conventional Heat Detector, 135F Fixed Temperature Rate Compensation, weatherproof
721-122-00, Conventional Heat Detector, 135F Fixed Temperature Rate of Rise
721-123-00, Conventional Heat Detector, 135F Fixed Temperature Rate of Rise
721-125-00, Conventional Heat Detect, 135F Fixed Temperature/Rate Compensation
721-127-00, Conventional Heat Detector, 135 Fixed Temperature/Rate-of-Rise
721-128-00, Conventional Heat Detector, combo, 135F Fixed, Rate-of-Rise (dual circuit)
721-132-00, Conventional Heat Detector, 194F Fixed Temp Rate Compensation, weatherproof
721-133-00, Conventional Heat Detector, 135F Fixed Temp Rate Compensation, weatherproof
721-134-00, Addressable Intelligent Heat Detector, 135F Fixed Temp/ROR, AP/CLIP, Type II
721-404-00, Conventional Heat Detector, 190F Fixed Temperature Rate of Rise
721-405-00, Conventional Heat Detector, 200F Fixed Temperature/Rate Compensation
721-407-00, Conventional Heat Detector, 194F Fixed Temperature Rate of Rise
721-408-00, Conventional Heat Detector, 194F Fixed Rate of Rise
722-123-00, Conventional Heat Detector, 135F Fixed Temperature
722-125-00, Conventional Heat Detector, 2-wire mechanical dual circuit 135F Fixed Temp
722-127-00, Conventional Heat Detector, 135 Fixed Temperature
722-129-00, Heat Detector, 135°F Fixed Temperature, AP/CLIP, Type II
722-408-00, Conventional Heat Detector, 194F Fixed Temperature
722-409-00, Conventional Heat Detector, 2-wire mechanical dual circuit 194F Fixed Temp
722-413-00, Addressable Intelligent Heat Detector, 190°F Fixed High Temp, AP/CLIP, Type II
723-002-00, Conventional Smoke Detector, Duct, 2-/4-wire, Photoelectric
Conv Duct Smoke Detect, 723-369-00
723-003-00, Conventional Smoke Detector, 135F Fixed Temperature, 2/4-Wire, Photoelectric
723-340-00, Conv Smoke Detector, 2-wire
Conv Smoke Detector, 723-340-xx 723-508-xx
723-340-01, Conv Smoke Detector, photoelectric, 2-wire, 135 fixed temp
Conv Smoke Detector, 723-340-xx 723-508-xx
723-367-00, Conventional Duct Smoke Detector, photoelectric, 4-wire
723-368-00, Conventional Duct Smoke Detector, photoelectric 4-wire
723-369-00, Conventional Duct Smoke Detector, photoelectric, 2-wire
723-370-00, Duct Smoke Detector
Smoke Detector, AP/CLIP, Type II, 723-602-00
723-371-00, Duct Smoke Detector
Smoke Detector, AP/CLIP, Type II, 723-602-00
723-372-00, Conventional Duct Smoke Detector, Photoelectric, plug-in
Conv Duct Smoke Detect, 723-367-00
Conv Duct Smoke Detect, 723-368-00
723-373-00, Explosion-proof Smoke Detector, Optical
723-508-00, Conv Smoke Detector, 4-wire
Conv Smoke Detector, 723-340-xx 723-508-xx
723-508-01, Conv Smoke Detector, 4-wire, 135F fixed temp
Conv Smoke Detector, 723-340-xx 723-508-xx
723-601-00, Intelligent Photoelectric Smoke Detector, AP/CLIP, Type II
723-602-00, Intelligent Photoelectric Smoke Detector, Remote Test in Duct, AP/CLIP, Type II
Smoke Detector, 723-370-00, 723-371-00
723-603-00, Intelligent Photoelectric Smoke Detector,135°F Fixed Temperature, AP/CLIP, Type II
723-606-00, Intelligent 135°F Fixed Temp Infrared Smoke Detector, AP Only, Type II

723-607-00, Addressable Intelligent High Sensitivity Smoke Detector, AP Only, Type II
725-002-00, Reflected Beam Smoke Detector
725-313-00, Reflected Beam Smoke Detector w integ sensitivity test capability
725-602-00, Carbon Monoxide Detector, rectangular
725-602-01, Carbon Monoxide Detector, circular
725-603-00, Addressable Intelligent CO Detector, AP Only, Type II
725-604-00, Addressable Intelligent Fire/CO Detector, AP Only, Type II
725-605-00, Intelligent Smoke/CO Detector, AP Only, Type II
729-020-00, Adaptor plate
- Conv 135F Heat Detector, 721-117-00
- Conv Heat Detector, 721-107-00
- Conv Heat Detector, 721-108-00
- Conv Heat Detector, 721-125-00
- Conv Heat Detector, 721-405-00

729-091-00, Annunciator, LED
- 135F Smoke Detector, AP/CLIP, Type II, 723-603-00
- 135F Smoke Detector, Infrared, AP Only, Type II, 723-606-00
- CO Detector, AP Only, Type II, 725-603-00
- Conv 135F ROR Heat Detector, 721-122-00
- Conv Duct Smoke Detect, 723-367-00
- Conv Duct Smoke Detect, 723-369-00
- Conv Duct Smoke Detector, 723-372-00
- Conv Smoke Detector, 723-002-00
- Conv Smoke Detector, 723-003-00
- Conv Smoke Detector, 723-340-xx 723-508-xx
- Fire/CO Detector, AP Only, Type II, 725-604-00
- Heat Detector, AP/CLIP, Type II, 721-134-00
- Heat Detector, AP/CLIP, Type II, 722-129-00
- Heat Detector, AP/CLIP, Type II, 722-413-00
- High Sensitivity Smoke Detector, AP Only, Type II, 723-607-00
- Smoke Detector, 723-370-00, 723-371-00
- Smoke Detector, AP/CLIP, Type II, 723-601-00
- Smoke Detector, AP/CLIP, Type II, 723-602-00
- Smoke/CO Detector, AP Only, Type II, 725-605-00

729-097-00, Conventional Detector Base, plug-in, 2-wire
- Conv 135F ROR Heat Detector, 721-122-00
- Conv Smoke Detector, 723-002-00
- Conv Smoke Detector, 723-003-00

729-101-00, Heat Detector Base
- Conv Heat Detector, 721-123-00
- Conv Heat Detector, 721-404-00

729-103-00, Heat Detector Base
- Conv Heat Detector, 721-123-00

729-108-00, Remote Test Station
Conv Duct Smoke Detect, 723-367-00
Conv Duct Smoke Detect, 723-368-00
Conv Duct Smoke Detect, 723-369-00
Conv Duct Smoke Detector, 723-372-00
Conv Smoke Detector, 725-313-00
Reflected Beam Smoke Detector, 725-002-00
Smoke Detector, 723-370-00, 723-371-00

729-125-00, Detector Base, plug-in, 2-wire
Conv 135F ROR Heat Detector, 721-122-00
Conv Smoke Detector, 723-002-00
Conv Smoke Detector, 723-003-00

729-127-00, Addressable Intelligent Detector Base, plug-in, 4.1 in., CLIP, Type I
Conv Duct Smoke Detector, 723-372-00

729-132-00, Addressable Intelligent Detector Base, plug-in, 6.1 in., CLIP, Type I
Conv Duct Smoke Detector, 723-372-00

729-138-00, Remote Test Station and key
Conv Duct Smoke Detect, 723-367-00
Conv Duct Smoke Detect, 723-368-00
Conv Duct Smoke Detect, 723-369-00
Conv Duct Smoke Detector, 723-372-00
Conv Smoke Detector, 725-313-00
Reflected Beam Smoke Detector, 725-002-00
Smoke Detector, 723-370-00, 723-371-00

729-140-00, Addressable Intelligent Module, Fault Isolator

729-150-00, Conventional Detector Base, 2-wire, plug-in, 12/24 VDC
Conv 135F ROR Heat Detector, 721-122-00
Conv Smoke Detector, 723-002-00
Conv Smoke Detector, 723-003-00

729-151-00, Conventional Detector Base, 4 wire, plug-in Form A and C Contacts
Conv 135F ROR Heat Detector, 721-122-00
Conv Smoke Detector, 723-002-000
Conv Smoke Detector, 723-003-00

729-152-00, Heat Detector Base
Conv Heat Detector, 721-123-00
Conv Heat Detector, 721-404-00

729-154-00, Heat Detector Base
Conv Heat Detector, 721-404-00

729-156-00, Test magnet
135F Smoke Detector, AP/CLIP, Type II, 723-603-00
135F Smoke Detector, Infrared, AP Only, Type II, 723-606-00
CO Detector, AP Only, Type II, 725-603-00
Conv Duct Smoke Detect, 723-367-00
Conv Duct Smoke Detect, 723-368-00
Exp Proof Smoke Detector, 723-373-00
Fire/CO Detector, AP Only, Type II, 725-604-00
Heat Detector, AP/CLIP, Type II, 721-124-00
Heat Detector, AP/CLIP, Type II, 722-129-00
Heat Detector, AP/CLIP, Type II, 722-413-00
High Sensitivity Smoke Detector, AP Only, Type II, 723-607-00
Smoke Detector, 723-370-00, 723-371-00
Smoke Detector, AP/CLIP, Type II, 723-601-00
Smoke Detector, AP/CLIP, Type II, 723-602-00

729-160-00, Two Module Cabinet
Six Relay Control Module, AP/CLIP, Type II, 729-224-00
Ten Input Monitor Module, AP/CLIP, Type II, 729-223-00
Ten Input Monitor Module, CLIP, Type I, 729-162-00

729-161-00, Six Module Cabinet
Six Relay Control Module, AP/CLIP, Type II, 729-224-00
Ten Input Monitor Module, AP/CLIP, Type II, 729-223-00
Ten Input Monitor Module, CLIP, Type I, 729-162-00

729-162-00, Addressable Intelligent Module, Ten Input Monitor, CLIP, Type I

729-166-00, Six Module Mounting Bracket
Six Relay Control Module, AP/CLIP, Type II, 729-224-00
Ten Input Monitor Module, AP/CLIP, Type II, 729-223-00
Ten Input Monitor Module, CLIP, Type I, 729-162-00

729-187-00, Multi-mounting Kit
Reflected Beam Smoke Detector, 725-002-00

729-188-00, Long-Range Kit
Conv Smoke Detector, 725-313-00
Reflected Beam Smoke Detector, 725-002-00

729-189-00, Surface-Mount Kit
Conv Smoke Detector, 725-313-00
Reflected Beam Smoke Detector, 725-002-00

729-193-00, Hub Cover, square 1/2 in.
Conv Heat Detect, 721-110-00
Conv Heat Detector, 721-109-00

729-205-00, Sampling Tube, 1 to 2 ft.
Conv Duct Smoke Detect, 723-367-00
Conv Duct Smoke Detect, 723-368-00
Conv Duct Smoke Detect, 723-369-00
Smoke Detector, 723-370-00, 723-371-00

729-205-01, Sampling Tube, 2 to 4 ft.
Conv Duct Smoke Detect, 723-367-00
Conv Duct Smoke Detect, 723-368-00
Conv Duct Smoke Detect, 723-369-00
Smoke Detector, 723-370-00, 723-371-00

729-205-02, Sampling Tube, 4 to 8 ft.
Conv Duct Smoke Detect, 723-367-00
Conv Duct Smoke Detect, 723-368-00
Conv Duct Smoke Detect, 723-369-00
Smoke Detector, 723-370-00, 723-371-00

729-205-03, Sampling Tube, 8 to 12 ft.
Conv Duct Smoke Detect, 723-367-00
Conv Duct Smoke Detect, 723-368-00
Conv Duct Smoke Detect, 723-369-00
Smoke Detector, 723-370-00, 723-371-00

729-206-00, Remote Test Coil
Conv Duct Smoke Detect, 723-369-00

729-209-00, Addressable Intelligent Detector Base, Sounder, 6.875 in., AP Only, Type II
135F Smoke Detector, AP/CLIP, Type II, 723-603-00
135F Smoke Detector, Infrared, AP Only, Type II, 723-606-00
CO Detector, AP Only, Type II, 725-603-00
Detector Base, 6.875 in., AP Only, Type II, 729-209-00, 729-212-00
Fire/CO Detector, AP Only, Type II, 725-604-00
Heat Detector, AP/CLIP, Type II, 721-134-00
Heat Detector, AP/CLIP, Type II, 722-129-00
Heat Detector, AP/CLIP, Type II, 722-413-00
High Sensitivity Smoke Detector, AP Only, Type II, 723-607-00
Smoke Detector, AP/CLIP, Type II, 723-601-00
Smoke/CO Detector, AP Only, Type II, 725-605-00

729-210-00, Addressable Intelligent Detector Base, Sounder, 6.875 in., AP/CLIP, Type II
135F Smoke Detector, AP/CLIP, Type II, 723-603-00
135F Smoke Detector, Infrared, AP Only, Type II, 723-606-00
CO Detector, AP Only, Type II, 725-603-00
Fire/CO Detector, AP Only, Type II, 725-604-00
Heat Detector, AP/CLIP, Type II, 721-134-00
Heat Detector, AP/CLIP, Type II, 722-129-00
Heat Detector, AP/CLIP, Type II, 722-413-00
High Sensitivity Smoke Detector, AP Only, Type II, 723-607-00
Smoke Detector, AP/CLIP, Type II, 723-601-00
Smoke/CO Detector, AP Only, Type II, 725-605-00

729-211-00, Addressable Intelligent Detector Base, Sounder, Low Freq, 6.875 in., AP/CLIP, Type II
135F Smoke Detector, AP/CLIP, Type II, 723-603-00
135F Smoke Detector, Infrared, AP Only, Type II, 723-606-00
CO Detector, AP Only, Type II, 725-603-00
Fire/CO Detector, AP Only, Type II, 725-604-00
Heat Detector, AP/CLIP, Type II, 721-134-00
Heat Detector, AP/CLIP, Type II, 722-129-00
Heat Detector, AP/CLIP, Type II, 722-413-00
High Sensitivity Smoke Detector, AP Only, Type II, 723-607-00
Smoke Detector, AP/CLIP, Type II, 723-601-00
Smoke/CO Detector, AP Only, Type II, 725-605-00

729-212-00, Addressable Intelligent Detector Base, Sounder, Low Freq, 6.875 in., AP Only, Type II
135F Smoke Detector, AP/CLIP, Type II, 723-603-00
135F Smoke Detector, Infrared, AP Only, Type II, 723-606-00
CO Detector, AP Only, Type II, 725-603-00
Detector Base, 6.875 in., AP Only, Type II, 729-209-00, 729-212-00
Fire/CO Detector, AP Only, Type II, 725-604-00
Heat Detector, AP/CLIP, Type II, 721-134-00
Heat Detector, AP/CLIP, Type II, 722-129-00
Heat Detector, AP/CLIP, Type II, 722-413-00
High Sensitivity Smoke Detector, AP Only, Type II, 723-607-00
Smoke Detector, AP/CLIP, Type II, 723-601-00
Smoke/CO Detector, AP Only, Type II, 725-605-00

729-213-00, Addressable Intelligent Detector Base, plug-in, isolator, AP/CLIP, Type II
135F Smoke Detector, AP/CLIP, Type II, 723-603-00
135F Smoke Detector, Infrared, AP Only, Type II, 723-606-00
CO Detector, AP Only, Type II, 725-603-00
Fire/CO Detector, AP Only, Type II, 725-604-00
Heat Detector, AP/CLIP, Type II, 722-121-00
Heat Detector, AP/CLIP, Type II, 722-129-00
Heat Detector, AP/CLIP, Type II, 722-413-00
High Sensitivity Smoke Detector, AP Only, Type II, 723-607-00
Smoke Detector, AP/CLIP, Type II, 723-601-00
Smoke/CO Detector, AP Only, Type II, 725-605-00

729-214-00, Addressable Intelligent, Detector Relay Base, AP/CLIP, Type II
135F Smoke Detector, AP/CLIP, Type II, 723-603-00
135F Smoke Detector, Infrared, AP Only, Type II, 723-606-00
CO Detector, AP Only, Type II, 725-603-00
Fire/CO Detector, AP Only, Type II, 725-604-00
Heat Detector, AP/CLIP, Type II, 721-124-00
Heat Detector, AP/CLIP, Type II, 722-413-00
High Sensitivity Smoke Detector, AP Only, Type II, 723-607-00
Smoke Detector, AP/CLIP, Type II, 723-601-00
Smoke/CO Detector, AP Only, Type II, 725-605-00

729-215-00, Addressable Intelligent Detector Base, plug-in, 4.1 in., AP/CLIP, Type II
135F Smoke Detector, AP/CLIP, Type II, 723-603-00
135F Smoke Detector, Infrared, AP Only, Type II, 723-606-00
CO Detector, AP Only, Type II, 725-603-00
Fire/CO Detector, AP Only, Type II, 725-604-00
Heat Detector, AP/CLIP, Type II, 721-134-00
Heat Detector, AP/CLIP, Type II, 722-129-00
Heat Detector, AP/CLIP, Type II, 722-413-00
High Sensitivity Smoke Detector, AP Only, Type II, 723-607-00
Smoke Detector, AP/CLIP, Type II, 723-601-00
Smoke/CO Detector, AP Only, Type II, 725-605-00

729-217-00, Addressable Intelligent Monitor Module, AP/CLIP, Type II
Switch, 514-001-00

729-218-00, Addressable Intelligent Module, Mini-Monitor, AP/CLIP, Type II
Audio Booster Panels, 703-16x-00 703-20x-00
Conv Pull station, 708-015-01, 708-015-03
Conv Pull Station, 708-022-00
Conv Pull Station, 708-025-01
Conv Pull Station, 708-025-03
Conv Pull Station, 708-026-01
Detector Base, 6.875 in., AP Only, Type II, 729-209-00, 729-212-00
Detector Base, 6.875 in., AP/CLIP, Type II, 729-210-00, 729-211-00
MAAP-X LOC Keypad, 710-072-51, 710-072-52
OS&Y Valve Supervisory/Tamper Switch, 514-000-00, 514-000-01
Switch, 514-001-00

729-219-00, Addressable Intelligent Zone Interface Module, AP/CLIP, Type II

729-220-00, Addressable Intelligent Dual Input Monitor Module, AP/CLIP, Type II

729-221-00, Addressable Intelligent Relay Control Module, AP/CLIP, Type II
Smoke Detector, 723-370-00, 723-371-00
Zone Interface Module, AP/CLIP, Type II, 729-219-00

729-223-00, Addressable Intelligent Ten Input Monitor Module, AP/CLIP, Type II

729-224-00, Addressable Intelligent Six Relay Control Module, AP/CLIP, Type II
729-225-00, Addressable Intelligent Supervised NAC Control Module, AP/CLIP, Type II
729-226-00, Cover/Trim Ring, Ivory, for AP/CLIP Smoke Detectors
135F Smoke Detector, AP/CLIP, Type II, 723-603-00
Detector Base, 4.1 in., AP/CLIP, Type II, 729-215-00
Detector Base, 6.1 in., AP/CLIP, Type II, 729-228-00
Detector Base, 6.875 in., AP/CLIP, Type II, 729-210-00, 729-211-00
Detector Base, Isolator, AP/CLIP, Type II, 729-213-00
High Sensitivity Smoke Detector, AP Only, Type II, 723-607-00
Smoke Detector, AP/CLIP, Type II, 723-601-00
Smoke/CO Detector, AP Only, Type II, 725-605-00
729-227-00, Cover/Trim Ring, Ivory, for AP/CLIP Infrared Smoke Detectors
135F Smoke Detector, Infrared, AP Only, Type II, 723-606-00
Detector Base, 4.1 in., AP/CLIP, Type II, 729-215-00
Detector Base, 6.1 in., AP/CLIP, Type II, 729-228-00
Detector Base, 6.875 in., AP/CLIP, Type II, 729-210-00, 729-211-00
Detector Base, Isolator, AP/CLIP, Type II, 729-213-00
Fire/CO Detector, AP Only, Type II, 725-604-00
729-228-00, Addressable Intelligent Detector Base, plug-in, 6.1 in., AP/CLIP, Type II
135F Smoke Detector, AP/CLIP, Type II, 723-603-00
135F Smoke Detector, Infrared, AP Only, Type II, 723-606-00
CO Detector, AP Only, Type II, 725-603-00
Fire/CO Detector, AP Only, Type II, 725-604-00
Heat Detector, AP/CLIP, Type II
Heat Detector, AP/CLIP, Type II, 722-129-00
Heat Detector, AP/CLIP, Type II, 722-413-00
High Sensitivity Smoke Detector, AP Only, Type II, 723-607-00
Smoke Detector, AP/CLIP, Type II, 723-601-00
Smoke/CO Detector, AP Only, Type II, 725-605-00
790-012-00, EOL Power Supervision Relay Module
Conv Detector Base, 729-151-00
Conv Duct Smoke Detector, 723-372-00
Conv Smoke Detector, 723-002-00
Conv Smoke Detector, 723-003-00
Conv Smoke Detector, 723-340-xx 723-508-xx
Supervised NAC Control Module, AP/CLIP, Type II, 729-225-00
790-013-01, EOL Power Supervision Relay Module, non-polarized
Conv Smoke Detector, 723-002-00
Conv Smoke Detector, 723-003-00
Detector Base, 6.875 in., AP Only, Type II, 729-209-00, 729-212-00
Detector Base, 6.875 in., AP/CLIP, Type II, 729-210-00, 729-211-00
790-026-00, 4-Zone Expander Alarm/Trouble Interface Kit
Interface PCB, Alarm, Alarm/Trouble, 175-047-00, 176-133-00, 176-177-00, 790-026-00