

Residences at Blackwell

2840 SE Blue Parkway

Lee's Summit, MO 64063

(Clubhouse Only)

Fire Alarm System Section 283100

Submittal Product Data

May 31, 2024



Tech connected. Lives protected.

Midwest Alarm Services

9745 Widmer Road

Lenexa, KS 66215

MW project 24050258

Residences at Blackwell

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Residences at Blackwell

Fire Alarm System Section 283100

Changes and Exceptions

The following exceptions are made from the specifications section 283100 or changes from the arrangement shown on the contract drawings.

- 1) Several sections of the specifications refer to visual notification (strobes) being non-silenceable and continuing to operate in alarm until the FACP performs a full system reset. This is an arrangement that is no longer used and has not been allowed by NFPA 72 since the 2013 edition. In the 2016 edition, 72-10.12.2 requires audible and visible devices to deactivate together. The reason is given in annex A - from the ADA “...*important not to provide conflicting signals for hearing or visually impaired.*” We are unable to make the system operate in the manner called for in the specifications, as the fire alarm system is to conform to the ADA and NFPA 72 standard.
- 2) The Specifications 1.4.C and other areas refer to xenon flash tubes for strobe notification devices. Many manufacturers have updated their strobes to use current LED technology, including System Sensor. The newer LED devices we are submitting meet UL1971 and are completely compatible and interchangeable with the older System Sensor L-series which used xenon tube technology.
- 3) The Specifications 1.4.D calls for an auxiliary bypass switch that will disable all auxiliary control functions, including the DACT communications to the central station monitoring, for the purposes of testing. This is functionally accomplished through the control panel after entering a user password and will disable auxiliary control functions, but not the DACT. Proper procedure in testing and servicing of a fire alarm system is for an authorized person to notify the central station by phone to place the building in test mode, in which they still receive the signals but do not call the fire department. In this way, the signals to the central station monitoring are also tested as required by NFPA 72 in chapter 14. Disconnecting or disabling the DACT is bad practice generally not allowed by the codes or the AHJ.
- 4) The specifications section 2.1.E.6 calls for a “*depleted battery*” indication, further described in 2.1.H as when operation on batteries “*exceeds the capacity requirements of the standby batteries.*” A depleted battery in the literal meaning is a low battery, a condition that is monitored by the panel power supply as required in NFPA 72 chapter 10. Switchover to battery power is accomplished through the main power supply. As such, the battery power (amperes) demand cannot exceed that of the power supply. Power and battery calculations are required by NFPA 72 to prove that the fire alarm system will operate within the manufacturers stated parameters. The depleted battery condition as described is redundant to low battery condition and not an available as a separate indication.
- 5) The specification section 2.2.C calls for certain specified strobe candelas for “*shops and production.*” This does not apply to the clubhouse or apartment buildings. Strobes will be set at candela levels as called for in NFPA 72 section 18.5.5.4 according to room sizes and arrangement for wall and ceiling mounting.
- 6) The specification section 2.2.F calls for heat detectors to be non-restorable and for 200°F fixed temperature. Non-restorable heat detectors are non-addressable and appear to be discontinued by major manufacturers. The specified 200°F is classified as the intermediate temperature range according to NFPA 72-17.6.2.1 and would be used for an area with a normal ceiling temperature of 155°F. The sole heat detector application for this job

is for elevator power shutdown when the elevator hoistway or machine room is sprinkled. NFPA 72-21.4 requires heat detectors for this application to have a lower temperature rating and RTI than the sprinkler(s) they are to be placed within 24" of. This is also called out in the elevator code ANSI/ASME A17.1.

The FST-951 heat detector we are submitting is 135°F fixed, restorable and meets the requirements for the application. If the elevator shaft/machine area is not sprinkled, this heat detector and the modules for the shunt trip function can be omitted. They were not indicated on the contract drawings, but the building is to be fully sprinkled and we interpreted that to include the elevator hoistway.

- 7) Section 3.1.D calls for testing in accordance with NFPA-72H, last published in 1988. In 1993, it was incorporated into a single combined NFPA 72 standard, currently located in chapter 14. The testing for this project shall be performed in accordance with NFPA 72 (2016) chapter 14.
- 8) Contract drawing A0.11 states under Fire Department Notes, item #4 that *"Pull stations not required in a fully sprinkled building with alarm per 2018 IBC section 907.2.9."* Preceding that section in the 2018 IFC, 907.2 states that *"Where other sections of this code allow elimination of fire alarm boxes due to sprinklers, a single fire alarm box shall be installed."* Exception #2 for R-2 occupancies will apply to the apartment buildings, but not for the clubhouse. We have shown a manual pull station at the exit nearest to the FACP. This can be located elsewhere if desired. Sometimes it is located adjacent to the FACP.
- 9) Some notification devices were added or moved to meet the 15' corridor rule in NFPA 72-18.5.5.5.5 and cover corridors that did not have coverage in the contract drawings.
- 10) Wall mounted strobe in Work/Break rm 50 changed to a ceiling device for better coverage since wall space is scarce in this room and corner placement should be avoided.

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NICET #92009, Fire Alarm Level IV
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NFW-100X Intelligent Addressable FACP with Communicator

General

The **FireWarden-100X (NFW-100X)** is the latest intelligent addressable Fire Alarm Control Panel (FACP) within the FireWarden Series and is a direct replacement for the FireWarden-100 (NFW-100). The NFW-100X comes with a pre-installed communicator and supports up to 198 addressable devices (99 detectors and 99 modules). With an extensive list of powerful features, the NFW-100X programs just like FireWarden-100 products, yet fits into applications previously served only by conventional panels.

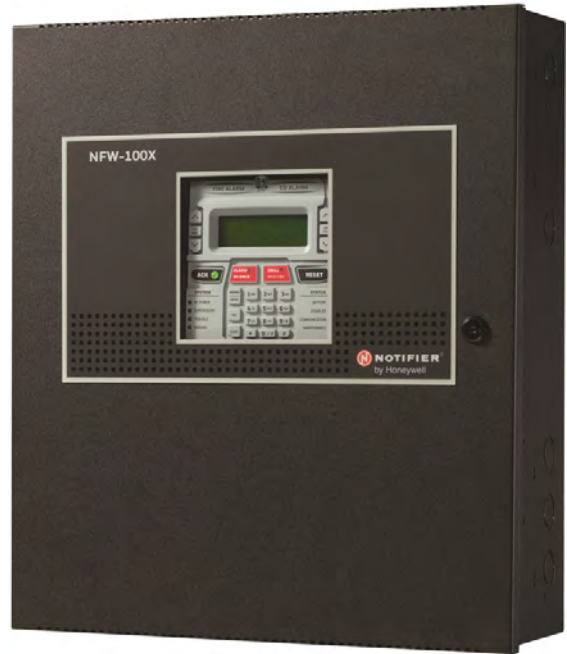
The pre-installed IPOTS-COM is a dual technology (POTS and IP) communicator. The POTS transmits system status (alarms, troubles, AC loss, etc.) to a Central Station via the public switched telephone network. The IP communicator's internet monitoring capability sends alarm signals over the Internet saving the monthly cost of two dedicated business telephone lines. Although not required, the secondary telephone line may be retained providing backup communication over the public switched telephone line. Optional cellular reporting is available using the CELL-MOD or CELL-CAB-N.

Remote and local programming of the control panel is possible using the FS-Tools Upload/Download utility. Programming databases can be uploaded/downloaded via the panel's USB port (and USB cable) or via an ethernet connection using the IPOTS-COM communicator. The USB port also allows for the download or upload of the entire program, history file, walk-test data, current status and system voltages by means of a USB flash drive.

The power supply and all electronics are contained on a circuit board supported on a new quick install chassis and housed in a metal cabinet. Available accessories include local and remote upload/download software, remote annunciators, and reverse polarity/city box transmitter (4XTM).

Features

- Listed to UL Standard 864, 10th edition
- Pre-installed IPOTS-COM Ethernet IP and POTS (Plain Old Telephone Service) Central Station Communicator over AlarmNet
- Optional CELL-MOD or CELL-CAB-N GSM Central Station Communicator over AlarmNet®
- Automated activation of the NFC-50/100 Emergency Command Center
- NFC-FFT Firefighter Telephone option
- Compatible with SWIFT® wireless devices
- Auto-programming (learn mode) reduces installation time. Reports two devices set to the same address
- Four built-in, independently programmable Style Z (Class A) or Style Y (Class B) NAC circuits
- Selectable strobe synchronization for System Sensor, Wheelock, and Gentex devices
- Notification Appliance Circuit End of Line resistor matching
- Four programmable function keys for ease of maintenance
- Two programmable relays and one fixed trouble relay
- Built-in Programmer
- Integral 80-character LCD display with backlighting
- Real-time clock/calendar with automatic daylight savings control
- History file with 1,000 event capacity
- Addressable sounder base compatibility
- Control module delay timer
- Automatic detector sensitivity testing (NFPA 72 compliant)
- Automatic device type-code verification
- Point trouble identification
- Waterflow selection per module point
- Alarm verification selection per detector point



- Maintenance alert warns when smoke detector dust accumulation is excessive
- One-person audible or silent walk test with walk-test log and printout
- System alarm verification selection per detector point
- PAS (Positive Alarm Sequence) and Pre-signal per point (NFPA 72 compliant)
- Up to 16 ANN-BUS annunciators- 8 per each ANN-Bus
- Remote Acknowledge, Alarm Silence, Reset and Drill via addressable modules or remote annunciator
- Upload/Download of program and data via USB with optional FS-Tools Programming Utility

SLC COMMUNICATION LOOP

- Supports FlashScan® and CLIP protocols
- SLC operates up to 10,000 ft. (3,000 m) in FlashScan mode with twisted, unshielded wire
- Single addressable SLC loop which meets NFPA Class B and Class A requirements
- 198 addressable device capacity (99 addressable detectors and 99 modules)
- Compatible with NOTIFIER FireWarden and ONYX Series addressable devices (refer to the *FireWarden SLC Wiring Manual*)

NOTIFICATION APPLIANCE CIRCUITS (NACS)

- Four independently programmable output circuits. Circuits can be configured for the following outputs:
 - **Style Y** (Class B)
 - **Style Z** (Class A)
- Silence Inhibit and Autosilence timer options
- Continuous, March Time, Temporal, or California code for main circuit board NACs with two-stage capability
- Selectable strobe synchronization per NAC
- 2.5 A special application, 250mA regulated, total power for NACs

NOTE: Maximum or total 24VDC system power shared between all NAC circuits and the ANN-BUS is 2.7 A

PROGRAMMING AND SOFTWARE

- Autoprogramming (learn mode) reduces installation time
- Custom English labels (per point) may be manually entered or selected from an internal library file
- Two programmable Form-C relay outputs
- 99 software zones
- Continuous fire protection during online programming
- Program Check automatically catches common errors not linked to any zone or input point
- **OFFLINE PROGRAMMING:** Create the entire program in your office using FS-Tools, a Windows®-based software package, and upload/download system programming locally. Offline programming requires an ethernet connection. FS-Tools is available on www.notifier.com.

User interface

LED INDICATORS

- | | |
|---------------------------|---|
| • Fire Alarm (red) | • CO Alarm (red) |
| • AC Power (green) | • Supervisory (yellow) |
| • Trouble (yellow) | • Ground fault (yellow) |
| • Battery fault (yellow) | • Disabled (yellow) |
| • Maintenance (yellow) | • Communication (yellow) |
| • Alarm Silenced (yellow) | • F1-F4 Programmable Function Keys (yellow) |

KEYPAD

- | | |
|---------------------------------------|---------------------------|
| • 16 key alpha-numeric pad | • Acknowledge |
| • Alarm Silence | • Drill (Manual Evacuate) |
| • Four (4) programmable function keys | • Reset (lamp test) |

PRODUCT LINE INFORMATION

NFW-100X: Addressable Fire Alarm Control Panel with one SLC loop. Includes main circuit board with display chassis with transformer, backbox with door, plastic bag containing screws, cables, key, etc.

FS-Tools: Programming software for Windows®-based PC computer. Available for download at www.notifier.com.

CELL-CAB-N/CELL-MOD: Optional GSM communicators.

IPOTS-COM: Dual technology (POTS and IP) communicator. (replacement board)

DP-ES-R: Optional dress panel for the NFW-100X (red).

DP-ES-B: Optional dress panel for NFW-100X (black).

TR-CE-B: Optional trim ring for semi-flush mounting. (Black. For red, order **TR-CE**.)

BB-XP: Optional cabinet for one or two modules.

BB-25: Optional cabinet for up to six modules mounted on CHS-6 chassis.

BB-26: Battery backbox, holds up to two 25 AH batteries and CHG-75.

NFS-LBB: Battery box, houses two 55 AH batteries

CHS-6: Chassis, mounts up to six multi-modules in a BB-25 cabinet.

CHG-75: Battery charger for lead-acid batteries with a rating of 25 to 75 AH.

CHG-120: Remote battery charging system for lead-acid batteries with a rating of 55 to 120 AH. Requires additional NFS-LBB for mounting.

NOTE: CHG-120 or CHG-75 required for batteries larger than 18AH.

BAT Series: Batteries, see data sheet DN-6933.

PRN Series: UL listed compatible event printer. Uses tractor-fed paper.

OPTIONAL MODULES

4XTM Reverse Polarity Transmitter Module: Provides a super-

vised output for local energy municipal box transmitter, alarm and trouble. Includes a disable switch and disable trouble LED.

PWRMOD24 Power Expander Module: Optional power module. Increases alarm power output to 6 amps.

COMPATIBLE ANNUNCIATORS

N-ANN-80: Remote LCD annunciator mimics the information displayed on the FACP LCD display. Recommended wire type is unshielded. (Basic model is black; order -W for white; see DN-7114.)

N-ANN-100R: Remote LCD annunciator mimics the information displayed on the FACP LCD display. Recommended wire type is unshielded. For use in FM applications only. (Basic model is black; order R for red.)

N-ANN-I/O: LED Driver Module provides connections to a user supplied graphic annunciator. (See DN-7105.)

N-ANN-LED: Annunciator Module provides three LEDs for each zone: Alarm, Trouble, and Supervisory. Ships with red enclosure. (See DN-60242.)

N-ANN-RLED: Provides alarm (red) indicators for up to 30 input zones or addressable points. (See DN-60242.)

N-ANN-RLY: Relay Module provides 10 programmable Form-C relays. Can be mounted inside the cabinet. (See DN-7107.)

N-ANN-S/PG: Serial/Parallel Printer Gateway module provides a connection for a serial or parallel printer. (See DN-7103.)

ADDRESSABLE DEVICES

FSP-951: Addressable low-profile photoelectric smoke detector. FlashScan only.

FSP-951-IV: Addressable low-profile photoelectric smoke detector. Ivory. FlashScan and CLIP mode.

NP-200: Addressable low-profile photoelectric smoke detector. B300-6 base included, FlashScan only.

NP-200-IV: Addressable low-profile photoelectric smoke detector. Ivory, B300-6-IV base included. FlashScan and CLIP mode.

FSP-951T: Addressable low-profile photoelectric smoke detector with thermal sensor. FlashScan only.

FSP-951T-IV: Addressable low-profile photoelectric smoke detector with thermal sensor. Ivory. FlashScan and CLIP mode.

NP-200T: Addressable low-profile photoelectric smoke detector with thermal sensor. B300-6 base included. FlashScan only.

NP-200T-IV: Addressable low-profile photoelectric smoke detector with thermal sensor. Ivory, B300-6-IV base included. FlashScan and CLIP mode.

FSP-951R: Remote test capable addressable photoelectric smoke detector for use with DNR(W) duct detector housing. FlashScan only.

FSP-951R-IV: Remote test capable addressable photoelectric smoke detector for use with DNR(W) duct detector housing. Ivory. FlashScan and CLIP mode.

NP-200R: Remote test capable addressable photoelectric smoke detector for use with DNR(W) duct detector housing. FlashScan only.

NP-200R-IV: Remote test capable addressable photoelectric smoke detector for use with DNR(W) duct detector housing. Ivory, FlashScan and CLIP mode.

FST-951: Low-profile 135°F fixed thermal sensor. FlashScan only.

FST-951-IV: Low-profile 135°F fixed thermal sensor. Ivory. FlashScan and CLIP mode.

NH-200: Low-profile 135°F fixed thermal sensor. B300-6 base included, FlashScan only.

NH-200-IV: Low-profile 135°F fixed thermal sensor. Ivory. B300-6-IV base included, FlashScan and CLIP mode.

FST-951R: Low-profile, intelligent, rate-of-rise thermal sensor. FlashScan only.

FST-951R-IV: Low-profile, intelligent, rate-of-rise thermal sensor. Ivory. FlashScan and CLIP mode.

NH-200R: Low-profile 135°F fixed thermal sensor. B300-6 base included, FlashScan only.

NH-200R-IV: Low-profile 135°F fixed thermal sensor. Ivory. B300-6-IV base included, FlashScan and CLIP mode.

FST-951H: Low-profile intelligent 190°F/88°C fixed thermal sensor. FlashScan only.

FST-951H-IV: Low-profile intelligent 190°F/88°C fixed thermal sensor. Ivory. FlashScan and CLIP mode.

NH-200H: Low-profile intelligent 190°F/88°C fixed thermal sensor. B300-6 base included, FlashScan only.

NH-200H-IV: Low-profile intelligent 190°F/88°C fixed thermal sensor. Ivory. B300-6-IV base included, FlashScan and CLIP mode.

Legacy Devices

FSI-851: Addressable low-profile ionization smoke detector.

NI-100: Addressable low-profile ionization smoke detector.

FSP-851: Addressable low-profile photoelectric smoke detector.

NP-100: Addressable low-profile photoelectric smoke detector.

FSP-851T: Addressable low-profile photoelectric smoke detector with thermal sensor.

NP-100T: Addressable low-profile photoelectric smoke detector with thermal sensor.

FSP-851R: Remote test capable addressable photoelectric smoke detector for use with DNR(W) duct detector housing.

NP-100R: Remote test capable addressable photoelectric smoke detector for use with DNR(W) duct detector housing.

FST-851: Fast-response, low-profile heat detector.

NH-100: Fast-response, low-profile heat detector.

FST-851R: Fast-response, low-profile heat detector with rate-of-rise option.

NH-100R: Fast-response, low-profile heat detector with rate-of-rise option.

FST-851H: Fast-response, low-profile heat detector that activates at 190°F/88°C.

NH-100H: Fast-response, low-profile heat detector that activates at 190°F/88°C.

FAPT-851: Addressable low-profile multi-sensor detector.

NP-A100: Addressable low-profile multi-sensor detector.

B200S: Programmable, addressable sounder base.

B200SR: Addressable sounder base.

DNR: InnovairFlex low-flow non-relay duct-detector housing. (Order FSP-851R, FSP-951R, or NP-100R separately.)

DNRW: InnovairFlex low-flow non-relay duct-detector housing, with NEMA-4 rating. Watertight. (Order FSP-851R, FSP-951R, or NP-100R separately.)

Addressable Modules

FMM-1: Addressable Monitor Module for one zone of normally-open dry-contact initiating devices. Mounts in standard 4.0" (10.16 cm.) box. Includes plastic cover plate and end-of-line resistor. Module may be configured for either a Style B (Class B) or Style D (Class A) IDC.

NMM-100: Addressable Monitor Module for one zone of normally-open dry-contact initiating devices. Mounts in standard 4.0" (10.16 cm.) box. Includes plastic cover plate and end-of-line resistor. Module may be configured for either a Style B (Class B) or Style D (Class A) IDC.

FDM-1: Dual Monitor Module. Same as NMM-100 except it provides two Style B (Class B) only IDCs.

NDM-100: Dual Monitor Module. Same as NMM-100 except it provides two Style B (Class B) only IDCs.

FMM-101: Miniature version of NMM-100. Excludes LED and Style D option. Connects with wire pigtails. May mount in device backbox.

NMM-100P: Miniature version of NMM-100. Excludes LED and Style D option. Connects with wire pigtails. May mount in device backbox.

FZM-1: Similar to NMM-100. Addressable Monitor Module for one

zone of conventional two-wire detectors. Requires resettable 24 VDC power. Refer to the *Device Compatibility Document* for listed compatible devices and quantity limitation.

NZM-100: Similar to NMM-100. Addressable Monitor Module for one zone of conventional two-wire detectors. Requires resettable 24 VDC power. Refer to the *Device Compatibility Document* for listed compatible devices and quantity limitation.

FCM-1: Addressable Control Module for one Style Y/Z (Class B/A) zone of supervised polarized Notification Appliances. Mounts directly to a 4.0" (10.16 cm.) electrical box. NAC option requires external 24 VDC to power notification appliances.

NC-100: Addressable Control Module for one Style Y/Z (Class B/A) zone of supervised polarized Notification Appliances. Mounts directly to a 4.0" (10.16 cm.) electrical box. NAC option requires external 24 VDC to power notification appliances.

FRM-1: Addressable relay module containing two isolated sets of Form-C contacts, which operate as a DPDT switch. Mounts directly to a 4.0" (10.16 cm.) box, surface mount using the SMB500.

NC-100R: Addressable relay module containing two isolated sets of Form-C contacts, which operate as a DPDT switch. Mounts directly to a 4.0" (10.16 cm.) box, surface mount using the SMB500.

NBG-12LX: Addressable manual pull station with interface module mounted inside.

NOT-BG12LX: Addressable manual pull station with interface module mounted inside.

ISO-X: Fault Isolator Module.

N100-ISO: Fault Isolator Module.

ISO-6: Six-fault isolator module. Mount one or two modules in a BB-XP cabinet (optional). Mount up to six modules on a CHS-6 chassis in a CAB-3/CAB-4 series cabinet.

SMB500: Used to mount all modules except the FMM-101/NMM-100P.

NMM-100-10: Ten-input monitor module. Mount one or two modules in a BB-2F cabinet (optional). Mount up to six modules on a CHS-6 chassis in a BB-6F cabinet.

NZM-100-6: Six-zone interface module. Mount one or two modules in a BB-XP cabinet (optional). Mount up to six modules on a CHS-6 chassis in a CAB-3/CAB-4 series cabinet.

SWIFT Wireless Devices

FWSG: Wireless Gateway

FWD-200P: intelligent, wireless photo detector.

FWH-200ROR135: LiteSpeed intelligent wireless rate of rise (135°) heat detector.

FWD-200ACCLIMATE: Wireless Acclimate Detector

FWH-200FIX135: intelligent wireless fixed-temperature (135°) heat detector.

FW-MM: Intelligent wireless monitor module.

FW-RM: Intelligent wireless relay module.

NBG-12LW: Intelligent wireless pull station.

WAV-RL, WAV-WL, WAV-CRL, WAV-CWL: Intelligent AV bases.

W-USB: Wireless USB radio/antenna dongle that plugs into the USB port of a PC running SWIFT Tools.

SWIFT Tools: Programming and diagnostic utility for the Wireless Gateway and devices. Available for download from firelite.com.

NOTE: For more information on Compatible Addressable Devices for use with the FireWarden-100X, see the following data sheets (document numbers): NP-200 Series (DN-60979), NH-200 Series (DN-60980), FSP-851 Series (DN-6935), FSP-951 Series (DN-60977), FST-851 Series (DN-6936), FST-951 Series (DN-60975), FAPT-851 (DN-6937), N100-ISO (DN-6994), NP-100 series (DN-6995), NH-100/NH-100R (DN-6997), DNR/InnovairFlex (DN-60424, DN-60429), NP-A100 (DN-6998), NMM-100/NMM-100P/NDM-100/NZM-100 (DN-6999), NC-100 (DN-7000), NC-100R (DN-60383), NMM-100-10 (DN-6990), MM-1/FDM-1/FZM-1/FMM-101 (DN-6720), FCM-1/FRM-1 (DN-6724), NOT-BG12LX (DN-7001), NBG-12LX (DN-6726), and FireWarden SLC Manual (52304).

System Capacity

- Intelligent Signaling Line Circuits.....1
- Addressable device capacity198
- Programmable software zones.....99
- Annunciators.....16

Electrical Specifications

AC Power: Operates in either 120 or 240 VAC, 50/60 Hz, 3.25 A, auto-sensing- no switch required. Wire size: minimum 14 AWG (2.00 mm²) with 600 V insulation. Nonpower-limited, supervised.

Battery: Two 12 V 18 AH lead-acid batteries. Battery Charger Capacity: 7-18 AH (FireWarden-100X cabinet holds maximum of two 18 AH batteries.)

Communication Loop: Supervised and power-limited.

Notification Appliance Circuits: Terminal Block provides connections for four NACs, Style Y (Class B) or Style Z (Class A). Special Application power. Power-limited, supervised circuitry. Maximum signaling current per circuit: 2.5 amps special application, 250mA regulated. End-of-Line Resistor: 4.7k ohm, ½ watt (P/N 71252 UL listed) for Style Y (Class B) NAC; system capable of 1.9 kΩ - 22 kΩ ELR range. Refer to the *NOTIFIER Device Compatibility Document* for listed compatible devices.

Two Programmable Relays and One Fixed Trouble Relay: Contact rating: 2.0 A @ 30 VDC (resistive), 0.5 A @ 30 VAC (resistive). Form-C relays, non-power-limited, non-supervised.

Cabinet Specifications

Door: 19.26" (48.92 cm.) high x 16.82" (42.73 cm.) wide x 0.72" (1.82 cm.) deep. **Backbox:** 19.00" (48.26 cm.) high x 16.65" (42.29 cm.) wide x 5.25" (13.34 cm.) deep. **Trim Ring (TR-CE/B):** 22.00" (55.88 cm.) high x 19.65" (49.91 cm.) wide.

Shipping Specifications

Weight: 26.9 lbs. (12.20 kg.) **Dimensions:** 20.00" (50.80 cm.) high x 22.5" (57.15 cm.) wide x 8.5" (21.59 cm.) deep.

Temperature and Humidity Ranges

This system meets NFPA requirements for operation at 0 – 49°C/32 – 120°F and at a relative humidity 93% ± 2% RH (noncondensing) at 32°C ± 2°C (90°F ± 3°F). However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and its peripherals be installed in an environment with a normal room temperature of 15 – 27°C/60 – 80°F.

Addressable Device Accessories

End-of-Line Resistor Assembly (R-47K and R-3.9K): The 47k ohm assembly supervises the NMM-100-10, NDM-100, NMM-100P, and NC-100 module circuits. The 3.9k ohm assembly supervises the NZM-100-6 module circuit. These resistors are included with each module.

Power Supervision Relay: Supervises the power to 4-wire smoke detectors and notification appliances.

Wiring Requirements

While shielded wire is not required, it is recommended that all SLC wiring be twisted-pair to minimize the effects of electrical interference. Refer to the panel manual for wiring details.

NFPA Standards

The FireWarden-100X complies with the following NFPA 72 Fire Alarm Systems requirements:

- **LOCAL** (Automatic, Manual, Waterflow and Sprinkler Supervisory).
- **AUXILIARY** (Automatic, Manual and Waterflow) (requires 4XTM).
- **REMOTE STATION** (Automatic, Manual and Waterflow) (Where a DACT is not accepted, the alarm, trouble and supervisory relays may be connected to UL 864 listed transmitters. For reverse polarity signaling of alarm and trouble, 4XTM is required.)
- **PROPRIETARY** (Automatic, Manual and Waterflow).
- **CENTRAL STATION** (Automatic, Manual and Waterflow, and Sprinkler Supervised).
- **OT, PSDN** (Other Technologies, Packet-switched Data Network)
- **IBC 2012, IBC 2009, IBC 2006, IBC 2003, IBC 2000** (Seismic).
- **CBC 2007** (Seismic)

Agency Listings and Approvals

The listings and approvals below apply to the basic FireWarden-100X control panel. 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
- **CSFM:** 7165-0028:0505
- **FDNY:** COA #6268



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.

NOTIFIER

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Country of Origin: USA



N-ANN-80 80-Character Serial LCD Annunciator

General

The N-ANN-80 annunciator is a compact, backlit, 80-character LCD fire annunciator that mimics the Fire Alarm Control Panel (FACP) display. It provides system status indicators for AC Power, Alarm, Trouble, Supervisory, and Alarm Silenced conditions. The N-ANN-80 and the FACP communicate over a two-wire serial interface employing the ANN-Bus communication format. Connected devices are powered, via two additional wires, by either the host FACP or a remote UL-listed, filtered power supply. The N-ANN-80 is black; for white order N-ANN-80-W.

The N-ANN-80 displays English-language text of system point information including device type, zone, independent point alarm, trouble or supervisory status, as well as any custom alpha labels programmed into the control panel. It includes control switches for remote control of critical system functions. (A keyswitch prevents unauthorized operation of the control switches.)

Up to eight N-ANN-80s may be connected to the ANN-Bus of each FACP. Minimal programming is required, which saves time during system commissioning. The N-ANN-80 is compatible with NOTIFIER FACP's with an ANN-Bus, such as the NFW-50X.

Features

- Listed to UL Standard 864, 9th Edition
- Backlit 80-character LCD display (20 characters x 4 lines)
- Mimics all display information from the host panel
- Control switches for System Acknowledge, Signal Silence, Drill, and Reset
- Control switches can be independently enabled or disabled at the FACP
- Keyswitch enables/disables control switches and mechanically locks annunciator enclosure
- Keyswitch can be enabled or disabled at the FACP
- Enclosure supervised for tamper
- System status LEDs for AC Power, Alarm, Trouble, Supervisory, and Alarm Silence
- Local sounder can be enabled or disabled at the FACP
- N-ANN-80 connects to the ANN-Bus terminal on the FACP and requires minimal panel programming
- Displays device type identifiers, individual point alarm, trouble, supervisory, zone, and custom alpha labels
- Time-and date display field
- Surface mount directly to wall or to single, double, or 4" square electrical box
- Semi-flush mount to single, double, or 4" square electrical box. Use ANN-SB80KIT for angled view mounting
- Can be remotely located up to 6,000 feet (1,800 m) from the panel
- Backlight turns off during AC loss to conserve battery power but will turn back on if an alarm condition occurs
- May be powered by 24 VDC from the host FACP or by remote power supply (requires 24 VDC)
- Up to eight N-ANN-80s can be connected on the ANN-Bus

Controls and Indicators

- AC Power
- Alarm



- Trouble
- Supervisory
- Alarm Silenced

Specifications

- **Operating voltage range:** 18 VDC to 28 VDC
- **Current consumption @ 24 VDC nominal** (filtered and non-resettable): 40 mA maximum
- **Ambient temperature:** 32°F to 120°F (0°C to 49°C)
- **Relative humidity:** 93% ± 2% RH (non-condensing) at 32°C ± 2°C (90°F ± 3°F)
- 5.375" (13.65 cm.) high x 6.875" (17.46 cm.) wide x 1.375" (3.49 cm.) deep
- For use indoors in a dry location
- All connections are power-limited and supervised

The ANN-Bus

POWERING THE DEVICES ON THE ANN-BUS FROM AUXILIARY POWER SUPPLY

The ANN-Bus can be powered by an auxiliary power supply when the maximum number of ANN-Bus devices exceeds the ANN-Bus power requirements. See the FACP manual for more information.

ANN-BUS DEVICE ADDRESSING

Each ANN-Bus device requires a unique address (ID Number) in order to communicate with the FACP. A maximum of 8 devices can be connected to the FACP ANN-Bus communication circuit. See the FACP manual for more information.

WIRE REQUIREMENTS: COMMUNICATIONS CIRCUIT

The N-ANN-80 connects to the FACP ANN-Bus communications circuit. To determine the type of wire and the maximum wiring distance that can be used with FACP ANN-Bus accessory modules, it is necessary to calculate the total worst case current draw for all modules on a single 4-conductor bus. The total worst case current draw is calculated by adding the individual worst case currents for each module.

NOTE: For total worst case current draw on a single ANN-Bus refer to appropriate FACP manual.

WIRE REQUIREMENTS: POWER CIRCUIT

- 14 to 18 AWG (0.75 - 2.08 mm²) wire for 24 VDC power circuit is acceptable.
- All connections are power-limited and supervised.
- A maximum of eight N-ANN-80 modules may be connected to this circuit.

Ordering Options:

 **N-ANN-80:** Black 80 character LCD Annunciator.

N-ANN-80-W: White, 80 character LCD Annunciator.

ANN-SB80KIT-B: Black surface mount backbox with angled wedge.

ANN-SB80KIT-W: White surface mount backbox with angled wedge.

Agency Listings and Approvals

The listings and approvals below apply to the N-ANN-80. 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
- **FM approved**
- **CSFM:** 7120-0028:0240
- **MEA:** 442-06-E Vol. 2



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.

NOTIFIER

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www.notifier.com

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Country of Origin: USA





Com Series™



FEATURES

- ▶ Provides dual path monitoring center communication for any burglary, commercial fire or residential fire panel
- ▶ Enables basic remote panel control via Virtual Keypad™ app
- ▶ Provides end user alerts of arming/disarming, alarm and other events
- ▶ Network communication for all signals is free
- ▶ NFPA 72 compliant for commercial fire communication

- ▶ Fully supervised universal alarm communication over LTE, Wi-Fi or network
- ▶ AT&T or Verizon networks
- ▶ Program your own account number to easily work around locked panels
- ▶ External SMA antenna
- ▶ Use Contact ID dialer capture, four input zones or bell monitoring
- ▶ Wiring for Ademco ECP Bus
- ▶ Communicates with DMP SCS-1R and SCS-VR Receivers
- ▶ Armed/disarmed status LED
- ▶ Private labeling available on the light pipe insert
- ▶ Two output terminals with multiple output options
- ▶ Program Honeywell VISTA panels through DualCom using Compass
- ▶ Program DSC PowerSeries panels through DualCom using DLS
- ▶ Wiring for DSC PowerSeries keypad bus
- ▶ End users have remote access to their panels via Virtual Keypad™ to control basic arm/disarm functions, manage all user codes, easily check zone status and bypass a zone if one is faulted



WORKS WITH MOST PANELS

If the existing panel supports Contact ID, it's a candidate for upgrading with DualCom and CellCom communicators. There are no issues with lockout codes. Simply add the DualCom or CellCom unit to the existing installation and program in your own account number.

UPGRADING HONEYWELL VISTA PANELS

The Com Series modules can be programmed to easily take over Honeywell VISTA panels. The communicator can connect to a VISTA Series ECP bus, which will allow you to program the Honeywell panel remotely using Compass.

UPGRADE DSC POWERSERIES PANELS

You'll be able to connect to the PowerSeries panel through the Com Series communicators to remotely manage all user codes and easily check zone status from the Virtual Keypad app.

USER CODE MANAGEMENT

With Virtual Keypad, your customers can eliminate time and money spent managing user codes — this is especially meaningful with multiple sites. At one time, they can send a user code to multiple panels.

Each of those panels can be different — whether they're XR, XT or Com Series, your customers have the same user code management capabilities. They can also add, edit and delete user codes any time they need to.

AVAILABLE BURGLARY COMMUNICATION

The DualComWZ provides control of basic panel security functions and video. It adds the ability to remotely interact with Z-Wave devices, enabling a variety of home automation features including control of lights, door locks, thermostats and more.

FIRE COMMUNICATION

The CellComF-LTE-V provides cellular fire communication and the DualComNF offers both network and cellular fire communication. Either one works on any fire control panel via Contact ID captures. Both meet NFPA 72 standard for single communication technology.

FIRE PANEL TAKEOVER

DualComNF provides two tip and ring to easily take over existing fire panels with two phone lines.

FIRE PACKAGE

DMP offers the PowerComF, allowing you to add new communication technologies to an existing fire panel. Included in the package are:

- ▶ One AT&T or Verizon DualcomNF
- ▶ One 505-12 Power Supply

As part of the package, the communicator has all the power it needs without drawing from the panel. This alleviates the need to perform any battery calculations for the existing fire panel.

MOBILE SYSTEM CONTROL

With any one of DMP's CellCom or DualCom communicators, you can easily update your customers' older residential and commercial systems to the latest cellular communication links. With cellular in place, users can remotely access their panels via the Virtual Keypad app. This makes it possible to use their mobile devices to control basic arm/disarm functions and receive alerts. The DualComWZ provides control of Z-Wave home automation devices.

Virtual Keypad App Version Features

Feature	Arming Only Version	Full Version	Add-On Services for Full Version
Arm and Disarm	•	•	
Notifications (Alarms, Open/Close, Trouble)	•	•	
View History	•	•	
View Zone Status		•	
Manage User Codes		•	
Activity Reports		•	
Configure Real-Time Notifications		•	
SMS or Email		•	
Geofencing		•	
Video Doorbell			•
SecureCom NVR			•
SecureCom Video			•
Video Integration			•
Central Station Video Verification			•

FOUR ZONES

Each Com Series model provides four zones for connection to burglary control panel outputs. Zone 4 is intended for connection to the control panel bell output.

ENABLE VIDEO ON THE APP

With the Com Series communicators, you can add up to six video cameras. Via the Virtual Keypad app, users can remotely view their premises to cancel or verify an alarm or simply check in on children or senior adults. Users can also capture still or video images.

FULLY SUPERVISED COMMUNICATION

The Com Series allows alarm messages to be communicated to an SCS-1R or SCS-VR Receiver over network or Verizon or AT&T LTE networks. Sending alarm communication for burglary and fire control panels over network or the LTE network provides higher speeds.

FIELD PANEL UPDATES

The Model 401 USB Flash Module allows you to conveniently field update firmware for the communicators that would otherwise require the use of a computer and a Model 399 Programming Harness.

MODULE PROGRAMMING

Programming over network or cell via Dealer Admin™ or Remote Link™ includes zone information and monitoring center communications.

MULTIPLE CONNECTION OPTIONS

Com Series communicators can be attached to the existing panel in a variety of ways. It can capture Contact ID messages from the dialer or connect the four input zones from outputs on the panel. Or it can sense the output of the bell of an existing alarm and communicate the appropriate message to the monitoring center.

TWO OUTPUTS

Use outputs to connect to an arming zone of an existing panel for control of that panel via the app.

EASY UPGRADE FOR DIALER-ONLY PANELS

Older dial-up panels have new life with the addition of network or cellular communication. Earn customer loyalty by extending the life of their existing panels and add modern panel features at the same time.

ADD VIRTUAL KEYPAD APP


Enable the Virtual Keypad app on your customers' existing panels for a minimal additional cost. Brand DMP's Virtual Keypad app with your organization's logo and contact information to provide a daily reminder of your services.

Com Series Features

Model	Carrier	Hardwire Network	Wi-Fi	LTE	Z-Wave	Housing Color	Honeywell VISTA	DSC PowerSeries	CID Capture	2 Tip & Ring	4 Zones	2 Outputs	Power Supply
DualComNF-LV	Verizon	•		•		Red	•	•	•	•	•	•	
DualComNF-LA	AT&T	•		•		Red	•	•	•	•	•	•	
DualComW-LV	Verizon		•	•		White	•	•	•		•	•	
DualComW-LA	AT&T		•	•		White	•	•	•		•	•	
DualComWZ-LV	Verizon		•	•	•	White	•	•	•		•	•	
DualComWZ-LA	AT&T		•	•	•	White	•	•	•		•	•	
DualComN-LV	Verizon	•		•		White	•	•	•		•	•	
DualComN-LA	AT&T	•		•		White	•	•	•		•	•	
CellCom-LTE-V	Verizon			•		White	•		•		•	•	
CellComF-LTE-V	Verizon			•		Red	•		•	•	•	•	
PowerComF-V	Verizon	•		•		Red			•	•	•	•	•
PowerComF-A	AT&T	•		•		Red			•	•	•	•	•

REFERENCE SHEET

Ordering Information



DualComNF-LV	Universal Fire Alarm Communicator with Hardwired Network Primary and LTE Backup (Verizon)
DualComNF-LA	Universal Fire Alarm Communicator with Hardwired Network Primary and LTE Backup (AT&T)
DualComW-LV	Universal Alarm Communicator with Wi-Fi Primary and LTE Backup (Verizon)
DualComW-LA	Universal Alarm Communicator with Wi-Fi Primary and LTE Backup (AT&T)
DualComWZ-LV	Universal Alarm Communicator with Wi-Fi Network Primary and LTE Backup with Z-Wave (Verizon)
DualComWZ-LA	Universal Alarm Communicator with Wi-Fi Network Primary and LTE Backup with Z-Wave (AT&T)

DualComN-LV	Universal Alarm Communicator with Hardwired Network Primary and LTE Backup (Verizon)
DualComN-LA	Universal Alarm Communicator with Hardwired Network Primary and LTE Backup (AT&T)
CellCom-LTE-V	Universal Alarm Communicator (Verizon)
CellComF-LTE-V	Universal Fire Alarm Communicator (Verizon)
PowerComF-V	Universal Fire Alarm Communicator (Verizon)
PowerComF-A	Universal Fire Alarm Communicator (AT&T)

Accessories

381-2	18" Coax Extension
381-12	1' Coax Extension
381-25	25' Coax Extension
383	Cellular Antenna LTE/CDMA/HSPA+
386	Wall Mount Antenna Bracket
387-2	2 dB Attack Enclosure Antenna
387-4	4' SMA to N Extension Cable
387-8	8' SMA to N Extension Cable
387-25	SMA TO N CABLE, 25FT, LMR195
387-50	SMA TO N CABLE, 50FT, LMR195
388-1	3 dB Fiberglass Antenna w/bracket
388-2	2 dB Attack Enclosure Antenna
388-3	3 dB MEG Antenna
685-R	Surface Mount Conduit Backbox (Red)
685-W	Surface Mount Conduit Backbox (White)
DualCom-HSG-W/10	Replacement Housing

Specifications

Dimensions	5.5" W x 3.75" H x 1" D
Open-Collector Outputs	2
Zones	4
Color	
Red	DualComNF, CellComF-LTE-V
White	DualComW, DualComWZ, DualComN, CellCom-LTE-V

CellCom-LTE-V

Primary Power	12 VDC
Current Draw	
Alarm	102 mA
Standby	55 mA

CellComF-LTE-V

Primary Power	12-24 VDC
Current Draw at 12VDC	
Alarm	102 mA
Standby	56 mA
Current Draw at 24VDC	
Alarm	82 mA
Standby	30 mA

DualCom Series

Primary Power	Nominal 12 VDC or 24 VDC
Current Draw at 12 VDC	
Standby	64 mA
Alarm	109 mA
Current Draw at 24 VDC	
Standby	30 mA
Alarm	82 mA

PowerCom Series

Primary Power	Nominal 12 VDC
Current Draw at 12 VDC	
Standby	64 mA
Alarm	109 mA Peak Cellular Communication

Certifications

CellCom Series

California State Fire Marshal (CSFM)
New York (FDNY) COA
Underwriters Laboratory (UL) Listed
ANSI/UL 1610 Central Station Burglar (Cellular)
ANSI/UL 1023 Household Burglar
ANSI/UL 985 Household Fire Warning (CID Capture)

CellComF-LTE-V

ANSI/UL 864 Fire Protective Signaling Systems (CID Capture)

Cellular

FCC Part 15: XMR201707BG96
XMR201909BG95M3

DualCom Series

FCC Part 15: XMR201707BG96
or FCC ID: XMR201910BG95M3
IC: 10224A-201709BG96
or 10224A-2019BG95M3

Underwriters Laboratories (UL) Listed

DualComNF

ANSI/UL 864 Fire Protective Signaling Systems (CID Capture)

DualComN

ANSI/UL 1610 Commercial Burglar

For additional information,
go to DMP.com/Compliance.

800-641-4282 | DMP.com | 2500 N. Partnership Blvd, Springfield, MO 65803 | Designed, engineered & manufactured in Springfield, MO using U.S. & global components.

LIMITED WARRANTY: DMP warrants that the products manufactured by DMP shall be free from defects of manufacture, labeling, and packaging for a period of three (3) years from the invoice date to the original Buyer, provided that representative samples of the defective products are returned to DMP for inspection. To read the full DMP Limited Warranty, go to DMP.com/Warranty or check the DMP Price List or Catalog.

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PS-1270 12 Volt 7.0 AH

Rechargeable Sealed Lead Acid Battery

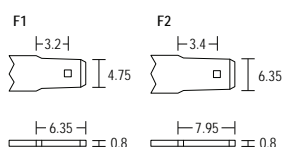


We've Got The Power.™

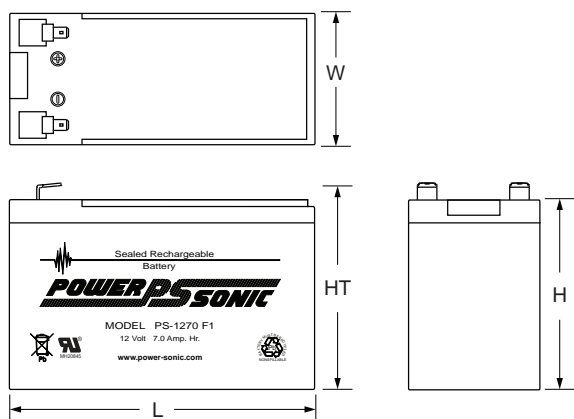


Terminals (mm)

- F1 - Quick disconnect tabs, 0.187" x 0.032" - Mate with AMP. INC. FASTON "187" series
— OR —
- F2 - Quick disconnect tabs, 0.250" x 0.032" - Mate with AMP. INC. FASTON "250" series



Physical Dimensions: in (mm)



L: 5.95 (151) W: 2.56 (65) H: 3.70 (94) HT: 3.86 (98)

Tolerances are +/- 0.04 in. (+/- 1mm) and +/- 0.08 in. (+/- 2mm) for height dimensions. All data subject to change without notice.

Features

- Absorbent Glass Mat (AGM) technology for superior performance
- Valve regulated, spill proof construction allows safe operation in any position
- Power/volume ratio yielding unrivaled energy density
- Rugged impact resistant ABS case and cover (UL94-HB)
- Approved for transport by air. D.O.T., I.A.T.A., F.A.A. and C.A.B. certified
- U.L. recognized under file number MH 20845

Performance Specifications

Nominal Voltage 12 volts (6 cells)

Nominal Capacity

20-hr. (350mA to 10.50 volts)	7.00 AH
10-hr. (650mA to 10.50 volts)	6.50 AH
5-hr. (1.2A to 10.20 volts)	6.00 AH
1-hr. (4.5A to 9.00 volts)	4.50 AH
15-min. (14A to 9.00 volts)	3.50 AH

Approximate Weight 4.80 lbs. (2.18 kg)

Energy Density (20-hr. rate) 1.49 W-h/in³ (90.95 W-h/l)

Specific Energy (20-hr. rate) 17.50 W-h/lb (38.58 W-h/kg)

Internal Resistance (approx.) 23 milliohms

Max Discharge Current (7 Min.) 21.0 amperes

Max Short-Duration Discharge Current (10 Sec.)..... 70.0 amperes

Shelf Life (% of nominal capacity at 68°F (20°C))

1 Month	97%
3 Months.....	91%
6 Months	83%

Operating Temperature Range

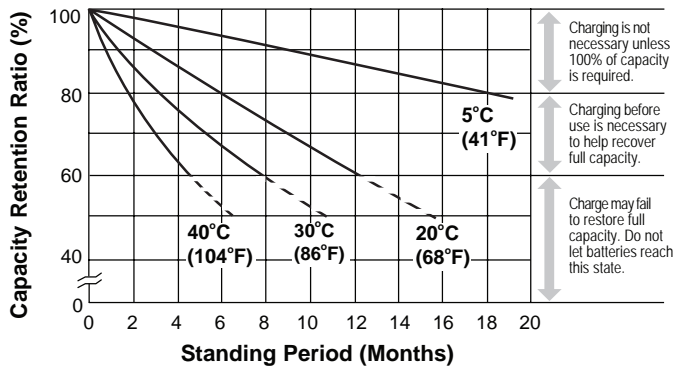
Charge.. -4°F (-20°C) to 122°F (50°C)

Discharge..... -40°F (-40°C) to 140°F (60°C)

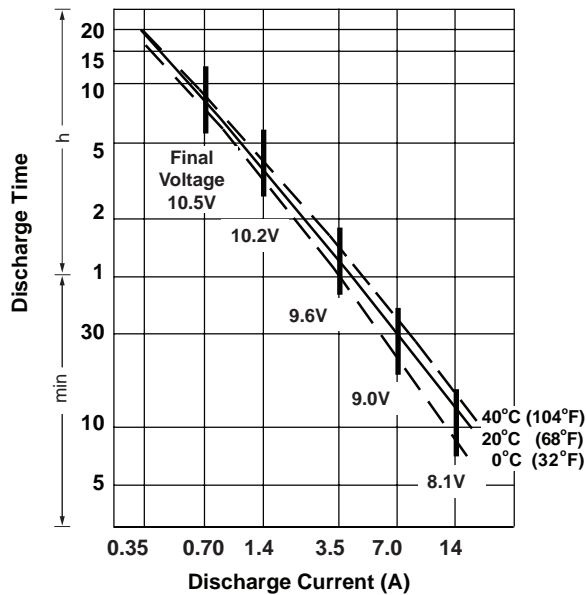
Case ABS Plastic

Power-Sonic Chargers PSC-12800A, 12800A-C

Shelf Life & Storage



Discharge Time vs. Discharge Current



Charging

Cycle Applications: Limit initial current to 2.1A. Charge until battery voltage (under charge) reaches 14.4 to 14.7 volts at 68°F (20°C). Hold at 14.4 to 14.7 volts until current drops to under 70mA. Battery is fully charged under these conditions, and charger should be disconnected or switched to "float" voltage.

"Float" or "Stand-By" Service: Hold battery across constant voltage source of 13.5 to 13.8 volts continuously. When held at this voltage, the battery will seek its own current level and maintain itself in a fully charged condition.

Note: Due to the self-discharge characteristics of this type of battery, it is imperative that they be charged within 6 months of storage, otherwise permanent loss of capacity might occur as a result of sulfation.

Chargers

Power-Sonic offers a wide range of chargers suitable for batteries up to 100AH. Please refer to the Charger Selection Guide in our specification sheets for "C-Series Switch Mode Chargers" and "Transformer Type A and F Series". Please contact our Technical department for advice if you have difficulty in locating suitable models.

Contact Information

DOMESTIC SALES

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Fax: +1-619-661-3650
national-sales@power-sonic.com

CUSTOMER SERVICE

Tel: +1-619-661-2030
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TECHNICAL SUPPORT

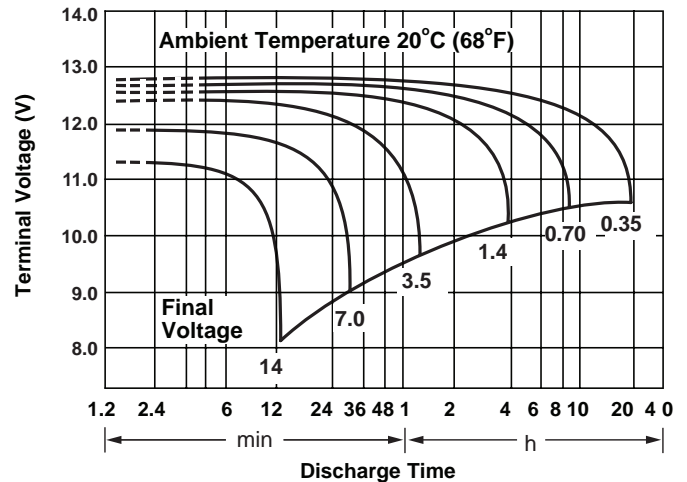
Tel: +1-619-661-2020
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support@power-sonic.com

INTERNATIONAL SALES

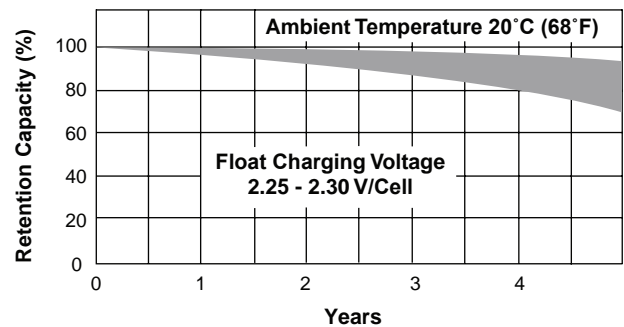
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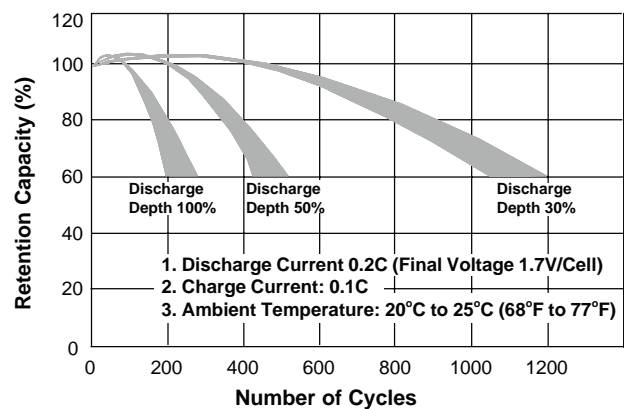
Discharge Characteristics



Life Characteristics in Stand-By Use



Life Characteristics in Cyclic Use



Further Information

Please refer to our website www.power-sonic.com for a complete range of useful downloads, such as product catalogs, material safety data sheets (MSDS), ISO certification, etc..

NBG-12LX

Addressable Manual Pull Station



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 standby current:** 375 µA.
- **Maximum SLC alarm current:** 5 mA.
- **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. (Listed for Canadian and non-Canadian applications.)

NBG-12LXSP: Spanish/English labelled version.

NBG-12LXP: Portuguese labelled version.

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/ULC Listed:** S692 (listed for Canadian and non-Canadian applications).
- **MEA:** 67-02-E.
- **CSFM:** 7150-0028:0199.
- **FDNY:** COA #6085 (NFS2-640), COA #6098 (NFS2-3030).
- **BSMI:** CI313066760047.
- **U.S. Coast Guard.**
- **Lloyd's Register.**
- **FM Approved.**

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

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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. Phone: (203) 484-7161, FAX: (203) 484-7118.
www.notifier.com



Made in the U.S. A.

FSP-951 Series Addressable Photoelectric Smoke Detectors

The NOTIFIER® FSP-951 Series intelligent plug-in smoke detectors are designed for both performance and aesthetics, and are direct replacements for the FSP-851 Series. A new modern, sleek, contemporary design and enhanced optical sensing chamber is engineered to sense smoke produced by a wide range of combustion sources in accordance with more stringent code standards.

The FSP-951 Series detector sensitivity can be programmed in the control panel software. Sensitivity is continuously monitored and reported to the panel. Point ID capability allows each detector's address to be set with rotary, decimal address switches, providing exact detector location for selective maintenance when chamber contamination reaches an unacceptable level. Dual electronic thermistors add 135°F (57°C) fixed temperature thermal sensing on the FSP-951T. The FSP-951R is a remote test capable detector for use with DNR Series duct detector housings. FSP-951 series detectors are available for both FlashScan® and CLIP applications as designated.

Features

SLC LOOP:

- Two-wire SLC loop connection
- Unit uses base for wiring
- Compatible with FlashScan® and CLIP protocol systems
- Stable communication technique with noise immunity

ADDRESSING:

- Addressable by device
- Rotary, decimal addressing
(Refer to the *NOTIFIER panel manuals* for device capacity.)

ARCHITECTURE:

- Sleek, low-profile, stylish design
- Unique single-source design to respond quickly and dependably to a broad range of fires
- Integral communications and built-in device-type identification
- Built-in tamper resistant feature
- Remote test feature from the panel
- Walk test with address display (an address on 121 will blink the detector LED: 12-[pause]-1 (*FlashScan systems only*))
- Built-in functional test switch activated by external magnet
- Removable cover and insect-resistant screen for simple field cleaning
- Expanded color options

OPERATION:

- Designed to meet UL 268 7th Edition
- Factory preset at 1.5% nominal sensitivity for panel alarm threshold level
- LED "blinks" when the unit is polled (communicating with the fire panel) and latches in alarm.
- Low standby current

MECHANICALS:

- Sealed against back pressure
- SEMS screws for wiring of the separate base
- Designed for direct-surface or electrical-box mounting
- Plugs into separate base for ease of installation and maintenance



- Separate base allows interchange of photoelectric, ionization and thermal sensors

OPTIONS:

- Optional relay, isolator, and sounder bases

Installation

FSP-951 Series plug-in intelligent smoke detectors use a detachable base to simplify installation, service and maintenance. Installation instructions are shipped with each detector.

Mount detector 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: 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 Class "B" wiring only.

When using relay or sounder bases, consult the ISO-X(A) installation sheet I56-1380 for device limitations between isolator modules and isolator bases.

Construction

These detectors are constructed of fire-resistant plastic. The FSP-951 Series plug-in intelligent smoke detectors are designed to commercial standards and offer an attractive appearance.

Operation

Each FSP-951 Series detector uses one of the panel's addresses (total limit is panel dependent) on the NOTIFIER Signaling Line Circuit (SLC). It responds to regular polls from the control panel and reports its type and the status. If it receives a test command from the panel (or a local magnet test), it stimulates its electronics and reports an alarm. It blinks its LEDs when polled and turns the LEDs on when commanded by the panel. The FSP-951 Series offers features and performance that represent the latest in smoke detector technology.

Product Line Information

NOTE: "-IV" suffix indicates CLIP and FlashScan device.

FSP-951: White, low-profile intelligent photoelectric sensor, FlashScan only

FSP-951A: Same as FSP-951 but with ULC listing

FSP-951-IV: Ivory, low-profile intelligent photoelectric sensor

FSP-951A-IV: Same as FSP-951-IV but with ULC listing

FSP-951T: White, same as FSP-951 but includes a built-in 135°F (57°C) fixed-temperature thermal device, FlashScan only

FSP-951TA: Same as FSP-951T but with ULC listing

FSP-951T-IV: Ivory, same as FSP-951T but includes a built-in 135°F (57°C) fixed-temperature thermal device

FSP-951TA-IV: Same as FSP-951T-IV but with ULC listing

FSP-951R: White, low-profile intelligent photoelectric sensor, remote test capable, for use with DNR/DNRW, FlashScan only

FSP-951RA: Same as FSP-951R but with ULC listing, for use with DNRA

FSP-951R-IV: Ivory, low-profile intelligent photoelectric sensor, remote test capable, for use with DNR/DNRW

FSP-951RA-IV: Same as FSP-951R-IV but with ULC listing, for use with DNRA

INTELLIGENT BASES

NOTE: For details on intelligent bases, see DN-60981.

B300-6: White, 6" base, standard flanged low-profile mounting base (CSFM: 7300-1653:0109)

B300-6-IV: Ivory, 6" base, standard flanged low-profile mounting base (CSFM: 7300-1653:0109)

B300A-6: Same as B300-6, ULC listed

B300A-6-IV: Ivory, 6" standard flanged low-profile mounting base, ULC listed

B300-6-BP: Bulk pack of B300-6, package contains 10

B501-WHITE: White, 4" standard European flangeless mounting base. UL/ULC listed (CSFM: 7300-1653:0109)

B501-BL: Black, 4" standard European flangeless mounting base. UL/ULC listed (CSFM: 7300-1653:0109)

B501-IV: Ivory color, 4" standard European flangeless mounting base. UL/ULC listed (CSFM: 7300-1653:0109)

B501-WHITE-BP: Bulk pack of B501-WHITE contains 10

B224RB-WH: White, relay base (CSFM: 7300-1653:0216)

B224RB-IV: Ivory, relay base (CSFM: 7300-1653:0216)

B224RBA-WH: White, relay base, ULC listing

B224RBA-IV: Ivory, relay base, ULC listing

B224BI-WH: White, isolator detector base (CSFM: 7300-1653:0216)

B224BI-IV: Ivory isolator detector base (CSFM: 7300-1653:0216)

B224BIA-WH: White, isolator detector base, ULC listing

B224BIA-IV: Ivory isolator detector base, ULC listing

B200S-WH: White, Intelligent addressable 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. Uses FlashScan protocol. (CSFM: 7300-1653:0213)

B200S-IV: Ivory, Intelligent addressable 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. Uses FlashScan protocol. (CSFM: 7300-1653:0213)

B200SA-WH: Same as B200S-WH, ULC listing

B200SA-IV: Same as B200S-IV, ULC listing

B200SCOA-WH: White, Intelligent, programmable sounder base in English/French (required in Canada for ULC applications with CO Series detector applications)

B200SCOA-IV: Ivory Intelligent, programmable sounder base in English/French (required in Canada for ULC applications with CO Series detector applications, ULC listing)

B200S-LF-WH: White, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. (CSFM: 7300-1653:0238)

B200S-LF-IV: Ivory, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. (CSFM: 7300-1653:0238)

B200SR-WH: White, Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone. Intended for retrofit applications. (CSFM: 7300-1653:0213)

B200SR-IV: Ivory, Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone. Intended for retrofit applications. (CSFM: 7300-1653:0213)

B200SRA-WH: Same as B200SR-WH with, ULC listing

B200SRA-IV: Same as B200SR-IV in Ivory color, ULC listing

B200SR-LF-WH: White, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. Intended for retrofit applications. (CSFM: 7300-1653:0238)

B200SR-LF-IV: Ivory, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. Intended for retrofit applications. (CSFM: 7300-1653:0238)

MOUNTING KITS AND ACCESSORIES

TR300: White, replacement flange for B210LP(A) base

TR300-IV: Ivory, replacement flange for B210LP(A) base

RA100Z(A): Remote LED annunciator. 3-32 VDC. Mounts to a U.S. single-gang electrical box. For use with B501(A) and B300-6(A).

M02-04-00: Test magnet

M02-09-00: Test magnet with telescoping handle

CK300: Color Kit (includes cover and trim ring), white, 10-pack

CK300-IV: Color Kit (includes cover and trim ring), ivory, 10-pack

CK300-BL: Color Kit (includes cover and trim ring), black, 10-pack

Sensitivity:

- UL Applications: 0.5% to 4.0% per foot obscuration.
- ULC Applications: 0.5% to 3.5% per foot obscuration

Size: 2.0" (51mm) high; base determines diameter

- **B300-6 series:** 6.1" (15.6 cm) diameter
- **B501 series:** 4" (10.2 cm) diameter

For a complete list of detector bases see DN-60981

Shipping weight: 3.4 oz. (95 g)

Operating temperature range:

- FSP-951 Series: 32°F to 122°F (0°C to 50°C)
- FSP-951T Series: 32°F to 100°F (0°C to 38°C)
- FSP-951R Series installed in DNR/DNRA/DNRW, -4°F to 158°F (-20°C to 70°C)

UL/ULC Listed Velocity Range: 0-4000 ft/min. (1219.2 m/min.), suitable for installation in ducts

Relative humidity: 10% – 93% non-condensing

Thermal ratings: fixed-temperature set point 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.): 200µA @ 24 VDC (one communication every 5 seconds with LED enabled)

Max current: 4.5 mA @ 24 VDC ("ON")

DETECTOR SPACING AND APPLICATIONS

NOTIFIER recommends spacing detectors in compliance with NFPA 72. In low airflow applications with smooth ceiling, space detectors 30 feet (9.1m). For specific information regarding detector spacing, placement, and special applications refer to NFPA 72. A *System Smoke Detector Application Guide*, document SPAG91, is available at www.systemsensor.com.

Listings and Approvals

Listings and approvals below apply to the FSP-951 Series detectors. 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/ULC Listing: S1115
- FM Approved
- CSFM: 7272-0028:0503



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We cannot cover all specific applications or anticipate all requirements.
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Country of Origin: Mexico

NOTIFIER

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FST-951 Series Intelligent Addressable Heat Detectors

The NOTIFIER® FST-951 Series intelligent thermal detectors are designed for both performance and aesthetics, and are direct replacements for the FST-851 Series. A new modern, sleek, contemporary design and advanced thermal technologies make the FST-951 Series ideal for both system operation and building design. The point ID address, set using rotary decimal switches, provide specific detector locations.

The series includes a 135°F/57°C fixed-temperature, rate-of-rise, and a 190°F/88°C fixed high-temperature detectors. These thermal detectors provide effective, intelligent property protection in a variety of applications. Detectors are available for both FlashScan® and CLIP applications as designated.

Features

SLC LOOP:

- Two-wire SLC loop connection
- Unit uses base for wiring

ADDRESSING:

- Addressable by device
- Rotary, decimal addressing
(Refer to the *NOTIFIER panel manuals* for device capacity.)

ARCHITECTURE:

- Designed to meet UL 268 7th Edition
- Sleek, low-profile, stylish design
- State-of-the-art thermistor technology for fast response
- Integral communications and built-in device-type identification
- Built-in tamper resistant feature
- Built-in functional test switch activated by external magnet

OPERATION:

- Fixed temperature model (FST-951) factory preset to 135°F (57°C)
- Rate-of-rise model (FST-951R), 15°F (8.3°C) per minute
- High-temperature model (FST-951H) factory preset to 190°F (88°C)
- 360°-field viewing angle of the two visual alarm indicators, LEDs blink red in Normal condition and turn on steady red in Alarm
- LEDs blink every time the unit is polled

MECHANICALS:

- Sealed against back pressure
- SEMS screws for wiring of the separate base
- Designed for direct-surface or electrical-box mounting
- Plugs into separate base for ease of installation and maintenance
- Separate base allows interchange of photoelectric, ionization and thermal sensors

OTHER SYSTEM FEATURES:

- Remote test feature from the panel
- Walk test with address display
- Low standby current

OPTIONS:

- Remote LED output connection to optional RA100Z remote LED annunciator



Installation

FST-951 Series plug-in intelligent thermal detectors use a detachable base to simplify installation, service and maintenance. Installation instructions are shipped with each detector.

Mount detector 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: 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 only.

When using relay or sounder bases, consult the ISO-X(A) installation sheet I56-1380 for device limitations between isolator modules and isolator bases.

Applications

Use thermal detectors for protection of property. For further information, refer to I56-6522, Applications Manual for System Smoke Detectors, which provides detailed information on detector spacing, placement, zoning, wiring, and special applications.

Construction

These detectors are constructed of fire-resistant plastic. The FST-951 Series plug-in intelligent thermal detectors are designed to commercial standards and offer an attractive appearance.

Operation

Each FST-951 Series detector uses one of the panel's addresses (total limit is panel dependent) on the NOTIFIER Signaling Line Circuit (SLC). It responds to regular polls from the control panel and reports its type and the status. If it receives a test command from the panel (or a local magnet test), it stimulates its electronics and reports an alarm. It blinks its LEDs when polled and turns the LEDs on when commanded by the panel. The FST-951 Series offers features and performance that represent the latest in thermal detector technology.

Product Line Information

NOTE: “-IV” suffix indicates CLIP and FlashScan device.

FST-951: White, low-profile intelligent 135°F fixed thermal sensor, FlashScan only

FST-951A: Same as FST-951 but with ULC listing

FST-951-IV: Ivory, low-profile intelligent 135°F fixed thermal sensor, FlashScan and CLIP

FST-951A-IV: Same as FST-951-IV but with ULC listing

FST-951R: White, low-profile intelligent rate-of-rise thermal sensor, FlashScan only

FST-951RA: Same as FST-951 but with ULC listing

FST-951R-IV: Ivory, low-profile intelligent rate-of-rise fixed thermal sensor, FlashScan and CLIP

FST-951RA-IV: Same as FST-951R-IV but with ULC listing

FST-951H: White, low-profile intelligent 190°F fixed thermal sensor, FlashScan only

FST-951HA: Same as FST-951H but with ULC listing

FST-951H-IV: Ivory, low-profile intelligent 190°F thermal sensor, FlashScan and CLIP

FST-951HA-IV: Same as FST-951 but with ULC listing

INTELLIGENT BASES

NOTE: For details on intelligent bases, see DN-60981.

B300-6: White, 6" base, standard flanged low-profile mounting base (CSFM: 7300-1653:0109)

B300-6-IV: Ivory, 6" base, standard flanged low-profile mounting base (CSFM: 7300-1653:0109)

B300A-6: Same as B300-6, ULC listed

B300A-6-IV: Ivory, 6" standard flanged low-profile mounting base, ULC listed

B300-6-BP: Bulk pack of B300-6, package contains 10

B501-WHITE: White, 4" standard European flangeless mounting base. UL/ULC listed (CSFM: 7300-1653:0109)

B501-BL: Black, 4" standard European flangeless mounting base. UL/ULC listed (CSFM: 7300-1653:0109)

B501-IV: Ivory color, 4" standard European flangeless mounting base. UL/ULC listed (CSFM: 7300-1653:0109)

B501-WHITE-BP: Bulk pack of B501-WHITE contains 10

B224RB-WH: White, relay base (CSFM: 7300-1653:0216)

B224RB-IV: Ivory, relay base (CSFM: 7300-1653:0216)

B224RBA-WH: White, relay base, ULC listing

B224RBA-IV: Ivory, relay base, ULC listing

B224BI-WH: White, isolator detector base (CSFM: 7300-1653:0216)

B224BI-IV: Ivory isolator detector base (CSFM: 7300-1653:0216)

B224BIA-WH: White, isolator detector base, ULC listing

B224BIA-IV: Ivory isolator detector base, ULC listing

B200S-WH: White, Intelligent addressable 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. Uses FlashScan protocol. (CSFM: 7300-1653:0213)

B200S-IV: Ivory, Intelligent addressable 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. Uses FlashScan protocol. (CSFM: 7300-1653:0213)

B200SA-WH: Same as B200S-WH, ULC listing

B200SA-IV: Same as B200S-IV, ULC listing

B200SCOA-WH: White, Intelligent, programmable sounder base in English/French (required in Canada for ULC applications with CO Series detector applications)

B200SCOA-IV: Ivory Intelligent, programmable sounder base in English/French (required in Canada for ULC applications with CO Series detector applications, ULC listing)

B200S-LF-WH: White, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. (CSFM: 7300-1653:0238)

B200S-LF-IV: Ivory, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. (CSFM: 7300-1653:0238)

B200SR-WH: White, Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone. Intended for retrofit applications. (CSFM: 7300-1653:0213)

B200SR-IV: Ivory, Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone. Intended for retrofit applications. (CSFM: 7300-1653:0213)

B200SRA-WH: Same as B200SR-WH with, ULC listing

B200SRA-IV: Same as B200SR-IV in Ivory color, ULC listing

B200SR-LF-WH: White, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. Intended for retrofit applications. (CSFM: 7300-1653:0238)

B200SR-LF-IV: Ivory, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. Intended for retrofit applications. (CSFM: 7300-1653:0238)

MOUNTING KITS AND ACCESSORIES

TR300: White, replacement flange for B210LP(A) base

TR300-IV: Ivory, replacement flange for B210LP(A) base

RA100Z(A): Remote LED annunciator. 3-32 VDC. Mounts to a U.S. single-gang electrical box. For use with B501(A) and B300-6(A).

M02-04-00: Test magnet

M02-09-00: Test magnet with telescoping handle

CK300: Color Kit (includes cover and trim ring), white, 10-pack

CK300-IV: Color Kit (includes cover and trim ring), ivory, 10-pack

CK300-BL: Color Kit (includes cover and trim ring), black, 10-pack

SPECIFICATIONS

Sensitivity: UL Applications: 0.5% to 4.0% per foot obscuration.
ULC is 0.5% to 3.5%

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

- **B300-6:** 6.1" (15.6 cm) diameter
- **B501:** 4" (10.2 cm) diameter

For a complete list of detector bases see DN-60981

Shipping weight: 3.4 oz. (95 g)

Operating temperature range:

- FST-951, FST-951R Series: –4°F to 100°F (–20°C to 38°C)
- FST-951H Series: –4°F to 150°F (–20°C to 66°C)

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% non-condensing

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

Mounting: B300-6(A) flanged base, included

See “**Product Line Information: Intelligent Bases,**” if using a different base.

ELECTRICAL SPECIFICATIONS

Voltage range: 15 - 32 volts DC peak

Standby current (max. avg.): 200µA @ 24 VDC (one communication every 5 seconds with LED enabled)

Max current: 4.5 mA @ 24 VDC (“ON”)

Listings and Approvals

Listings and approvals below apply to the FST-951 Series detectors. 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/ULC Listing: S747
- FM Approved
- CSFM: 7270-0028:0502



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Country of Origin: Mexico



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

Monitor Modules with FlashScan®



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 0.65" (1.651 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 communication protocols.

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 (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-



FMM-1(A) (Type H)

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) 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: 375 µA (LED flashing), 1 communication every 5 seconds, 47k EOL.

Maximum IDC wiring resistance: 1500 Ohms.

Maximum IDC Voltage: 11 Volts.

EOL resistance: 47K Ohms.

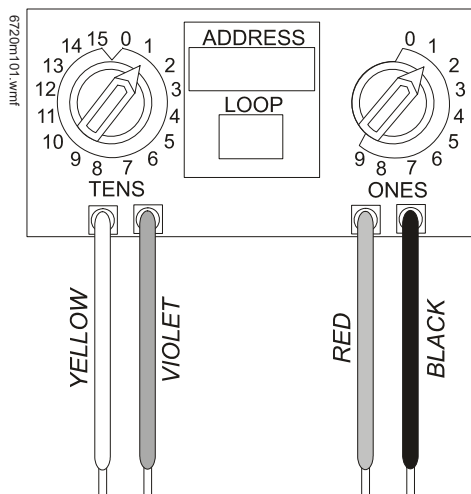
Temperature range: 32°F to 120°F (0°C to 49°C).

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 μ A, 1 communication every 5 seconds, 47k EOL; 600 μ A Max. (Communicating, IDC Shorted).

Maximum IDC wiring resistance: 1500 Ohms.

Maximum IDC Voltage: 11 Volts.

Maximum IDC Current: 450 μ A.

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: 270 μ A, 1 communication and 1 LED flash every 5 seconds, 3.9k eol.

EOL resistance: 3.9K Ohms.

External supply voltage (between Terminals T10 and T11):

- 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.

FDM-1(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.

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 1.25" (3.175 cm) deep. Mounts to a 4" (10.16 cm) square x 2.125" (5.398 cm) deep box.

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, 7165-0028:0224, 7165-0028:0243.
- **MEA:** 457-99-E.
- **U.S. Coast Guard:** 161.002/50/0 (NFS2-640, NFS2-320, NFS2-3030).
- **Lloyd's Register:** 11/600013 (NFS2-640, NFS2-320, NFS2-3030).
- **Fire Dept. of New York:** COA #6121 (NFS2-640, NFS-320), COA# 6114 (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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www.notifier.com

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

Control and Relay Modules



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 μ A direct poll, 375 μ A group poll with LED flashing, 485 μ A 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.*

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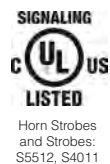
L-Series and L-Series with LED Indoor Selectable Horns, Strobes and Horn Strobes

System Sensor L-Series and L-Series with LED audible visible notification products are rich with features guaranteed to cut installation times and maximize profits with lower current draw and modern aesthetics.

Features

- LED technology provides lower current draw
- Digital Voltage Meter (DVM) diagnostic test points for Horn Strobes and Strobes
- Common aesthetics across the L-Series platform
- Standard and compact sizes
- Tamper-resistant construction
- Field-selectable candela settings on wall units: 15, 30, 75, 95, 110, 135, and 185
- Field-selectable candela settings on ceiling units: 15, 30, 75, 95, 115, 150, and 177
- Rotary switches for candela, tone and volume selections
- Mounting plate provides plug-in design for easier installation and shorting springs to check wiring continuity
- Electrically compatible with legacy SpectrAlert, SpectrAlert Advance and L-series devices
- Synchronization through use of UL approved power supplies that support System Sensor Sync protocol or System Sensor MDL3 Sync Module
- Horns, Strobes and Horn Strobes listed for wall or ceiling use

Agency Listings



The System Sensor L-Series and L-Series with LED

platform offers the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry with lower current draw and modern aesthetics. LED lighting technology offers significantly lower current draw compared to older Xenon bulbs across a full candela range. This improves design flexibility for notification appliance circuits (NACs) while also reducing power supply requirements allowing for simpler and lower cost installations.

Flexible design options meet virtually any application requirement: wall or ceiling mount, standard or compact sizes, red or white color choices, bezel kits for alternate markings and languages, and LED color lenses for distinctive visual signaling. In addition, installers can easily adapt devices using field selectable candela, tone and volume settings using rotary switches.

The L-Series and L-Series with LED line is developed to simplify installation. All devices feature plug-in designs with minimal intrusion into the back box, making installations fast and foolproof while virtually eliminating costly and time-consuming ground faults. The universal mounting plate includes an onboard shorting spring, so installers can test wiring continuity before the device is installed.

In addition, the System Sensor L-Series with LED notification appliances offer a new diagnostic test point feature that allows you to measure device voltage with a digital voltage meter (DVM) without removing the appliance from the wall or ceiling. The DVM test points are discreetly located on the face of the notification appliance which enable faster troubleshooting and end of line (EOL) voltage checks while greatly reducing the risk of misplacing or damaging appliances during troubleshooting.

L-Series and L-Series with LED Specifications

Physical/Electrical Specifications	
Standard Operating Temperature	32°F to 120°F (0°C to 49°C)
Humidity Range	10 to 93% non-condensing
Strobe Flash Rate	1 flash per second
Nominal Voltage, LED Strobes and Horn Strobes	Regulated 24 VDC
Nominal Voltage, Horns	Regulated 12 VDC or regulated 24 DC/FWR
Operating Voltage Range, LED Strobes and Horn Strobes	16 to 33 V (24 V nominal)
Operating Voltage Range, Horns	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Input Terminal Wire Gauge	12 to 18 AWG

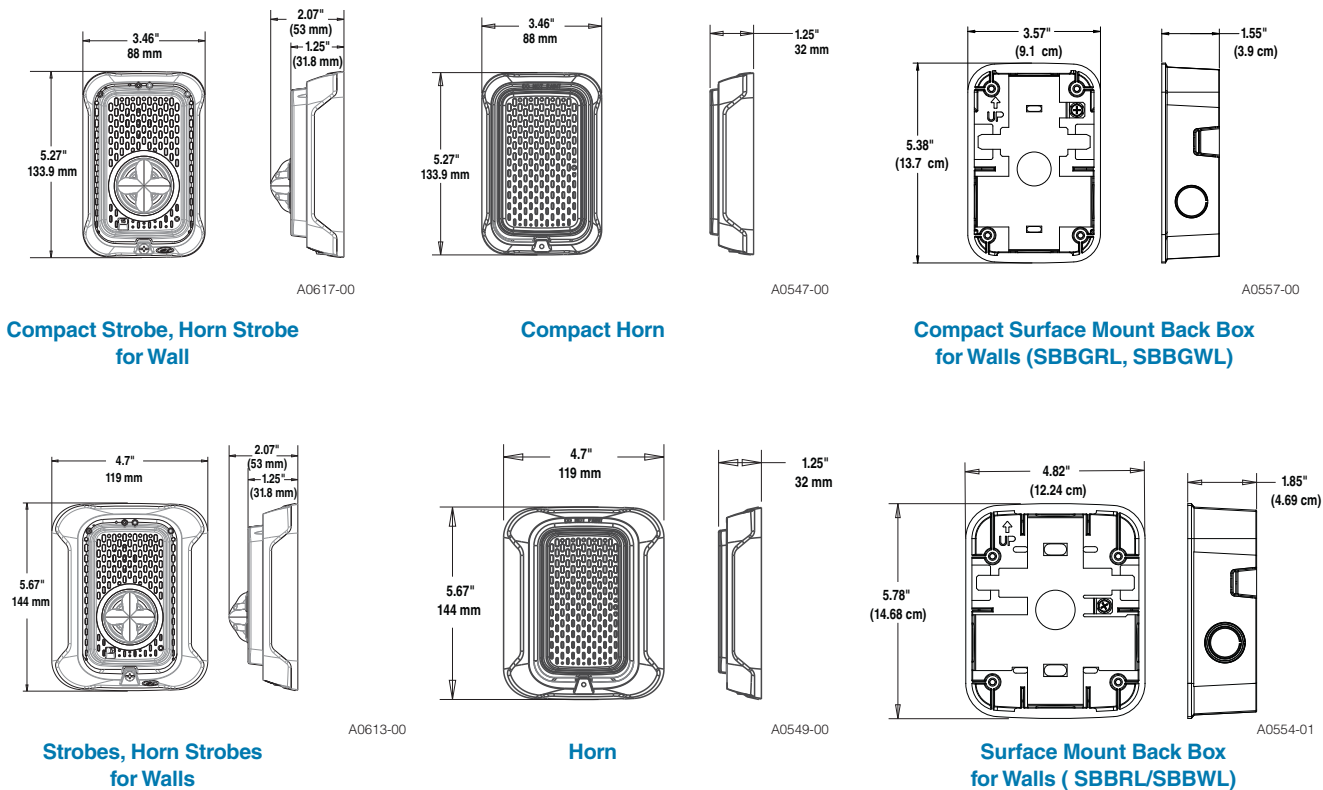
UL/ULC Current Draw Data, Horn Tones, and Sound Output Data

UL/ULC Maximum Strobe Current Draw (mA)			
	Candela Rating	16–33 Volts	
		Wall	Ceiling
Candela Range	15	18	18
	30	22	22
	75	70	70
	95	75	75
	110	85	—
	115	—	90
	135	105	—
	150	—	110
	177	—	115
	185	120	—

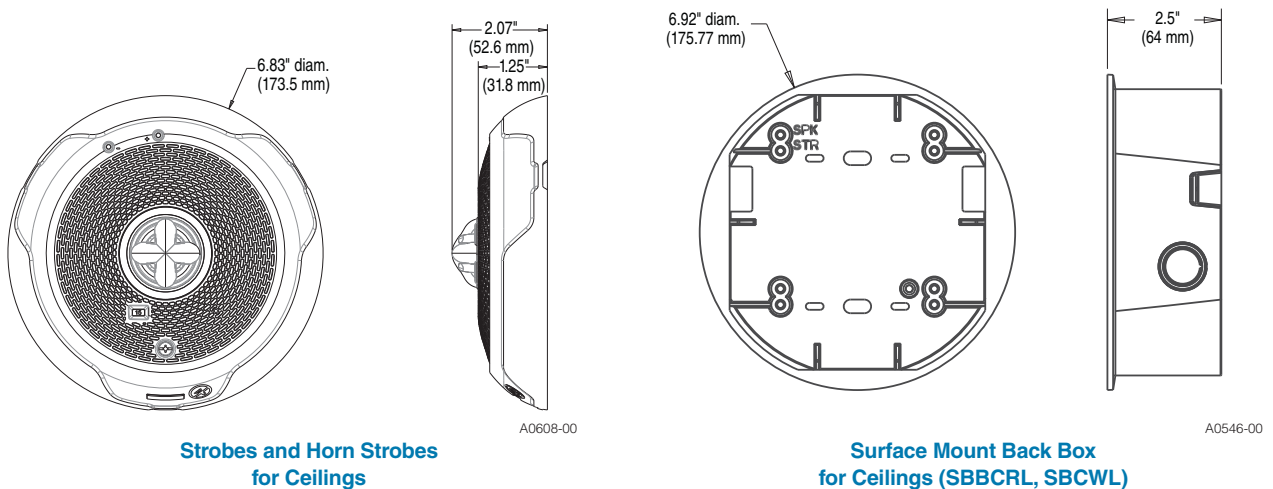
UL/ULC Maximum Horn Current Draw (mA RMS)				
Sound Pattern	dB	8–17.5 Volts	16–33 Volts	
		DC	DC	FWR
Temporal	High	39	44	54
Temporal	Low	28	32	54
Non-Temporal	High	43	47	54
Non-Temporal	Low	29	32	54
3.1 KHz Temporal	High	39	41	54
3.1 KHz Temporal	Low	29	32	54
3.1 KHz Non-Temporal	High	42	43	54
3.1 KHz Non-Temporal	Low	28	29	54
Coded	High	43	47	54
3.1 KHz Coded	High	42	43	54

UL/ULC Maximum Horn Strobe Current Draw (mA) and Sound Output (dBA)													
Current Draw (mA RMS), Horn Strobe, Candela Range (15-185 cd)													Sound Output (dBA)
Switch Pos.	Sound Pattern	Volume Setting	16-33 Volts										16-33V
			15cd	30cd	75cd	95cd	110cd	115cd	135cd	150cd	177cd	185cd	DC
			WALL	CEILING	WALL	CEILING	WALL	CEILING	WALL	CEILING	CEILING	WALL	
1	Temporal 3	High	35	38	87	92	94	120	189	189	190	190	87
2	Temporal 3	Low	35	38	87	92	94	120	135	135	145	145	79
3	Non-Temporal	High	50	52	87	92	94	120	127	127	135	135	87
4	Non-Temporal	Low	35	38	87	92	94	120	125	125	130	130	79
5	3.1KHz Temporal 3	High	35	38	87	89	91	115	155	155	165	165	86
6	3.1KHz Temporal 3	Low	35	38	87	89	91	115	128	130	135	135	80
7	3.1KHz Non-Temporal	High	40	42	87	89	91	115	125	125	135	135	86
8	3.1KHz Non-Temporal	Low	35	38	87	89	91	115	120	120	130	130	80

L-Series with LED Dimensions: Wall-Mounted Equipment



L-Series with LED Dimensions: Ceiling-Mounted Equipment



L-Series with LED: Ordering Information

Model	Description
L-Series with LED Horn Strobes	
P2RLED	2-Wire, Horn Strobe, Wall, Red
P2RLED-B	2-Wire, Horn Strobe, Wall, Red, Bilingual
P2WLED	2-Wire, Horn Strobe, Wall, White
P2WLED-B	2-Wire, Horn Strobe, Wall, White, Bilingual
P2GRLED	2-Wire, Compact Horn Strobe, Wall, Red
P2GRLED-B	2-Wire, Compact Horn Strobe, Wall, Red, Bilingual
P2GWLED	2-Wire, Compact Horn Strobe, Wall, White
P2GWLED-B	2-Wire, Compact Horn Strobe, Wall, White, Bilingual
P2RLED-P	2-Wire, Horn Strobe, Wall, Red, Plain
P2WLED-P	2-Wire, Horn Strobe, Wall, White, Plain
P2RLED-SP	2-Wire, Horn Strobe, Wall, Red, FUEGO
P2WLED-SP	2-Wire, Horn Strobe, Wall, White, FUEGO
PC2RLED	2-Wire, Horn Strobe, Ceiling, Red
PC2RLED-B	2-Wire, Horn Strobe, Ceiling, Red, Bilingual
PC2WLED	2-Wire, Horn Strobe, Ceiling, White
PC2WLED-B	2-Wire, Horn Strobe, Ceiling, White, Bilingual
L-Series with LED Strobes	
SRLED	Strobe, Wall, Red
SRLED-B	Strobe, Wall, Red, Bilingual
SWLED	Strobe, Wall, White
SWLED-B	Strobe, Wall, White, Bilingual
SGRLED	Strobe, Compact, Wall, Red
SGRLED-B	Strobe, Compact, Wall, Red, Bilingual
SGWLED	Strobe, Compact, Wall, White
SGWLED-B	Strobe, Compact, Wall, White, Bilingual
SRLED-P	Strobe, Wall, Red, Plain
SWLED-P	Strobe, Wall, White, Plain
SRLED-SP	Strobe, Wall, Red, FUEGO
SWLED-CLR-ALERT	Strobe, Wall, White, ALERT
SWLED-ALERT	Strobe, Wall, White, ALERT, Amber Lens
SCRLED	Strobe, Ceiling, Red
SCRLED-B	Strobe, Ceiling, Red, Bilingual
SCRLED-P	Strobe, Ceiling, White, Plain
SCWLED	Strobe, Ceiling, White
SCWLED-B	Strobe, Ceiling, White, Bilingual
SCWLED-P	Strobe, Ceiling, White, Plain
SCWLED-CLR-ALERT	Strobe, Ceiling, White, ALERT
L-Series Horns	
HRL*	Horn, Red
HRLA*	Horn, Red, Plain, ULC
HWL*	Horn, White
HWLA*	Horn, White, Plain, ULC
HGRL*	Compact Horn, Red
HGRLA*	Compact Horn, Red, Plain, ULC
HGWL*	Compact Horn, White
HGWLA*	Compact Horn, White, Plain, ULC

Model	Description
LED Lenses	
LENS-A3	Lens LED Amber Wall/Ceiling
LENS-B3	Lens LED Blue Wall/Ceiling
LENS-G3	Lens LED Green Wall/Ceiling
LENS-R3	Lens LED Red Wall/Ceiling
Accessories	
TR-2	Universal Wall Trim Ring Red
TR-2W	Universal Wall Trim Ring White
SBBRL	Wall Surface Mount Back Box, Red
SBBWL	Wall Surface Mount Back Box, White
SBBGRL	Compact Wall Surface Mount Back Box, Red
SBBGWL	Compact Wall Surface Mount Back Box, White
TRC-2	Universal Ceiling Trim Ring, Red
TRC-2W	Universal Ceiling Trim Ring, White
SBBCRL	Ceiling Surface Mount Back Box, Red
SBBCWL	Ceiling Surface Mount Back Box, White
Bezels†	
BZR	Wall Red Bezel Kit
BZW	Wall White Bezel Kit
BZGR	Compact Wall Red Bezel Kit
BZGW	Compact Wall White Bezel Kit
BZRC	Horn Strobe Ceiling Red Bezel Kit
BZWC	Horn Strobe Ceiling White Bezel Kit

Notes for L-Series With LED Horn Strobes and Strobes:

All -P models have a plain housing (no "FIRE" marking on cover).
 All -SP models have "FUEGO" marking on cover.
 All -ALERT models have "ALERT" marking on cover.
 All -B models have "FIRE/FEU" marking on cover for use in Canadian applications.
 Amber lenses are not for use in Canadian applications

Notes for L-Series Horns:

*Horn-only models are listed for wall or ceiling use.

Notes for Bezels:

†Each bezel pack ships in a package of 5.
 Add one of the following extensions for print/language options: -F (FIRE), -AL (ALERT), -EV (EVAC), -AG (AGENT), -P (Plain), -FR (FEU), -PG (FOGO), -SP (FUEGO), -SPE (FUEGO/FIRE).

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 AVDS916-01 • 10/03/2023

L-Series Low Frequency Sounders and Sounder Strobes

General

L-Series audible visible notification products have features to maximize profits with lower current draw and modern aesthetics.

The L-Series offers the most versatile and easy-to-use line of low frequency sounder and low frequency sounder strobes in the industry. With white and red plastic housings, listed for wall and ceiling mounting, L-Series Low Frequency can meet virtually any application requirement.

The low frequency sounder and low frequency sounder strobes were designed to address the NFPA 72 sleeping space requirements that require a low frequency notification appliance that operates within frequency range of 520 Hz \pm 10% and is of a square wave tone. Like the entire L-Series product line they include a variety of features that increase their application versatility while simplifying installation. All devices feature plug-in designs with minimal intrusion into the back box, making installations fast and foolproof while virtually eliminating costly and time-consuming ground faults.

To further simplify installation and protect devices from construction damage, L-Series uses a universal mounting plate with an onboard shorting spring, so installers can test wiring continuity before the device is installed.

Installers can also easily adapt devices to a suit a wide range of application requirements using field-selectable candela settings, 24-volt operation, and a rotary switch for 520 Hz low frequency sounder tones.

Low-frequency models include:

- Wall-mount sounder strobes: P2RL-LF, P2WL-LF
- Wall-mount sounders: HRL-LF, HWL-LF
- Ceiling-mount sounders: HCRL-LF, HCWL-LF
- Compact ceiling-mount sounders: HGRL-LF, HGWL-LF

Features

- 520 Hz \pm 10% square wave tone, NFPA compliance
- Full candela range plus High/Low tone options to optimize current draw for a wide variety of applications
- Compact, standard, and round ceiling options
- Field-selectable candela settings on wall units: 15, 30, 75, 95, 110, 135, and 185
- Rotary switch for High and Low, Temp 3 and Temp4 settings
- Plug-in design with minimal intrusion into the back box
- Mounting plate shorting spring checks wiring continuity before device installation
- Electrically compatible with legacy SpectrAlert and SpectrAlert Advance devices, and provides a direct replacement for HW/R-LF and P2R/WH-LF
- Compatible with MDL3 sync module
- Sounders listed for ceiling and wall mounting
- Sounder Strobe listed for wall mounting
- Updated modern aesthetics

Product Line Information

P2RL-LF: Low-frequency sounder strobe, wall, red

P2WL-LF: Low frequency sounder strobe, wall, white

HRL-LF[†]: Low frequency sounder, wall, red

HWL-LF[†]: Low frequency sounder, wall, white



HGRL-LF[†]: Compact low frequency sounder, wall, red

HGWL-LF[†]: Compact low frequency sounder, wall, white

HCRL-LF[†]: Low frequency sounder, ceiling, red

HCWL-LF[†]: Low frequency sounder, ceiling, white

[†]Add -BP10 to order bulk pack of 10 units

ACCESSORIES

SBBRL: Surface mount back box, wall, red

SBBWL: Surface mount back box, wall, white

SBBCRL: Surface mount back box, ceiling, red

SBBCWL: Surface mount back box, ceiling, white

SBBGRL: Compact surface mount back box, wall, red

SBBGWL: Compact surface mount back box, wall, white

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 the factory for the latest listing status.

- **UL Listed:** S4011
- **FM Approved:** PR452768
- **CSFM:**
 - Horns only: 7135-1653:0516
 - Horn/Strobes: 7125-1653:0517

Architects/Engineers Specifications

GENERAL

L-Series low frequency sounder and low frequency sounder strobes shall mount to a standard 4 x 4 x 1.5-inch back box, 4-inch octagon back box, or double-gang back box. Two-wire products shall also mount to a single-gang 2 x 4 x 1 7/8-inch back box. A universal mounting plate shall be used for mounting products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, L-Series 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, 24-volt-rated notifi-

cation appliance circuit outputs shall operate between 16.5 and 33 volts. Indoor L-Series products shall operate between 32 and 120 degrees Fahrenheit (0°C to 49°C) from a regulated DC or full-wave rectified unfiltered power supply. Low Frequency Sounder strobes shall have field-selectable candela settings including 15, 30, 75, 95, 110, 135, 185. The field selectable tones will sound within the frequency range of 520 Hz \pm 10% square wave tone and have a permanent marking on the housing that reads "low frequency sounder".

LOW FREQUENCY SOUNDER

The low frequency sounder shall be a System Sensor L-Series Model _____ listed to UL 464 and shall be approved for fire protective service. The low frequency sounder and the Sync•Circuit. MDL3 Module accessory, if used, shall be powered from a notification appliance circuit output and shall operate on a nominal 24 volts (includes fire alarm panels with built in sync). When used with the Sync•Circuit Module MDL3, 24-volt rated notification appliance circuit outputs shall operate between 16.5 to 33 volts. If the notification appliances are not UL 9th edition listed with the corresponding panel or power supply being used, then refer to the compatibility listing of the panel to determine maximum devices on a circuit. The low frequency sounder has an option to switch between temporal three or temporal four pattern, non-temporal (continuous) pattern and coded supply within the frequency range of 520Hz \pm 10% square wave tone. The low frequency sounder shall operate on a coded or non-coded power supply with high and low volume settings.

LOW FREQUENCY SOUNDER STROBE COMBINATION

The low frequency sounder strobe shall be a System Sensor L-Series Model _____ listed to UL 1971 and UL 464 and shall be approved for fire protective service. The low frequency sounder 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 sounder shall have an option to switch between a temporal three or temporal four pattern and a non-temporal (continuous) pattern. These options are set by a multiple position switch. The low frequency sounder on low frequency sounder strobe models shall operate on a non-coded power supply with high and low volume settings. The field selectable tones will sound within the frequency range of 520 Hz \pm 10% square wave tone.

SYNCHRONIZATION MODULE

The module shall be a System Sensor Sync•Circuit model MDL3 listed to UL 464 and shall be approved for fire protective service. The module shall synchronize SpectraAlert strobes at 1 Hz and low frequency sounder at temporal three. Also, while operating the strobes, the module shall silence the low frequency sounder on low frequency sounder strobe models over a single pair of wires. The module shall mount to a $4\frac{11}{16} \times 4\frac{11}{16} \times 2\frac{1}{8}$ -inch back box. The module shall also control two Class B circuits or one 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.

Physical/Electrical Specifications

- **Standard Operating Temperature:** 32°F to 120°F (0°C to 49°C)
- **Humidity Range:** 10 to 93% non-condensing
- **Frequency Range:** 520 Hz \pm 10%
- **Strobe Flash Rate:** 1 flash per second
- **Nominal Voltage Low Frequency Sounder:** Regulated 24 DC/FWR¹
- **Nominal Voltage Range Low Frequency Sounder Strobe:** Regulated 24 VDC/FWR¹
- **Operating Voltage Range:** 16 to 33 V (24 V nominal)

- **Operating Voltage Range MDL3 Sync Module:** 16.5 to 33 V (24 V nominal)
- **Input Terminal Wire Gauge:** 12 to 18 AWG

DIMENSIONS

- **Wall Sounder Strobe Dimensions (including lens):** 5.6" L x 4.7" W x 1.9" D (142 mm L x 119 mm W x 49 mm D)
- **Standard Wall Sounder Dimensions:** 5.6" L x 4.7" W x 1.5" D (142 mm L x 119 mm W x 38 mm D)
- **Compact Wall Sounder Dimensions:** 5.25" L x 3.46" W x 1.5" D (133mm L x 88mm W x 38mm D)
- **Ceiling Sounder Dimensions:** 6.8" diameter x 1.4" high (173mm diameter x 36mm high)
- **Standard Wall Sounder with SBBRL/SBBWL Surface Mount Back Box:** 5.7" L x 4.8" W x 3.3" D (145 mm L x 120 mm W x 87 mm D)
- **Compact Wall Sounder with SBBGRL/SBBGWL Surface Mount Back Box:** 5.4" L x 3.6" W x 3.0" D (137 mm L x 91mm W x 76 mm D)
- **Low Frequency Ceiling Sounder with SBBCRL/SBBCWL Surface Mount Back Box:** 6.9" diameter x 3.9" high (175mm diameter x 99mm high)

Notes: 1. Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.

UL Current Draw and Sound Output Data

Low Frequency Wall Sounder Strobe Current Draw (mA) and Sound Output (dBA)																		
Pos	Tone	Volume Setting	Current Draw (mA)														Sound Output (dBA)	
			16-33 VDC							16-33 FWR							16-33 V	
			15cd	30cd	75cd	95cd	110cd	135cd	185cd	15cd	30cd	75cd	95cd	110cd	135cd	185cd	DC	FWR
1	Temporal 3	High	98	115	158	173	182	212	266	136	153	188	206	228	258	304	80	80
2	Temporal 3	Low	98	102	141	162	173	202	255	150	150	176	194	216	242	280	76	76
3	Temporal 4	High	98	108	137	151	178	202	252	200	198	169	188	212	242	290	80	80
4	Temporal 4	Low	102	104	122	136	163	187	237	176	174	154	173	197	227	275	76	76
5	Continuous	High	141	158	198	216	234	264	305	190	207	249	268	289	321	368	80	80
6	Continuous	Low	120	128	179	196	215	244	285	165	182	226	244	266	297	342	76	76

UL Max. Low Frequency Sounder Current Draw (mA RMS)						
Pos	Tone	Volume Setting	Current Draw (mA)		Sound Output (dBA) Reverberant	
			16-33 Volts		16-33 Volts	
			DC	FWR	DC	FWR
1	Temporal 3	High	108	150	80	80
2	Temporal 3	Low	78	76	76	76
3	Temporal 4	High	111	151	80	80
4	Temporal 4	Low	80	76	76	76
5	Continuous	High	111	151	80	80
6	Continuous	Low	80	76	76	76
7	Coded	High	111	151	80	80
8	Coded	Low	80	76	76	76

*NOTE: For coded tones, temporal coding must be provided by the NAC. If the NAC voltage is held constant, the sounder output will remain constantly on. Coded ratings provided are for continuous voltage.



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.

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Country of Origin: Mexico



SpectrAlert® Advance

Selectable Output Notification Appliances



Audio/Visual Devices

General

System Sensor® 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°F and 151°F (-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.



Indoor Ceiling
Horn/Strobe



Outdoor Ceiling
Strobe



Indoor Wall
Horn/Strobe



Indoor Ceiling
Strobe



Indoor Wall
Horn



Outdoor Wall
Strobe

- Outdoor products rated from -40°F and 151°F (-40°C and 66°C).
- 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 shall mount to a standard 4.0" x 4.0" x 1.5" (10.16 x 10.16 x 3.81 cm) backbox, 4.0" (10.16 cm) octagonal backbox, or a double-gang backbox. Two-wire products shall also mount to a single-gang 2.0" x 4.0" x 1.875" (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 SyncCircuit™ 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 SyncCircuit 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 32°F and 120°F (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 UL 1971 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 UL 1971 and UL 464 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 UL and shall operate between -40°F and 151°F (-40°C and 66°C). The products shall be listed for use with a System Sensor outdoor/weather-proof backbox with half-inch and three-fourths-inch conduit entries.

SYNCHRONIZATION MODULE

The module shall be a System Sensor Sync•Circuit MDL3R or MDL3W listed to UL 464 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 4.688" x 4.688" x 2.125" (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.

Strobe Current Draw, UL 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

Operating Specifications

- **Standard operating temperature:** 32°F to 120°F (0°C to 49°C).
- **K Series operating temperature:** -40°F to 151°F (-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):** 6.8" diameter x 2.5" deep (17.3 cm diameter x 6.4 cm deep).
- **Wall-mount dimensions (including lens):** 5.6" H x 4.7" W x 2.5" D (14.2 cm H x 11.9 cm W x 6.4 cm D).
- **Horn dimensions:** 5.6" H x 4.7" W x 1.3" D (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** (HR__, HW__, P2__, P4__, PC2__, PC4__ models); **S5512** (models SCR, SCRH, SCW, SCWH, SR, SRH, SW, SWH); **S3593** (SCRHK, SCRK, SRHK, SRK).
- **ULC Listed:** **S4011** (HRA, HRKA); **S5512** (typically "A" models, with exception of outdoor strobes). See Canadian data sheet for listings and specifications.
- **FM approved**
- **MEA: 452-05-E**
- **CSFM: 7125-1653:0186** (SCR, SCRH, SCW, SCWH, SR, SRH, SW, SWH); **7300-1653:0188** (P2__, P4__, PC2__, PC4__ modules); **7135-1653:0189** (HR, HRK, HW); **7300-1653:0187** (SCRHK, SCRK, SRHK, SRK).

Horn Current Draw, UL 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	FW R	DC	FW R
1	Temporal	High	78	78	84	84
2	Temporal	Medium	74	74	80	80
3	Temporal	Low	71	73	76	76
4	Non-temporal	High	82	82	88	88
5	Non-temporal	Medium	78	78	85	85
6	Non-temporal	Low	75	75	81	81
7*	Coded	High	82	82	88	88
8*	Coded	Medium	78	78	85	85
9*	Coded	Low	75	75	81	81

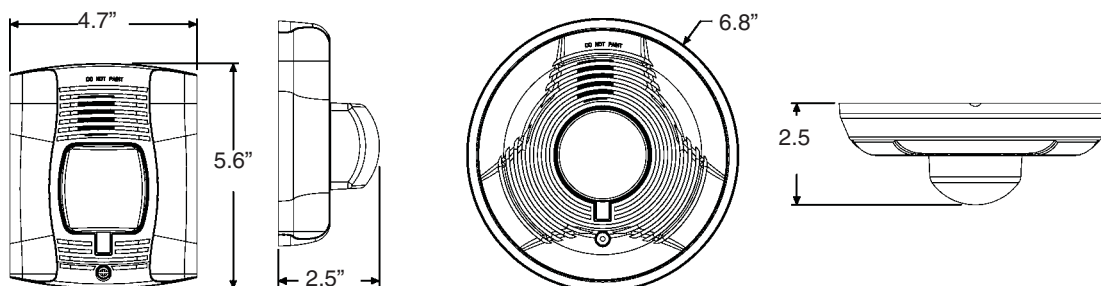
***NOTE:** Settings 7, 8, and 9 are not available on 2-wire horn/strobe.

Two-Wire Horn/Strobe, **STANDARD** Candela Range (15 – 115 cd), UL 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
DC Input, Temporal, High	137	147	79	90	107	176	194	212	218
DC Input, Temporal, Medium	132	144	69	80	97	157	182	201	210
DC Input, Temporal, Low	132	143	66	77	93	154	179	198	207
DC Input, Non-temporal, High	141	152	91	100	116	176	201	221	229
DC Input, Non-temporal, Medium	133	145	75	85	102	163	187	207	216
DC Input, Non-temporal, Low	131	144	68	79	96	156	182	201	210
FWR Input, Temporal, High	136	155	88	97	112	168	190	210	218
FWR Input, Temporal, Medium	129	152	78	88	103	160	184	202	206
FWR Input, Temporal, Low	129	151	76	86	101	160	184	194	201
FWR Input, Non-temporal, High	142	161	103	112	126	181	203	221	229
FWR Input, Non-temporal, Medium	134	155	85	95	110	166	189	208	216
FWR Input, Non-temporal, Low	132	154	80	90	105	161	184	202	211

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

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



Ordering Information

Model	Description	Model	Description
WALL HORN/STROBES		CEILING HORN/STROBES	
P2R	2-wire horn/strobe, standard cd, red.	PC2R	2-wire horn/strobe, standard cd, red.
P2RH	2-wire horn/strobe, high cd, red.	PC2RH	2-wire horn/strobe, high cd, red.
P2RK	2-wire horn/strobe, standard cd, red, outdoor.	PC2RK	2-wire horn/strobe, standard cd, red, outdoor.
P2RHK	2-wire horn/strobe, high cd, red, outdoor.	PC2RHK	2-wire horn/strobe, high cd, red, outdoor.
P2W	2-wire horn/strobe, standard cd, white.	PC2W	2-wire horn/strobe, standard cd, white.
P2WH	2-wire horn/strobe, high cd, white.	PC2WH	2-wire horn/strobe, high cd, white.
P4R	4-wire horn/strobe, standard cd, red.	PC4R	4-wire horn/strobe, standard cd, red.
P4RH	4-wire horn/strobe, high cd, red.	PC4RH	4-wire horn/strobe, high cd, red.
P4RK	4-wire horn/strobe, standard cd, red, outdoor.	PC4RK	4-wire horn/strobe, standard cd, red, outdoor.
P4RHK	4-wire horn/strobe, high cd, red, outdoor.	PC4RHK	4-wire horn/strobe, high cd, red, outdoor.
P4W	4-wire horn/strobe, standard cd, white.	PC4W	4-wire horn/strobe, standard cd, white.
P4WH	4-wire horn/strobe, high cd, white.	PC4WH	4-wire horn/strobe, high cd, white.
WALL STROBES		CEILING STROBES	
SR	Strobe, standard cd, red.	SCR	Strobe, standard cd, red.
SRH	Strobe, high cd, red.	SCRH	Strobe, high cd, red.
SRK	Strobe, standard cd, red, outdoor.	SCRK	Strobe, standard cd, red, outdoor.
SRHK	Strobe, high cd, red, outdoor.	SCRHK	Strobe, high cd, red, outdoor.
SW	Strobe, standard cd, white.	SCW	Strobe, standard cd, white.
SWH	Strobe, high cd, white.	SCWH	Strobe, high cd, white.
ACCESSORIES		HORNS	
BBS-2A	Backbox skirt, wall, red.	HR	Horn, red.
BBSW-2A	Backbox skirt, wall, white.	HRK	Horn, red, outdoor.
BBSC-2A	Backbox skirt, ceiling, red.	HW	Horn, white.
BBSCW-2A	Backbox skirt, ceiling, white.	ACCESSORIES, continued	
SA-WBB	Weatherproof backbox, wall.	TR-HS	Trim Ring, wall, red, package of 5
SA-WBBC	Weatherproof backbox, ceiling.	TRW-HS	Trim Ring, wall, white, package of 5
WTP	Weatherproof, flush mount plate, red	TRC-HS	Trim Ring, ceiling, red, package of 5
WTPW	Weatherproof, flush mount plate, white	TRCW-HS	Trim Ring, ceiling, white, package of 5
<p>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.</p> <p>NOTE: For strobes and horn/strobes, add suffix "F" for French or "B" for Bilingual.</p> <p>NOTE: All outdoor models ("K(A)" suffix) include a plastic weatherproof backbox.</p> <p>NOTE: Add "-R" to models for weatherproof replacement device (no back box included). Only for use with weatherproof outdoor flush mounting plate, WTP and WTPW.</p> <p>NOTE: Add "P" to model for plain housing. (No "FIRE" marking on cover.)</p>			

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