ONYXWorks® NFN

Embedded Gateway-3

NOTIFIER® by Honeywell

Network Systems

General

The NOTI•FIRE•NET™ Gateway is an intelligent gateway interface for the ONYXWorks® fire monitoring workstation. This gateway facilitates complete monitoring and control of a NOTI•FIRE•NET™ network. In addition, it supports full panel programming and network diagnostics.

The embedded gateway is a standalone version and is equipped with IP capability thus enabling ONYX® Series users to monitor multiple sites over an Ethernet network without the need for remote workstations.

Features

- Enables ONYX® Series workstation to monitor alarm, pre-alarm, trouble, disabled events, etc. for NFN fire alarm control panels.
- ONYXWorks® supports up to 50 intelligent gateways.
- Compatible with standard and high speed NOTI•FIRE•NET™ network.
- Adds acknowledge, silence, reset, enable/disable, and activate/deactivate control capability to the workstation.
- Supports fire alarm control panel programming upload/downloads and modifications.
- Embedded gateway allows remote IP connections and increases scalability of network.
- Supervised IP connections for remote workstations and gateways.
- Multiple workstations can access the gateway at the same time.
- Gateway redundancy for network survivability.

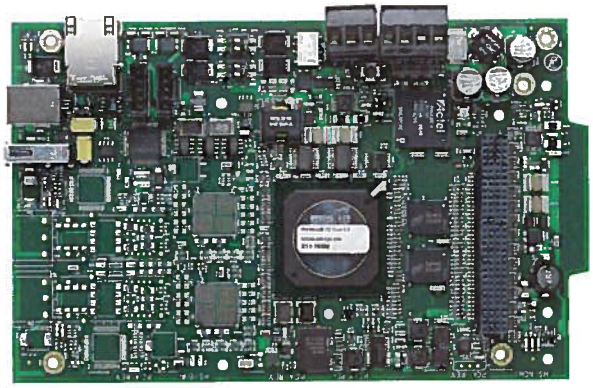
Compatibility

The NOTI•FIRE•NET™ Gateway is compatible with ONYXWorks® and ONYX FirstVision and interfaces to NOTI•FIRE•NET™ version 5.0 and higher, as well as a high speed NOTI•FIRE•NET™ network for the following panels and devices:

- ONYX Series
- AM2020/AFP1010 (version 5.0 SIB-NET)
- AFP-200 (version 5.0 NAM)
- AFP-300/AFP-400 (version 5.0 NAM)
- BACnet Gateway
- NCA-2/NCA Network Control Annunciator
- NOTI•FIRE•NET™Web Server

Specifications

- Power input: 24 VDC
- Input current: 450 mA @ 24 VDC (without NCM).
- Operating temperature: 0°C to 49°C (32°F to 120°F).
- Direct connection to NFS2-640, NFS-640, NFS-320, NFS2-3030, and NFS-3030 fire alarm control panels. NCM required for connection to NOTI•FIRE•NET™, and HS-NCM for connection to high-speed network. (See data sheets DN-6861 and DN-60454.)



NFN-GW-EM-3

Standards and Codes

The NOTI•FIRE•NET™ Gateway complies with the following UL/ULC Standards and NFPA 72 Fire Alarm Systems requirements:

- UL 864
- UL 1076
- UL 2017
- ULC S559-04
- ULC S527-99

Listings and Approvals

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL / ULC:** S5697
- **FM Approved**
- **CSFM:** 7300-1525:103
- **MEA:** 286-07-E
- **FDNY:** COA #6041

Ordering Information

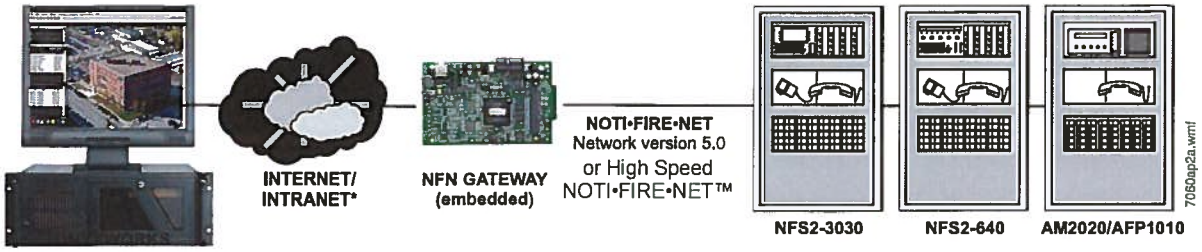
NFN-GW-EM-3: NOTI•FIRE•NET™ Gateway, embedded. Includes PC board, NUP to NUP cable (75577), USB Cable (75665) and NFN Configuration.

Additional EMBEDDED VERSION Gateway required components:

- NCM for connection to NOTI•FIRE•NET™.
- HS-NCM for connection to high speed NOTI•FIRE•NET™.
- IBM®-compatible PC with Windows® XP.
- Standard Ethernet network cable with RJ45 to RJ45 connectors.
- ONYXWorks Workstation V3.12 or above .
- NFN Network Version 5.0 or above.
- Verifire Tools Version 5.71 or above.

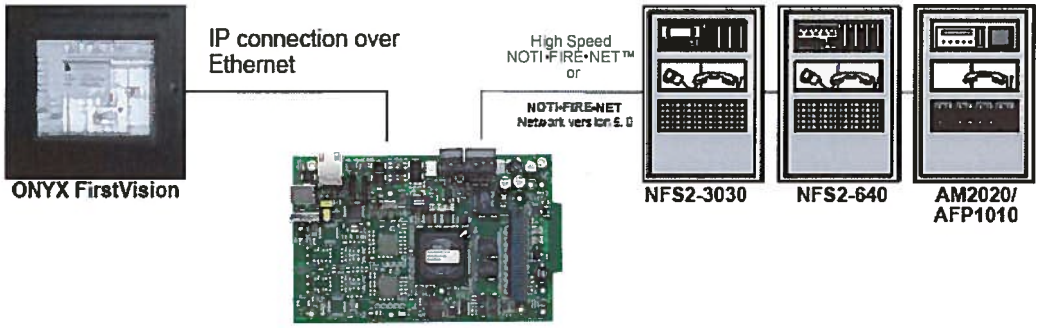
Remote Monitoring

NFN-GW-EM-3



* A UL Listed ethernet (TCP/IP) switch is required between a shared-IP network and the ONYXWORKS equipment. Contemporary Control Systems, Inc. (www.ctrlink.com) has several UL864 recognized switching hubs.

Firefighters' Display



ISO 9001 CERTIFIED
ENGINEERING & MANUFACTURING
QUALITY SYSTEMS

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For more information, contact Notifier. Phone: (203) 484-7161, FAX: (203) 484-7118.
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Made in the U.S. A.

BAT Series Batteries

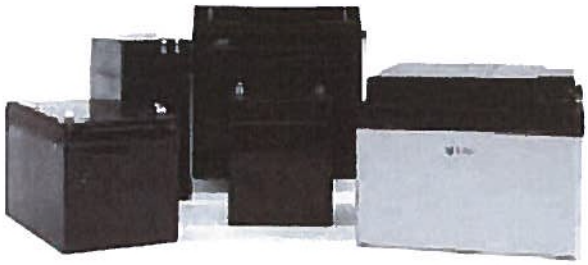
Sealed Lead-Acid

NOTIFIER® by Honeywell

Power Supplies

General

BAT Series Batteries are Power Sonic brand batteries. BAT Series (or Power Sonic brand) batteries are recommended for secondary power or backup power for all NOTIFIER fire alarm control equipment.



6933cov.jpg

Features

- Provide secondary power for control panels.
- Sealed and maintenance-free.
- Overcharge protected.
- Easy handling with leakproof construction.
- Ruggedly constructed, high-impact case (ABS, polystyrene, or polypropylene, depending on models).
- Long service life.
- Compact design.

Agency Listings and Approvals

The listings and approvals below apply to BAT Series Batteries. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL Recognized Components**: MH20845 *(Power-Sonic)*

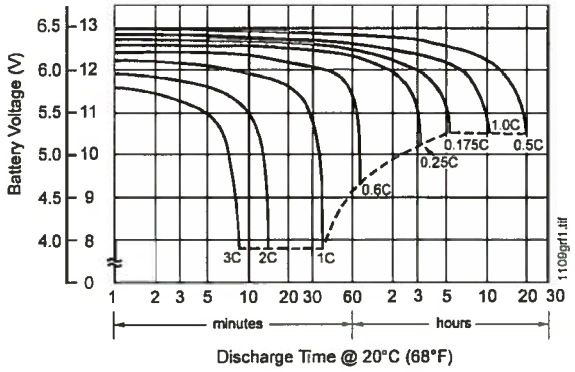
Ordering Information

BAT-1250-BP: 10-unit bulk pack of BAT-1250 (12 V 5 AH)
BAT-1270-BP: 5-unit bulk pack of BAT-1270 (12 V 7 AH)
BAT-12120-BP: 4-unit bulk pack of BAT-12120 (12V 12 AH)
BAT-12180-BP: 2-unit bulk pack of BAT-12180 (12 V 18 AH)
BAT-12260-BP: 2-unit bulk pack of BAT-12260 (12 V 26 AH)
BAT-12550: single battery (12 V 55 AH)
BAT-121000: single battery (12 V 100 AH)

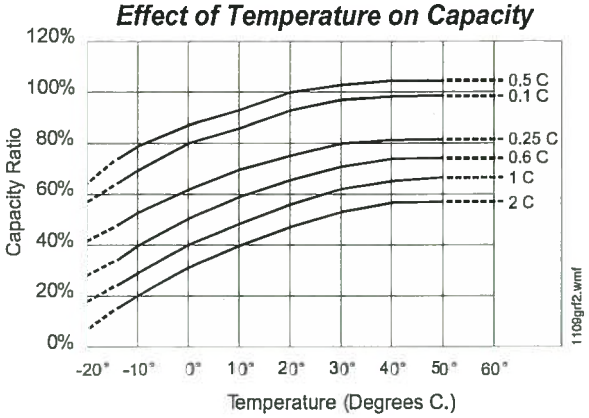
Part Number Reference & Specifications

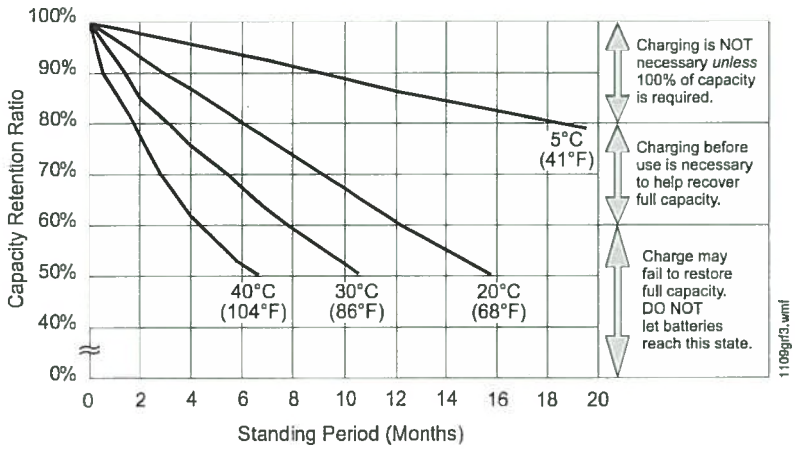
Part Number	Power Sonic Part Number	Battery Description			DIMENSIONS									
		Nominal Voltage V	Nominal Capacity @ 20 hr. rate A.H.		Width		Depth		Height		Height over terminal		Weight	
					in.	mm	in.	mm	in.	mm	in.	mm	lb.	kg.
BAT-1250	PS-1250	12	5	sealed	3.54	90	2.76	70	4.02	102	4.21	107	4.1	1.9
BAT-1270	PS-1270	12	7	sealed	5.95	151	2.56	65	3.7	94	3.86	98	4.8	2.18
BAT-12120	PS-12120	12	12	sealed	5.95	151	3.86	98	3.7	94	3.94	100	7.92	3.59
BAT-12180	PS-12180	12	18	sealed	7.13	181	2.99	76	6.57	167	6.57	167	12.6	5.8
BAT-12260	PS-12260	12	26	sealed	6.56	167	6.97	177	4.92	125	4.92	125	17	7.71
BAT-12550	PS-12250	12	55	sealed	9.04	230	654	138	8.2	208	8.98	228	36	16.33
BAT-121000	PS-121000	12	100	sealed	12	305	6.6	168	8.2	208	8.98	228	68	30.84

Characteristic Discharge Curves

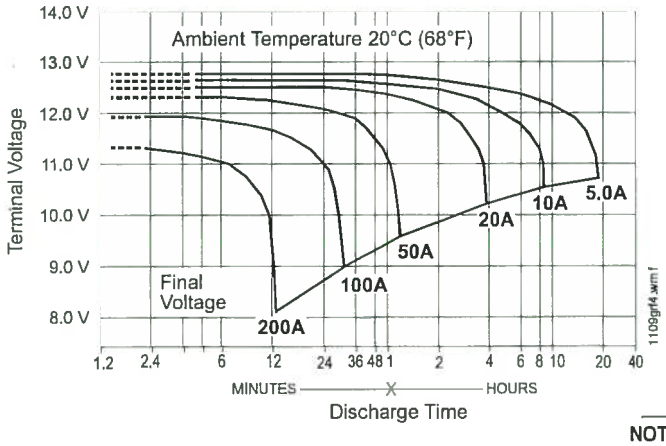


Effect of Temperature on Capacity





at left: PS-121000 Shelf-Life and Storage



at left: PS-121000 Discharge Characteristics

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ISO-6(A)

Six Fault Isolator Module

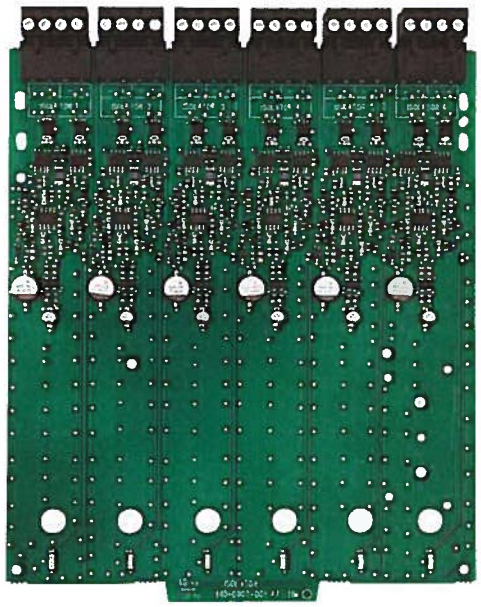
NOTIFIER® by Honeywell

Intelligent Addressable Devices

General

The ISO-6(A) Six Fault Isolator Module provides six equivalent circuits that will allow a portion of the communications loop to continue operating when a short circuit occurs on that loop. An amber LED indicator will blink in the normal state for each of the six inputs and will latch on during a short circuit condition. The module will automatically restore the communications loop to normal condition when the short circuit is removed.

The ISO-6 Six Isolator Module is an automatic switch that opens when the line voltage drops below four volts. Isolator modules should be spaced between groups of sensors or modules in a loop to protect the rest of the loop. If a short occurs between any two isolators, then both isolators immediately switch to an open circuit state and isolate the devices between them. The remaining units on the loop continue to fully operate.



Features

- Removable 12 to 18 AWG plug-in terminal blocks.
- Individual LED status indicators.
- Six individual, Class B isolator circuits.
- Mount up to two modules in BB-XP enclosure (optional).
- Mount up to six modules on a CHS-6 chassis in a CAB-4/CAB-3 series, EQ series, or BB-25 cabinet.
- Mounting hardware included.

Applications

The ISO-6 Fault Isolator Modules should be spaced between groups of sensors in an SLC to protect the rest of the loop. Use to isolate short circuit problems within a section of a loop so that other sections can continue to operate normally. The ISO-6 supports a maximum of 25 devices between isolators.

When more than 100 Isolator Modules are connected to an SLC loop, the address capacity of the loop is reduced by two (2) addresses for every isolator device in excess of 100.

Specifications

Normal Operating Voltage: 15-32 VDC.

Stand-By Current: 450 µA per circuit, 2.7 mA all circuits.

Maximum Current Draw: 17 mA per circuit in isolation, 102 mA with all circuits in isolation.

Temperature Range: 32° F to 120° F (0° C to 49° C).

Humidity: 10% to 85% non-condensing.

Dimensions: 6.8"H x 5.8"W x 1.0"D.

Shipping weight: 1.1 lb. (0.50 kg) including packaging.

Mounting Options: CHS-6 Chassis, BB-XP Cabinet, BB-25 Cabinet, CAB-4 Series Cabinet, EQ Series Cabinet.

Wire Gauge: 12 AWG (3.31 mm²) to 18 AWG (0.821 mm²).

Compatible Devices: See the documentation for your panel, and the *Device Compatibility Document*.

Agency Listings and Approvals

The listings and approvals below apply to ISO-6 components. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL/ULC Listed:** S3705.
- FM Approved.
- CSFM: 7300-1653-0234.

Product Line Information

ISO-6: Six Isolator Module.

ISO-6A: ULC-listed version of ISO-6.

BB-XP: Optional cabinet for one or two modules. **Door Dimensions:** 9.234" (23.454 cm) wide (9.484" [24.089 cm] including hinges), x 12.218" (31.0337 cm) high, x 0.672" (1.7068 cm) deep. **Backbox Dimensions:** 9.0" (22.860 cm) wide (9.25" [23.495 cm] including hinges), x 12.0" (30.480 cm) high x 2.75" (6.985 cm). **Chassis Dimensions** (installed): 7.150" (18.161 cm) wide overall x 7.312" (18.5725 cm) high interior overall x 2.156" (5.4762 cm) deep overall.

BB-25: Optional cabinet for up to six modules mounted on CHS-6 chassis (below). **Door Dimensions:** 24.0" (60.96 cm) wide x 12.632" (32.0852 cm) high, x 1.25" (3.175 cm) deep, hinged at bottom. **Backbox Dimensions:** 24.0" (60.96 cm) wide x 12.550" (31.877 cm) high x 5.218" (13.2537 cm) deep.

CHS-6: Chassis, mounts up to six modules in a CAB-4 Series cabinet (see DN-6857), EQ Series cabinet (see DN-60229), or BB-25 cabinet.

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NBG-12LX

Addressable Manual Pull Station

NOTIFIER® by Honeywell

Intelligent/Addressable Devices

General

The Notifier NBG-12LX is a state-of-the-art, dual-action (i.e., requires two motions to activate the station) pull station that includes an addressable interface for any Notifier intelligent control panel except FireWarden series panels, and the NSP-25 panel. Because the NBG-12LX is addressable, the control panel can display the exact location of the activated manual station. This leads fire personnel quickly to the location of the alarm.

Features

- Maintenance personnel can open station for inspection and address setting without causing an alarm condition.
- Built-in bicolor LED, which is visible through the handle of the station, flashes in normal operation and latches steady red when in alarm.
- Handle latches in down position and the word "ACTIVATED" appears to clearly indicate the station has been operated.
- Captive screw terminals wire-ready for easy connection to SLC loop (accepts up to 12 AWG/3.25 mm² wire).
- Can be surface mounted (with SB-10 or SB-I/O) or semi-flush mounted. Semi-flush mount to a standard single-gang, double-gang, or 4" (10.16 cm) square electrical box.
- Smooth dual-action design.
- Meets ADAAG controls and operating mechanisms guidelines (Section 4.1.3[13]); meets ADA requirement for 5 lb. maximum activation force.
- Highly visible.
- Attractive shape and textured finish.
- Key reset.
- Includes Braille text on station handle.
- Optional trim ring (BG12TR).
- Meets UL 38, Standard for Manually Actuated Signaling Boxes.
- Up to 99 NBG-12LX stations per loop on CLIP protocol loops.
- Up to 159 NBG-12LX stations per loop on FlashScan® protocol loops.
- Dual-color LED blinks green to indicate normal on FlashScan® systems.

Construction

Shell, door, and handle are molded of durable polycarbonate material with a textured finish.

Specifications

- **Shipping Weight:** 9.6 oz. (272.15 g)
- **Normal operating voltage:** 24 VDC.
- **Maximum SLC loop voltage:** 28.0 VDC.
- **Maximum SLC loop current:** 375 µA.
- **Temperature Range:** 32°F to 120°F (0°C to 49°C)
- **Relative Humidity:** 10% to 93% (noncondensing)
- **For use indoors in a dry location**

The NBG-12LX
Addressable Manual Pull Station

Installation

The NBG-12LX will mount semi-flush into a single-gang, double-gang, or standard 4" (10.16 cm) square electrical outlet box, or will surface mount to the model SB-10 or SB-I/O surface backbox. If the NBG-12LX is being semi-flush mounted, then the optional trim ring (BG12TR) may be used. The BG12TR is usually needed for semi-flush mounting with 4" (10.16 cm) or double-gang boxes (not with single-gang boxes).

Operation

Pushing in, then pulling down on the handle causes it to latch in the down/activated position. Once latched, the word "ACTIVATED" (in bright yellow) appears at the top of the handle, while a portion of the handle protrudes from the bottom of the station. To reset the station, simply unlock the station with the key and pull the door open. This action resets the handle; closing the door automatically resets the switch.

Each manual station, on command from the control panel, sends data to the panel representing the state of the manual switch. Two rotary decimal switches allow address settings (1 – 159 on FlashScan® systems, 1 – 99 on CLIP systems).

Architectural/Engineering Specifications

Manual Fire Alarm Stations shall be non-coded, with a key-operated reset lock in order that they may be tested, and so designed that after actual Emergency Operation, they cannot be restored to normal except by use of a key. An operated station shall automatically condition itself so as to be visually detected as activated. Manual stations shall be constructed of red-colored polycarbonate material with clearly visible operating instructions provided on the cover. The word FIRE shall appear on the front of the stations in white letters, 1.00 inches (2.54 cm) or larger. Stations shall be suitable for surface mounting on matching backbox SB-10 or SB-I/O; or semi-flush mounting on a standard single-gang, double-gang, or 4"

(10.16 cm) square electrical box, and shall be installed within the limits defined by the Americans with Disabilities Act (ADA) or per national/local requirements. Manual Stations shall be Underwriters Laboratories listed.

Manual stations shall connect with two wires to one of the control panel SLC loops. The manual station shall, on command from the control panel, send data to the panel representing the state of the manual switch.. Manual stations shall provide address setting by use of rotary decimal switches.

The loop poll LED shall be clearly visible through the front of the station. The LED shall flash while in the normal condition, and stay steadily illuminated when in alarm.

Product Line Information

NBG-12LX: Dual-action addressable pull station. Includes key locking feature.

SB-10: Surface backbox; metal.

SB-I/O: Surface backbox; plastic.

BG12TR: Optional trim ring.

17021: Keys, set of two.

NY-Plate: New York City trim plate

Agency Listings and Approvals

In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL / CUL Listed:** S692 (listed for Canadian and non-Canadian applications)
- **MEA:** 67-02-E
- **CSFM:** 7150-0028:0199
- **FDNY:** COA #6038 (NFS2-640), COA #6058 (NFS2-3030)
- **BSMI:** CI313066760047
- **U.S. Coast Guard:** 161.002/23/3 (AFP-200); 161.002/27/3 (AM-2020/AFP-1010; 161.002/42/1 (NFS-640)
- **Lloyd's Register:** 02/6007 (NFS-640); 94/60004 (E2) (AFP-200); 03/60011 (E1); 07/60007 (NFS2-3030)
- **FM** Approved

Patented: U.S. Patent No. D428,351; 6,380,846; 6,314,772; 6,632,108.

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www.notifier.com

FAPT-851(A)

Acclimate® Plus™ Multi-Sensor
Low-Profile Intelligent Detector

NOTIFIER® by Honeywell

Intelligent/Addressable Devices

General

The Notifier FAPT-851(A) Acclimate® Plus™ detector is an intelligent, addressable, multi-sensing, low-profile detector designed for use with Notifier Notifier Onyx and CLIP series Fire Alarm Control Panels (FACPs).

The Acclimate Plus detector uses a combination of photoelectric and thermal sensing technologies to increase immunity to false alarms. Unlike traditional intelligent detectors, the Acclimate Plus detector has a microprocessor in the detector head that processes alarm data. As a result, the Acclimate Plus detector adjusts its sensitivity automatically, without operator intervention or control panel programming.

Areas where the Acclimate Plus detector is especially useful include office complexes, schools, college campuses, manufacturing and industrial facilities, and anywhere else the use of a particular area may change. The Acclimate Plus detector automatically adjusts its sensitivity to the environment.

FlashScan® (U.S. Patent 5,539,389) is a communication protocol developed to greatly enhance the speed of communication between analog intelligent devices and compatible systems. Intelligent devices communicate in a grouped fashion. If one of the devices within the group has new information, the panel's CPU stops the group poll and concentrates on single points. The net effect is response speed greater than five times that of earlier designs.

Features

- Automatically adjusts sensitivity levels without operator intervention or programming. Sensitivity increases with heat.
- Microprocessor-based, combination photo and thermal technology.
- Compatible with all Notifier Onyx and CLIP series Fire Alarm Control Panels (FACPs).
- Addressable-analog communication.
- Sleek, low-profile design.
- Two-wire SLC connection.
- Rotary, decimal addressing (1-99 on CLIP systems, 1-159 on FlashScan systems).
- Addresses can be viewed and changed without electronic programmers.
- Dual bi-color LED design provides 360° viewing angle.
- LEDs lock red when in alarm. In FlashScan, LEDs flash green in standby for normal condition.
- Built-in tamper-resistant feature.
- Constructed of off-white fire-resistant plastic, designed to commercial standards, and offers an attractive appearance.
- SEMS screws for wiring of the separate base.
- Several base options, including relay, isolator, and sounder.
- Built-in functional test switch activated by external magnet.
- Listed to UL 268.
- Capable of heat-only alarm mode, enabled by a special command from the panel. Smoke alarms are ignored.
- Low-temperature signal at 45°F +/– 10°F (7.22°C +/– 5.54°C).

FAPT-851 with B210.png

FAPT-851(A) in B210LP(A) Base

Specifications

Sensitivity: *auto-adjusting levels*: 1 to 2%/ft. and 2 to 4%/ft. with classic CLIP systems; 1 to 2, 2 to 3, and 3 to 4%/ft. with systems; *fixed-sensitivity levels:* 1, 2, and 4%/ft. with classic CLIP systems; 0.5, 1, 2, 3, and 4%/ft. with FlashScan systems.

Size: 2.0" (5.3 cm) high; base determines diameter.

- **B210LP(A):** 6.1" (15.5 cm) diameter.
- **B501(A):** 4.1" (10.4 cm) diameter.
- **B200S(A):** 6.875" (17.46 cm) diameter.
- **B200SR(A):** 6.875" (17.46 cm) diameter.
- **B224RB(A):** 6.2" (15.748 cm) diameter.

Shipping weight: 5.2 oz. (147 g).

Operating temperature: 0°C to 38°C (32°F to 100°F).

UL-Listed velocity range: 0 – 4000 ft./min. (1219.2 m/min.), suitable for installation in ducts.

Relative humidity: 10% – 93% noncondensing.

Thermal sensing rating: fixed-temperature setpoint 135°F (57°C).

ELECTRICAL SPECIFICATIONS

Voltage range: 15 – 32 volts DC peak.

Standby current (max. avg.): 300 µA.

Loop resistance: 50 ohms maximum; varies according to control panel used. Refer to panel installation manuals.

LED current (max.): 6.5 mA @ 24 VDC ("ON").

Installation

The FAPT-851(A) plug-in detector uses a separate base to simplify installation, service, and maintenance. A special tool allows maintenance personnel to plug-in and remove detectors without using a ladder. Suitable mounting base boxes include:

- 4.0" (10.16 cm) square box.
- 3.5" (8.89 cm) or 4.0" (10.16 cm) octagonal box.
- Single-gang box (except relay or isolator base).

NOTE: *The FAPT-851(A) detector has the unique ability to adjust sensitivity according to the environment, based on heat and smoke levels. Avoid installing these detectors in locations that are susceptible to rapid and high temperature changes. An example of an incorrect application would be near or in line with the output of a self-contained heater.*

Agency Listings and Approvals

These listings and approvals apply to the modules specified in this. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. *Consult factory for latest listing status.*

- **UL Listed:** S1115.
- **ULC Listed:** S1115.
- **MEA Listed:** 225-02-E.
- **FM Approved.**
- **CSFM:** 7272-0028:0206.
- **U.S. Coast Guard:** 161.002/42/1 (NFS-640); 161.002/50/0 (NFS2-640/NFS-320/NFS-320C, excluding B210LP(A)).
- **Lloyd's Register:** 11/600013 (NFS2-640, NFS-320/NFS-320C, excluding B210LP(A)).
- **Maryland State Fire Marshal:** Permit # 2122.

Ordering Information

NOTE: *"A" suffix indicates ULC Listed model.*

FAPT-851: Low-profile intelligent multi-sensor detector.

FAPT-851A: Same as FAPT-851 but with ULC Listing.

INTELLIGENT BASES

NOTE: *"A" suffix indicates ULC Listed model.*

NOTE: *For details about intelligent bases and their mounting, see DN-60054.*

B210LP(A): Plug-in detector base; standard U.S. flanged low-profile mounting base.

B210LPBP: Bulk pack of B210LP; package contains 10.

B501(A): Flangeless mounting base.

B501BP: Bulk pack of B501; package contains 10.

B200S(A): Intelligent, programmable sounder base capable of producing sound output in high or low volume with ANSI Temporal 3, ANSI Temporal 4, continuous tone, marching tone, and custom tone.

B200SR(A): Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone. Replaces B501BH series bases in retrofit applications.

B224RB(A): Relay base Screw terminals: up to 14 AWG (2.0 mm^2). Relay type Form-C. Rating: 2.0 A @ 30 VDC resistive; 0.3 A @ 110 VDC inductive; 1.0 A @ 30 VDC inductive.

B224BI(A): Isolator base. Maximum: 25 devices between isolator bases.

ACCESSORIES

F110: Retrofit flange to convert B210LP to match the B710LP profile, or to convert older high-profile bases to low-profile.

F110BP: Bulk pack of F110; package contains 15.

F210: Replacement flange for B210LP(A) base.

RA100Z(A): Remote LED annunciator. 3 – 32 VDC. Fits U.S. single-gang electrical box. Supported by B210LP(A) and B501(A) bases only.

SMB600: Surface mounting kit for use with B210LP(A).

M02-04-00: Test magnet.

M02-09-00: Test magnet with telescoping handle.

XR2B: Detector removal tool. Allows installation and/or removal of FlashScan® Series detector heads from base in high ceiling installations.

T55-127-010: Detector removal tool without pole.

XP-4: Extension pole for XR2B. Comes in three 5-foot (1.524 m) sections.

For more information, contact Notifier. Phone: (203) 484-7161, FAX: (203) 484-7118.
www.notifier.com

FST-851(A) Series

Intelligent Thermal (Heat) Detectors with FlashScan®

NOTIFIER® by Honeywell

Intelligent / Addressable Devices

General

Notifier FST-851(A) Series intelligent plug-in thermal detectors with integral communication has features that surpass conventional detectors. Point ID capability allows each detector's address to be set with rotary, decimal address switches, providing exact detector locations. FST-851(A) Series thermal detectors use an innovative thermistor sensing circuit to produce 135°F/57°C fixed-temperature (FST-851/A) and rate-of-rise thermal detection (FST-851R/A) in a low-profile package. FST-851H(A) provides fixed high-temperature detection at 190°F/88°C. These thermal detectors provide effective, intelligent property protection in a variety of applications. FST-851(A) Series detectors are compatible with Notifier Onyx and CLIP series Fire Alarm Control Panels (FACPs).

FlashScan® (U.S. Patent 5,539,389) is a communication protocol developed by Notifier Engineering that greatly enhances the speed of communication between analog intelligent devices and certain NOTIFIER systems. Intelligent devices communicate in a grouped fashion. If one of the devices within the group has new information, the panel's CPU stops the group poll and concentrates on single points. The net effect is response speed greater than five times that of earlier designs.

Features

- Sleek, low-profile, stylish design.
- State-of-the-art thermistor technology for fast response.
- Rate-of-rise model (FST-851R/A), 15°F (8.3°C) per minute.
- Factory preset fixed temperature at 135°F (57°C); high-temperature model fixed at 190°F (88°C).
- Addressable by device.
- Compatible with FlashScan® and CLIP protocol systems.
- Rotary, decimal addressing (1-99 on CLIP systems, 1-159 on FlashScan systems).
- Two-wire SLC connection.
- Visible LEDs "blink" every time the unit is addressed.
- 360°-field viewing angle of the visual alarm indicators (two bi-color LEDs). LEDs blink green in Normal condition and turn on steady red in Alarm.
- Integral communications and built-in device-type identification.
- Remote test feature from the panel.
- Built-in functional test switch activated by external magnet.
- Walk test with address display (an address of 121 will blink the detector LED 12-(pause)-1).
- Low standby current.
- Backward-compatible.
- Built-in tamper-resistant feature.
- Designed for direct-surface or electrical-box mounting.
- Sealed against back pressure.
- Plugs into separate base for ease of installation and maintenance. Separate base allows interchange of photoelectric, ionization and thermal sensors.
- SEMS screws for wiring of the separate base.
- Constructed of off-white fire-resistant plastic, designed to commercial standards, and offers an attractive appearance.

B210-2251.jpg

FST-851(A) in B210LP(A) Base

- 94-5V plastic flammability rating.
- Remote LED output connection to optional RA100Z(A) remote LED annunciator.
- Optional sounder, relay, and isolator bases.
- Optional flanced surface mounting kit.

Specifications

Size: 2.1" (5.3 cm) high; base determines diameter.

- **B210LP(A):** 6.1" (15.5 cm) diameter.
- **B501(A):** 4.1" (10.4 cm) diameter.
- **B200S(A):** 6.875" (17.46 cm) diameter.
- **B200SR(A):** 6.875" (17.46 cm) diameter.
- **B224RB(A):** 6.2" (15.748 cm) diameter.
- **B224BI(A):** 6.2" (15.748 cm) diameter.

Shipping weight: 4.8 oz. (137 g).

Operating temperature range: FST-851(A) Series, FST-851R(A): –20°C to 38°C (–4°F to 100°F); FST-851H(A): –20°C to 66°C (–4°F to 150°F).

Detector spacing: UL approved for 50 ft. (15.24 m) center to center. FM approved for 25 x 25 ft. (7.62 x 7.62 m) spacing.

Relative humidity: 10% – 93% noncondensing.

Thermal ratings: fixed-temperature setpoint 135°F (57°C), rate-of-rise detection 15°F (8.3°C) per minute, high temperature heat 190°F (88°C).

ELECTRICAL SPECIFICATIONS

Voltage range: 15 - 32 volts DC peak.

Standby current (max. avg.): 300 µA @ 24 VDC (one communication every 5 seconds with LED enabled).

LED current (max.): 6.5 mA @ 24 VDC ("ON").

Applications

Use thermal detectors for protection of property. For further information, go to systemsensor.com for manual I56-407-00, Applications Manual for System Smoke Detectors, which provides detailed information on detector spacing, placement, zoning, wiring, and special applications.

Installation

The FST Series plug-in intelligent thermal detectors use a separate base to simplify installation, service, and maintenance. Installation instructions are shipped with each detector. A special tool allows maintenance personnel to plug in and remove detectors without using a ladder

Mount base (all base types) on an electrical backbox which is at least 1.5" (3.81 cm) deep. For a chart of compatible junction boxes, see *DN-60054*.

***NOTE:** 1) Because of the inherent supervision provided by the SLC loop, end-of-line resistors are not required. Wiring "T-taps" or branches are permitted for Style 4 (Class "B") wiring. **2)** When using relay or sounder bases, consult the ISO-X(A) installation sheet I56-1380 for device limitations between isolator modules and isolator bases.*

Agency Listings and Approvals

These listings and approvals apply to the modules specified in this document.In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. *Consult factory for latest listing status.*

- **UL Listed:** S747.
- **ULC Listed:** S6978.
- **MEA Listed:** 383-02-E.
- **FM Approved.**
- **CSFM:** 7270-0028:0196.
- **BSMI:** CI313066760025.
- **CCCF:** Certif. # 2004081801000018.
- **U.S. Coast Guard:** 161.002/42/1 (NFS-640); 161.002/50/0 (NFS2-640/NFS-320/NFS-320C, excluding B210LP(A)).
- **Lloyd's Register:** 11/600013 (NFS2-640/NFS-320/NFS-320C, excluding B210LP(A)).

Product Line Information

***NOTE:** "A" suffix indicates ULC Listed model.*

FST-851: Intelligent thermal detector. Must be mounted to one of the bases listed below.

FST-851A: Same as FST-851 but with ULC Listing.

FST-851R: Intelligent thermal detector with rate-of-rise feature.

FST-851RA: Same as FST-851R but with ULC Listing.

FST-851H: Intelligent high-temperature thermal detector.

FST-851HA: Same as FST-851H but with ULC Listing.

INTELLIGENT BASES

***NOTE:** "A" suffix indicates ULC Listed model.*

***NOTE:** For details about intelligent bases and their mounting, see DN-60054.*

B210LP(A): Standard U.S. flanged low-profile mounting base.

B210LPBP: Bulk pack of B210LP; package contains 10.

B501(A): Standard European flangeless mounting base.

B501BP: Bulk pack of B501; package contains 10.

B200S(A): Addressable Intelligent, programmable sounder base capable of producing sound output in high or low volume with ANSI Temporal 3, ANSI Temporal 4, continuous tone, marching tone, and custom tone.

B200SR(A): Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone. Replaces B501BH series bases in retrofit applications.

B224RB(A): Intelligent relay base. Screw terminals: up to 14 AWG (2.0 mm²). Relay type: Form-C. Rating: 2.0 A @ 30 VDC resistive; 0.3 A @ 110 VDC inductive; 1.0 A @ 30 VDC inductive.

B224BI(A): Intelligent isolator base. Isolates SLC from loop shorts. Maximum: 25 devices between isolator bases; see Note 2 under Installation.

ACCESSORIES

F110: Retrofit flange to convert B210LP(A) to match the B710LP(A) profile, or to convert older high-profile bases to low-profile.

F110BP: Bulk pack of F110; package contains 15.

F210: Replacement flange for B210LP(A) base.

RA100Z(A): Remote LED annunciator. 3 – 32 VDC. Fits U.S. single-gang electrical box. Supported by B210LP(A) and B501(A) bases only.

SMB600: Surface mounting kit, flanged.

M02-04-00: Test magnet.

M02-09-00: Test magnet with telescoping handle.

XR2B: Detector removal tool. Allows installation and/or removal of FlashScan® Series detector heads from base in high ceiling installations. Includes T55-127-010.

T55-127-010: Detector removal tool without pole.

XP-4: Extension pole for XR2B. Comes in three 5-foot (1.524 m) sections.

For more information, contact Notifier. Phone: (203) 484-7161, FAX: (203) 484-7118.
www.notifier.com

FCM-1(A) & FRM-1(A) Series

Control and Relay Modules

NOTIFIER® by Honeywell

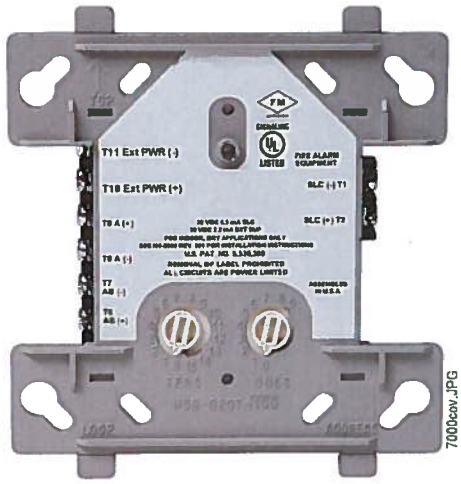
Intelligent / Addressable Devices

General

FCM-1(A) Control Module: The FCM-1(A) Addressable Control Module provides Notifier intelligent fire alarm control panels a circuit for Notification Appliances (horns, strobes, speakers, etc.). Addressability allows the FCM-1(A) to be activated, either manually or through panel programming, on a select (zone or area of coverage) basis.

FRM-1(A) Relay Module: The FRM-1(A) Addressable Relay Module provides the system with a dry-contact output for activating a variety of auxiliary devices, such as fans, dampers, control equipment, etc. Addressability allows the dry contact to be activated, either manually or through panel programming, on a select basis.

FlashScan® (U.S. Patent 5,539,389) is a communication protocol developed by NOTIFIER Engineering that greatly enhances the speed of communication between analog intelligent devices. Intelligent devices communicate in a grouped fashion. If one of the devices within the group has new information, the panel CPU stops the group poll and concentrates on single points. The net effect is response speed greater than five times that of other designs.



FCM-1(A)

Features

- Built-in type identification automatically identifies these devices to the control panel.
- Internal circuitry and relay powered directly by two-wire SLC loop. The FCM-1(A) module requires power (for horns, strobes, etc.), or audio (for speakers).
- Integral LED "blinks" green each time a communication is received from the control panel and turns on in steady red when activated.
- LED blink may be deselected globally (affects all devices).
- High noise immunity (EMF/RFI).
- The FCM-1(A) may be used to switch 24-volt NAC power, audio (up to 70.7 Vrms).
- Wide viewing angle of LED.
- SEMS screws with clamping plates for wiring ease.
- Direct-dial entry of address 01– 159 for FlashScan loops, 01 – 99 for CLIP mode loops.
- Speaker, and audible/visual applications may be wired for Class B or A (Style Y or Z).

Applications

The FCM-1(A) is used to switch 24 VDC audible/visual power, high-level audio (speakers). The FRM-1(A) may be programmed to operate dry contacts for applications such as door holders or Air Handling Unit shutdown, and to reset four-wire smoke detector power.

NOTE: *Refer to the SLC Manual (PN 51253) for details regarding releasing applications with the FCM-1(A). Refer to the FCM-1-REL datasheet (DN-60390) for new FlashScan® releasing applications.*

Construction

- The face plate is made of off-white heat-resistant plastic.
- Controls include two rotary switches for direct-dial entry of address (01-159).
- The FCM-1(A) is configured for a single Class B (Style Y) or Class A (Style Z) Notification Appliance Circuit.
- The FRM-1(A) provides two Form-C dry contacts that switch together.

Operation

Each FCM-1(A) or FRM-1(A) uses one of 159 possible module addresses on a SLC loop (99 on CLIP loops). It responds to regular polls from the control panel and reports its type and status, including the open/normal/short status of its Notification Appliance Circuit (NAC). The LED blinks with each poll received. On command, it activates its internal relay. The FCM-1(A) supervises Class B (Style Y) or Class A (Style Z) notification or control circuits.

Upon code command from the panel, the FCM-1(A) will disconnect the supervision and connect the external power supply in the proper polarity across the load device. The disconnection of the supervision provides a positive indication to the panel that the control relay actually turned ON. The external power supply is always relay isolated from the communication loop so that a trouble condition on the external power supply will never interfere with the rest of the system.

Rotary switches set a unique address for each module. The address may be set before or after mounting. The built-in TYPE CODE (not settable) will identify the module to the control panel, so as to differentiate between a module and a sensor address.

Specifications for FCM-1(A)

Normal operating voltage: 15 to 32 VDC.

Maximum current draw: 6.5 mA (LED on).

Average operating current: 350 µA direct poll, 375 µA group poll with LED flashing, 485 µA Max. (LED flashing, NAC shorted.)

Maximum NAC Line Loss: 4 VDC.

External supply voltage (between Terminals T10 and T11): Maximum (NAC): Regulated 24 VDC; Maximum (Speakers): 70.7 V RMS, 50W.

Drain on external supply: 1.7 mA maximum using 24 VDC supply; 2.2 mA Maximum using 80 VRMS supply.

Max NAC Current Ratings: For class B wiring system, the current rating is 3A; For class A wiring system, the current rating is 2A.

Temperature range: 32°F to 120°F (0°C to 49°C).

Humidity range: 10% to 93% non-condensing.

Dimensions: 4.5" (114.3 mm) high x 4" (101.6 mm) wide x 1.25" (31.75 mm) deep. Mounts to a 4" (101.6 mm) square x 2.125" (53.975 mm) deep box.

Accessories: SMB500 Electrical Box; CB500 Barrier

Specifications for FRM-1(A)

Normal operating voltage: 15 to 32 VDC.

Maximum current draw: 6.5 mA (LED on).

Average operating current: 230 µA direct poll; 255 µA group poll.

EOL resistance: not used.

Temperature range: 32°F to 120°F (0°C to 49°C).

Humidity range: 10% to 93% non-condensing.

Dimensions: 4.5" (114.3 mm) high x 4" (101.6 mm) wide x 1.25" (31.75 mm) deep. Mounts to a 4" (101.6 mm) square x 2.125" (53.975 mm) deep box.

Accessories: SMB500 Electrical Box; CB500 Barrier

Agency Listings and Approvals

In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL:** S635
- **ULC:** S3705 (A version only)
- **FM Approved**
- **CSFM:** 7300-0028:0219
- **MEA:** 14-00-E
- **FDNY:** COA #6067, #6065

Contact Ratings for FRM-1(A)

Current Rating	Maximum Voltage	Load Description	Application
3 A	30 VDC	Resistive	Non-Coded
2 A	30 VDC	Resistive	Coded
.9 A	110 VDC	Resistive	Non-Coded
.9 A	125 VDC	Resistive	Non-Coded
.5 A	30 VDC	Inductive (L/R=5ms)	Coded
1 A	30 VDC	Inductive (L/R=2ms)	Coded
.3 A	125 VAC	Inductive (PF=0.35)	Non-Coded
1.5 A	25 VAC	Inductive (PF=0.35)	Non-Coded
.7 A	70.7 VAC	Inductive (PF=0.35)	Non-Coded
2 A	25 VAC	Inductive (PF=0.35)	Non-Coded

***NOTE:** Maximum (Speakers): 70.7 V RMS, 50 W*

Product Line Information

***NOTE:** "A" suffix indicates ULC Listed model.*

FCM-1(A): Intelligent Addressable Control Module.

FRM-1(A): Intelligent Addressable Relay Module.

A2143-20: Capacitor, required for Class A (Style Z) operation of speakers.

SMB500: Optional Surface-Mount Backbox.

CB500: Control Module Barrier — required by UL for separating power-limited and non-power limited wiring in the same junction box as FCM-1(A).

***NOTE:** For installation instructions, see the following documents:*

- *FCM-1(A) Installation document I56-1169.*
- *FRM-1(A) Installation document I56-3502.*
- *Notifier SLC Wiring Manual, document 51253.*

ISO 9001 CERTIFIED ENGINEERING & MANUFACTURING QUALITY SYSTEMS

This document is not intended to be used for installation purposes.
We try to keep our product information up-to-date and accurate.
We cannot cover all specific applications or anticipate all requirements.
All specifications are subject to change without notice.

Made in the U.S.A.

For more information, contact Notifier. Phone: (203) 484-7161, FAX: (203) 484-7118.
www.notifier.com

SpectrAlert® Advance

Selectable Output Notification Appliances

NOTIFIER® by Honeywell

Audio/Visual Devices

General

SpectrAlert® Advance selectable-output horns, strobes and horn/strobes are rich with features guaranteed to cut installation times and maximize profits. The SpectrAlert Advance series of notification appliances is designed to simplify your installations, with features such as: plug-in designs, instant feedback messages to ensure correct installation of individual devices, and eleven field-selectable candela settings for wall and ceiling strobes and horn/strobes.

More specifically, when installing Advance products, first attach a universal mounting plate to a four-inch square, four-inch octagon, or double-gang junction box. The two-wire mounting plate attaches to a single-gang junction box.

Then, connect the notification appliance circuit wiring to the SEMS terminals on the mounting plate.

Finally, attach the horn, strobe, or horn/strobe to the mounting plate by inserting the product's tabs in the mounting plate's grooves. The device will rotate into position, locking the product's pins into the mounting plate's terminals. The device will temporarily hold in place with a catch until it is secured with a captured mounting screw.

SpectrAlert Advance products allow you to choose:

- 12 or 24 volts.
- 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, or 185 candela by way of a rear-mounted slide switch and front viewing window.
- Horn tones and volume by way of a rotary switch.

The SpectrAlert Advance series includes outdoor notification appliances. Outdoor strobes and horn/strobes (two-wire and four-wire) are available for wall or ceiling. Outdoor horns are available for wall only. All System Sensor outdoor products are rated between –40°C and 66°C in wet or dry applications.

Models available:

- Indoor wall-mount: horn, strobe, 2-wire horn/strobe, 4-wire horn/strobe.
- Indoor ceiling-mount: strobe, 2-wire horn/strobe, 4-wire horn/strobe.
- Outdoor wall-mount: horn, strobe, 2-wire horn/strobe, 4-wire horn/strobe.
- Outdoor ceiling-mount: strobe, 2-wire horn/strobe, 4-wire horn/strobe.

Features

- Plug-in design.
- Same mounting plate for wall- and ceiling-mount units.
- Shorting spring on mounting plate for continuity check before installation.
- Captive mounting screw.
- Tamper-resistance capability.
- Field-selectable candela settings on wall and ceiling units: 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, 185.
- Automatic selection of 12 or 24 volt operation at 15 and 15/75 candela.
- Outdoor wall and ceiling products.
- Outdoor products rated from –40°C and 66°C.

7087pho1.jpg

Indoor Ceiling Horn/Strobe


7087pho4.jpg

Outdoor Ceiling Strobe


7087pho3.jpg

Indoor Wall Horn/Strobe

7087pho2.jpg

Indoor Ceiling Strobe


7087pho5.jpg

Indoor Wall Horn


7087pho6.jpg

Outdoor Wall Strobe

- Outdoor products rainproof per UL50 (NEMA 3R) and weatherproof per NEMA 4X, IP56
- Minimal intrusion into the backbox.
- Horn rated at 88+ dbA at 16 volts.
- Rotary switch for tone selection.
- Three horn volume settings.
- Electrically compatible with existing SpectrAlert products.

Engineering Specifications

SpectrAlert Advance horns, strobes, and horn/strobes mount to a standard 10.16 x 10.16 x 3.81 cm backbox, 10.16 cm octagonal backbox, or a double-gang backbox. Two-wire products mount to a single-gang 5.08 x 10.16 x 4.763 cm backbox. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance products, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt rated notification appliance circuit outputs shall operate between 9 and 17.5 volts; 24-volt rated notification appliance circuit outputs shall operate between 17 and 33 volts. Indoor SpectrAlert Advance products shall operate between 0°C and 49°C from a regulated DC, or full-wave-rectified, unfiltered power supply. Strobes and horn/strobes shall have field-selectable candela settings including 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, 185.

STROBE

The strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to CAN/ULC S5512 and shall be approved for fire protective service. The strobe shall be wired

as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

HORN/STROBE COMBINATION

The horn/strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to CAN/ULC S5512 and shall be approved for fire protective service. The horn/strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system. The horn shall have three audibility options and an option to switch between a Temporal 3 pattern and a Non-Temporal (continuous) pattern. These options are set by a multiple position switch. On four-wire products, the strobe shall be powered independently of the sounder. The horn on horn/strobe models shall operate on a coded or non-coded power supply.

OUTDOOR PRODUCTS

SpectrAlert Advance outdoor horns, strobes and horn/strobes shall be listed for outdoor use by ULC and shall operate between –40°C and 66°C. The products shall be listed for use with a System Sensor outdoor/weatherproof backbox with half-inch and three-fourths-inch conduit entries.

SYNCHRONIZATION MODULE

The module shall be a System Sensor Sync•Circuit MDL3RA or MDL3WA listed to ULC and shall be approved for fire protective service. The module shall synchronize SpectrAlert strobes at 1 Hz and horns at Temporal 3. Also, while operating the strobes, the module shall silence the horns on horn/strobe models over a single pair of wires. The module shall mount to a 11.906 x 11.906 x 5.398 cm backbox. The module shall also control two Style Y (class B) circuits or one Style Z (Class A) circuit. The module shall synchronize multiple zones. Daisy-chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

Operating Specifications

- **Standard operating temperature:** 0°C to 49°C.
- **K Series operating temperature:** –40°C to 66°C.
- **Humidity range:** 10% to 93% non-condensing (indoor products).
- **Strobe flash rate:** 1 flash per second.
- **Nominal voltage:** regulated 12 VDC/FWR or regulated 24 VDC/FWR. ***NOTE:*** *Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.*
- **Operating voltage range:** 8 V to 17.5 V (12 V nominal); or 16 V to 33 V (24 V nominal). ***NOTE:*** *P, S, PC, and SC products will operate at 12 V nominal only for 15 cd and 15/75 cd.*
- **Input terminal wire gauge:** 12 to 18 AWG (3.31 to 0.821 mm²).
- **Ceiling-mount dimensions (including lens):** 17.3 cm diameter x 6.4 cm deep.
- **Wall-mount dimensions (including lens):** 14.2 cm H x 11.9 cm W x 6.4 cm D.
- **Horn dimensions:** 14.2 cm H x 11.9 cm W x 3.3 cm D.

Agency Listings and Approvals

The listings and approvals below apply to SpectrAlert Advance Selectable Output Notification Devices. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL Listed:** S4011
- **ULC Listed:** S5512
- **FM Approved**
- **MEA:** 452-05-E
- **CSFM:** 7125-1653:0186 (indoor strobes); 7125-1653:0188 (horn strobes, chime strobes); 7135-1653:0189 (horns, chimes)

Strobe Current Draw, ULC Maximum (mA RMS)

Candela		8 – 17.5 V		16 – 33 V	
		DC	FWR	DC	FWR
Standard Candela Range	15	123	128	66	71
	15/75	142	148	77	81
	30	NA	N/A	94	96
	75	NA	NA	158	153
	95	NA	NA	181	176
	110	NA	NA	202	195
	115	NA	NA	210	205
High Candela Range	135	NA	NA	228	207
	150	NA	NA	246	220
	177	NA	NA	281	251
	185	NA	NA	286	258

Horn Current Draw, ULC Maximum (mA RMS)

Sound Pattern	dB	8 – 17.5 V		16 – 33 V	
		DC	FWR	DC	FWR
Temporal	High	57	55	69	75
Temporal	Medium	44	49	58	69
Temporal	Low	38	44	44	48
Non-temporal	High	57	56	69	75
Non-temporal	Medium	42	50	60	69
Non-temporal	Low	41	44	50	50
Coded	High	57	55	69	75
Coded	Medium	44	51	56	69
Coded	Low	40	46	52	50

Horn and Horn/Strobe Rotary Switch Setting

Setting	Repetition Rate	dB Level
1	Temporal horn	High
2	Temporal horn	Medium
3	Temporal horn	Low
4	Normal horn	High
5	Normal horn	Medium
6	Normal horn	Low
7*	Externally coded	High
8*	Externally coded	Medium
9*	Externally coded	Low

**NOTE:* *Settings 7, 8, and 9 are not available on 2-wire horn/strobe.*

Horn and Horn/Strobe Output (dBA)

Switch Position	Sound Pattern	dB	8 – 17.5 V		16 – 33 V	
			DC	FWR	DC	FWR
1	Temporal	High	96	93	101	99
2	Temporal	Medium	89	89	95	95
3	Temporal	Low	86	87	91	92
4	Non-temporal	High	90	86	96	93
5	Non-temporal	Medium	82	82	90	89
6	Non-temporal	Low	79	80	86	86
7*	Coded	High	90	87	96	93
8*	Coded	Medium	82	82	90	89
9*	Coded	Low	78	80	86	86

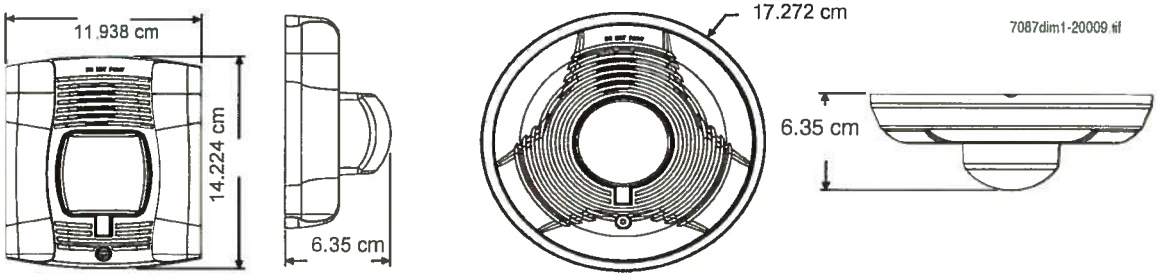
**NOTE:* *Settings 7, 8, and 9 are not available on 2-wire horn/strobe.*

Two-Wire Horn/Strobe, *STANDARD* Candela Range (15 – 115 cd), ULC Maximum Current Draw (mA RMS)

Input, Sound Pattern, dB Level	8 – 17.5 V		16 – 33 V						
	15	15/75	15	15/75	30	75	95	110	115
Input, Temporal, High	137	147	79	90	107	176	194	212	218
Input, Temporal, Medium	132	144	69	80	97	157	182	201	210
Input, Temporal, Low	132	143	66	77	93	154	179	198	207
Input, Non-temporal, High	141	152	91	100	116	176	201	221	229
Input, Non-temporal, Medium	133	145	75	85	102	163	187	207	216
Input, Non-temporal, Low	131	144	68	79	96	156	182	201	210
Input, Temporal, High	136	155	88	97	112	168	190	210	218
Input, Temporal, Medium	129	152	78	88	103	160	184	202	206
Input, Temporal, Low	129	151	76	86	101	160	184	194	201
Input, Non-temporal, High	142	161	103	112	126	181	203	221	229
Input, Non-temporal, Medium	134	155	85	95	110	166	189	208	216
Input, Non-temporal, Low	132	154	80	90	105	161	184	202	211

Two-Wire Horn/Strobe, *HIGH* Candela Range (135 – 185 cd), ULC Maximum Current Draw (mA RMS)

Input	16 – 33 V				Input	16 – 33 V			
	135	150	177	185		135	150	177	185
Temporal, High	245	259	290	297	Temporal, High	215	231	258	265
Temporal, Medium	235	253	288	297	Temporal, Medium	209	224	250	258
Temporal, Low	232	251	282	292	Temporal, Low	207	221	248	256
Non-temporal, High	255	270	303	309	Non-temporal, High	233	248	275	281
Non-temporal, Medium	242	259	293	299	Non-temporal, Medium	219	232	262	267
Non-temporal, Low	238	254	291	295	Non-temporal, Low	214	229	256	262



Ordering Information

Model	Description	Model	Description
WALL HORN/STROBES		*CEILING HORN/STROBES*	
P2RA	2-wire horn/strobe, standard cd, red.	PC2RKA	2-wire horn/strobe, standard cd, red, outdoor.
P2RHA	2-wire horn/strobe, high cd, red.	PC2RHKA	2-wire horn/strobe, high cd, red, outdoor.
P2RKA	2-wire horn/strobe, standard cd, red, outdoor	PC2WA	2-wire horn/strobe, standard cd, white.
P2RHKA	2-wire horn/strobe, high cd, red, outdoor.	PC2WHA	2-wire horn/strobe, high cd, white.
P2WA	2-wire horn/strobe, standard cd, white.	PC4RKA	4-wire horn/strobe, standard cd, red, outdoor.
P2WHA	2-wire horn/strobe, high cd, white.	PC4RHKA	4-wire horn/strobe, high cd, red, outdoor.
P4RA	4-wire horn/strobe, standard cd, red.	PC4WA	4-wire horn/strobe, standard cd, white.
P4RHA	4-wire horn/strobe, high cd, red.	PC4WHA	4-wire horn/strobe, high cd, white.
P4RKA	4-wire horn/strobe, standard cd, red, outdoor.	*HORNS*	
P4RHKA	4-wire horn/strobe, high cd, red, outdoor.	HRA	Horn, red.
P4WA	4-wire horn/strobe, standard cd, white.	HRKA	Horn, red, outdoor.
P4WHA	4-wire horn/strobe, high cd, white.	HWA	Horn, white.
ACCESSORIES		*WALL STROBES*	
BBS-2A	Backbox skirt, wall, red.	SRA	Strobe, standard cd, red.
BBSW-2A	Backbox skirt, wall, white.	SRHA	Strobe, high cd, red.
BBSC-2A	Backbox skirt, ceiling, red.	SRKA	Strobe, standard cd, red, outdoor.
BBSCW-2A	Backbox skirt, ceiling, white.	SRHKA	Strobe, high cd, red, outdoor.
WTPA	Flush mount, weatherproof plate, red	SWA	Strobe, standard cd, white.
WTPWA	Flush mount, weatherproof plate, white	SWHA	Strobe, high cd, white.
TR-HSA	Trim Ring, Red, package of 5	*CEILING STROBES*	
TRW-HSA	Trim Ring, White, package of 5	SCRKA	Strobe, standard cd, red, outdoor.
TRC-HSA	Trim Ring Ceiling, Red, package of 5	SCRHKA	Strobe, high cd, red, outdoor.
TRCW-HSA	Trim Ring Ceiling, White, package of 5	SCWA	Strobe, standard cd, white.
		SCWHA	Strobe, high cd, white.

NOTE: *For strobes and horn/strobes, add suffix "-F" for French or "-B" for Bilingual.*

NOTE: **"High cd" refers to strobes that include 135, 150, 177, and 185 candela settings. "Standard cd" refers to strobes that include 15, 15/75, 30, 75, 95, 110, and 115 candela settings.*

NOTE: *All outdoor models ("K(A)" suffix) include a plastic weatherproof backbox.*

NOTE: *Add "-R" to models for weatherproof replacement device (no back box included). Only for use with weatherproof outdoor flush mounting plate, WTPA and WTPWA.*

NOTE: *Add "P" to model for plain housing (No "FIRE" marking on the cover.)*

For more information, contact Notifier.
(888) 289-1114
10 Whitmore Road
Woodbridge, Ontario L4L 7Z4
www.notifier.com

Audible Visible Accessories

System Sensor offers a wide range of Audible Visible (AV) accessories to enable you to meet a variety of application requirements.

Features

MP120K Mounting Plate

- Designed for both indoor and outdoor use
- Plug-in design eliminates ground faults
- Power supply that converts 120 VAC to nominal 24 V FWR
- Compatible with all two-wire SpectrAlert Advance® devices

Color Lens Attachments

- Easily turns any device into a strobe for ECS, severe weather, sprinkler activation and more
- Outdoor rated from –35°F to 151°F
- Wall- or ceiling-mount lenses available
- UL 1638 listed

WTP Weatherproof Plates

- Enables flush mounting of outdoor devices to brick, ceramic tile, concrete, and masonry brick
- Weatherproof per NEMA 3R
- For use in both indoor and outdoor applications
- For use with all K series (outdoor) products replacement -R models
- Universal mounting plate easily attaches to the weatherproof plate

Agency Listings

LISTED S4011 S3593 — 7300-1653 195 7300-1653 204 7300-1653 0222 — MEA approved 582-06-E

The **MP120K Mounting Plate** is designed to use 120 VAC to power SpectrAlert Advance horns, strobes, horn strobes, chimes, and chime strobes.

Color Lens Attachments install easily on any indoor or outdoor SpectrAlert Advance strobe devices to provide distinctive visual signaling.

WTP Series Weatherproof Plates enable installers to flush mount outdoor horns, strobes, horn strobes, speakers, and speaker strobes to a variety of wall surfaces, including brick, ceramic tile, concrete, and masonry brick. These NEMA 3R-rated plates come in red and white to suit aesthetic and functional requirements. They may be used indoors or outdoors (with outdoor devices), as required by conditions. They easily attach to the SpectrAlert Advance universal mounting plate.

Trim Rings for speakers and speaker strobes allow for additional space within the backbox. Trim rings for horns, strobes, and horn strobes allow 4-wire devices to mount to a single-gang back box.

SpectrAlert Advance Outdoor Back Boxes ensure a NEMA 4X watertight listing for AV devices. In locations where you have a hard surface to mount to, **Surface Mount Back boxes** are the best solution. If you have an exposed junction box, the **Back Box Skirts** offer an attractive solution to mask the junction box exposure. **Retrofit Plates** cover paint outlines on the wall when replacing legacy SpectrAlert Advance products.

SpectrAlert Advance DECALS are for use on our non-pad printed wall- and ceiling-mount devices. Each decal comes with AGENT, EVAC, ALERT, or FIRE label options. The **Sync•Circuit Module** synchronizes SpectrAlert Advance strobes at 1 Hz and horns and chimes at temporal 3 over a single pair of wires. Patented module technology also allows the silencing of horns or chimes on horn strobe and chime strobe models over a pair of wires. See Datasheet *A05-1007-005* for more information.

Specifications

MP120K

120 VAC mounting plate model MP120K shall be listed to UL 464 for fire protective signaling systems. The mounting plate shall power a two-wire SpectrAlert® Advance horn, strobe, horn strobe, chime or chime strobe from a 120 VAC supply converted to nominal 24 V FWR. For indoor applications, the mounting plate shall be installed in a 4x4x2 1/8 -inch junction box. For outdoor applications, the mounting plate shall be installed using the proper SpectrAlert Advance outdoor weatherproof back box and outdoor listed notification appliance.

Compatibility

MP120K may be used with any of the following products at all horn and strobe settings: P2R, P2RH, P2RK, P2RHK, P2W, P2WH, SR, SRH, SRK, SRHK, SW, SWH, PC2R, PC2RH, PC2RK, PC2RHK, PC2W, PC2WH, SCR, SCRH, SCRK, SCRHK, SCW, SCWH, HR, HRK, HW, SR-P, SW-P, SRH-P, SWH-P, P2R-P, P2W-P, P2RH-P, P2WH-P, SCR-P, SCW-P, SCRH-P, SCWH-P, PC2R-P, PC2W-P, PC2RH-P, PC2WH-P, SR-SP, SRH-SP, P2R-SP, P2RH-SP, SCW-SP, SCWH-SP, PC2W-SP, PC2WH-SP, CHR, CHW, CHSR, CHSW.

Physical/Operating Specifications

Standard Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Humidity Range	10 to 93% non-condensing (indoor products)
Nominal Voltage	Regulated 120 VAC
Operating Voltage Range	96–132 VAC
Current Draw From AC Line	150 mA max.

WTP Weatherproof Plates

The SpectrAlert Advance weatherproof plate for horns, strobes, and horn strobes shall mount to 4x4x1 1/4-inch and 2x4x1 1/2-inch back boxes. The weatherproof plate for speakers and speaker strobes shall mount to 4x4x2 1/8-inch back boxes. The weatherproof plate may be installed on brick, concrete, ceramic tile, and masonry brick and must be used with System Sensor "K" series outdoor replacement models (-R). Outdoor SpectrAlert Advance products shall operate between -40°F and 151°F.

Physical Specifications

Speaker Strobe	7.25" L x 6.26" W x 3.00" D (including speaker and lens)
Speaker	7.25" L x 6.26" W x 1.30" D (including speaker)
Horn Strobe	6.90" L x 5.90" W x 2.80" D (including strobe lens)
Horn	6.90" L x 5.90" W x 1.60" D (including horn)

Note: WTP and WTPW are compatible with 4x4x11/4-inch and 2x4x11/2-inch back boxes. (Compatible with outdoor horns, horn strobes and strobes)
WTP-SP and WTP-SPW are compatible with 4x4x21/8-inch back boxes. (Compatible with outdoor speakers and speaker strobes)

Models Available for Use with the Watertight Plates:

WTP/WTPW	HRK-R
WTP/WTPW	SRK-R, SRHK-R, SWK-R, SWHK-R
WTP/WTPW	P2RK-R, P2RHK-R, P4RK-R, P2WK-R, P2WHK-R
WTP-SP	SPRK-R, SPWK-R
WTP-SPW	SPSRK-R

Note: -R models ship without the outdoor back box. The weatherproof mounting plates are designed to be used only with -R replacement models.

Specifications

Color Lens Attachments

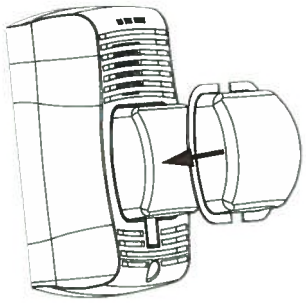
The System Sensor SpectrAlert Advance color lens attachments shall be approved for fire protective service as listed in UL 1638. The lens attachments shall only be used with non-FIRE-printed System Sensor strobe devices. The lens shall mount to any wall- or ceiling-mount strobes and shall be rated from –35°F to 151°F.

Compatibility

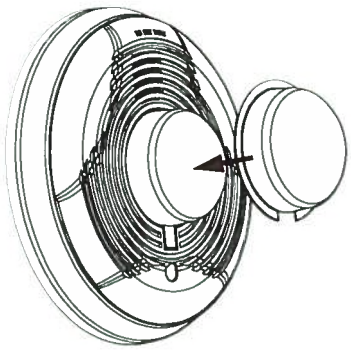
Color lens attachments may be used with the following System Sensor plain (non-FIRE-printed) indoor or outdoor strobe models: SR-P, SRH-P, SW-P, SWH-P, P2R-P, P2W-P, P2WH-P, P2RK-P, P2RHK-P, SCW-P, PC2R-P, PC2W-P, PC2WH-P, SPSW-P, SPSR-P, SPSWH-P, SPSRH-P, SPSWV-P, SPSRV-P, SPSCW-P, SPSCWH-P, SPSCWV-P, SPSCWVH-P, SRK-P, SRHK-P, SWK-P, SWHK-P, P2WK-P, P2WHK-P, SPSWK-P, SPSRK-P, SW-CLR-ALERT, SCW-CLR-ALERT, SPSCW-CLRALERT.

Color Lens Installation

Installation to Wall-Mount Strobe



Installation to Ceiling-Mount Strobe



Candela Rating for UL 1638

Light output of color lenses is measured per UL 1638, on axis, and is not derated.

Strobe Output (cd)	
Candela Switch Setting	**On-Axis Candela Rating (UL1638) – All Colors**
15	15
15/75*	NA
30	30
75	75
95	95
110	110
115	115
135	135
150	150
177	177
185	185

*15/75 Candela setting not to be used with color lenses

Ordering Information

Part No.	Description
Metal Weatherproof Backboxes	
MWBBW	white, wall-mount, compatible with: SPWK-R, SPWK, SPSWK-R, SPSWK-P, SPSWK
MWBB	red, wall-mount, compatible with: SPRK-R, SPRK
MWBBCW	white, ceiling-mount, compatible with: SPCWK, SPSCWK,SPCWK-R, SPSCWK, SPSCWK-R, SPSCWHK, SPSCWHK-R
SA-WBBW	white, wall-mount, compatible with: P2WK, P2WHK, P2WHK-P, P2WK-P, SWK, SWK-P,P2WHK-R, P2WK-R, SWHK-R
SA-WBB	red, wall-mount, compatible with: P2RK, P2RK-P, P2RK-R, SRK, SRK-P, SRK-R P2RHK, P4RK, P4RHK, SRHK, HRK, P2RHK-R, P2RK-R, HRK-R, P4RHK-R, P4RK-R, SRHK-R
SA-WBBCW	white, ceiling-mount, compatible with: PC2WK, SCWK
SA-WBBW	white, wall-mount, compatible with: P2WK, P2WHK, P2WHK-P, P2WK-P, SWK, SWK-P,P2WHK-R, P2WK-R, SWHK-R

Ordering Information (continued)

Part No.	Description
Surface Mount Back Box	
SBBR	red, wall-mount, compatible with: HR, CHR, SR, SR-SP, SRH, P2R, P2R-SP, P2RH, P4R, P4RH, CHSR, P2R-P, SR-P, SRH-P
SBBW	white, wall-mount, compatible with:HW, CHW, SW, SWH, P2W, P2WH, P4W, P4W-P, CHSW, P2W-P, P2WH-P, SW-P, SWH-P, SW-ALERT, SWH-ALERT
SBBSPR	red, wall-mount, compatible with: SPR, SPRV, SPSR, SPSRH, SPSRV, SPSR-P, SPSRH-P, SPSRV-P
SBBSPW	white, wall-mount, compatible with: SPW, SPWV, SPSW, SPSWH, SPSWV, SPSW-P, SPSWH-P, SPSWV-P, SPSW-ALERT, SPSW-CLR-ALERT
SBBCR	red, ceiling-mount compatible with: SCR, SCRH, PC2R, PC2RH, PC4R, PC4RH, SPCR, SPCRV, SPSCR, SPSCRH, SPSCRV, SPSCRVH, PC2R-P
SBBCW	white, ceiling-mount, compatible with: SCW, SCWH, PC2W, PC2W-SP, PC2WH, PC4W, SPCW, SPCWV, SPSCW, SPSCWH, SPSCWV, SPSCWVH, PC2W-P, PC2WH-P, SCW-P, SPSCW-P, SPSCWH-P, SPSCWHK-P, SPSCWV-P, SPSCWVH-P, SPSCW-CLR-ALERT, SCW-CLR-ALERT
Back Box Skirts	
BBS-2	red, wall-mount, compatible with: P2R, SR, HR, CHSR, CHR, P2RH, P4R, P4RH, SRH, P2R-P, P2RH-P, P4R-P, P4RH-P, SR-P, SRH-P, SR-SP, SRH-SP, P2R-SP, P2RH-SP
BBS-SP201W	Surface-mount back-box skirt for the PF24V (ExitPoint™ Directional Sounder with Voice Messaging)
SPBBS	red, wall-mount, compatible with: SPR, SPSR, SPRV,SPSR-P,SPSRH,SPSRH-P
Colored Lenses	
LENS-B	Wall-mount, blue
LENS-R	Wall-mount, red
LENS-G	Wall-mount, green
LENS-A	Wall-mount, amber
LENS-BC	Ceiling-mount, blue
LENS-RC	Ceiling-mount, red
LENS-GC	Ceiling-mount, green
LENS-AC	Ceiling-mount, amber

Part No.	Description
Decals	
DECAL-R	red, used for non-pad-printed wall-mount devices. (10 total decals per box for 5 devices)*
DECAL-RC	red, used for non-pad-printed ceiling-mount devices. (15 total decals per box for 5 devices)*
DECAL-W	white, used for non-pad-printed wall-mount devices. (10 total decals per box) for 5 devices*
DECAL-WC	white, used for non-pad-printed ceiling-mount devices. (15 total decals per box for 5 devices)*
*All Decals include Labels: "AGENT, EVAC, ALERT & FIRE"	
Retrofit Plates (For use with horn strobe & speaker strobe devices)	
RFPW	9.5" x 7" white
RFP	9.5" x 7" red
Mounting Plate	
MP120K	120 VAC Adapter Mounting Plate
Sync Modules	
MDL3W	white, 12/24 volt Sync-Circuit module.
MDL3R	red 12/24 volt Sync-Circuit module
Trim Rings	
TR	red, wall-mount for use with speaker devices
TRC	red, ceiling-mount for use with speaker devices
TRC-HS	red, ceiling-mount for use with horn strobe devices
TRCW	white, ceiling-mount for use with speaker devices
TRCW-HS	red, ceiling-mount for use with horn strobe devices
TR-HS	red, wall-mount for use with horn strobes devices
TRW	white, wall-mount for use with speaker devices
TRW-HS	white, wall-mount for use with horn strobe devices
Watertight Plates	
WTPW	white, for use with horn, strobes & horn strobe devices
WTP	red, for use with horn, strobes & horn strobe devices
WTP-SPW	white, for use with speaker devices
WTP-SP	red, for use with speaker devices

SYSTEM SENSOR

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Phone: 800-SENSOR2 • Fax: 630-377-6495
www.systemsensor.com

AVDS00403 • 7/13

EOL-CR, EOL-CW

Universal End-of-Line Device Mounting Plates

NOTIFIER® by Honeywell

General

The EOL-CR and EOL-CW Universal End-of-Line Device Mounting Plates are used, when required, to place the end-of-line device at an accessible height. The EOL-CR/-CW consists of a terminal strip mounted on a heavy gauge metallic single-gang faceplate, finished in red or white baked enamel; it fits on a standard single-gang electrical box. The end-of-line device is included with the corresponding module in the central equipment.

Architectural/Engineering Specifications

The End-of-Line Device Mounting Plate shall be model EOL-CR/-CW. It shall consist of a terminal strip, mounted on a single-gang faceplate, made of heavy-gauge metal, finished in red (EOL-CR) or white (EOL-CW), and shall fit on a standard single-gang electrical box.

Agency Listings and Approvals

The listings and approvals below apply to the EOL-CR and EOL-CW Mounting Plates for End-of-Line Devices. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in progress. Consult factory for latest listing status.

- **ULC Listed:** File S7547

Ordering Information

EOL-CR: End-of-line device mounting plate (red). Shipping weight 0.17 kg (6 oz.).

EOL-CW: End-of-line device mounting plate (white). Shipping weight 0.17 kg (6 oz.).

EOL-CR

ISO 9001 CERTIFIED
ENGINEERING & MANUFACTURING QUALITY SYSTEMS

This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice.

For more information, contact Notifier.
(888) 289-1114
10 Whitmore Road
Woodbridge, Ontario L4L 7Z4
www.notifier.com

FMM-1(A), FMM-101(A), FZM-1(A) & FDM-1(A)

Monitor Modules with FlashScan®

NOTIFIER® by Honeywell

Intelligent/Addressable Devices

General

Four different monitor modules are available for Notifier's intelligent control panels for a variety of applications. Monitor modules supervise a circuit of dry-contact input devices, such as conventional heat detectors and pull stations, or monitor and power a circuit of two-wire smoke detectors (FZM-1(A)).

FMM-1(A) is a standard-sized module (typically mounts to a 4" [10.16 cm] square box) that supervises either a Style D (Class A) or Style B (Class B) circuit of dry-contact input devices.

FMM-101(A) is a miniature monitor module a mere 1.3" (3.302 cm) H x 2.75" (6.985 cm) W x 0.5" (1.270 cm) D that supervises a Style B (Class B) circuit of dry-contact input devices. Its compact design allows the FMM-101(A) to be mounted in a single-gang box behind the device it monitors.

FZM-1(A) is a standard-sized module that monitors and supervises compatible two-wire, 24 volt, smoke detectors on a Style D (Class A) or Style B (Class B) circuit.

FDM-1(A) is a standard-sized dual monitor module that monitors and supervises two independent two-wire Style B (Class B) dry-contact initiating device circuits (IDCs) at two separate, consecutive addresses in intelligent, two-wire systems.

FlashScan® (U.S. Patent 5,539,389) is a communication protocol developed by NOTIFIER that greatly increases the speed of communication between analog intelligent devices. Intelligent devices communicate in a grouped fashion. If one of the devices within the group has new information, the panel CPU stops the group poll and concentrates on single points. The net effect is response speed greater than five times that of other designs.

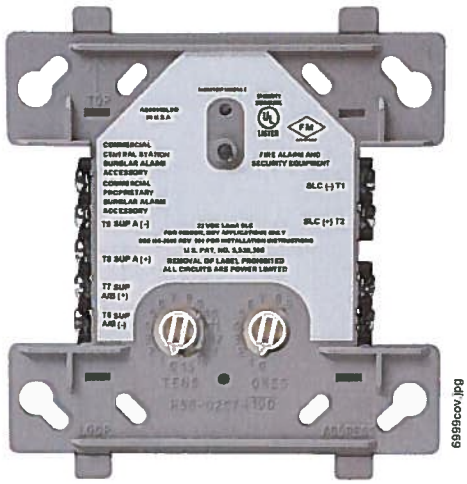
FMM-1(A) Monitor Module

- Built-in type identification automatically identifies this device as a monitor module to the control panel.
- Powered directly by two-wire SLC loop. No additional power required.
- High noise (EMF/RFI) immunity.
- SEMS screws with clamping plates for ease of wiring.
- Direct-dial entry of address: 01 – 159 on FlashScan loops; 01 – 99 on CLIP loops.
- LED flashes green during normal operation (this is a programmable option) and latches on steady red to indicate alarm.

The FMM-1(A) Monitor Module is intended for use in intelligent, two-wire systems, where the individual address of each module is selected using the built-in rotary switches. It provides either a two-wire or four-wire fault-tolerant Initiating Device Circuit (IDC) for normally-open-contact fire alarm and supervisory devices. The module has a panel-controlled LED indicator. The FMM-1(A) can be used to replace MMX-1(A) modules in existing systems.

FMM-1(A) APPLICATIONS

Use to monitor a zone of four-wire smoke detectors, manual fire alarm pull stations, waterflow devices, or other normally-open dry-contact alarm activation devices. May also be used to monitor normally-open supervisory devices with special supervisory indication at the control panel. Monitored circuit may be wired as an NFPA Style B (Class B) or Style D (Class A) Initiating Device Circuit. A 47K ohm End-of-Line Resistor (provided) terminates the Style B circuit. No resistor is required for supervision of the Style D circuit.



FMM-1(A) (Type H)

FMM-1(A) OPERATION

Each FMM-1(A) uses one of the available module addresses on an SLC loop. It responds to regular polls from the control panel and reports its type and the status (open/normal/short) of its Initiating Device Circuit (IDC). A flashing LED indicates that the module is in communication with the control panel. The LED latches steady on alarm (subject to current limitations on the loop).

FMM-1(A) SPECIFICATIONS

Nominal operating voltage: 15 to 32 VDC.

Maximum current draw: 5.0 mA (LED on).

Average operating current: 350 µA (LED flashing), 1 communication every 5 seconds, 47k EOL.

Maximum IDC wiring resistance: 40 ohms.

EOL resistance: 47K ohms.

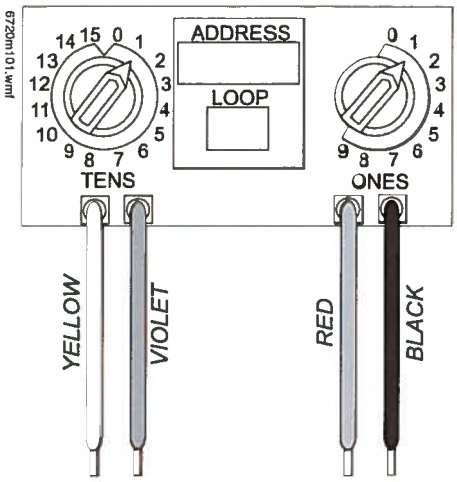
Temperature range: 32°F to 120°F (0°C to 49°C).

Humidity range: 10% to 93% noncondensing.

Dimensions: 4.5" (11.43 cm) high x 4" (10.16 cm) wide x 1.25" (3.175 cm) deep. Mounts to a 4" (10.16 cm) square x 2.125" (5.398 cm) deep box.

FMM-101(A) Mini Monitor Module

- Built-in type identification automatically identifies this device as a monitor module to the panel.
- Powered directly by two-wire SLC loop. No additional power required.
- High noise (EMF/RFI) immunity.
- Tinned, stripped leads for ease of wiring.
- Direct-dial entry of address: 01 – 159 on FlashScan loops; 01 – 99 on CLIP loops.



The FMM-101(A) Mini Monitor Module can be installed in a single-gang junction directly behind the monitored unit. Its small size and light weight allow it to be installed without rigid mounting. The FMM-101(A) is intended for use in intelligent, two-wire systems where the individual address of each module is selected using rotary switches. It provides a two-wire initiating device circuit for normally-open-contact fire alarm and security devices. The FMM-101(A) can be used to replace MMX-101(A) modules in existing systems.

FMM-101(A) APPLICATIONS

Use to monitor a single device or a zone of four-wire smoke detectors, manual fire alarm pull stations, waterflow devices, or other normally-open dry-contact devices. May also be used to monitor normally-open supervisory devices with special supervisory indication at the control panel. Monitored circuit/device is wired as an NFPA Style B (Class B) Initiating Device Circuit. A 47K ohm End-of-Line Resistor (provided) terminates the circuit.

FMM-101(A) OPERATION

Each FMM-101(A) uses one of the available module addresses on an SLC loop. It responds to regular polls from the control panel and reports its type and the status (open/normal/short) of its Initiating Device Circuit (IDC).

FMM-101(A) SPECIFICATIONS

Nominal operating voltage: 15 to 32 VDC.

Average operating current: 350 µA, 1 communication every 5 seconds, 47k EOL; 600 µA Max. (Communicating, IDC Shorted).

Maximum IDC wiring resistance: 40 ohms.

Maximum IDC Voltage: 11 Volts.

Maximum IDC Current: 400 µA.

EOL resistance: 47K ohms.

Temperature range: 32°F to 120°F (0°C to 49°C).

Humidity range: 10% to 93% noncondensing.

Dimensions: 1.3" (3.302 cm) high x 2.75" (6.985 cm) wide x 0.65" (1.651 cm) deep.

Wire length: 6" (15.24 cm) minimum.

FZM-1(A) Interface Module

- Supports compatible two-wire smoke detectors.
- Supervises IDC wiring and connection of external power source.
- High noise (EMF/RFI) immunity.
- SEMS screws with clamping plates for ease of wiring.
- Direct-dial entry of address: 01 – 159 on FlashScan loops, 01 – 99 on CLIP loops.
- LED flashes during normal operation; this is a programmable option.
- LED latches steady to indicate alarm on command from control panel.

The FZM-1(A) Interface Module is intended for use in intelligent, addressable systems, where the individual address of each module is selected using built-in rotary switches. This module allows intelligent panels to interface and monitor two-wire conventional smoke detectors. It transmits the status (normal, open, or alarm) of one full zone of conventional detectors back to the control panel. All two-wire detectors being monitored must be UL compatible with the module. The FZM-1(A) can be used to replace MMX-2(A) modules in existing systems.

FZM-1(A) APPLICATIONS

Use the FZM-1(A) to monitor a zone of two-wire smoke detectors. The monitored circuit may be wired as an NFPA Style B (Class B) or Style D (Class A) Initiating Device Circuit. A 3.9 K ohm End-of-Line Resistor (provided) terminates the end of the Style B or D (class B or A) circuit (maximum IDC loop resistance is 25 ohms). Install ELR across terminals 8 and 9 for Style D application.

FZM-1(A) OPERATION

Each FZM-1(A) uses one of the available module addresses on an SLC loop. It responds to regular polls from the control panel and reports its type and the status (open/normal/short) of its Initiating Device Circuit (IDC). A flashing LED indicates that the module is in communication with the control panel. The LED latches steady on alarm (subject to current limitations on the loop).

FZM-1(A) SPECIFICATIONS

Nominal operating voltage: 15 to 32 VDC.

Maximum current draw: 5.1 mA (LED on).

Maximum IDC wiring resistance: 25 ohms.

Average operating current: 300 µA, 1 communication and 1 LED flash every 5 seconds, 3.9k eol.

EOL resistance: 3.9K ohms.

External supply voltage (between Terminals T3 and T4): DC voltage: 24 volts power limited. Ripple voltage: 0.1 Vrms maximum. Current: 90 mA per module maximum.

Temperature range: 32°F to 120°F (0°C to 49°C).

Humidity range: 10% to 93% noncondensing.

Dimensions: 4.5" (11.43 cm) high x 4" (10.16 cm) wide x 1.25" (3.175 cm) deep. Mounts to a 4" (10.16 cm) square x 2.125" (5.398 cm) deep box.

FDM1(A) Dual Monitor Module

The FDM-1(A) Dual Monitor Module is intended for use in intelligent, two-wire systems. It provides two independent two-wire initiating device circuits (IDCs) at two separate, consecutive addresses. It is capable of monitoring normally open contact fire alarm and supervisory devices; or either normally open or normally closed security devices. The module has a single panel-controlled LED.

***NOTE:** The FDM-1(A) provides two Style B (Class B) IDC circuits ONLY. Style D (Class A) IDC circuits are NOT supported in any application.*

FDM-1(A) SPECIFICATIONS

Normal operating voltage range: 15 to 32 VDC.

Maximum current draw: 6.4 mA (LED on).

Average operating current: 750 µA (LED flashing).

Maximum IDC wiring resistance: 1,500 ohms.

Maximum IDC Voltage: 11 Volts.

Maximum IDC Current: 240 µA

EOL resistance: 47K ohms.

Maximum SLC Wiring resistance: 40 Ohms.

Temperature range: 32° to 120°F (0° to 49°C).

Humidity range: 10% to 93% (non-condensing).

Dimensions: 4.5" (11.43 cm) high x 4" (10.16 cm) wide x 2.125" (5.398 cm) deep.

FDM-1(A) AUTOMATIC ADDRESSING

The FDM-1(A) automatically assigns itself to two addressable points, starting with the original address. For example, if the FDM-1(A) is set to address "26", then it will automatically assign itself to addresses "26" and "27".

***NOTE:** "Ones" addresses on the FDM-1(A) are 0, 2, 4, 6, or 8 only. Terminals 6 and 7 use the first address, and terminals 8 and 9 use the second address.*

CAUTION:
Avoid duplicating addresses on the system.

Installation

FMM-1(A), FZM-1(A), and FDM-1(A) modules mount directly to a standard 4" (10.16 cm) square, 2.125" (5.398 cm) deep, electrical box. They may also be mounted to the SMB500 surface-mount box. Mounting hardware and installation instructions are provided with each module. All wiring must conform to applicable local codes, ordinances, and regulations. These modules are intended for power-limited wiring only.

The FMM-101(A) module is intended to be wired and mounted without rigid connections inside a standard electrical box. All wiring must conform to applicable local codes, ordinances, and regulations.

Agency Listings and Approvals

In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL:** S635
- **ULC:** S635
- **FM Approved**
- **CSFM:** 7300-0028:0219
- **MEA:** 457-99-E
- **U.S. Coast Guard:**
  - 161.002/23/3 *(AFP-200: FMM-1/-101, FZM-1)*
  - 161.002/42/1 *(NFS-640: FMM-1/-101)*
- **Lloyd's Register:**
  - 03/60011/E1 *(FMM-1/-101, FZM-1)*
  - 94/60004/E2 *(AFP-200: except FDM-1)*
  - 02/60007 *(NFS-640: FDM-1)*
- **FDNY:** COA #6038 (NFS2-640, NFS-320), COA# 6058 (NFS2-3030)

Product Line Information

***NOTE:** "A" suffix indicates ULC-listed model.*

FMM-1(A): Monitor module.

FMM-101(A): Monitor module, miniature.

FZM-1(A): Monitor module, two-wire detectors.

FDM-1(A): Monitor module, dual, two independent Class B circuits.

SMB500: Optional surface-mount backbox.

***NOTE:** See installation instructions and refer to the SLC Wiring Manual, PN 51253.*

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This document is not intended to be used for installation purposes.
We try to keep our product information up-to-date and accurate.
We cannot cover all specific applications or anticipate all requirements.
All specifications are subject to change without notice.

Made in the U.S. A.

For more information, contact Notifier. Phone: (203) 484-7161, FAX: (203) 484-7118.
www.notifier.com

NBG-12 Series

Non-Coded Conventional Manual Fire Alarm Pull Stations

NOTIFIER® by Honeywell

Conventional Initiating Devices

General

The NOTIFIER **NBG-12 Series** is a cost-effective, feature-packed series of non-coded manual fire alarm pull stations. It was designed to meet multiple applications with the installer and end-user in mind. The NBG-12 Series features a variety of models including single- and dual-action versions.

The NBG-12 Series provides an alarm initiating input signal to conventional fire alarm control panels (FACPs) such as the SFP Series, and to XP Transponders. Its innovative design, durable construction, and multiple mounting options make the NBG-12 Series simple to install, maintain, and operate.

Features

- Aesthetically pleasing, highly visible design and color.
- Attractive contoured shape and light textured finish.
- Meets ADA 5 lb. maximum pull-force.
- Meets UL 38, Standard for Manually Actuated Signaling Boxes.
- Easily operated (single- or dual-action, model dependent), yet designed to prevent false alarms when bumped, shaken, or jarred.
- PUSH IN/PULL DOWN handle latches in the down position to clearly indicate the station has been operated.
- The word "ACTIVATED" appears on top of the handle in bright yellow, further indicating operation of the station.
- Operation handle features white arrows showing basic operation direction for non-English-speaking persons.
- Braille text included on finger-hold area of operation handle and across top of handle.
- Multiple hex- and key-lock models available.
- U.S. patented hex-lock needs only a quarter-turn to lock/unlock.
- Station can be opened for inspection and maintenance without initiating an alarm.
- Product ID label viewable by simply opening the cover; label is made of a durable long-life material.
- The words "NORMAL" and "ACTIVATED" are molded into the plastic adjacent to the alarm switch (located inside).
- Four-position terminal strip molded into backplate.
- Terminal strip includes Phillips combination-head captive 8/32 screws for easy connection to Initiating Device Circuit (IDC).
- Terminal screws backed-out at factory and shipped ready to accept field wiring (up to 12 AWG/3.1 mm²).
- Terminal numbers are molded into the backplate, eliminating the need for labels.
- Switch contacts are normally open.
- Can be surface-mounted (with **SB-10** or **SB-I/O**) or semi-flush mounted. Semi-flush mount to a standard single-gang, double-gang, or 4" (10.16 cm) square electrical box.
- Backplate is large enough to overlap a single-gang backbox cutout by 1/2" (1.27 cm).
- Optional trim ring (**BG12TR**).
- Spanish versions *(FUEGO)* available (**NBG-12LSP, NBG-12LPSP**).
- Designed to replace the legacy **NBG-10** Series.
- Models packaged in attractive, clear plastic (PVC), clam-shell-style, Point-of-Purchase packages. Packaging includes a cutaway dust/paint cover in shape of pull station.

6643cov.jpg

Construction

- Cover, backplate and operation handle are all molded of durable polycarbonate material.
- Cover features white lettering and trim.
- Red color matches System Sensor's popular SpectrAlert® Advance horn/strobe series.

Operation

The NBG-12 manual pull stations provide a textured finger-hold area that includes Braille text. In addition to PUSH IN and PULL DOWN text, there are arrows indicating how to operate the station, provided for non-English-speaking people.

Pushing in and then pulling down on the handle activates the normally-open alarm switch. Once latched in the down position, the word "ACTIVATED" appears at the top in bright yellow, with a portion of the handle protruding at the bottom as a visible flag. Resetting the station is simple: insert the key or hex (model dependent), twist one quarter-turn, then open the station's front cover, causing the spring-loaded operation handle to return to its original position. The alarm switch can then be reset to its normal (non-alarm) position manually (by hand) or by closing the station's front cover, which automatically resets the switch.

Specifications

PHYSICAL SPECIFICATIONS:

pull station		SB-10	SB-I/O	WBB	WP-10
H	5.500 in. (13.97 cm)	5.500 in. (13.97 cm)	5.601 in. (14.23 cm)	4.25 in. (10.79 cm)	6.000 in. (15.24 cm)
W	4.121 in. (10.467 cm)	4.125 in. (10.478 cm)	4.222 in. (10.72 cm)	4.25 in. (10.79 cm)	4.690 in. (11.913 cm)
D	1.390 in. (3.531 cm)	1.375 in. (3.493 cm)	1.439 in. (3.66 cm)	1.75 in. (4.445 cm)	2.000 in. (5.08 cm)

6643dim2.tbl

ELECTRICAL SPECIFICATIONS:

Switch contact ratings: gold-plated; rating 0.25 A @ 30 VAC or VDC. **Auxiliary contact circuit** (Terminals 3 & 4, NBG-12LA): rated to 3.0 A @ 30 VAC or VDC.

ENGINEERING/ARCHITECTURAL SPECIFICATIONS

Manual Fire Alarm Stations shall be non-code, with a key- or hex-operated reset lock in order that they may be tested, and so designed that after actual Emergency Operation, they cannot be restored to normal except by use of a key or hex. An operated station shall automatically condition itself so as to be visually detected as activated. Manual stations shall be constructed of red colored LEXAN (or polycarbonate equivalent) with clearly visible operating instructions provided on the cover. The word **FIRE** shall appear on the front of the stations in white letters, 1.00 inches (2.54 cm) or larger.* Stations shall be suitable for surface mounting on matching backbox SB-10 or SB-I/O; or semi-flush mounting on a standard single-gang, double-gang, or 4" (10.16 cm) square electrical box, and shall be installed within the limits defined by the Americans with Disabilities Act (ADA) or per national/local requirements. Manual Stations shall be Underwriters Laboratories listed.

*NOTE: *The words "FIRE/FUEGO" on the NBG-12LSP and NBG-12LPSP shall appear on the front of the station in white letters, approximately 3/4" (1.905 cm) high.*

Pre-Signal Models

The **NBG-12LPS** and **NBG-12LPSP** pull stations are non-coded manual pull stations which provide a FACP with two normally open alarm initiating input signals. "Pre-signal" input is activated by pushing in, then pulling down, the dual-action handle. A "general" alarm input signal can be manually activated via a momentary rocker switch mounted inside the unit. This general alarm switch can only be accessed by opening the cover with the supplied key/lock. *See diagram at right.*

Agency Listings and Approvals

The listings and approvals below apply to the NBG-12 Series pull stations. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **C(UL)US** Listed: file S692.
- **CSFM** approved: file 7150-0028:199.
- **FM** approved *(except NBG-12LPS, NBG-12LPSP).*
- **MEA** approved: file 67-02-E *(NBG-12, NBG-12L, NBG-12LOB, NBG-12LA).*
- **Lloyd's Register** type approved: file 93/60141 (E3) *(NBG-12, NBG-12L, NBG-12LA, NBG-12LOB, NBG-12S).*
- **U.S. Coast Guard** approved: files 161.002/23/3 *(AFP-200 with NBG-12, NBG-12L, NBG-12S)*; 161.002/42/1 *(NFS-640 with NBG-12, NBG-12L, NBG-12S)*; 161.002/27/3 *(AFP1010/AM2020 with NBG-12, NBG-12L, NBG-12S).*
- **Patented:** U.S. Patent No. D428,351; 6,380,846; 6,314,772; 6,632,108.

Product Line Information

NBG-12S: Single-action pull station with pigtail connections, hex lock.

NBG-12: Dual-action pull station with SPST N/O switch, screw terminal connections, ***hex lock***.

NBG-12L: Dual-action pull station with SPST N/O switch, screw terminal connections, ***key lock***.

NBG-12LSP: Same as NBG-12L with English/Spanish *(FIRE/FUEGO)* labeling.

NBG-12LPS: Dual-action pull station with pre-signal option.

NBG-12LPSP: Same as NBG-12LPS with English/Spanish *(FIRE/FUEGO)* labeling.

NBG-12LOB: Dual-action pull station with key lock, outdoor applications listings (**NBG-12LO**), and backbox. Includes **SB-I/O** indoor/outdoor backbox, and sealing gasket. Model will also mount to **WP-10** weatherproof backbox in retrofit applications.

***NOTE:** NBG-12LO not available separately;*
NBG-12LO + approved backbox = NBG-12LOB.
Outdoor applications listings apply to NBG-12LOB combination.

NBG-12LA: Dual-action pull station with key lock and annunciator contacts.

SB-10: Surface-mount backbox, metal.

SB-I/O: Surface-mount backbox, plastic. *(Included with NBG-12LOB.)*

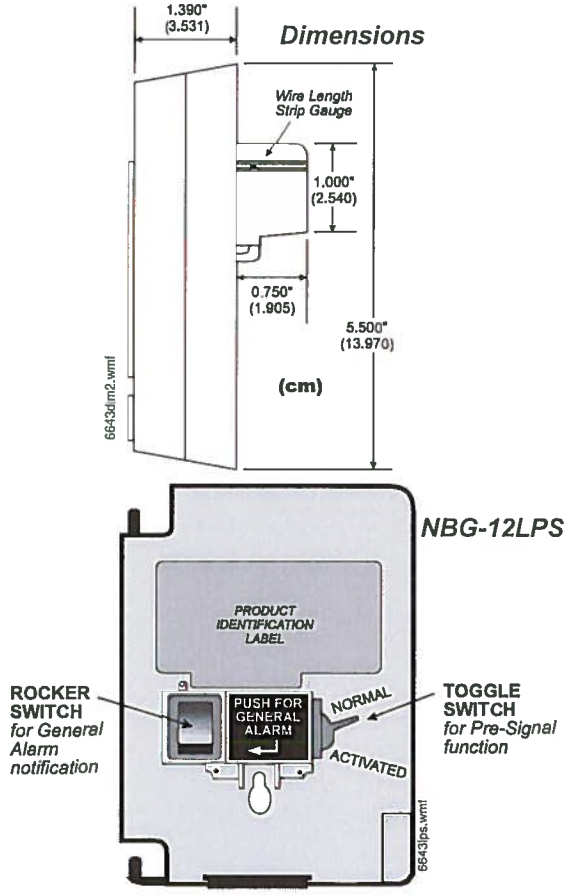
BG12TR: Optional trim ring for semi-flush mounting.

WP-10: Outdoor use backbox.

17021: Keys, set of two. (Included with key-lock pull stations.)

17007: Hex key, 9/64". (Included with hex-lock pull stations.)

***NOTE:** For addressable NBG-12LX models, see data sheet DN-6726.*



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polycarbonate products

STI Universal Stopper®

Shown with waterproof back box

Indoor/Outdoor

c UL us
ADA
Compliant
See Reverse For Details

PRODUCT OVERVIEW

These indoor/outdoor low profile or dome polycarbonate covers protect devices such as dual action pull stations, keypads for entry systems, intercom stations, emergency buttons, electrical light switches, duplex plugs, etc., without restricting legitimate operation. The versatile cover offers excellent protection against physical damage (both accidental and intentional), dust and grime as well as severe environments inside and out.

Cover options: Dome or Low Profile, with or without horn, flush mount, surface mount or waterproof back box models. Maximum protrusion is 4 inches deep. Cover has the same footprint as the Mini Stopper® but accommodates most dual action pull stations.

FEATURES

- Protects against vandalism, accidental damage, dust and grime and severe environments inside and outside.
- Protects pull stations, keypads, intercom stations, emergency buttons, electrical light switches or duplex plugs.
- Cover is molded from thick, tough polycarbonate material.
- Cover available in low profile or dome shape.
- Flush frame, surface frame or waterproof back box (with sealed or open internal mounting plate), enclosed flush back box.
- Top and bottom of waterproof back box are threaded for 3/4" NPT rigid conduit.
- Sized to fit most pull stations.
- High strength continuous hinge.
- Dome models have optional relay output with 12-24 VDC power input.
- Gaskets included.
- ADA Compliant.
- Locking tab (not for use with fire pull stations).
- Dome models available with or without 105 dB horn.
- Dome models available with red, green, blue, yellow, white or black label hood/horn housing with custom or no label.
- Available for red units "In Case of Fire..." label.
- UV-stabilized to keep cover clear.
- Typical working properties of polycarbonate are -40° to 250°F (-40° to 121°C).
- No charge for custom label. (See reverse for details.)
- Three year guarantee against breakage of polycarbonate in normal use (one year on electro mechanical and electronic components).

STI Universal Stopper®

Dimensions and Technical Information

BUILD YOUR MODEL

STI-1 _ _ _ _ _ _

Cover Options

3 = Dome Cover
4 = Low Profile Cover*

*Only available with Hood/Horn option "0"

Mounting Options

0 = Flush Mount
2 = Surface Mount
3 = Enclosed Flush Back Box
4 = Enclosed Back Box & Sealed Mounting Plate**
5 = Enclosed Back Box & Opened Mounting Plate**
8 = Enclosed Back Box & European Sealed Mounting Plate**
9 = Enclosed Back Box & European Open Mounting Plate**

**all colors except NC

Hood/Horn

0 = No Label Hood (Label must start with 'N.' If Hood/Horn Option = 0 and Mounting Option = 0 or 3, the label must be NC)
1 = Label Hood without Horn**
2 = Label Hood with Horn**
3 = Label Hood with Horn & Relay**

**all colors except NC

Special Electronics

0 = None
1 = Heat (available with Mounting Options 4, 5, 8 & 9)**

**Coming soon

Housing/Horn Color & Label

Fire label	Free Custom label*
FR = Red – Fire label	CK = Black*
No label	CB = Blue*
NK = Black	CG = Green*
NB = Blue	CR = Red*
NC = Clear	CW = White*
NG = Green	CY = Yellow*
NR = Red	*must provide custom label wording (2 lines, 20 characters per line including spaces)
NW = White	
NY = Yellow	

COVER OPTIONS - SIDE VIEW

Dome

Low Profile

MOUNTING OPTIONS

FLUSH

SURFACE

BACK BOX
Enclosed Flush

BACK BOX
With Sealed Mounting Plate

BACK BOX
With Opened Mounting Plate

BACK BOX
With European Sealed Mounting Plate

BACK BOX
With European Opened Mounting Plate

APPROVAL & WARRANTY

TESTING

· ADA Compliant

Cover option '3' only has been tested and approved or listed by:

· UL/cUL Listed No. S2466 (Type rating pending). Excludes mounting options 8 and 9.

Flush, Surface or Back Box with opened Mounting Plate
· IP Rating 56

Back Box with sealed Mounting Plate
· IP Rating 66

WARRANTY

Three year guarantee against breakage of polycarbonate in normal use (one year on electro mechanical and electronic components).

IMPORTANT NOTICE

When used on fire systems, Universal Stopper is intended for areas where the incidence of false fire alarms from manual pull stations is high or has proven to be a serious problem. Any disadvantage of the device is more than balanced when one considers the consequences of false fire alarms, especially if fire service personnel and equipment are responding to a false fire alarm when they are needed for a real fire somewhere else. Add to this the disruption to the facility when false alarms occur. If you have, or may have, a problem with false fire alarms or physical/weather damage to your fire alarm activation devices, the Universal Stopper could prove invaluable.

STI

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Fax: 44 (0) 1527 501 999
Free: 0800 085 1678 (UK)
www.sti-europe.com

Fire Detection Devices
CR/CF-MP Series
Moisture-Proof Heat Detectors

Features

- Dual Action Rate of Rise & Fixed Temperature
- Detects Rate of Ambient temperature rise of 8°C (15°F)
- Detectors operating on fixed temperatures are only available in two settings of 135°F (57°C) or 200°F (93°C)
- Clear-anodized aluminium finish

Description

The CR and CF-MP Series Moisture Proof Detectors are designed for hazardous locations and Moisture Proof applications. Each Moisture Proof detector is available in single or multiple circuits with open and/or closed contact configurations, and any of the fixed temperature settings including 135, 165, 200 and 285 degrees Farenheit.

The Moisture Proof detector is characterized by a black phenol-plastic seal plate and black and white pigtail connections. It is specified for use in high humidity environments and areas that are subject to corrosive elements or spray washing. The suffix "MP" denotes "Moisture Proof".

CR-135MP

The Model CR-135MP is a combination Rate-of-Rise and Fixed Temperature detector. A set of normally open contacts will close when the ceiling temperature increases at a (minimum) rate of 8.4°C (15°F) per minute. Closing the contacts initiates the fire alarm sequence. Independent of the rate-of-rise operation, the fixed temperature portion consists of a spring-loaded plunger retained by a fusible alloy that releases when the ceiling temperature reaches 135°F (57°C). When released, the plunger strikes the contacts and holds them closed. Spacing on an uninterrupted ceiling is 70 ft. (21.3m) for the rate-of-rise; 40 ft. (12.2m) for the fixed temperature portion.

CF-135MP

The Model CF-135MP is a Fixed Temperature Only detector. The fixed temperature portion consists of a spring-loaded plunger retained by a fusible alloy that releases when the ceiling temperature reaches 135°F (57°C). When released, the plunger strikes a normally open set of contacts and holds them closed. Spacing on an uninterrupted ceiling is 40 ft. (21.3m). The CF-135MP is identified by a black dot on its heat collector fin.

CR-200MP

The Model CR-200MP is a combination Rate-of-Rise and Fixed Temperature detector that operates in the same way as the CR-135MP, with the exception that the fixed temperature portion releases when the ceiling temperature reaches 200°F (93°C). Spacing on an uninterrupted ceiling is 70 ft. (21.3) for the rate-of-rise, and 25 ft.(7.6m) for the fixed temperature portion (a reduced spacing parameter from the CF-135MP). The CR-200MP is identified by a white dot on its heat collector fin.

CF-200MP

The Model CF-200MP is a Fixed Temperature Only detector. The fixed temperature portion releases when the ceiling temperature reaches 200°F (93°C). Spacing is 25 ft., (7.6m). The CF-200MP is identified by a black dot and a white dot on the heat collector fin.

Canada 25 Interchange Way, Vaughan (Toronto), Ontario L4K 5W3 Telephone: (905) 695-3549 Fax: (905) 660-4113 • **Web Page:** www.summit-st.net
U.S.A. 4575 Witmer Industrial Estates, Niagara Falls, NY 14305 Telephone: (866) 786-6480 Fax: (888) 660-4113 • **E-mail:** mail@summit-st.net

Contact Configurations

Any Detector in the Moisture Proof Series is available in Normally Open (by far the most common) or Normally Closed, or Multiple Circuit configurations. The Model Number does not reflect the Normally Open configuration, however the letter "C" denotes Normally Closed. For example: "CR 135 C MP" describes a rate-of-rise / fixed temperature detector, fusing at 135°F., with Normally Closed contacts, assembled with the moisture proof seal plate.

Engineering Specifications

The CR & CF Series Moisture Proof detectors shall be installed in areas where corrosive elements exist or washing of walls and ceiling surfaces is commonplace. The fixed temperature portion and the rate-of-rise operation shall be determined by the ambient temperature. The Moisture Proof detectors shall be installed in areas where environmental conditions including dust, vapours, insects, etc., would cause an ionization or photoelectric type detector to initiate a false alarm.

Specifications

Contact Rating
3A @ 125 VAC 1A @ 28 VDC 0.3A @ 125 VDC 0.1A @ 250 VDC

Dimensions	
Diameter	5.25" (13.4 cm)
Height	2.0" (4.85 cm)
Weight	
0.41 lb. (330 gm)	

Ordering Information

Model Number	Description
CR-135MP	Rate of Rise & Fixed Temperature to 135°F (57°C) Moisture Proof Heat Detector
CR-200MP	Rate of Rise & Fixed Temperature to 200°F (93°C) Moisture Proof Heat Detector
CF-135MP	Fixed Temperature 135°F (57°C) Moisture Proof Heat Detector
CF-200MP	Fixed Temperature 200°F (93°C) Moisture Proof Heat Detector

AGNICO EAGLE

Vendor Document Status

1 ☐ Proceed to next submission and status.

2 ☐ Proceed with exceptions as noted to next submission and status.

3 ☐ Do not proceed.
Revise as noted and resubmit next submission and status.

4 ☑ Complete, no further submission required.

By: Joël Morliere Date: 2017-06-12

Review and authorization to fabricate are only for general conformance with the design concept of the Project as expressed in the Contract Documents. Sole responsibility for the accuracy and completeness of this document, including but not limited to dimensions and quantities, remains with the Supplier/Contractor. Agnico Eagle does not warrant the accuracy or completeness of any of the information contained herein, nor does Agnico Eagle authorize or approve any construction means, methods, techniques, sequences or any safety precautions or procedures.

Agnico Eagle No. 6515-C-270-007-265-SPD-0001 R: Sub001

DOCUMENT FOR INFORMATION

WSP

SHOP DRAWING
DATA SHEET

Affixing this stamp confirms that an administrative approval and/or a verification of compliance with shop drawings or specifications was made, but does not entail the liability of the author of the work or its owner with regards to this shop drawing or data sheet, for which the contractor is the sole responsible.

☑ Reviewed ☐ Reviewed as noted

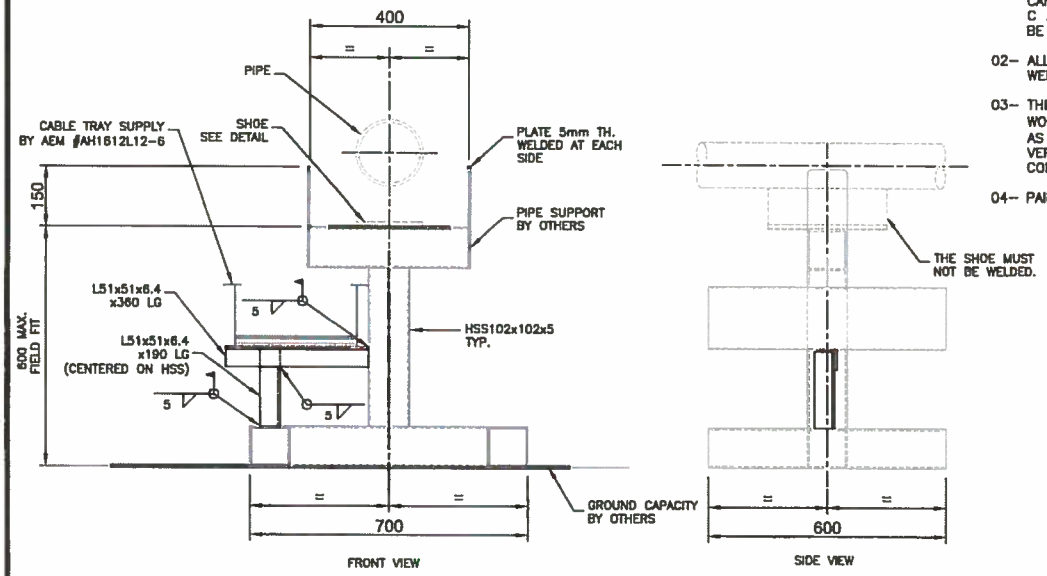
☐ Rejected ☐ Filed for records

The contractor, supplier and/or sub-contractor is responsible for: comfirming and coordinating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his or her work with that of all other trades and performing all work in a safe and satisfactory manner.

By: J. Morliere Date: 2017/06/12

Project # 151-06440-40

Tracé par: "BOURJ26", 2017-05-05 14:46:09 (Lts: 0.25 ; Mes: 1)
P:\300-RN\643812\0000\4-Ingenierie\D-Dessins maitres\43-ST\643812-0000-43DD-0001-0.dwg
Format: Lettre/Légal Ver.: 4.2 2016-01-26



CABLE TRAY SUPPORT (1)

ÉCHELLE : 1 : 15

GENERAL NOTES

01– STRUCTURAL STEEL MUST RESPECT CRITERIA LISTED IN CAN/CSA–G40.20 AND CAN/CSA–G40.21, GRADE 350 W WITH EXCEPTION OF C AND L PROFILES WHICH ARE TOBE OF GRADE 300 W. HSS PROFILES TO BE OF ASTM 500 TYPE C GRADE 345 W.

02– ALL STRUCTURAL MEMBERS MUST BE CLEANED BY GRINDING PRIOR TO ALL WELDING WORKS.

03– THE CONTRACTOR OR SUB–CONTRACTOR MUST PROCEED WITH ALL WELDING WORKS IN ACCORDANCE WITH W59–03(R2008). HE MUST ALSO BE CERTIFIED AS PER W47.1–09(R2014). THE ENGINEER/OWNER RESERVES THE RIGHT TO VERIFY THESE CERTIFICATIONS BEFORE AS WELL AS AFTER THE PROJECT COMMENCEMENT.

04– PAINT BY OTHERS

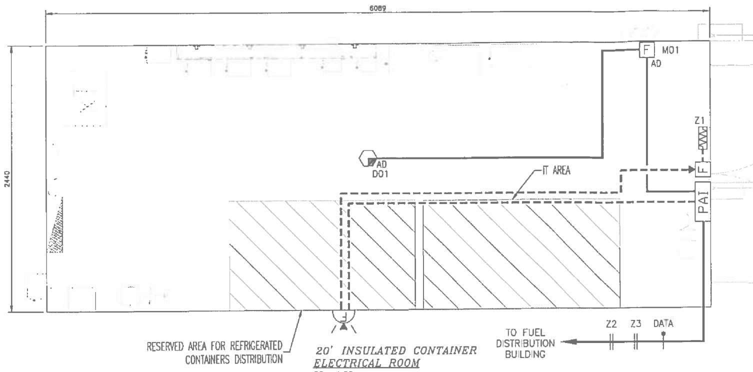
REGISTERED PROFESSIONAL ENGINEERS
M.Y DIALLO
LICENSEE
NT/NU
2017-05-05

POUR CONSTRUCTION
FOR CONSTRUCTION
SNC·LAVALIN
2017-05-05

REV.	DATE	ISSUES	BY	CHK	APP.
0	2017-05-05	ISSUED FOR CONSTRUCTION	M.LAN	M.DIA	B.CHA
A	2017-05-04	ISSUED FOR APPROVAL	M.LAN	M.DIA	B.CHA

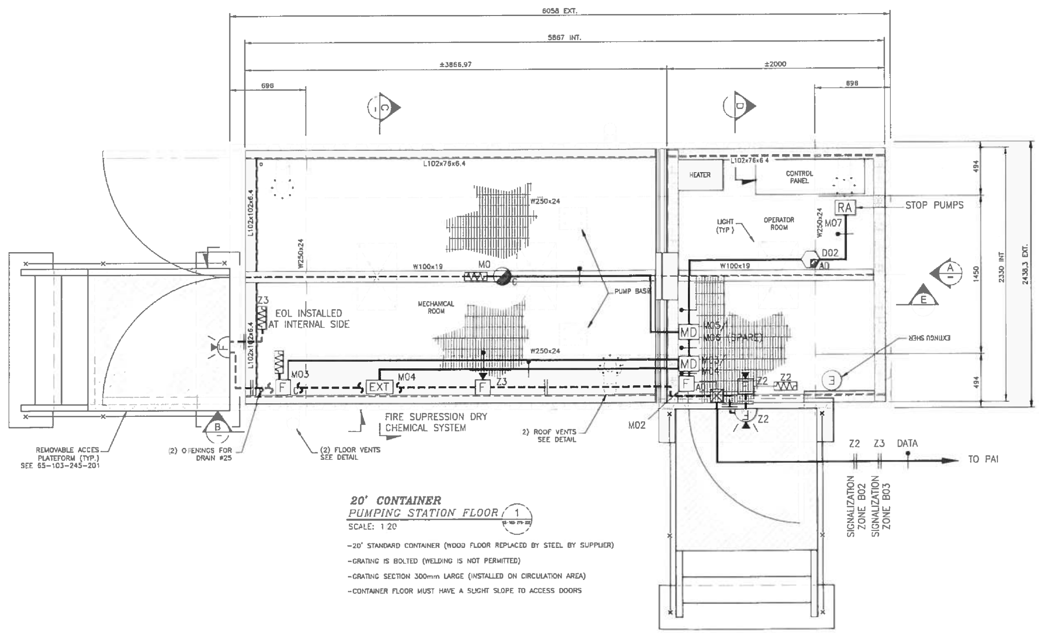
SNC·LAVALIN
SNC-Lavalin Stavibel Inc.
150, rue Gamble Ouest
Rouyn-Noranda (Québec) J9X 2R7
Tel. : 819 764-5161 Fax : 819 797-0158
www.snclavalin.com

Client / Project : AGNICO EAGLE - MELIADINE DIVISION			
Title : 103 - COMBUSTIBLES SUPPORT SECTION			
Drawn by : Michel Lanthier, tech.	Verified by : Mohamed Diallo, ing.	Project manager : Dany Lambert, ing.	Project # : 643812-0000
Designed by : Mohamed Diallo, ing.	Approved by : Mohamed Diallo, ing.	Org. Date : 2017-05-04	Reference : -
Scale : INDICATED	Drawing # : 643812-0000-43DD-0001	Rev. : 0	



20' INSULATED CONTAINER ELECTRICAL ROOM

SCL 1:20



20' CONTAINER
PUMPING STATION FLOOR 1

SCALE: 1:20

- 20' STANDARD CONTAINER (WOOD FLOOR REPLACED BY STEEL BY SUPPLIER)
- GRATING IS BOLTED (WELDING IS NOT PERMITTED)
- GRATING SECTION 300mm LARGE (INSTALLED ON CIRCULATION AREA)
- CONTAINER FLOOR MUST HAVE A SLIGHT SLOPE TO ACCESS DOORS

IMPORTANT !

THIS DRAWING IS THE PROPERTY OF VIKING FIRE PROTECTION INC. AND IS INTENDED TO BE USED FOR PURPOSES OF THIS PROJECT. THE DISTRIBUTION OR REPRODUCTION IS PROHIBITED UNLESS EXPLICITLY AUTHORIZED.

NOTES

LEGEND

Symbol	Description
PAI	FIRE ALARM CONTROL PANEL NOTIFIER #NFS-320C
F AD	ADDRESSABLE MANUAL PULL STATION # NBG-12LX, C/W FLASH MOUNTED BACKBOX # SB-10, INSTALLATION AT 1200mm TOP.
F C	CONV. MANUAL PULL STATION # NBG-12L, C/W FLASH MOUNTED BACKBOX # SB-10 & PROTECTOR # STI-1340/FR, INSTALLATION AT 1200mm TOP.
AD	ADDRESSABLE COMBINED SMOKE / THERMIC DETECTOR # FAPT-851A, C/W BASE MOUNTED ON OCTOGONAL BACKBOX
RA	ADDRESSABLE RELAY MODULE # FRM-1A, MOUNTED ON BOX 4 x 4 x 2 1/8
MD	ADDRESSABLE SUPERVISORY DOUBLE MODULE # FDM-1A, MOUNTED ON BOX 4 x 4 x 2 1/8
C	CONVENTIONAL THERMIC DETECTOR, HUMIDITY PROOF # CR-135MP, C/W BASE MOUNTED ON OCTOGONAL BACKBOX
F	FIRE ALARM RED HORN # HRA CEILING MOUNTED ON BOX 4 x 4 x 2 1/8
F	COMBINED FIRE ALARM RED HORN/STROBE # P2RKA-B CEILING MOUNTED C/W BACKBOX
EOL	END OF LINE RED PLATE # EOL-CR, MOUNTED ON ONE GANG BACKBOX
EXT	FIRE SUPRESSION DRY CHEMICAL SYSTEM
☒	JUNCTION BOX
—	3 #18 AWG FOR ADDRESSABLE LOOP FAS FT4
—	2 #14 AWG RW90 SOLID FOR SIGNALIZATION

REQUIREMENTS & APPROVALS

APPLICABLE CODES & STANDARDS			DESIGN ACCORDING TO
☐ N.F.P.A. 72	☐ N.F.P.A. 16	■ ULC-S524	☐ N.F.P.A. 72
☐ N.F.P.A. 14	☐ N.F.P.A. 20	☐ -	☐ F.M.
☐ N.F.P.A. 15	☐ N.F.P.A. 24	☐ -	■ CNB-2005

APPROVED BY	ISSUED	APPROVAL
-	-	-

ENGINEER STAMP

REVISIONS

REV.	DESCRIPTION	BY	DATE
A	EMIS POUR INFORMATION	R.B.	2017-06-15

MONTREAL
3005 Pitfield Blvd
St-Laurent (Quebec) H4S 1H4
Tel. (514) 333-5110
Fax (514) 333-6260

VIKING FIRE PROTECTION INC

DATE: 2017-06-13	AGNICO EAGLE - MELIADINE DIVISION 103 COMBUSTIBLE RANKIN PROJECT MONTRÉAL - QUÉBEC
DRAWN BY: R. BASSAL	
CHECKED BY: P. NOEL	SECTION SCHÉMA UNIFILAIRE D'ALARME INCENDIE
	CONTRACT WITH

CONTRACT NO.	SCALE	SHEET NO.	DRAWING NO.
TMC10774	N/A	1 de 1	T1077401A

AGNICO EAGLE

Vendor Document Status

1 ☐ Proceed to next submission and status.

2 ☐ Proceed with exceptions as noted to next submission and status.

3 ☐ Do not proceed.
Revise as noted and resubmit next submission and status.

4 ☑ Complete, no further submission required.

By: JEAN-FRANCOIS TREMBLAY Date: 2017-06-29

Review and authorization to fabricate are only for general conformance with the design concept of the Project as expressed in the Contract Documents. Sole responsibility for the accuracy and completeness of this document, including but not limited to dimensions and quantities, remains with the Supplier/Contractor. Agnico Eagle does not warrant the accuracy or completeness of any of the information contained herein, nor does Agnico Eagle authorize or approve any construction means, methods, techniques, sequences or any safety precautions or procedures.

Agnico Eagle No. 6515-C-270-007-141-TES-0002 R: Sub002

DOCUMENT FOR INFORMATION

NUQSANA PROMEC MINING

AGNICO-EAGLE MINES Ltd.
Inspection & Testing Report

ITR Number: AEM-EL-ITR-001
ITR Type: GENERAL
Contract No.: 6515-C-270-007

AGNICO EAGLE

Tag Number:		**Equipment/ Pipe N°:**		**System:**	
Service:		**Function:**		**Purchase Order:**	
Manufacturer:		**Model:**		**Serial Number:**	
Location Dwg :		**Reference Datasheet:**		**Installation Detail Dwg:**	
Reference Datasheet Number:					

Item N°	Inspection Points	C	NC/ NCR #	N/A	Completed By/ Date
1	DEVICE INSTALLED AS PER INSTALLATION DETAILS, LOCATION OR MANUFACTURERS DRAWINGS	C	NC #_____	N/A	Promec: CLIENT:
2	EQUIPMENT ACESSIBLE AND EASY TO MAINTAIN	C	NC #_____	N/A	Promec: CLIENT:
3	EQUIPMENT RACK OR CLAMPING DEVICE ADEQUATE (HEIGHT, SOLIDITY ETC.)	C	NC #_____	N/A	Promec: CLIENT:
4	GROUNDING INSTALLED AND CONNECTED	C	NC #_____	N/A	Promec: CLIENT:
5	TERMINAL CONNECTION CONNECTED AND TORQUED	C	NC #_____	N/A	Promec: CLIENT:
6	BREAKER CONNECTIONS CONNECTED AND TORQUED	C	NC #_____	N/A	Promec: CLIENT:
7	LUG BOLT TORQUE	C	NC #_____	N/A	Promec: CLIENT:
8	POWER BUS BAR BOLTED AND TORQUED	C	NC #_____	N/A	Promec: CLIENT:
9	GROUND BUS BAR BOLTED AND TORQUED	C	NC #_____	N/A	Promec: CLIENT:
10	MEGGER EQUIPMENT	C	NC #_____	N/A	Promec: CLIENT:
11	MEGGER CABLES	C	NC #_____	N/A	Promec: CLIENT:
12	HI-POT TEST	C	NC #_____	N/A	Promec: CLIENT:
13	PANELS IDENTIFIED	C	NC #_____	N/A	Promec: CLIENT:
14	UNIT DRAWER IDENTIFIED	C	NC #_____	N/A	Promec: CLIENT:
15	BREAKERS IDENTIFIED	C	NC #_____	N/A	Promec: CLIENT:
16	CABLES IDENTIFIED	C	NC #_____	N/A	Promec: CLIENT:
17	SEAL O RING INSTALLED (IF APPLICABLE)	C	NC #_____	N/A	Promec: CLIENT:
18	FUSES INSTALLED AND OF ADEQUATE SIZE	C	NC #_____	N/A	Promec: CLIENT:
18	VISUAL INSPECTION	C	NC #_____	N/A	Promec: CLIENT:
20	CLEAN / VACUUMED	C	NC #_____	N/A	Promec: CLIENT: