NORRIS INC

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RESURGAM CITY OF PORTLAND, MAINE

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 02/17/16

SUBMITTAL PACKAGE

Project: **89 Anderson Street**

System: **Fire Alarm System**

Submitted By: **Norris Inc.**
2257 West Broadway
South Portland, Maine 04106
Telephone: (800) 370-3473

Date: **December 30th, 2015**

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 02/17/16

NOTIFIER®
by Honeywell

This is to certify that

NORRIS, INC.

is an authorized Engineered Systems Distributor for ***NOTIFIER***

During the years of ***2015-2016***

Signed for and on behalf of NOTIFIER

Vice President Global Sales

Norris Inc
2257 West Broadway
South Portland, ME 04106
1-800-370-3473

321996SP
Equipment List

Reviewed for Code Compliance
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Date: 02/17/16

BH MILLIKEN
175 ANDERSON STREET
PORTLAND, ME 04101
Tel:207-879-1877 Fax:207-774-1492

89 Anderson Street

Description

NOTIFIER-NFW2-100, Addressable Fire Alarm Control Panel, Black
IM-12180, 12V 18AH Battery
R5-804R2, SILVER SATIN 2' PLUG - PLUG
R5-RJ31X, UL 8P8C RJ31X JACK
NOTIFIER-NOT-BG12LX, Addressable Pull Station
NOTIFIER-NP-100, Intelligent Addressable Photo detector, with base.
NOTIFIER-CO1224TR, Conventional Carbon Monoxide Detector, 12/24 VDC, w/ Sounder
NOTIFIER-NMM-100P, Addressable Mini Mod
NOTIFIER-NC-100R, Addressable Relay Module
NOTIFIER-FCPS-24S8, 8.0 amps, 120 VAC remote charger power supply
IM-1270, 12V 7AH Battery NOTIFIER-P2R, Horn Strobe, Wall, Red, Multi Cd
NOTIFIER-P2RH, Horn Strobe, Wall, Red, High Range Multi Cd
NOTIFIER-MHR, Mini Horn, Wall, Red
NOTIFIER-SR, Strobe, Wall, Red, Multi Cd
NOTIFIER-SRK, Strobe, Wall, Red, Multi Cd, Outdoor w/ Red Lens Cover
Space Age-SSU00690, Fire Alarm Records Cabinet
SPAAGEELE-IE0091, Notifier Lock Kit
AES, AES Radio Masterbox
AES-7788F, UL FIRE 8 ZONE RED CASE W/2.5 DB ANTENNA
EK-TRG1640, TransformerAES-7210-5-UM, 5dB Omni directional UHF Antenna
AES-13-0346, Cable Assembly; 18# RG-58 Used to connect RG-8 with N Male
AES-7230, Standard Coaxial Surge Protector, N female N female
NOTIFIER-R-20T, Relay, DPDT, Multivolt, Track mount
ADI-SR-3025TM, Tamper Box w/ Shunt
PHI30345, Disconnect Switch
GENTEX-GN-503, 120VAC/9VDC Smoke/CO
GENTEX-7139CS-C, 120VAC/9VDC Smoke w/ 177CD Strobe
GENTEX-9123-, AC-9VDC Battery Back up Photo Smoke Temporal
GENTEX-GXS120-177WW, 120VAC Visual Strobe, White, Wall, 177CD
GENTEX-CO1209, 120VAC/9VDC Sng/Mult. CO Alarm

FireWarden-100-2(E) Rev 3

Intelligent Addressable FACP

NOTIF by Honey

Addressable Fire Al

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General

The Notifier FireWarden-100-2 Rev 3 (NFW2-100) with Version 5.0 firmware is a combination FACP (Fire Alarm Control Panel) and DACT (Digital Alarm Communicator/Transmitter) all on one circuit board. This compact intelligent addressable control panel has an extensive list of powerful features.

The SLC (Signaling Line Circuit) of the FireWarden-100-2 Rev 3 operates using a Rapid Group Polling communication protocol technology that polls multiple devices simultaneously for a quicker device response time.This patented technology allows a fully-loaded panel with up to 198 devices to report an incident and activate the notification circuits in under 10 seconds. With this improved polling, devices can be wired on standard twisted, unshielded wire up to a distance of 10,000 feet.

The 's quick-remove chassis protects the electronics during construction. The backbox can be installed allowing field wiring to be pulled. When construction is completed, the electronics can be quickly installed with just two bolts.

New features for Rev 3 with Version 5.0 firmware include removable terminal blocks, improved transient protection, additional secondary ANN-BUS, and increased power for the resettable and remote sync outputs.

Available accessories include ANN-BUS devices as well as ACS LED, graphic and LCD annunciators, and reverse polarity/city box transmitter.

The integral DACT transmits system status (alarms, supervisories, troubles, AC loss, etc.) to a Central Station via the public switched telephone network. It also allows remote and local programming of the control panel using the PS-Tools Upload/Download utility. In addition, the control panel may be programmed or interrogated off-site via the public switched telephone network. Any personal computer with Windows® XP or greater, a compatible modem, and PS-Tools—the Upload/Download software kit—may serve as a Service Terminal. This allows download of the entire program or upload of the entire program, history file, walktest data, current status and system voltages. The panel can also be programmed through the FACP's keypad or via a standard PS-2 computer keyboard, which can be plugged directly into the printed circuit board. This permits easy typing of address labels and other programming information.

Version 5.0 firmware supports the following: Primary and Secondary ANN-bus devices, NP-A100, USB port, NAC circuit diagnostics, a new report has been added to the walk-test that lists untested devices, new device types added: audio telephone type code for NFV-25/50ZST, Photo Supervisory and auto-resettable Drill (non-latching).

The FireWatch Series internet monitoring modules IPDACT-2 and IPDACT-2UD permit monitoring of 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.

NOTE: *Unless otherwise specified, the term "FireWarden-100-2" is used in this document to refer to both the FireWarden-100-2 and the FireWarden-100-2E FACPs (Fire Alarm Control Panels). Likewise, "NFW2-100" refers to NFW2-100E as well.*

Features

- Listed to UL standard 864, 9th edition.
- On-board DACT.

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- Remote site or local USB port upload/download, using PS-Tools.
- Four (4) Style Y (Class B) NAC circuits, which can be converted to four (4) Style Z (Class A) circuits with optional ZNAC-92 converter module. (Up to 6.0 amps total NAC power when using optional XRM-24B.)
- Selectable strobe synchronization for System Sensor, Wheelock, and Gentex devices.
- Remote Acknowledge, Silence, Reset and Drill via addressable monitor modules or FDU-80, N-ANN-80 or Legacy ACS Annunciators.
- ANN-BUS for connection to following optional modules (cannot be used if ACS annunciators are used):
  - N-ANN-80(-W) Remote LCD Annunciator
  - N-ANN-I/O LED Driver
  - N-ANN-S/PG Printer Module
  - N-ANN-RLY Relay Module
  - N-ANN-LED Annunciator Module
  - N-ANN-RLED Annunciator Module alarms only
  - ROME Relay Option Module Enclosure
- ACS & Terminal-mode Annunciators:
  - ACS Annunciators: Up to 32 Legacy ACM Series annunciators (ACM-16AT or ACM-32 series). Cannot be used if ANN-BUS devices are used.
  - Terminal-mode Annunciators: Up to 32 Legacy FDU-80 annunciators.
- EIA-232 printer/PC interface (variable baud rate) on main circuit board, for use with optional UL-listed printer PRN-6.
- Integral 80-character LCD display with backlighting.
- Real-time clock/calendar with automatic daylight savings control.
- Detector sensitivity test capability (NFPA 72 compliant).

- History file with 1,000-event capacity.
- Maintenance alert warns when smoke detector dust accumulation is excessive.
- Automatic device type-code verification.
- One person audible or silent walk test with walk-test log and printout.
- Point trouble identification.
- Waterflow (nonsilenceable) selection per monitor point.
- System alarm verification selection per detector point.
- PAS (Positive Alarm Sequence) and presignal delay per point (NFPA 72 compliant).

NOTE: *Only detectors may participate in PAS.*

SLC LOOP:

- SLC can be configured for NFPA Style 4, 6, or 7 operation.
- SLC supports up to 198 addressable devices per loop (99 detectors and 99 monitor, control, or relay modules).
- SLC loop maximum length 10,000 ft. (3,000 m.). *See installation manual for wire tables.*

NOTIFICATION APPLIANCE CIRCUITS (NACS):

- Four onboard NACs with additional NAC capability using output control modules (NC-100). The four Class B NACs can be converted to four Class A NACs with optional ZNAC-92 converter module.
- Silence Inhibit and Auto Silence 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 amps maximum per each NAC circuit.

NOTE: *Maximum 24VDC system power output is shared among all NAC circuits and 24VDC special-application auxiliary power outputs. Total available output is 3.0 amps. Using the optional XRM-24B transformer increases 24VDC output to 6.0 amps.*

PROGRAMMING AND SOFTWARE:

- Autoprogram (learn mode) reduces installation time.
- Custom English labels (per point) may be manually entered or selected from an internal library file.
- Three Form-C relay outputs (two programmable).
- 99 software zones.
- Continuous fire protection during online programming at the front panel.
- Program Check automatically catches common errors not linked to any zone or input point.
- **OFFLINE PROGRAMMING:** Create the entire program in your office using a Windows®-based software package (NFW2-100 requires PS-Tools Programming software, available on www.magni-fire.com). Upload/download system programming locally to the NFW2-100 Rev 3 in less than one minute.
- USB upload/download programming with standard Male-A to Male-B cable.

User Interface

LED INDICATORS

- AC Power (green)
- Fire Alarm (red)
- Supervisory (yellow)
- Alarm Silenced (yellow)
- System Trouble (yellow)
- Maintenance/Presignal (yellow)
- Disabled (yellow)
- Battery Fault (yellow)
- Ground Fault (yellow)

KEYPAD CONTROLS

- Acknowledge/Step
- Alarm Silence
- Drill
- System Reset (lamp test)
- 16-key alpha-numeric pad (similar
- 4 cursor keys
- Enter

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Product Line Information

NFW2-100: FireWarden-100-2 Rev 3 198-point addressable Fire Alarm Control Panel, one SLC loop. Includes 80-character LCD display, single printed circuit board mounted on chassis, and cabinet. 120 VAC operation.

NFW2-100R: Same as **NFW2-100**, except in a red backbox.

NFW2-100E: Same as **NFW2-100**, except with 240 VAC operation.

4XTM Reverse Polarity Transmitter Module: Provides supervised output for local energy municipal box transmitter, alarm, and trouble.

ZNAC-92: Optional converter module which converts four (4) Style Y (Class B) NAC circuits to four (4) Style Z (Class A) circuits.

PS Tools: Programming software for Windows®-based PC computer (cable not included), available on www.firelite.com.

DP-9692B: Optional dress panel for FireWarden-100-2 Rev 3.

TR-CE-B: Optional trim Ring for semi-flush mounting.

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

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

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.

XRM-24B(E): Optional transformer. Increases system power output to 6.0 amps. Use XRM-24BE with FireWarden-100-2E Rev 3.

PRT/PK-CABLE: Cable printer/personal computer interface cable; required for printer or for local upload/download programming and updating panel firmware.

PRN-6: UL listed compatible event printer. Uses tractor-fed paper.

IPDACT-2/2UD, IPDACT Internet Monitoring Module: Mounts in bottom of enclosure with optional mounting kit (PN IPBRKT). Connects to primary and secondary DACT telephone output ports for internet communications over customer provided ethernet internet connection. Requires compatible Teldat VisorALARM Central Station Receiver. Can use DHCP or static IP. *(See data sheet DN-60408 for more information.)*

IPBRKT: Mounting kit for IPDACT-2/2UD in common enclosure.

IPSPLT: Y-adaptor option allows connection of both panel dialer outputs to one IPDACT-2/2UD cable input.

COMPATIBLE ANNUNCIATORS

N-ANN-80(-W): LCD Annunciator is a remote LCD annunciator that mimics the information displayed on the FACP LCD display. Recommended wire type is un-shielded. (Basic model is black; order -W version for white; s*ee DN-7114.)*

N-ANN-LED: Annunciator Module provides three LEDs for each zone: Alarm, Trouble and Supervisory. Ships with red or black 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, which can be mounted inside the cabinet, provides 10 programmable Form-C relays. *(See DN-7107.)*

ROME-B: Relay Option Module Enclosure (order ROME-B for black or ROME for red). Provides one **N-ANN-RLY** Relay Module already installed. The ROME Series provides mounting space for one additional Relay Module or one addressable Multi-module. *(See Installation Sheet PN 53530.)*

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

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

ACM-8R: Relay module provides 8 Form-C 5.0 amp relays.

ACM Annunciator Series: LED-type fire annunciators capable of providing up to 99 software zones of annunciation. Available in increments of 16 or 32 points to meet a variety of applications.

LDM Graphic Series: Lamp Driver Module series for use with custom graphic annunciators.

FDU-80 (Liquid Crystal Display) point annunciator: 80-character, backlit LCD-type fire annunciators capable of displaying English-language text.

NOTE: *For more information on Compatible Annunciators for use with the FireWarden-100-2 Rev 3, see the following data sheets (document numbers) ACM-8R (DN-3558), ACS/ACM Series (DN-0524), LDM Series (DN-0551), FDU-80 (DN-6820).*

COMPATIBLE ADDRESSABLE DEVICES

All feature a polling LED and rotary switches for addressing.

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

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

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

NP-100R: Addressable remote test capable detector for use with DNR(W) duct smoke detector housings.

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

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

NH-100H: Fixed high-temperature detector that activates at 190F/88C.

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

DNR: Innovair Flex low-flow non-relay duct-detector housing. Order NP-100R separately.

DNRW: Innovair Flex low-flow non-relay duct-detector housing, with NEMA-4 rating. Watertight. (Order NP-100R separately.)

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.

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

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

NZM-100: Similar to NMM-100, but may monitor up to 20 conventional two-wire detectors. Requires resettable 24 VDC power. Consult factory for compatible smoke detectors.

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. Notification Appliance Circuit option requires extern fication appliances.

NC-100R: Addressable relay module sets of Form-C contacts, which oper Mounts directly to a 4.0" (10.16 cm.) b the SMB500.

NOT-BG12LX: Addressable manual p module mounted inside.

N100-ISO: Fault Isolator Module. This loop from short circuit conditions (requi ation).

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

NMM-100-10: Ten-input monitor module. Mount one or two modules in a BB-XP cabinet (optional). Mount up to six modules on a CHS-6 chassis in a BB-25.

NZM-100-6: Six-zone interface module for compatible conventional two-wire detectors. Mount one or two modules in a BB-XP cabinet (optional). Mount up to six modules on a CHS-6 chassis in a BB-25.

NOTE: *For more information on Compatible Addressable Devices for use with the FireWarden-100-2 Rev 3, see the following data sheets (document numbers): N100-ISO (DN-6994), NP-100 series (DN-6995), NI-100 (DN-6996), NH-100 series (DN-6997), ND-100 series (DN-7006), NP-A100 (DN-6998), NMM-100/NMM-100P/ NDM-100/NZM-100 (DN-6999), NC-100/NC-100R (DN-7000), NOT-BG12LX (DN-7001), NMM-100-10 (DN-6990), and NZM-100-6 (DN-60150).*

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. Wire size should be no smaller than 18 AWG (0.78 mm²) and no larger than 12 AWG (3.1 mm²). The wire size depends on the length of the SLC circuit. Refer to the panel manual for wiring details.

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SYSTEM SPECIFICATIONS

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System Capacity

- Intelligent Signalling Line Circuits 1
- Addressable device capacity 198
- Programmable software zones 99
- ACS Annunciators 32
- ANN-bus devices 16

Electrical Specifications

AC Power: FireWarden-100-2 Rev 3: 120 VAC, 60 Hz, 3.0 amps. FireWarden-100-2 Rev 3(E): 240 VAC, 5 0 Hz, 1.5 amps. Wire size: minimum 14 AWG (2.00 mm²) with 600 V insulation.

Battery charger capacity: 7 AH - 18 AH batteries. Up to two 18 Ah batteries can be housed in the FACP cabinet. Larger batteries require an external battery charger such as the CHG-75 or CHG-120, and a separate battery cabinet such as the BB-26 or NFS-LBB.

Communication Loop: Supervised and power-limited.

Notification Appliance Circuits: Each terminal block provides connections for two Style Y (Class B) for a total of four Style Y (Class B) or with an optional ZNAC-92 module converts to four Style Z (Class A) NACs. Maximum signaling current per circuit: 2.5 amps. End-of-Line Resistor: 4.7K ohm, 1/2 watt (P/N 71252 UL listed) for Style Y (Class B) NAC. Refer to panel documentation and *Notifier Device Compatibility Document* for listed compatible devices.

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

Special Application Non-resettable Power (24 VDC Nominal): Jumper selectable (JP4) for conversion to resettable power output. Up to 1.0 amp total DC current available from each output. Power-limited.

Special Application Resettable Power (24 VDC nominal): Jumper selectable (JP6) for conversion to non-resettable power. Up to 1.0 amp total DC current available. Refer to the *Notifier Device Compatibility Document* for listed compatible devices.

Remote Sync Output: Remote power supply synchronization output. Nominal special application power: 24 VDC. Maximum current: 300 mA. End-of-Line Resistor: 4.7K ohm. Output linked to NAC 1 control. Supervised and power-limited.

Telephone Interface: Unless used with Teldat VISORALARM, requires dedicated business telephone number with a minimum of 5 volts DC (off-hook voltage). Obtain dedicated phone line directly from your local phone company. Do not use shared phone lines or PBX (digital) type phone line extensions.

Cabinet Specifications

Door: 19.26" (48.92 cm.) high x 16.82" (42.73 cm.) wide x 0.12" (.30 cm.) deep. **Backbox:** 19.00" (48.26 cm.) high x 16.65" (42.29 cm.) wide x 5.20" (13.34 cm.) d
B): 22.00" (55.88 cm.) high x 19.65" (49

Shipping Specifications

Weight: 26.9 lbs. (12.20 kg.) **Dimensi**
high x 22.5" (57.15 cm.) wide x 8.5" (21.

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 (non-condensing) 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.

NFPA Standards

The FireWarden-100-2 Rev 3 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, Waterflow and Sprinkler Supervisory) (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, Waterflow and Sprinkler Supervisory).
- **CENTRAL STATION** (Automatic, Manual, Waterflow and Sprinkler Supervisory).
- **OT, PSDN** (Other Technologies, Packet-switched Data Network)

Agency Listings and Approvals

The listings and approvals below apply to the basic FireWarden-100-2 Rev 3 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 Listed:** S635
- **FM approved**
- **CSFM:** 7165-0028:0235
- **MEA:** 120-06-E, Volume 2

For ULC-listed version, see DN-60600.

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ISO 9001 CERTIFIED
ENGINEERING & MANUFACTURING QUALITY SYSTEMS

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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.

Made in the U.S. A.

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

BAT Series Batteries

Sealed Lead-Acid or Gell Cell

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General

BAT Series Batteries feature a new part-numbering/listing system — providing an improved method of delivery for NOTIFIER-approved sealed lead-acid batteries for all your fire alarm system needs. Multiple brands of batteries are now offered under generic part numbers, reducing backorder situations and permitting us to deliver these products in a more timely fashion. NOTIFIER has approved the multiple brands listed below as possible product shipped for a given part number. Please note that any incoming orders for "PS Series" batteries will be converted to the equivalent BAT Series part numbers.

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Features

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

Agency Listings and Approvals

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

- **UL Recognized Components**: files MH19884 *(B & B Battery),* MH20567 *(UPG, previously Jolt),* MH20845 *(Power-Sonic).*

Part Number Reference

CURRENT Part Number	BATTERY DESCRIPTION	ALTERNATES APPROVED: manufacturers and P/Ns shipped under BAT P/Ns
BAT-1250	12 V, 5 AH, sealed.	BP5-12 (B&B Battery); PS-1250 (Power-Sonic); SA1250 (Jolt) to be replaced with UB1250 (UPG).
BAT-1250	12 V, 5 AH, sealed.	BP5-12 (B&B Battery); PS-1250 (Power-Sonic); SA1250 (Jolt) to be replaced with UB1250 (UPG).
BAT-1270	12 V, 7 AH, sealed.	BP7-12 (B&B Battery); PS-1270 (Power-Sonic); SA1272 (Jolt) to be replaced with UB1270 (UPG).
BAT-12120	12 V, 12 AH, sealed.	BP12-12 (B&B Battery); PS-12120 (Power-Sonic); SA12120 (Jolt) to be replaced with UB12120 (UPG).
BAT-12180	12 V, 18 AH, sealed.	PS-12180 (Power-Sonic); SA12180 (Jolt) to be replaced with UB12180 (UPG).
BAT-12180	12 V, 18 AH, sealed.	PS-12180 (Power-Sonic); SA12180 (Jolt) to be replaced with UB12180 (UPG).
BAT-12260	12 V, 26 AH, sealed.	BP26-12 (B&B Battery); PS-12260 (Power-Sonic); SA12260 (Jolt) to be replaced with UB12260 (UPG).
BAT-12550	12 V, 55 AH, sealed.	PS-12550 (Power-Sonic); XSA12550 (Jolt) to be replaced with UB12550 (UPG).
BAT-12550	12 V, 55 AH, sealed.	PS-12550 (Power-Sonic); XSA12550 (Jolt) to be replaced with UB12550 (UPG).
BAT-121000	12 V, 100 AH, gell cell.	PS-121000 (Power-Sonic); XSA121000A (Jolt) to be replaced with UB121000 (UPG).

POWER-SONIC

Part Number Reference

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MODEL	Nominal Voltage V	Nominal Capacity @ 20 hr. rate A.H.	Discharge Current @20 hr. rate mA	DIMENSIONS									
				Width		Depth		Height		Height over terminal			
				in.	mm	in.	mm	in.	mm	in.	mm		
PS-1250	12	5	250	3.54	90	2.76	70	4.02	102	4.21	107	4.1	1.9
PS-1270	12	7	325	5.94	151	2.56	65	3.7	94	3.86	98	5.7	2.6
PS-12120	12	12	600	5.94	151	3.86	98	3.7	94	3.86	98	8.8	4
PS-12180	12	18	875	7.13	181	2.99	76	6.57	167	6.57	167	12.8	5.8
PS-12250	12	25	1300	6.89	175	6.54	166	4.92	125	4.92	125	18.7	8.5
PS-12550	12	55	3000	10.25	260	6.6	168	8.2	208	9.45	240	39.7	18
PS-121000	12	100	5000	12	305	6.6	168	8.2	208	9.45	240	65.7	29.8

Characteristic Discharge Curves

Effect of Temperature on Capacity

at left:
PS-121000
Shelf-Life
and Storage

at left:
PS-1210000
Discharge
Characteristics

NOT-BG12LX

Addressable Manual Pull Station

NOTIF by Honeyw

Intelligent/Ad

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Date: 02/17/16

General

The Notifier NOT-BG12LX 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 FireWarden series intelligent control panels, and the NSP-25 panel. Because the NOT-BG12LX 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.

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**

Installation

The NOT-BG12LX 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 NOT-BG12LX is being semi-flush mounted, then the optional trim ring (BG12TR) may be used.

The NOT-BG12LX
Addressable Manual Pull Station

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 – 99 on NFW2-100/NFW2-100C, 1 – 50 for NFW-50/NFW-50C).

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.

Product Line Information

NOT-BG12LX: Dual-action addressable pull station. Includes key locking feature. (Listed for Canadian and non-Canadian applications.)

SB-10: Surface backbox; metal.

SB-I/O: Surface backbox; plastic.

BG12TR: Optional trim ring.

17021: Keys, set of two.

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 Vol. IV.
- **CSFM: 7150-0028:0199.**
- **FM Approved.**

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

RESURGAM CITY OF PORTLAND, MAINE
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 02/17/16

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ISO 9001 CERTIFIED
ENGINEERING & MANUFACTURING QUALITY SYSTEMS

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We cannot cover all specific applications or anticipate all requirements.
All specifications are subject to change without notice.

Made in the U.S. A.

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

NP-100(A) Series

Addressable Photoelectric Detectors for the FireWarden Series

NOTIFIER by Honeywell

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 02/17/16

General

The **NP-100(A)**, **NP-100T(A)** and **NP-100R(A)** addressable, low-profile plug-in photoelectric detectors use a state-of-the-art photoelectric sensing chamber with communications to provide open area protection and are used exclusively with NOTIFIER's **FireWarden Series** (FireWarden-100-2 and FireWarden-50) and **Spartan** (NSP-25) Addressable Fire Alarm Control Panels (FACPs). The **NP-100T(A)** adds thermal sensors that will alarm at a fixed temperature of 135°F (57°C). Since these detectors are addressable, they will help emergency personnel quickly locate a fire during its early stages, potentially saving precious rescue time while also reducing property damage. Two LEDs on each sensor light to provide a local, visible sensor indication. Remote LED annunciator capability is available as an optional accessory, PN RA100Z(A). The **NP-100R(A)** is a remote test capable detector for use with DNR(A)/DNRW duct smoke detector housings.

B210-2951.jpg

NP-100(A) in B210LP(A) Base

Features

SLC loop

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

Addressing

- Addressable by device.
- Rotary, decimal addressing: 01 – 99 with FireWarden-100-2 and NSP-25, and 01 – 50 with FireWarden-50.

Architecture

- Unique single-source, dual-chamber design to respond quickly and dependably to a broad range of fires.
- Sleek, low-profile design.
- Integral communications and built-in type identification.
- Built-in tamper-resistant feature.
- Removable cover and insect-resistant screen for simple field cleaning.

Operation

- Withstands air velocities up to 4,000 feet-per-minute (20 m/sec.) without triggering a false alarm.
- Factory preset at 1.5% nominal sensitivity for panel alarm threshold level.
- Visible LED "blinks" when the unit is addressed (communicating with the fire panel) and latches on in alarm.

Mechanicals

- Sealed against back pressure.
- Direct surface mounting or electrical box mounting.
- Mounts to: single-gang box, 3.5" (8.89 cm) or 4.0" (10.16 cm) octagonal box, or 4.0" (10.16 cm) square electrical box *(using a plaster ring — included).*

Other system features

- Fully coated circuit boards and superior RF/transient protection.
- 94-V0 plastic flammability rating.
- Low standby current.

Options

- Remote LED output connection, PN RA100Z(A).

Applications

Use photoelectric detectors in life-safety applications to provide a broad range of fire-sensing capability, especially where smoldering fires are anticipated. Ionization detectors are often better than photoelectric detectors at sensing fast, flaming fires.

Construction

These detectors are constructed of off-white fire resistant plastic. NP-100(A) series plug-in, low-profile smoke detectors are designed to commercial standards and offer an attractive appearance.

Installation

NP-100(A) series plug-in detectors use a detachable mounting base to simplify installation, service and maintenance.

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

NOTE: *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. NP-100R(A) mounts in a DNR(A)/DNRW duct detector housing.*

Operation

Each NP-100(A) series detector uses one of 99 possible addresses on the FireWarden-100-2 and NSP-25, or one of 50 possible addresses on the FireWarden-50 Signaling Line Circuit (SLC). It responds to regular polls from the system and reports its type and status.

The addressable photoelectric sensor in the NP-100(A) series has a unique unipolar chamberthat responds quickly and uniformly to a broad range of smoke conditions. It can withstand wind gusts up to 4,000 feet-per-minute (20 m/sec.) without sending an alarm level signal. Because of its unipolar chamber, the NP-100(A) series is approximately two times more responsive than most photoelectric sensors. This makes it a more stable detector.

Detector Sensitivity Test

Each detector can have its sensitivity tested (required per NFPA 72, Chapter 14 on *Inspection, Testing and Maintenance*) when installed/connected to a FireWarden-100-2 or FireWarden-50 addressable fire alarm control panel. The results of the sensitivity test can be printed off the FireWarden-100-2 or FireWarden-50 for record keeping.

Specification

Voltage range: 15 – 32 VDC (peak).

Standby current: 300 µA @ 24 VDC.

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

Air velocity: 4,000 ft./min. (20 m/sec.) maximum.

Size: 2.1" (5.33 cm) high; base determines diameter.

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

Weight: 3.6 oz. (102 g).

Operating temperature range: ***for NP-100****(A)****:*** 0°C to 49°C (32°F to 120°F); ***for NP-100T****(A)****:*** 0°C to 38°C (32°F to 100°F). ***NP-100R****(A)****:*** installed in a DNR(A)/DNRW -20°C to 70°C (-4°F to 158°F).

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

Relative humidity: 10% – 93%, non-condensing.

Listings

Listings and approvals below apply to the NP-100(A), NP-100T(A), and NP-100R(A) 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 Listed:** S1115.
- **ULC Listed:** S911.
- **CSFM**: 7272-0028:0231.
- **MEA**: 243-02-E Vol. 2.
- **Maryland State Fire Marshal**: permit 2173.
- **FM approved**.

Product Line Information

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

NP-100: Adressable photoelectric detector; B210LP base included.

NP-100A: Sames as NP-100 with ULC Listing; B210LPA base included.

NP-100T: Same as NP-100 but with ***thermal*** element; B210LP base included.

NP-100TA: Same as NP-100T with ULC Listing; B210LPA base included.

NP-100R: Remote test capable addressable photoelectric detector for use with a DNRA/DNRW duct detector housing; B210LP base included.

NP-100RA: Same as NP-100R with Ul
DNRA duct detector housing; B210LP/

INTELLIGENT BASES

NOTE: *"A" suffix indicates ULC Listed m*

NOTE: *For details about intelligent base*
DN-60054.

B210LP(A): Plug-in detector base (ir
flanged low-profile mounting base.

B210LPBP: Bulk pack of B210LP; pac

B501(A): Standard European flangeless mounting base.

B501BP: Bulk pack of B501; package contains 10.

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

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

B224BI(A): Plug-in System Sensor ***isolator*** detector base. Maximum 25 devices between isolator bases *(see DN-6994)*.

ACCESSORIES

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

F110BP: Bulk pack of F110; package contains 15.

F210: Replacement flange for B210LP(A) base.

RA100Z(A): Remote LED annunciator. 3 – 32 VDC. Mounts to a U.S. single-gang electrical box. For use with B501(A) and B210LP(A) bases only.

SMB600: Surface mounting kit

M02-04-00: Test magnet.

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

XR2B: Detector removal tool. Allows installation and/or removal of detector heads from bases in high ceiling applications.

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

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

BCK-200B: Black detector covers for use with NP-100(A) only; box of 10.

WCK-200B: White detector covers for use with NP-100(A) only; box of 10.

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 02/17/16

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

NH-100(A) Series

Intelligent Addressable Thermal Detectors for FireWarden Series

NOTIF by Honeyw

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 02/17/16

General

The **NOTIFIER NH-100(A) Series** thermal detectors are addressable sensors that use a state-of-the-art thermistor sensing circuit for fast response. These sensors provide open-area protection and are intended for use with **FireWarden Series** (FireWarden-100-2 and FireWarden-50) and **Spartan** (NSP-25) addressable Fire Alarm Control Panels (FACPs).

The **NH-100(A)** and **NH-100R(A)** sensors provide fixed temperature alarm detection at 135°F (57°C). The **NH-100R(A)** sensor also responds to rate-of-rise conditions of greater than 15°F (8.3°C) per minute. The **NH-100H(A)** is a fixed high-temperature detector that activates at 190°F (88°C). These thermal detectors provide addressable property protection in a variety of applications.

Two LEDs on each sensor light to provide a local, visible sensor indication. Remote LED annunciator capability is available using an optional accessory, the RA100Z.

Features

SLC loop:

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

Addressing:

- Addressable by device.
- Rotary, decimal addressing: 01 – 99 with FireWarden-100-2, NSP-25, 01 – 50 with FireWarden-50.

Architecture:

- 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:

- Factory preset at 135°F (57°C) for the NH-100(A) and NH-100R(A); 190°F (88°C) for the NH-100H(A).
- Rate-of-rise triggers at 15°F (8.3°C) per minute for the NH-100R(A).
- 360°-field viewing angle of the visual alarm indicators (two bicolor LEDs). LEDs blink red in Normal condition and turn on steady red in Alarm.
- Visible LEDs “blink” every time the unit is addressed.

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.

B210-2251.jpg

NH-100(A) in B210LP(A) Base

- Low standby current.
- 94-5V plastic flammability rating.

Options:

- Remote LED output connection to optional RA100Z remote LED annunciator.
- Flanged surface mounting kit.

Installation

NH-100(A) Series plug-in intelligent thermal detectors use a detachable base to simplify installation, service and maintenance. Installation instructions are shipped with each detector.

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

NOTE: *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.*

Applications

Use thermal detectors for protection of property.

Construction

These detectors are constructed of off-white fire-resistant plastic. The NH-100(A) Series plug-in intelligent thermal detectors are designed to commercial standards and offer an attractive appearance.

Operation

Each NH-100(A) Series detector uses one of 99 (FireWarden-100-2, NSP-25) or 50 (FireWarden-50) possible addresses on a control panel SLC loop. 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 NH-100(A) Series offers features and performance that represent the latest in thermal detector technology.

Spefications

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

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

Shipping weight: 4.8 oz. (137 g).

Installation temperature:

- NH-100(A), NH-100R(A): –4°F to 100°F (–20°C to 38°C).
- NH-100H(A): –4°F to 150°F (–20°C to 66°C).

Humidity range: 10% to 93% relative humidity (noncondensing).

Voltage range: 15 to 32 VDC peak.

Standby current: 300 µA @ 24 VDC (one communication every five seconds with LED blink enabled).

LED current: 6.5 mA @ 24 VDC.

Mounting: B210LP(A) flanged base, included. See "Product Line Information: Intelligent Bases" if using a different base.

Fixed-temperature setpoint: 135°F (57°C) for the NH-100 and NH-100R(A)(A); 190°F (88°C) for the NH-100H(A).

Rate-of-rise detection: responds to greater than 15°F (8.3°C) per minute.

Listings and Approvals

Listings and approvals below apply to the NH-100(A) 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 Listed**: S747.
- **ULC Listed**: S747.
- **CSFM**: 7270-0028:0234.
- **MEA**: 387-02-E Vol. II.
- **FM approved**.

Product Line Information

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

NH-100: Intelligent thermal sensor; 135° F (57° C); B210LP base included.

NH-100A: Same as NH-100 but with ULC Listing; B210LPA base included.

NH-100R: Same as NH-100 with *rate-of-rise* feature; B210LP base included.

NH-100RA: Same as NH-100R but with ULC Listing; B210LPA base included.

NH-100H: Intelligent fixed high-temperature thermal detector; 190° F (88° C); B210LP base included.

NH-100HA: Same as NH-100H but with ULC Listing; B210LPA base included.

INTELLIGENT BASES

NOTE: *"A" suffix indicates ULC Listed m*

NOTE: *For details about intelligent base*
DN-60054.

B210LP(A): Plug-in detector base (ir
flanged low-profile mounting base.

B210LPBP: Bulk pack of B210LP; pac

B501(A): Standard European flangele

B501BP: Bulk pack of B501; package

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

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

B224BI(A): Plug-in System Sensor ***isolator*** detector base. Maximum 25 devices between isolator bases *(see DN-6994)*.

ACCESSORIES

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

F110BP: Bulk pack of F110; package contains 15.

F210: Replacement flange for B210LP(A) base.

RA100Z(A): Remote LED annunciator. 3 – 32 VDC. Mounts to a U.S. single-gang electrical box. For use with B501(A) and B210LP(A) bases only.

SMB600: Surface mounting kit

M02-04-00: Test magnet.

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

XR2B: Detector removal tool. Allows installation and/or removal of detector heads from bases in high ceiling applications.

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

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

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Monitor Modules

NMM-100(A), NMM-100P(A), NZM-100(A), and NDM-100(A) for FireWarden Series Panels

NOTIF by Honey

Intelligent Ad

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 02/17/16

General

Four different monitor modules are available for Notifier's Fire-Warden Series 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 (NZM-100(A)).

NMM-100(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.

NMM-100P(A) is a miniature monitor module a mere 1.3" (3.302 cm) H x 2.75" (6.985 cm) W x 0.5" (1.270 cm) D that supervises a Style B (Class B) circuit of dry-contact input devices. Its compact design allows the NMM-100P(A) to be mounted in a single-gang box behind the device it monitors.

NZM-100(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.

NDM-100(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.

NMM-100(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 Decade entry of address: 01 – 99 on FireWarden-100-2, 01 – 50 on FireWarden-50.
- LED flashes during normal operation and latches on steady to indicate alarm.

The NMM-100(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.

NMM-100(A) APPLICATIONS

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

NMM-100(A) (Type H)

NMM-100(A) OPERATION

Each NMM-100(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).

NMM-100(A) SPECIFICATIONS

Nominal operating voltage: 15 to 32 VDC.

Maximum current draw: 5.0 mA (LED on).

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

Maximum IDC wiring resistance: 40 ohms.

EOL resistance: 47K ohms.

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

Humidity range: 10% to 93% noncondensing.

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

NMM-100P(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 Decade entry of address: 01 – 99 on FireWarden-100-2, 01 – 50 on FireWarden-50.

The NMM-100P(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 NMM-100P(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. NMM-100P(A)

NMM-100P(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.

NMM-100P(A) OPERATION

Each NMM-100P(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).

NMM-100P(A) SPECIFICATIONS

Nominal operating voltage: 15 to 32 VDC.

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

Maximum IDC wiring resistance: 40 ohms.

Maximum IDC Voltage: 11 Volts.

Maximum IDC Current: 400 µA.

EOL resistance: 47K ohms.

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

Humidity range: 10% to 93% noncondensing.

Dimensions: 1.3" (3.302 cm) high x 2
0.65" (1.651 cm) deep.

Wire length: 6" (15.24 cm) minimum.

NZM-100(A) Interface M

- Supports compatible two-wire smok
- Supervises IDC wiring and conne source.
- High noise (EMF/RFI) immunity.
- SEMS screws with clamping plates for ease of wiring.
- Direct Decade entry of address:, 01 – 99 on FireWarden-100-2, 01 – 50 on FireWarden-50.
- LED flashes during normal operation.
- LED latches steady to indicate alarm on command from control panel.

The NZM-100(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.

NZM-100(A) APPLICATIONS

Use the NZM-100(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.

NZM-100(A) OPERATION

Each NZM-100(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).

NZM-100(A) SPECIFICATIONS

Nominal operating voltage: 15 to 32 VDC.

Maximum current draw: 5.1 mA (LED on).

Maximum IDC wiring resistance: 25 ohms.

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

EOL resistance: 3.9K ohms.

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

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

Humidity range: 10% to 93% noncondensing.

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

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NDM-100(A) Dual Monitor Module

The NDM-100(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. The module has a single panel-controlled LED.

NOTE: *The NDM-100(A) provides two Style B (Class B) IDC circuits ONLY. Style D (Class A) IDC circuits are NOT supported in any application.*

NDM-100(A) SPECIFICATIONS

Normal operating voltage range: 15 to 32 VDC.

Maximum current draw: 6.4 mA (LED on).

Average operating current: 750 µA (LED flashing).

Maximum IDC wiring resistance: 1,500 ohms.

Maximum IDC Voltage: 11 Volts.

Maximum IDC Current: 240 µA

EOL resistance: 47K ohms.

Maximum SLC Wiring resistance: 40 Ohms.

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

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

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

NDM-100(A) AUTOMATIC ADDRESSING

The NDM-100(A) automatically assigns itself to two addressable points, starting with the original address. For example, if the NDM-100(A) is set to address “26”, then it will automatically assign itself to addresses “26” and “27”.

NOTE: *“Ones” addresses on the NDM-100(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

NMM-100(A), NZM-100(A), and NDM-100(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 NMM-100P(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:** 7300-0028:0230 (NMM-100, NMM-100P, NZM-100); 7300-0028:0237 (NDM-100)
- **MEA:** 72-01-E Vol. 2 (NMM-100, 227-03-E Vol. 3 (NDM-100)

Product Line Informatio

NOTE: *“A” suffix indicates ULC-listed mo*

NMM-100(A): Monitor module.

NMM-100P(A): Monitor module, miniat

NZM-100(A): Monitor module, two-wire

NDM-100(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 52304.*

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NC-100R(A)

Relay Module for FireWarden Series Panels

NOTIFIER by Honeywell

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Date: 02/17/16

General

The **NC-100R(A)** Addressable Relay Module provides NOTIFIER's **FireWarden Series** intelligent control panels with two isolated sets of Form-C dry-contact outputs for activating a variety of auxiliary devices, such as fans, dampers, door holders, control equipment, etc. Addressability allows the dry contact to be activated, either manually or through panel programming, on a select basis.

NC-100R(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.
- Integral LED "blinks" green each time a communication is received from the control panel and turns on in steady when activated.
- High noise immunity (EMF/RFI).
- Wide viewing angle of LED.
- SEMS screws with clamping plates for wiring ease.
- Direct Decade entry of address: 01 – 99 with the FireWarden-100-2(C) and 01 – 50 with the FireWarden-50(C).

Applications

The NC-100R(A) may be programmed to operate dry contacts for door holders, Air Handling Unit shutdown, etc., and to reset four-wire smoke detector power.

Construction

- The face plate is made of off-white heat-resistant plastic.
- Controls include two rotary switches for direct-dial entry of address setting.
- The NC-100R(A) provides two Form-C dry contacts that switch together.

Operation

Each NC-100R(A) uses one of the addresses on a SLC loop. It responds to regular polls from the control panel and reports its type and status. The LED blinks with each poll received. On command, it activates its internal relay.

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.

Specifications

Normal operating voltage: 15 to 32 VDC.

Maximum SLC current draw: 6.5 mA (LED).

Average operating current: 230 µA direct poll (CLIP mode), 255 µA group poll with LED flashing.

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" (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 mm) deep box.

Relay Contact Ratings

Load Description	Application	Maximum Voltage	Current Rating
Resistive	Non-Coded	30 VDC	3.0 A
Resistive	Coded	30 VDC	2.0 A
Resistive	Non-Coded	110 VDC	0.9 A
Resistive	Non-Coded	125 VAC	0.9 A
Inductive (L/R=5ms)	Coded	30 VDC	0.5 A
Inductive (L/R=2ms)	Coded	30 VDC	1.0 A
Inductive (PF=0.35)	Non-Coded	125 VAC	0.5 A

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/ULC Listed:** S635.
- **CSFM approved:** file 7300-0028:230.
- **FM approved.**
- **MEA approved:** file 72-01-E, Vol. 2.

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Date: 02/17/16

Product Line Information

NC-100R: Intelligent addressable relay module.

NC-100RA: Intelligent addressable relay module, ULC listed model.

SMB500: Optional surface-mount backbox.

NOTE: *For installation instructions, see document I56-2593-001 and refer to the SLC Wiring Manual, document 52304.*

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CO1224T/CO1224A

Conventional
Carbon Monoxide Detector

NOTIF by Honeywell

Conventional

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 02/17/16

General

Carbon monoxide (CO) is an odorless, colorless, tasteless and highly toxic gas that is produced when fuels, such as wood, gasoline, charcoal and oil, are burned with insufficient air. The majority of residential and commercial fatalities caused from these fuels come from heating systems, power tools and charcoal grills.

If carbon monoxide is detected, the **CO1224T/CO1224A** will alert by sounding and flashing a temp-4 signal alarm. Protection is guaranteed 24/7 by a central station if connected to a panel with a digital alarm communicator.

The CO1224T/CO1224A is specifically designed for system operation. This means the detector is fully listed to UL Standard 2075, offering a code required trouble relay, which sends a sensor failure or end-of-life signal to the control panel and the central station, as well as SEMS-type terminal Phillips-head screws, which provide a quicker and more positive wiring connection and code required wiring supervision. Also, the offers low current draw, allowing more detectors to be connected to the panel without having to purchase a more expensive panel or an extra power supply.

Add addressability to the by supervising the circuit with a compatible monitor module such as the FMM-101(A).

Special to the CO1224T is RealTest™ technology that allows testing of its internal CO detector with a carbon monoxide gas agent. There are few steps: Hold the test button for two seconds, and after the green LED begins to flash about once per second, spray a small amount of CO into the detector. The detector will alarm to indicate presence of gas.

NOTE: *RealTest™ is only available on the UL-listed CO1224T. Refer to the installation documents for details and cautions.*

Features

- In the CO1224T, RealTest™ technology allows installer to test detector with CO gas.
- Full compliance with UL 2075.
- A code required trouble relay.
- Wiring supervision with SEMS terminals.
- A six-year end-of-life timer.
- 12/24 VDC.
- A current draw of 20mA in standby and 40mA in alarm.
- Versatile mounting for wall and ceiling.
- Electrochemical sensing technology.

Specifications

ARCHITECTS'/ENGINEERS' SPECIFICATIONS

Carbon monoxide detector shall be a System Sensor model number , listed to UL 2075 for Gas and Vapor Detectors and Sensors. The detector shall be equipped with a sounder and a trouble relay. The detector's base shall be able to mount to a single-gang electrical box or direct (surface) mount to the wall or ceiling. Wiring connections shall be made by means of SEMS screws. The detector shall provide dual color LED indication, which blinks to indicate normal standby, alarm, or end-of-life. When the sensor supervision is in a trouble condition, the detector shall send a trouble signal to the panel. When the detector gives a trouble or end-of-life signal, the detector shall be replaced.

CO1224T.jpg

ELECTRICAL SPECIFICATIONS

Operating Voltage: 12/24 VDC

Audible Signal: 85 dB in alarm

Standby Current: 20 mA

Alarm Current: 40 mA (75 mA test)

Alarm Contact Ratings: 0.5 A @ 30 VDC

Trouble Contact Ratings: 0.5 A @ 30 VDC

PHYSICAL SPECIFICATIONS

Size: 5.1"L x 3.3"W x 1.3"H

Approximate Weight: 7 oz

Operating Temperature Range: 0°C to 40°C (32°F to 104°F)

Operating Humidity Range: 22% to 90% RH

Input Terminals: 14 to 22 AWG

Mounting: Single-gang backbox; surface mount to wall or ceiling.

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Operation Modes

Operation Mode	Green LED	Red LED	Sounder
Normal (Standby)	Blink 1 per minute	–	–
Alarm	–	Blink in Temporal 4 pattern	Sound in Temporal 4 pattern
RealTest™ (CO1224T only)	Blink 1 per second	–	–

Hush Feature: Pushing the Test/Hush button will silence the sounder for 5 minutes (except in RealTest mode).

Trouble Feature: When the detector is in a trouble condition, it will send a trouble signal to the panel via the trouble contact.

End-of-Life Timer: After the sensor inside the detector has reached the end of its useful life, a trouble signal will be sent to the panel. This will indicate that it is time to replace the detector. An electrochemical carbon monoxide detector life span is approximately six years, and the detector must be replaced by the date marked on the inside of the product.

MONITOR MODULE APPLICATIONS

When used in conjunction with the CO1224T or CO1224A, the monitor module should be programmed as a supervisory device type and is not suitable for evacuation purposes. Wire the module as an NFPA Style B (Class B) Initiating Device Circuit and terminate the with a 47K ohm End-of-line resistor (provided).

Listings and Approvals

The listings and approvals below apply to the CO1224T and CO1224A. 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:** E307195 (CO1224T)
- **ULC Listed:** E304075 (CO1224A)

Product Line Information

CO1224T: 12/24 volt, 4-wire system-monitored carbon monoxide detector with RealTest™ Technology. Replaces CO1224.

CO1224A: 12/24 volt, 4-wire system-monitored carbon monoxide detector, ULC-listed for use in Canadian applications.

CO-PLATE: CO detector replacement plate, package of 5. Covers previously installed round detectors' footprints for a clean, low-profile finish.

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Multi-Voltage Conventional Relays

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Approved with Conditions

Date: 02/17/16

General

Notifier's multi-voltage conventional relays are used for high-current switching applications such as fan and damper assembly control, door control, air handling unit controls, and other types of system interfacing.

The R-10T(A)/20T(A) and R-14T(A)/R-24T(A) models are multi-voltage relays with terminal strip field wiring connections, mounting track and hardware. The R-10T(A) is a single FORM-C (SPDT) relay with a red activation LED, and the R-14T(A) is a 4-gang 1 FORM-C (SPDT) relay with 4 red activation LEDs. The R-20T(A) is a single 2 FORM-C (DPDT) relay with red activation LED, and the R-24T(A) is a 4-gang 2 FORM-C (DPDT) relay with 4 red activation LEDs.

The R-10E(A)/R-20E(A) and R-14E(A)/R-24E(A) are similar to the T series track mount relays, but they are mounted into a steel enclosure. The enclosure has a removable front cover that provides easy access and a LED viewing hole on the top of the cover.

PR-1(A)/PR-2(A)/PR-3(A) are epoxy encapsulated multi-voltage relays. They are single pole double throw relays that use a red LED as a visible indication of relay coil energization. PR-3 is identical to PR-2 except it has an extra pair of wires for redundant power input.

Model EOLR-1(A) is an epoxy encapsulated single pole single throw, normally open relay that can be used as an end of line device in fire alarm systems, e.g. to supervise power supplies.

Specifications

R-10T(A)/R-14T(A)/R-20T(A)/ R-24(A)T

Operating Voltage Range:	18-35 VDC, 18-35 VAC, 115 VAC, 230 VAC.
Operating Current:	23 mA @ 24 VDC , 59 mA @ 24 VAC,150 mA @ 120 VAC, 180 mA @ 240 VAC [R-10T(A)/ R-14T(A)].
	40 mA DC max. @ 24 VDC, 24 VAC, 92 mA @ 24 VAC, 220 mA @ 120 VAC, 260 mA @ 240 VAC [R-20T(A)/R-24T(A)]
Humidity Range:	10% to 93% (non-condensing).
Dimensions:	R-10T(A)/ R-20T(A): 2.5"L x 3.35"W x 1.2"H.
	R-14T(A)/R-24T(A): 10"L x 3.35"W x 1.2"H.
Operating Temperature:	-40° F to 158° F (-40°C to 70°C)
Contact Ratings:	24 VDC: 7A with L/R = 5 mS.
	120 VAC: 10 A.
	120 VAC: 1/6 HP.
	230 VAC: 7 A.

Multi-Voltage Conventional Relays

R-10E(A)/ R-14E(A)/R-20E(A)/ R-24E(A)

Operating Voltage Range:	18-35 VDC,. 18-35 VAC, 115 VAC, 230 VAC.
Operating Current:	23 mA DC max. @ 24 V, 59 mA @ 24 VAC, 150mA @ 120 VAC, 180 mA @ 240 VAC [R-10E(A)/ R-14E(A)].
	-40 mA DC max. @ 24 VDC, 24 VAC, 115 VAC, 230 VAC (R-20E/R-24E).
Humidity Range:	10% to 93% (non-condensing).
Dimensions:	R-10E(A)/R-20E(A): 5.1"L x 3.75"W x 2.5"H.
	R-14E(A)/R-24E(A): 11"L x 5.3"W x 2.5"H.
Operating Temperature:	-40° F to 158° F (-40° C to 70° C).
Contact Ratings:	24 VDC: 7 A with L/R = 5mS.
	120 VAC: 10 A.
	120 VAC: 1/6 HP.
	230 VAC: 7 A.

PR-1(A)

Operating Voltage Range:	18-35 VDC, 18-35 VAC, 120 VAC.
Operating Current:	15 mA DC max. @ 24 VDC, 24 VAC,120VAC.
Humidity Range:	10% to 93% RH.
Dimensions:	0.87" H x 2.01" W x 1.42" D.
Operating Temperature:	-40° F to 158° F (-40° C to 70° C).
Contact Ratings:	24 VDC: 7 A with LR = 5 mS.
	120 VAC: 7 A max. (0.35 PF).
	250 VAC: 10 A resistive.
	30 VDC: 10 A resistive.
Wire Length:	8" minimum.

PR-2(A)/PR-3(A)

Operating Voltage Range:	10 to 40 VDC.
Operating Current:	30 mA DC max.
Humidity Range:	10% to 93% RH.
Dimensions:	0.91” H x 1.65” W x 1.22” D.
Operating Temperature:	-40° F to 158° F (-40° C to 70° C).
Contact Ratings:	120 VAC: 10 A (resistive load). 120 VAC: 7 A max. (0.35 PF). 250 VAC: 10 A max. (resistive load). 30 VDC: 10 A max. (resistive load).
Wire Length:	8” minimum.

EOLR-1(A)

Operating Voltage Range:	9 to 40 VDC.
Operating Current:	20 mA DC max.
Humidity Range:	10% to 93% RH.
Operating Temperature:	-22° F to 140° F (-30° C to 60° C).
Contact Ratings:	120 VAC: 0.5 A max. (resistive load). 30 VDC: 3 A max. (resistive load).
Wire Length:	8” minimum.

Agency Listings and App

In some cases, certain modules may
approval agencies, or listing may be i
tory for latest listing status.

- UL/ULC Listed: S3705
- ULC Listed: CS669
- MEA: 419-04-E
- CSFM: 7300-1653:173

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PRODUCT LINE INFORMATION

NOTE: *“A” suffix indicates ULC listed model.*

PR-1(A): Epoxy encapsulated single pull double throw (SPDT) relay. It also uses a red LED as a visible indication of relay coil energization with pigtails.

PR-2(A): Epoxy encapsulated single pull double throw (SPDT) activated by 10 to 40 VDC. It uses a red LED as a visible indication of relay coil energization with pigtails.

PR-3(A): Epxoy encapsulated single pull double throw (SPDT) activated by 10 to 40 VDC. It contains an additional black and red wire for redundant power input with pigtails.

EOLR-1(A): Epoxy encapsulated single pull single throw (SPST) normally open relay that is activated by 9 to 40 VDC. This relay can be used as an end of line device in fire alarm systems, e.g., to supervise power supplies.

R-10T(A): Single (SPDT) relay with a red activation LED.

R-14T(A): 4-gang (SPDT) relay with 4 red activation LEDs.

R-20T(A): Single (DPDT) relay with a red activation LED.

R-24T(A): 4-gang (DPDT) relay with 4 red activation LEDs.

The R-10E(A)/R-20E(A) and R-14E(A)/R-24E(A) are similar to the T series track mount relays, but they are mounted into a steel enclosure. The enclosure has a removable front cover that provides easy access and a LED viewing hole on the top of the cover.

R-10E(A): Single (SPDT) relay mounted into a steel enclosure, 1 red activation LED.

R-14E(A): 4-gang (SPDT) relay mounted into a steel enclosure, 4 red activation LEDs.

R-20E(A): Single (DPDT) relay mounted into a steel enclosure, 1 red activation LED.

R-24E(A): 4-gang (DPDT) relay mounted into a steel enclosure, 4 red activation LEDs.

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7015pr1.jpg

PR-1(A)

PR-2(A)

7015pr3.jpg

PR-3(A)

7015eolr1.jpg

EOLR-1(A)

7015r10t.jpg

R-10T(A)

7015r14t.jpg

R-14T(A)

7015r20-24e.jpg

R-20E(A) & R-24E(A)
Enclosures

7015r10-14e.jpg

R-10E(A) & R-14E(A)
Enclosures

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FCPS-24S6(C/E) & FCPS-24S8(C/E)

6- & 8-Amp 24-Volt Remote Power Supplies

NOTIFIER by Honeywell

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 02/17/16

General

The FCPS-24S6E (6-amp) and FCPS-24S8E (8-amp) are remote power supplies with battery charger. The FCPS-24S6/-24S8 may be connected to any 12 or 24 volt fire alarm control panel (FACP) or may be used as stand-alone supplies. Primary applications include notification appliance circuit (NAC) expansion (to support ADA requirements and NAC synchronization) or auxiliary power to support 24 volt system accessories. The FCPS-24S6/-24S8 provides regulated and filtered 24 VDC power to four notification appliance circuits configured as either four Class B (Style Y) or Class A (Style Z, with ZNAC-4 option module). Alternately, the four outputs may be configured as all non-resettable, all resettable or two non-resettable and two resettable. The FCPS-24S6/-24S8 also contains a battery charger capable of charging up to 18 AH batteries. FCPS-24S6C & FCPS-24S8C are ULC-listed.

NOTE: *Unless otherwise specified, the terms FCPS-24S6 and FCPS-24S8 used in this document refers to the standard FCPS-24S6 and FCPS-24S8, FCPS-24S6C and FCPS-24S8C, the FCPS-24S6E and FCPS-24S8E*

Features

- UL-Listed NAC synchronization using System Sensor, Wheelock, or Gentex "Commander^2" appliances.
- Operates as a "sync-follower" or as a "sync-generator" (default). *See note on page 2.*
- Contains two fully-isolated input/control circuits - triggered from FACP NAC (NAC expander mode) or jumped permanently "ON" (stand-alone mode).
- Four Class B (Style Y) or four Class A (Style Z, with ZNAC-4 module) NACs.
- 6-amp (FCPS-24S6) or 8-amp (FCPS-24S8) full load output, with 3 amps maximum/circuit, in NAC expander mode (UL 864).
- 4-amp (FCPS-24S6) or 6-amp (FCPS-24S8) continuous output in stand-alone mode (UL 1481).
- Compatible with coded inputs; signals passed through.
- Optional power-supervision relay (EOLR-1).
- In stand-alone mode, output power circuits may be configured as: resettable, (reset line from FACP required), non-resettable, or a mix of two and two.
- Fully regulated and filtered power output - optimal for powering four-wire smoke detectors, annunciators, and other system peripherals requiring regulated/filtered power.
- Power-limiting technology meets UL power-limiting requirements.
- Form-C normally-closed trouble relay.
- Fully supervised power supply, battery, and NACs.
- Selectable earth fault detection.
- AC trouble report selectable for immediate 2-hour delay.
- Works with virtually any UL 864 fire alarm control which utilizes an industry-standard reverse-polarity notification circuit (including unfiltered and unregulated NAC power).
- Requires input trigger voltage of 9 - 32 VDC.
- Self-contained in compact, locking cabinet - 15"H x 14.5"W x 2.75"D (cm: 38.1H x 36.83W x 6.985D).
- Includes integral battery charger capable of charging up to 18 AH batteries. Cabinet capable of housing 7.0 AH batteries.
- Battery charger may be disabled via DIP switch for applications requiring larger batteries.
- Fixed, clamp-type terminal blocks accommodate up to 12 AWG (3.1mm^2) wire.

Specifications

Primary (AC) Power:

- FCPS-24S6C/-24S8C: 120 VAC, 60 Hz, 3.2A maximum.
- FCPS-24S6E/-24S8E: 240 VAC, 50 Hz, 1.6A maximum.
- Wire Size: minimum #14 AWG (2.0mm^2) with 600 V insulation.

Control Input Circuit:

- **Trigger Input Voltage:** 9 to 32 VDC.
- **Trigger Current:** 2.0 mA (16 - 32 V); Per Input: 1.0 mA (9 - 16 V).

Trouble Contact Rating: 5 A at 24 VDC.

Auxiliary Power Output: Specific application power 500 mA maximum.

Output Circuits:

- +24 VDC filtered, regulated.
- 3.0 A maximum for any one circuit.
- Total continuous current for all outputs (stand-alone mode):
  - FCPS-24S6: 4.0 A maximum.
  - FCPS-24S8: 6.0 A maximum.
- Total short-term current for all outputs (NAC expander mode):
  - FCPS-24S6: 6.0 A maximum.
  - FCPS-24S8: 8.0 A maximum.

Secondary Power (Battery) Charging Circuit:

- Supports lead-acid batteries only.

- Float-charge voltage: 27.6 VDC.
- Maximum current charge: 1.5 A.
- Maximum battery capacity: 18 AH.

Applications

Example 1: Expand notification appliance power an additional 6.0 A (FCPS-24S6) or 8.0 A (FCPS-24S8). Use up to four Class B (Style Y) outputs or four Class A (Style Z) outputs (using ZNAC-4). For example, the FACP notification appliance circuits will activate the FCPS when reverse-polarity activation occurs. Trouble conditions on the FCPS are sensed by the FACP through the notification appliance circuit.

Example 2: Use the FCPS to expand auxiliary regulated 24-volt system power up to 4.0 A (FCPS-24S6) or up to 6.0 A (FCPS-24S8). Both resettable and non-resettable power options are available. Resettable outputs are created by connecting the resettable output from the FACP to one or both of the FCPS inputs.

Example 3: Use addressable control modules to activate the FCPS instead of activating it through the FACP notification appliance circuits. This typically allows for mounting the FCPS at greater distances* away from the FACP while expanding system architecture in various applications.

For example, an addressable control module is used to activate the FCPS, and an addressable monitor module is used to sense FCPS trouble conditions. Local auxiliary power output from the FCPS provides power to the addressable control module.

***NOTE:** Addressable FACPs are capable of locating control and monitor modules at distances of up to 12,500 feet (3,810 meters).*

Sync Follower/Generator Note

In some installations, it is necessary to synchronize the flash timing of all strobes in the system for ADA compliance. Strobes accomplish this by monitoring very short timing pulses on the NAC power which are created by the FACP. When installed at the end of a NAC wire run, the FCPS-24S6/-24S8 can track (i.e. "follow") the strobe synchronization timing pulses on the existing NAC wire run. This maintains the overall system flash timing of the additional strobes attaches to the FCPS.

When the FCPS-24S6/-24S8 is configured (via DIP switch settings) as a "sync follower," the FCPS's NAC outputs track the strobe synchronization pulses present at the FCPS's sync input terminal. The pulses originate from an upstream FACP or other power supply.

When the FCPS-24S6/-24S8 are configured (via DIP switch settings) as a "sync generator," the FCPS's sync input terminals are not used. Rather, the FCPS is the originator of the strobe synchronization pulses on the FCPS's NAC outputs. In "sync generator" mode, the sync type (System Sensor, Wheelock, or Gentex) is selectable via DIP switch settings.

Standards and Codes

The FCPS-24S6 and FCPS-24S8 co
standards:

- **NFPA 72** National Fire Alarm Code.
- **UL 864** Standard for Control Units
  (NAC expander mode).
- **UL 1481** Power Supplies for Fire Al

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Agency Listings and App

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

- **UL Listed:** S635, S674
- **ULC Listed:** S635 (FCPS-24S6C & FCPS-24S8C)
- **CSFM Approved:** 7315-0028:225
- **MEA:** 299-02-E
- **FM Approved**

Ordering Information

FCPS-24S6: 6.0 A, 120 VAC remote charger power supply. Includes main printed circuit board, transformers, enclosure (15"H x 14.5"W x 2.75"D [cm: 38.1H x 36.83W x 6.985D]), and installation instructions.

FCPS-24S6C: Same as above, ULC-listed.

FCPS-24S6R: Same as FCPS-24S6 with red enclosure.

FCPS-24S6E: 6.0 A, 240 VAC remote charger power supply. Includes main printed circuit board, transformers, enclosure (15"H x 14.5"W x 2.75"D [cm: 38.1H x 36.83W x 6.985D]), and installation instructions.

FCPS-24S8: 8.0 A, 120 VAC remote charger power supply. Includes main printed circuit board, transformers, enclosure (15"H x 14.5"W x 2.75"D [cm: 38.1H x 36.83W x 6.985D]), and installation instructions.

FCPS-24S8C Same as above, ULC-listed.

FCPS-24S8R: Same as FCPS-24S8 with red enclosure.

FCPS-24S8E: 8.0 A, 240 VAC remote charger power supply. Includes main printed circuit board, transformers, enclosure (15"H x 14.5"W x 2.75"D [cm: 38.1H x 36.83W x 6.985D]), and installation instructions.

ZNAC-4: Class A (Style Y) NAC option module.

EOLR-1: 12/24 VDC end-of-line relay for monitoring four-wire smoke detector power.

BAT-1270: Battery, 12-volt, 7.0 AH (two required, see BAT Series data sheet DN-6933).

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ISO 9001 CERTIFIED ENGINEERING & MANUFACTURING QUALITY SYSTEMS

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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.

Made in the U.S. A.

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

SpectrAlert® Advance

Selectable Output Notification Appliances

NOTIF by Honeyw

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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.

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Indoor Ceiling Horn/Strobe

7087pho4.jpg

Outdoor Ceiling Strobe

7087pho3.jpg

Indoor Wall Horn/Strobe

7087pho2.jpg

Indoor Ceiling Strobe

7087pho5.jpg

Indoor Wall Horn

7087pho6.jpg

Outdoor Wall Strobe

- Outdoor products 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 Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt rated notification appliance circuit outputs shall operate between 9 and 17.5 volts; 24-volt rated notification appliance circuit outputs shall operate between 17 and 33 volts. Indoor SpectrAlert Advance products shall operate between 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/weatherproof 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.

Operating Specifications

- **Standard operating temperature:** 49°C).
- **K Series operating temperature:** to 66°C).
- **Humidity range:** 10% to 93% r products).
- **Strobe flash rate:** 1 flash per secor
- **Nominal voltage:** regulated 12 VD 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).

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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).

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

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

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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

Switch Position	Sound Pattern	dB	8 – 17.			
			DC			
1	Temporal	High	78	7		
2	Temporal	Medium	74	7		
3	Temporal	Low	71	7		
4	Non-temporal	High	82	82	[illegible]	[illegible]
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

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Ordering Information

Model	Description	Model	Descrip
WALL HORN/STROBES		***CEILING HORN/STROBES***	
P2R	2-wire horn/strobe, standard cd, red.	**PC2R**	2-wire horn/strobe, standa
P2RH	2-wire horn/strobe, high cd, red.	**PC2RH**	2-wire horn/strobe, high c
P2RK	2-wire horn/strobe, standard cd, red, outdoor.	**PC2RK**	2-wire horn/strobe, standa
P2RHK	2-wire horn/strobe, high cd, red, outdoor.	**PC2RHK**	2-wire horn/strobe, high c
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

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

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

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

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

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

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SpectrAlert® Advance Mini-Horns

MHR/MHW

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Date: 02/17/16

General

The SpectrAlert® Advance series of mini-horn sounders are designed to simplify installation to provide primary and secondary signaling for fire and security applications.

The MHR and MHW mini-horns operate at 12 and 24 volts and are ideal for hotel, motel or residential fire system applications, where a smaller notification device is desired. The mini-horns offer high and low volume settings, and temporal or non-temporal tones. The horns can be mounted to single gang back boxes for aesthetically sensitive applications. Synchronization is also provided when using the MDL3R, MDL3W module or any Notifier panel with the System Sensor sync protocol.

The MHR and MHW mini-horns can operate between 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified, unfiltered power supply. They are listed to Underwriter's Laboratories.

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Features

- Standard UL 464 for fire protective signaling systems.
- 12 and 24V operation.
- High and low volume settings.
- Temporal and non-temporal tones.
- Mounts to a single-gang backbox.
- Compatible with MDL sync module.
- Mechanically and electrically compatible with PA400 series Mini-Alert™ sounders.

Specifications

PHYSICAL SPECIALIZATIONS

Dimensions: 4.6"L x 2.9"W x .45"D.

Weight: 2.67 oz.

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

Mounting: Surface: Deep single-gang backbox (2-3/4" deep); Flush: Standard 4" x 4" back box.

ELECTRICAL SPECIFICATIONS

Input Terminals: 12 to 18 AWG

Nominal Voltage: Regulated 12DC/FWR or 24DC/FWR

Operating Voltage: 8-33

Operating Voltage with MDL3R/W: 9-33

Architectural/Engineering Specifications

Mini-horns shall be a System Sensor Model MHR or MHW capable of operating at nominal 12 or 24VDC and shall mount to a single gang back box. Mini-horns shall be listed to Underwriter's Laboratories Standard UL464 for fire protective signaling systems. Mini-horns shall operate between 32 and 120 degrees Fahrenheit from a regulated DC, or full-wave rectified, unfiltered power supply. When used with the Sync•Circuit™ Module, 12-volt rated notification appliance circuit outputs shall operate between nine and 17.5 volts; 24-volt rated notification appliance circuit outputs shall operate between 17 and 33 volts.

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 progress. Consult factory for listing status.

- **UL Listed:** S4011
- **MEA:** 7-07-E
- **CSFM:** 7135-1653:196
- **FM Approved:** 3028007

Ordering Information

MHR: Mini-Horn; Red.

MHW: Mini-Horn; White.

UL Sound Output and Current Draw Data

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Inspections Division
Approved with Conditions

Date: 02/17/16

SOUNDER OUTPUT (dBA)

Switch Position	Sound Pattern	Volume	8-17.5 VDC	8-17.5 VFWR	Nominal 12 VDC	Nominal 12 VFWR	1 V	
1	Temporal	High	68	67	71	70		
2	Temporal	Low	66	65	69	68		
3	Non-temporal	High	72	71	75	74		
4	Non-temporal	Low	70	69	73	72	78	77

SOUNDER CURRENT DRAW (mA RMS)

Switch Position	Sound Pattern	Volume	8-17.5 V		16-33 V	
			DC	FWR	DC	FWR
1	Temporal	High	12	10	17	15
2	Temporal	Low	10	9	14	13
3	Non-temporal	High	22	17	29	25
4	Non-temporal	Low	17	13	21	19

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ISO 9001 CERTIFIED
ENGINEERING & MANUFACTURING QUALITY SYSTEMS

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

Made in the U.S. A.

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

Audible Visible Accessories

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

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Features

MP120K Mounting Plate

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

Color Lens Attachments

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

WTP Weatherproof Plates

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

Agency Listings

UL LISTED S4011 S3593 | 7300-1653:195 7300-1653:204 7300-1653:0222 | MEA approved 582-06-E | ULC | FM APPROVED

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

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

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

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

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

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

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Specifications

MP120K

120 VAC mounting plate model MP120K shall be listed to UL 464 for fire protective signaling systems. The mounting p two-wire SpectrAlert® Advance horn, strobe, horn strobe, chime or chime strobe from a 120 VAC supply converted to indoor applications, the mounting plate shall be installed in a 4x4x2$^{1}/_{8}$ -inch junction box. For outdoor applications, th installed using the proper SpectrAlert Advance outdoor weatherproof back box and outdoor listed notification appliar

Compatibility

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

Physical/Operating Specifications

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

WTP Weatherproof Plates

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

Physical Specifications

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

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

Models Available for Use with the Watertight Plates:

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

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

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Specifications

Color Lens Attachments

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

Compatibility

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

Color Lens Installation

Installation to Wall-Mount Strobe

Installation to Ceiling-Mount Strobe

Candela Rating for UL 1638

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

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

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

Ordering Information

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

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Ordering Information (continued)

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

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

3825 Ohio Avenue • St. Charles, IL 60174
Phone: 800-SENSOR2 • Fax: 630-377-6495
www.systemsensor.com

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ACE-11

SYSTEM RECORD DOCUMENTS

The SRD is the perfect item to help you meet demanding code requirements today. NFPA 72 2013 7.7.2.4 states that a cabinet must be “prominently labelled ‘SYSTEM RECORD DOCUMENTS’.”

The SRD is the perfect fit to meet todays demanding code requirements. SAE’s number one goal is to manufacture code compliant solutions and this product allows you to do just that. NFPA 72 2013 7.7.2.1 states, "With every new system, a documentation cabinet shall be installed at the system control unit or other approved location at the protected premises."

This durable 16 gauge steel enclosure with a solid piano hinge and key lock will keep all of your code required documents in one safe place. With a 4GB USB flash drive it stores your fire alarm software safe and secure eliminating the occurrences of the software not being on site when technicians arrive to service the system. Along with your fire alarm software you can store your test & inspection, service records, manuals & system records. Using a standard USB B connector you may also store you records electronically (See NFPA 72 2013 7.5.6.7).

The SRD has designated hooks to organize key rings and hold important business cards for easy access and reference. Inside the cover it has an organized record for identifying equipment information, required documentation locations (See NFPA 72 2013 7.2.1).

Standard Features:

- Installed with a 4 GB digital flash drive with USB B connector
- 2 key ring hooks to hold system keys
- Business card holder for key contacts
- Overall dimensions are 12" x 13" tall and 2 1/4” deep
- 18 gauge steel box and cover for security
- Durable powder coat baked on finish other colors available
- Standard 3/4" cat 30 key lock. Other lock assemblies available
- Solid stainless steel piano hinge
- Permanently screened white ink 1" high "SYSTEM RECORD DOCUMENTS"
- Legend sheet for documentation, passwords and system information

NFPA MEMBER

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION CAL FIRE SINCE 1885

NEMA

Made In U.S.A.

ISO 9001 REGISTERED COMPANY

ACEBOX
Space Age Electronics, Inc.
www.1sae.com
800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

No Excuses, Just Solutions!

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Specifications:

The system record documents box (SRD) shall be UL Listed, constructed of 18 gauge colc have a red powder coat epoxy finish. The cover shall be permanently screened with 1" hig RECORD DOCUMENTS " with white indelible ink. The access door shall be locked with a hinge shall be a solid width 12" stainless steel piano hinge. The enclosure will supply 4 mounting holes. Inside the enclosure will accommodate standard 8 1/2 x 11 manuals and loose document records that will be protected within the enclosure. A legend sheet will be permanently attached to the door for system required documentation, key contacts and system information. The SRD will have securely mounted inside a minimum of 4 Gigabyte digital flash memory drive with a standard USB B connector for uploading and downloading information. The drive shall not be accessible without tools to any person whom gains access to the records. The enclosure shall also provide 2 key ring holders with a location to mount standard business type cards for key contact personnel.

USB Storage Interface Requires Standard USB-B Connector

Key Ring Hooks

Business Card Holder

For replacement forms order P/N: EA0316 (Qty. 10)

ACEBOX

Property Information

Name of property: _____
Address: _____
Description of property: _____
Occupancy type: _____

Certifications and Approvals

16.1 System Installation Contractor:
This system, as specified herein, has been installed and tested according to all NFPA standards cited herein.

Signed: _____
Printed name: _____
Date: ____ / ____ / ____
Organization: _____
Title: _____
Phone: _____

16.5 Authority Having Jurisdiction:
I have witnessed a satisfactory acceptance test of this system and find it to be installed and operating properly in accordance with its approved plans and specifications, with its approved sequence of operations, and with all NFPA standards cited herein.

Signed: _____
Printed name: _____
Date: ____ / ____ / ____
Organization: _____
Title: _____
Phone: _____

Equipment Information

ID No 1: _____
Serial: _____
Access code: _____

ID No 2: _____
Serial: _____
Access code: _____

Minimum Required Documentation (SIG-FUN)
(Reference NFPA-72 2013 Section 7.2.1)

1 Written narrative providing intent and system description
□ N/A □ Enclosed Or Alt. Location _____

2 Riser diagram
□ N/A □ Enclosed Or Alt. Location _____

3 Floor plan layout showing location of all devices and control equipment
□ N/A □ Enclosed Or Alt. Location _____

4 Sequence of operation in either an input/ output matrix or narrative form
□ N/A □ Enclosed Or Alt. Location _____

5 Equipment technical data sheets
□ N/A □ Enclosed Or Alt. Location _____

6 Manufacturers published instructions, including operation and maintenance instruction
□ N/A □ Enclosed Or Alt. Location _____

7 Battery calculations (where batteries are provided)
□ N/A □ Enclosed Or Alt. Location _____

8 Voltage drop calculations for notification appliance circuits
□ N/A □ Enclosed Or Alt. Location _____

9 Completed record of inspection and testing in accordance with 7.6.6 and 7.8.2
□ N/A □ Enclosed Or Alt. Location _____

10 Completed record of completion in accordance with 7.5.6 and 7.8.2
□ N/A □ Enclosed Or Alt. Location _____

11 Copy of site specific software, where applicable
□ N/A □ Enclosed Or Alt. Location _____

12 Record (as-built) drawings
□ N/A □ Enclosed Or Alt. Location _____

13 Periodic inspection, testing, and maintenance documentation in accordance with Section 7.6
□ N/A □ Enclosed Or Alt. Location _____

14 Records, record retention, and record maintenance in accordance with 7.7
□ N/A □ Enclosed Or Alt. Location _____

Signed: _____ Date: ____ / ____ / ____

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Legend sheet for storing system information including contacts, sign-off , maintenance & test information, and alternate locations of additional records.

Ordering Information:

Part #	Description
SSU00689	**System Record Documents Cabinet RED**
SSU00690	**Custom screening with your Logo**
EA0315	**10 pack door legend sheet**

ACEBOX
Space Age Electronics, Inc.
www.1sae.com
800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

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No Excuses, Just Solutions!

7788F/7744F Series

Wireless Fire Alarm Communicators for AES-*IntelliNet*

Model 7788F

LISTED

Advanced Wireless Alarm Monitoring

The AES-*IntelliNet* mesh radio network offers unmatched reliability and speed in delivering wireless alarm signals to a central station without third party fees or reliance on networks owned by companies outside the security and fire alarm industry. AES-7788F/7744F Series Smart Subscriber Transceivers provide the wireless communication link between the fire alarm panel and the central station receiver. The 7788F/7744F Series is ideal for most commercial fire alarm applications. Each 7788F/7744F Series Subscriber is housed in a full sized, red, locked, steel cabinet and supports a range of alarm panel inputs including EOL fire, EOL supervised, and direct voltage from the panel (non-fire applications).

Supervised Operation

AES Smart Subscribers offer fully supervised operation that includes monitoring of operating power (both primary AC power and battery backup) and the connection to the radio network. Each Subscriber "checks in" with the AES central station receiver at least once every 24 hours. The supervision check in time can be set for as often as once per minute and, because the central station owns the wireless network, there is no additional cost for air time to transmit supervisory signals.

Full Data Reporting from Alarm Panel Digital Dialer

Models 7788F-ULP and 7744F-ULP come equipped with an IntelliPro Fire Full Data Module (AES-7794) which enables reporting of full alarm data captured from the fire alarm panel's digital communicator. IntelliPro Fire supports most alarm communication formats including Contact ID, Pulse, as well as Bosch Modem IIe and Modem IIIa2.

AES CORPORATION

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Features – A

- UL Listed c cations.
- Meets NFPA 72 requirements
- Direct reporting to AES receiver across IntelliNet wireless mesh network
- Each Subscriber acts as transmitter/receiver/repeater
- Simple and fast activation on network
- On board status LEDs for easy set up
- 8 programmable zone inputs – 7788F
- 4 programmable zone inputs and 4 reverse polarity inputs – 7744F
- Easy programming via AES handheld programmer or PC
- Rugged metal housing ideal for any commercial fire alarm application

Models 7788F/7744F-ULP with IntelliPro Fire also includes

- IntelliPro Fire transmits full alarm data from virtually any fire alarm panel digital communicator
- Alarm format support for Contact ID, Pulse, or Bosch Modem IIe or Modem IIIa2
- Easy installation in AES subscriber
- Operates in applications with or without a phone line

Wireless mesh networking is an innovative technology adopted by many industries with applications that need to communicate data over a large geographic area with a high level of reliability at a low total cost of ownership.

The advanced design and 2-way communications capability provides easy installation, expansion, and management when compared to alternative communication methods, both wired and wireless.

7788F/7744F Series

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Technical Specifications

7788F/7744F Series Subscribers

Dimensions
- 13.25"H x 8.5"W x 4.3"D (34cm H x 21.5cm W x 11cm D)

Weight
- Approx. 7 pounds (3.2 kilograms), excludes battery.

Radio Frequency
- Standard Frequency Range: 450-470MHz (others available)
- Output Power - 2 Watts (others available)

Antenna
- Included 2.5 db tamper resistant antenna mounts on enclosure
- Multiple remote antenna options available

Power Input
- 16.5VAC, 40VA (transformer not included)

Backup Battery
- Will charge 12V battery up to 7.5 AH. Requires 12VDC 7.5 AH battery for UL 864.

Alarm Signal Inputs (subscriber)
- 7788F – 8 individually programmable zones
- 7744F - 4 individually programmable zones and 4 reverse polarity inputs

UL Standards
- UL 864 Edition 9 – Standard for Control Units and Accessories for Fire Alarm Systems
- UL 365 – Standard for Police Station Connected Burglar Alarm Units and Systems
- UL 1681 – Standard for Central Station Burglar Alarm Units

Antenna Cut / Communication Trouble Output
- Form C relay; fail secure; rated for 24 VDC 1A resistive

Reset Button
- Located on main circuit board.

Operating Temperature
- 0° to 50° C (32° to 122°F)

Storage Temperature
- -10° to 60° C (14° to 140°F)

Relative Humidity
- 0 to 85% RHC, Non Condensing

AES-7794 IntelliPro Fire

Input / Output Connections
- RJ11 connection to AES subscriber for module data and power
- RJ11 connector for Handheld Programmer/PC programming
- RJ31X Telco connections - T and R both in and out via terminal strip and RJ45
- Alarm Panel digital communicator T and R both in and out via terminal strip and RJ45
- Trouble output: Form C relay detects if Subscriber is off the network

Alarm Formats
- Support for Contact ID and Pulse formats as well as Modem IIe and Modem IIIa2 converted to CID

Size
- 2.8 x 5.0 inches (7.1cm x 12.7cm)

Power Requirements
- 12 VDC nominal - primary and backup power provided by the AES 7788F/7744F or other Subscriber

How to Orde

Date: 02/17/16

Model	De
7744F	4 Zone Fire Alarm Subscriber with 4 reverse polarity inputs
7744F-ULP	7744F Fire Alarm Subscriber with IntelliPro Fire full data module
7788F	8 Zone Fire Alarm Subscriber
7788F-ULP	7788F Fire Alarm Subscriber with IntelliPro Fire full data module

Optional Accessories

7041E	Subscriber Handheld Programmer
7794	IntelliPro Fire Full Data Module

AES-IntelliNet™ is the industry leader in delivering high quality wireless mesh networks to the fire and security industry in commercial, corporate, government, and educational applications with its broad line of products and advanced network management tools. Users of AES-IntelliNet networks have gained significant revenue, communications, and cost advantages while meeting the high standards of reliability required for the fire and security industry. AES-IntelliNet alarm monitoring systems are deployed at hundreds of thousands of locations in over 150 countries.

For more information
Call 800-AES-NETS (800-237-6387)
AES Corporation | 285 Newbury Street | Peabody, MA 01960 USA
Tel. +1 978-535-7310 | Fax +1 978-535-7313 | Email info@aes-intellinet.com
Web www.aes-intellinet.com

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7788F-7744F/9/7/11R3

Recessed Pin Plunger

3010 Series

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Date: 02/17/16

Applications

- Model 3015 available in plate mount or clip
- Model 3025 plunger self-adjusts to proper re
  - Pulling out on plunger shunts switch
  - Disconnection while servicing equipment is unnecessary

3012 Clip Mount Plunger

General Specifications

Enclosure	ABS plastic
Temperature Range	-40°F to 150°F (-40°C to 65°C)
Environmental	Contact Housing is made of flame-retardant ABS plastic. Reed switch is protected and held in place by a polyurethane potting material
NEMA Rating	1
Protection Class	IP 62
Response Time	1 msec max.
Life Cycles	100,000 Under Full Load, 10,000,000 Under Dry Circuit
Lead Types/O.D.	#22 wire / 0.05" (0.15cm)
Color Choices	Natural(N), Mahogany(M)
UL Listed	All Models

3015 Recessed Plunger Switch

Includes: 1– Adjustable #6 x 32 1/2" Phillips screw

3025 Tamper Switch

UL LISTED

Order Information	Electrical Specifications					
Part Number	Contact[1] Configuration	Load Rating (AC/DC)	Switching Voltage (AC/DC)	Switching Current (AC/DC)	Contact Resistance	Lead Length
3012-M, N	N.O.	7.5W/VA	100V	0.5A	0.2 Ohms	1'
3015-M, N	N.O.	7.5W/VA	100V	0.5A	0.2 Ohms	1'
3027-M, N	SPDT	3W/VA	30V	0.25A	0.2 Ohms	1'
3025T-M, N	N.O.	7.5W/VA	100V	0.5A	0.2 Ohms	#6 Screw Terminal

Warning— Each electrical rating is an individual maximum and cannot be exceeded!

[1] Configuration with plunger out.

NEW FEATURES

GEN CORP

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Inspections Division
Approved with Conditions

Date: 02/17/16

Combination Photoelectric Smoke and Carbon Monoxide Alarm

120VAC/9VDC Single/Multiple Station Smoke and CO Alarm

SERIES

Applications

The GN-503 (120VAC/9VDC) Series of combination photoelectric smoke and electrochemical sensor carbon monoxide alarms are for use as evacuation devices in all dwelling units, including but not limited to homes, apartments, hospitals, hotels, motels and other commercial occupancies. The GN-503 Series is listed in compliance with ANSI/UL 217, ANSI/UL 2034, for installation per NFPA 720 and NFPA 72.

Available in three models, the GN-503 Series is engineered to virtually eliminate nuisance alarms and deliver outstanding performance wherever reliable smoke and CO protection is required. The GN-503F features one (1) set of Form A/Form C contacts that activate for smoke and/or CO events. THE GN-503FF FEATURES TWO (2) SETS OF FORM A/ FORM C CONTACTS THAT ACTIVATE INDEPENDENTLY FOR SMOKE AND CO EVENTS. Both the GN-503F and GN-503FF provide a connection to a protected premises alarm system to provide a supervisory/trouble signal.

The GN-503 Series is provided with a 9VDC alkaline battery for electrical back-up in the event building power is lost. The battery impedance is verified and the alarm provides a low or missing battery warning. The battery drawer provides easy replacement without removing the unit from the wall or ceiling.

The GN-503 Series is designed with a self test feature that quickly notifies if the alarm is functioning properly or needs attention (signified by a series of chirps) by simply pressing the test button. The functionality tests that the smoke/CO alarm is operating properly (signified by going into alarm). The self and functionality tests are in compliance with NFPA 72, NFPA 720 and ANSI/UL Standards.

The GN-503 Series provides a temporal 3 evacuation tone for smoke alarm annunciation and all units provide a temporal 4 tone for CO alarm annunciation. Per NFPA 720, the temporal 3 evacuation tone for smoke alarm will take precedence over the temporal 4 tone for CO alarm.

Product Listings

SIGNALING UL LISTED

- ANSI/UL 217 and ANSI/UL 2034 Listed
- CSFM # 5276-0569:144

Product Compliance

NEMA MEMBER

ASSEMBLED IN THE USA

- NFPA 72 and NFPA 720
- IBC/IFC/IRC
- City & State Ordinances/Laws/Regulations
- Quality Management System is certified to: ISO 9001:2008

Standard Product Features

- GN-503 available in 120VAC with 9VDC battery back-up
- Horn frequency 3100 Hz (nominal)
- Meets sensitivity requirements of ANSI/UL 2034
- F Model: One (1) set of Form A/Form C contacts that activate for smoke and/or CO events
- FF Model: Two (2) sets of Form A/Form C contacts that activate independently for smoke and CO events
- Relay contacts operate on battery back-up
- Push button self test feature
- Push button functional test feature
- Quick-disconnect wiring harness
- Non-latching (self restoring) alarm
- Fully insect protected
- Red LED pulses every 30 seconds, green LED for AC power on
- Mounting hardware adapts to standard junction boxes, including but not limited to 4x4x2-1/8 octagon
- Dust cover to prevent contamination during installation
- Low or missing battery indicator
- 1 year warranty from date of purchase
- 5 year limited warranty on CO sensor

Additional Smoke Alarm Features

- Photoelectric smoke sensing technology
- Temporal 3 evacuation sounding pattern for smoke annunciation
- Nominal 2.5% sensitivity (smoke)
- Solid state red LED to indicate smoke presence

Additional CO Alarm Features

- Electrochemical sensor
- Temporal 4 sounding pattern for CO annunciation
- End of life signal indicates CO sensor has reached depletion state and unit must be replaced

GN-503 Series Combination Smoke/CO Alarm

Model Number	Voltage	9VDC Battery Back-Up	One (1) Set Form A/ Form C Relay Contacts	Two (2) Sets Form A/ Form C Relay Contacts
GN-503	120VAC	●		
GN-503F	120VAC	●	●	
GN-503FF	120VAC	●		●

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GN-503 AND GN-503F Wiring Diagrams

GN-503/GN-503F ADDITIONAL PRODUCT INFORMATION

THE GN-503F AND GN-503FF PRODUCT WIRING HARNESS IS NOT INTERCHANGEABLE. THE GN-503F AND GN-503FF MUST USE PROPER WIRING HARNESS. PRODUCT WILL NOT FUNCTION IF INCORRECT HARNESS IS USED.

- DO NOT connect Gentex alarms to other manufacturers' alarms.
- Per NFPA 72, a maximum of 18 compatible smoke, heat, CO and/or combination smoke/CO alarms may be interconnected. No more than 12 of the 18 can be smoke alarms.
- All units connected in tandem MUST get their power from the same circuit, that is, all smoke alarms in tandem must be controlled by the same fuse or circuit breaker.

NOTICE: PER NFPA 72, A MAXIMUM OF 12 SMOKE/CO ALARMS OF GN-503 WITH THE RELAY OPTION (F) MAY BE TANDEM INTERCONNECTED.

The GN-503/GN-503F may be tandem interconnected with other Gentex tandem capable smoke alarms, CO alarms or smoke/CO alarms. To interconnect with Gentex 9000 Series, 7000 Series, 710CS Series, 7109CS Series, GN-200 Series & GN-300 Series the LEGACY TANDEM WIRE must be used. Refer to installation manual for detailed information.

CAUTION: RED/YELLOW & BROWN/YELLOW wire to be capped when not in use. This wire is for tandem connection only. Do not connect to any other circuit.

- If a GN-503 Series or CO1209 Series unit is annunciating for a CO event, legacy products that are tandem interconnected will not activate and will remain silent.
- If smoke alarm portion of device goes into alarm, all smoke alarms, CO alarms or combination smoke/CO alarms tandem wired will sound smoke alarm warning.
- When both smoke and CO conditions are present, smoke condition will have priority and alarm will sound smoke annunciation.

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USING THE GENTEX GN-503FF COMBINATION SM
CARBON MONOXIDE ALARM ALLOWS THE ABII

• Interface with a FACP Panel
• Interface with NAC Circuits

GN-503FF Wiring Diagrams

GN-503FF ADDITIONAL PRODUCT INFORMATION

Use brown/yellow wire to tandem interconnect GN-503FF alarms to additional GN-503 Series, S1209 Series and CO1209 Series.

NOTICE: THE GN-503FF IS ONLY CAPABLE OF TANDEM INTERCONNECT WITH GN-503 SERIES, CO1209 SERIES AND S1209 SERIES.

THE GN-503F AND GN-503FF PRODUCT WIRING HARNESS IS NOT INTERCHANGEABLE. THE GN-503F AND GN-503FF MUST USE PROPER WIRING HARNESS. PRODUCT WILL NOT FUNCTION IF INCORRECT HARNESS IS USED.

- DO NOT connect Gentex alarms to other manufacturers' alarms.
- Per NFPA 72, a maximum of 18 compatible smoke, heat, CO and/or combination smoke/CO alarms may be interconnected. No more than 12 of the 18 can be smoke alarms.
- All units connected in tandem MUST get their power from the same circuit, that is, all smoke alarms in tandem must be controlled by the same fuse or circuit breaker.

NOTICE: PER NFPA 72, A MAXIMUM OF 12 SMOKE/CO ALARMS OF GN-503 WITH THE RELAY OPTION (FF) MAY BE TANDEM INTERCONNECTED.

CAUTION: BROWN/YELLOW wire to be capped when not in use. This wire is for tandem connection only. Do not connect to any other circuit.

- If smoke alarm portion of device goes into alarm, all smoke alarms, CO alarms or combination smoke/CO alarms tandem wired will sound smoke alarm warning.
- When both smoke and CO conditions are present, smoke condition will have priority and alarm will sound smoke annunciation.

GN-503 SERIES

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Inspections Division
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Date: 02/17/16

Electrical Specifications

Operating Voltage	120VAC, 60Hz
Operating Current	.045 amps
Operating Current (Relay Options)	.070 amps
Operating Ambient Temp Range	40°F to 100°F (4.4°C-38°C)
Alarm Horn Rating	85dBA at 10 feet (3.048 m)
Auxiliary Relay (GN-503F)	1 Form A & 1 Form C (0.5 amp)
Auxiliary Relay (GN-503FF)	2 Form A & 2 Form C (0.3 amp)
Size	Diameter at base: 5.75 in. (14.605 cm)
	Overall diameter 6.25 in. (16.51 cm)
	Depth: 1.8 in. (4.572 cm)
Secondary Power Source	Alkaline 9VDC battery (Duracell® MN 1604)
CO Sensing Cell	Electrochemical Cell

Architect & Engineering Specifications

The combination photoelectric smoke and carbon monoxide alarm shall be a Gentex Model GN-503/GN-503F/GN-503FF or approved equal which shall provide at least the following features and functions:

1. Nominal smoke sensitivity shall be 2.5%.
2. The smoke alarm portion of device shall utilize an infrared LED sensing circuit which pulses in 4 to 5 second intervals when subjected to smoke. After 2 consecutive pulses in smoke, the alarm shall activate.
3. The CO alarm shall utilize an electrochemical sensing element with a minimum 5-year life.
4. The carbon monoxide alarm portion of device is adjusted not to detect CO levels below 30 PPM and will not alarm when exposed to constant levels of 30 PPM for 30 days. Per ANSI/UL 2034 requirements, the device will alarm at the following levels: 70 PPM CO between 1 to 4 hours, but not less than 1 hour. 150 PPM CO between 10 to 50 minutes. 400 PPM between 4 to 15 minutes.
5. The GN-503 Series device shall have a Duracelll® MN 1604 9VDC alkaline battery as a back-up in the event building power is lost.
6. The 9VDC battery impedance shall be verified by the circuit of the smoke/CO alarm.
7. The alarm shall provide an indicator when the battery is low in power, high impedance or is missing.
8. The CO alarm will provide an audible indicator of 3 quick chirps every 30 seconds at end of life of CO sensor.
9. The sensing chamber shall be fully protected to prevent entrance of small insects, thus reducing the probability of false alarms.
10. The alarm shall include a solid state red color LED that will indicate presence of CO at the unit.
11. The alarm shall include a solid state piezo alarm rated at 85dBA at 10ft.
12. A visual LED monitor (condition indicator) shall slow pulse in normal operation and rapid pulse in alarm (red color)
13. An easily accessible test button shall be provided. Push down on button for 5 seconds causing smoke/CO alarm to activate. If device does not go into alarm, the device is not working properly.
14. The device shall have tandem interconnect capability of up to 12 smoke/CO alarms.
15. The GN-503 and GN-503F alarm shall have the capability to tandem interconnect with all Gentex tandem capable smoke alarms, CO alarms or combination smoke/CO alarms, including 7000/7003 Series, 9000/9003 Series, 710CS/713CS Series, 7109CS/7139CS Series, GN-200/GN-300 Series, S1209 Series and CO1209 Series.
15. The GN-503FF alarm shall have the capability to tandem interconnect with the following Gentex alarms, CO alarms or combination smoke/CO alarms: GN-503 Series, S1209 Series and CO1209 Series.
16. The manufacturer shall provide models with the optional feature of auxiliary Form A/Form C relay contacts for initiating remote functions and annunciation and a relay option that is capable of activation by tandem interconnect wire.
17. The combination smoke/CO alarm shall be non-latching (self-restoring).
18. Unit must be ANSI/UL 217 and ANSI/UL 2034 listed for both wall and ceiling mounting.
19. Unit shall be listed by Underwriters Laboratories and California State Fire Marshal (CSFM).

All equipment shall be completely factory assembled, wired and tested, and the contractor shall be prepared to submit a certified letter testifying to this condition. Alarms which do not meet all of the requirements of this specification will not be considered.

For complete product specifications, refer to product installation manual.

24 units per carton
24 pounds per carton

GENTEX CORPORATION

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Gentex Corporation reserves the right to make changes to the product data sheet at their discretion.

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551-0073-04

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Date: 02/17/16

Photoelectric Smoke Alarm with Visual Signaling Appliance

710/713CS/LS 7109/7139CS/ SERIES

Applications

The 710/713CS/LS and 7109/7139CS/LS photoelectric single/multiple station smoke alarms are designed to give reliable early warning of the presence of smoke where both audible and visual alarms are required. The series features a 90dBA solid state piezo signal and a 177 Candela strobe with “FIRE” lettering. The strobe is listed per UL 1971.

The smoke alarm operates on the light scattering principle, a superior method of detection in smoldering fires, utilizing a pulsing LED light source and a photodiode sensor in a fully screened sensing chamber.

Every 4 to 5 seconds the pulsing LED emits an infrared beam that by passes the photodiode under normal conditions. However, when smoke enters the sensing chamber, the infrared beam is deflected onto the sensor by the smoke particles. The LED pulse rate increases to 8 times the normal rate, and after the photodiode confirms that smoke is present for 2 consecutive pulses, it will produce the signal necessary to trip an alarm.

Upon activation, the alarm will emit a 90dBA local audible signal and activate the high intensity strobe. During the alarm period the strobe will flash at a brightness of 177 candela 60 times per minute. After the smoke has cleared from the detector, the unit will revert to the normal stand-by condition.

Easy Wash™ - On Site Maintenance Program

Standard Features

- Available in 120VAC
- 177 candela rating (UL 1971 listed)
- Horn frequency 3100Hz (nominal)
- Patented three position test switch
- Nominal 2.5% Sensitivity
- Quick-Disconnect Wiring Harness (CS Models)
- Form C Auxiliary Relay Contacts for Remote Annunciation (CS Models)
- 9VDC Battery Back-Up (7109/7139CS/LS) w/Audible Low Battery Chirp
- 120VAC with 9VDC Battery Back-up Models, Visual Does Not Operate on Battery Back-Up
- Relays Operate on Battery Back-Up
- Relay Contacts Will Activate From the Tandem Wire
- 90dBA Continuous Piezo Horn (710CS/LS & 7109CS/LS Series)
- 90dBA Temporal 3 Evacuation Piezo Horn (713CS/LS & 7139CS/LS Series)
- 5-to-1 Signal-to-Noise Ratio
- Fully Insect Screened
- Interconnect with all Gentex tandem capable smoke alarms
- Interconnect up to 6 Alarms (CS Models)
- Easy Wash™ on-site maintenance washing program
- 9 Foot Line Cord (LS Models)
- Mounting Hardware Adapts to Standard Junction Boxes
- Warranty is 1 Year From Date of Purchase

Product Listings

SIGNALING UL LISTED

- **UL 217 and UL 1971 Listed**
- **CSFM: 7257-0569:104 (710/713CS/LS)**
  7257-0569:118 (7109/7139CS/LS)
- **BS+A/MEA: 285-91-E**
- **BFP (City of Chicago)**
- **MSFM Listing #1929**

Product Compliance

- **NFPA 72**
- **Americans with Disabilities Act (ADA)**

NEMA MEMBER

ASSEMBLED IN THE USA

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Date: 02/17/16

710CS/LS and 7109CS/LS Series - Continuous Piezo Sounder

Model Number	Part Number	Voltage	Wall Mount	Ceiling Mount	9 Foot Line Cord	Interconnect Up To 6 Units	Form C Contacts	
710CS-W	907-0231-002	120 VAC	●			●	●	
710CS-C	907-0232-002	120 VAC		●		●	●	
710CSX-W	907-0235-002	120 VAC	●			●	●	
710CSX-C	907-0236-002	120 VAC		●		●	●	
710LS	907-0239-002	120 VAC	●		●			
7109CS-W	917-0007-002	120 VAC	●			●	●	●
7109CS-C	917-0008-002	120 VAC		●		●	●	●
7109CSX-W	917-0010-002	120 VAC	●			●	●	●
7109CSX-C	917-0011-002	120 VAC		●		●	●	●
7109LS	917-0006-002	120 VAC	●		●			●

713CS/LS and 7139CS/LS Series - Temporal 3 Piezo Sounder

Model Number	Part Number	Voltage	Wall Mount	Ceiling Mount	9 Foot Line Cord	Interconnect Up To 6 Units	Form C Contacts	9VDC Battery Back-Up
713CS-W	907-0248-002	120 VAC	●			●	●	
713CS-C	907-0249-002	120 VAC		●		●	●	
713CSX-W	907-0252-002	120 VAC	●			●	●	
713CSX-C	907-0253-002	120 VAC		●		●	●	
713LS	907-0256-002	120 VAC	●		●			
7139CS-W	917-0019-002	120 VAC	●			●	●	●
7139CS-C	917-0020-002	120 VAC		●		●	●	●
7139CSX-W	917-0021-002	120 VAC	●			●	●	●
7139CSX-C	917-0022-002	120 VAC		●		●	●	●
7139LS	917-0018-002	120 VAC	●		●			●

NOTES:

Candela Rating: 177 Candela UL 1971 Listed Strobe Light
Flash Rate per Minute: 60 Minimum

"W" = Wall Mount
"C" = Ceiling Mount

- Available in square configuration only.
- Ceiling mount not available in line cord models.
- The X models have the ability to turn the strobe on from a field mounted relay
- When testing 713/7139 units, it may take up to 16 seconds longer for smoke alarm to go in or out of alarm mode.
- It is recommended that 710/713/7109/7139 Series smoke alarm be tested weekly.
- Refer to Technical Bulletin 002 for Easy Wash™ on site washing instructions
- 710/7109 units produce a non-temporal audible alarm and are therefore not intended for locations where the desired action of the occupant(s) is evacuation.
- 713/7139 units produce a temporal 3 audible alarm. Per NFPA 72, the American National Standard Audible Emergency Evacuation Signal as defined in ANSI S3.41, is required whenever the intended response is to evacuate the building.

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Wiring Diagram

710CS
7109CS
713CS
7139CS

Electrical Specifications

Operating Voltage. . . . . .120 VAC, 60Hz
Operating Current. . . . . 0.400 amps (Peak)
Operating Ambient Temp Range. . . . . 40°F to 100°F
Alarm Horn Rating. . . . . 90 Decibels at 10 Ft.
Nominal Sensitivity. . . . . 2.5% Obscuration
Auxiliary Relay (Standard). . . . . 1 Form C (0.6 amp)
(710/713CS and 7109/7139CS)
Size . . . . . .5.5” Square x 4.75” Overall Depth
Secondary Power Source. . . . . Alkaline 9VDC battery (supplied)
(7109CS/LS and 7139CS/LS)

The CSX models are used for remote annunciation of the strobe.

710/713CS/LS 7109/7139CS/ SERIES

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Architect & Engineering Specifications

The photoelectric smoke alarm shall be a Gentex Model 710LS, 713LS, 7109LS, 7139LS or approved equal which shall provide at least the following features and functions.

1. Nominal sensitivity shall be 2.5%.
2. The smoke alarm shall utilize an infrared LED sensing circuit which pulses in 4 to 5 second intervals; when subjected to smoke the pulse rate shall increase 8 times. After 2 consecutive pulses in smoke, the detector will alarm.
3. The smoke alarm shall provide minimum 5-to-1 signal-to-noise ratio in the optics frame to assure stability of operation in environments of high RF and transient conditions.
4. The sensing chamber shall be fully screened to prevent entrance of small insects, thus reducing the probability of false alarms.
5. A continuous piezo horn rated at 90dBA at 10 ft. (710CS/LS & 7109CS/LS units) and a temporal 3 piezo horn rated at 90dBA at 10 ft. (713CS/LS & 7139CS/LS units).
6. A visual LED monitor (condition indicator) will pulse in normal operation and steady on in alarm.
7. The visual signal shall have a minimal light output of 177 Candela.
8. An easily accessible test knob shall be provided. The test knob in the TEST position will simulate an actual smoke condition of approximately 3.5% causing the smoke alarm to alarm within 20-36 seconds. Also the alarm shall test for the most sensitive setting. An alarm during this test will be a maintenance indicator. Return to Gentex Corporation for maintenance.
9. The smoke alarm shall be provided with a 9 foot line cord with a strain relief connection, if a portable unit.
10. Unit must be capable of providing a monitored battery back-up.
11. Unit must be UL 217 and UL 1971 listed for wall mount.
12. Unit shall also meet all requirements of the State of California Fire Marshal, Bureau of Standards and Appeals and the Americans with Disabilities Act (ADA).

Architect & Engineering Specifications

The photoelectric smoke alarm shall be a Gentex Model 710CS, 713CS, 7109CS, 7139CS or approved equal which shall provide at least the following features and functions.

1. Nominal sensitivity shall be 2.5%.
2. The smoke alarm shall utilize an infrared LED sensing circuit which pulses in 4 to 5 second intervals; when subjected to smoke the pulse rate shall increase 8 times. After 2 consecutive pulses in smoke, the smoke alarm will alarm.
3. The smoke alarm shall provide minimum 5-to-1 signal-to-noise ratio in the optics frame to assure stability of operation in environments of high RF and transient conditions.
4. The sensing chamber shall be fully screened to prevent entrance of small insects, thus reducing the probability of false alarms.
5. A continuous piezo horn rated at 90dBA at 10 ft. (710CS/LS & 7109CS/LS units) and a temporal 3 piezo horn rated at 90dBA at 10ft. (713CS/LS & 7139CS/LS units).
6. A visual LED monitor (condition indicator) will pulse in normal operation and will remain solid in alarm.
7. The visual signal shall have a minimal light output of 177 Candela and will flash one time per second.
8. An easily accessible test knob shall be provided. The test knob in the TEST position will simulate an actual smoke condition of approximately 3.5% causing the smoke alarm to alarm within 20-36 seconds. Also the detector shall test for the most sensitive setting. An alarm during this test will be a maintenance indicator. Return to Gentex Corporation for maintenance.
9. The smoke alarm shall be provided with a Form C contact for remote annunciation purposes.
10. The manufacturer shall provide other compatible detector models with the following optional features: a) auxiliary Form C relay contact for initiating remote functions and annunciation; b) relay option that is capable of activation by tandem interconnect wire.
11. Unit must be capable of providing a monitored battery back-up.
12. Unit must be UL 217 and UL 1971 listed for wall mount or ceiling mount.
13. Unit shall also meet all requirements of the State of California Fire Marshal, Bureau of Standards and Appeals and the Americans with Disabilities Act ADA).

All equipment shall be completely factory assembled, wired and tested, and the contractor shall be prepared to submit a certified letter testifying to this condition. Detectors which do not meet all of the requirements of this specification will not be considered.

12 units per carton
21 pounds per carton

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Photoelectric Smoke Alarm

120VAC and 220VAC with 9VDC Battery Back-Up Single/Multiple Station Smoke Alarm

9000/ 9003 SERIES

Applications

The 9000/9003 Series of photoelectric smoke alarms is designed for residential and commercial residential applications, including homes, apartments, hospitals, hotels and motels, in compliance with UL 217, UL 1730 applicable IBC/IFC Standards and NFPA 72.

Available in many different models, the 9120/9123 Series is engineered to virtually eliminate nuisance alarms and deliver outstanding performance wherever reliable fire protection is required. The 9000/9003 Series is provided with a 9VDC alkaline battery for back-up in the event building power is lost. The battery impedance is verified and the alarm provides a low or missing battery warning.

The Gentex 9000/9003 Series provides an exclusive patented three position test feature that simulates a 0.85% and 3.5% actual smoke condition in full compliance with NFPA 72 and UL Standards.

Options include self-restoring 135°F integral or isolated heat thermals and Form A/Form C dry contacts for remote annunciation. Tandem interconnection of up to 12 units is available on several models; tandem interconnection of up to 6 units is available on "F" models, which activate the dry contacts from the tandem wire or a local alarm.

Easy Wash™ - On Site Maintenance Program

Standard Features

- Available in 120VAC and 220VAC with 9VDC battery back-up
- Horn frequency 3100 Hz (nominal)
- Nominal 2.5% sensitivity
- Patented three position test switch
- Relays operate on battery back-up
- Quick-disconnect wiring harness
- 90dBA continuous piezo horn (9120/9220 Series)
- 90dBA temporal 3 evacuation piezo horn (9123/9223 Series)
- 5-to-1 signal-to-noise ratio
- Pulsing LED sensing chamber
- Fully insect screened
- Interconnect with all Gentex tandem capable smoke alarms
- Easy Wash™ on-site maintenance washing program
- Red LED pulses every 30 seconds, green LED for AC power on
- Mounting hardware adapts to standard junction boxes
- Dust cover to prevent contamination during installation
- Low or missing battery indicator
- 1 year warranty from date of purchase

Product Listings

SIGNALING UL LISTED

- **UL 217 and UL 1730 Listed**
- **CSFM #7257-569:117**
- **BS+A/MEA #285-91-E**
- **BFP (City of Chicago)**
- **MSFM Listing #1929**
- **Hong Kong FSD Listed (9220 Series ONLY)**

Product Compliance

- **NFPA 72**
- **IBC/IFC/IRC**

NEMA MEMBER

ASSEMBLED IN THE USA

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Inspections Division
Approved with Conditions

Date: 02/17/16

9000 (9120/9220) Series - Continuous Piezo Sounder

Model Number	Part Number	Voltage	Integral 135°F Thermal	Isolated 135°F Thermal	Tandem Up To 12 Units	Tandem Up To 6 Units	Form A/C Contacts
9120	917-0001-002	120VAC			●		
9120T	917-0002-002	120VAC	●		●		
9120H	917-0003-002	120VAC		●	●		
9120F	917-0004-002	120VAC				●	●
9120TF	917-0009-002	120VAC	●			●	●
9120HF	917-0005-002	120VAC		●		●	●
9220	917-0026-002	220VAC			●		
9220T	917-0027-002	220VAC	●		●		
9220H	917-0028-002	220VAC		●	●		
9220F	917-0029-002	220VAC				●	●
9220TF	917-0031-002	220VAC	●			●	●
9220HF	917-0030-002	220VAC		●		●	●

9003 (9123/9223) Series - Temporal 3 Evacuation Piezo Sounder

Model Number	Part Number	Voltage	Integral 135°F Thermal	Isolated 135°F Thermal	Tandem Up To 12 Units	Tandem Up To 6 Units	Form A/C Contacts
9123	917-0012-002	120VAC			●		
9123T	917-0013-002	120VAC	●		●		
9123H	917-0014-002	120VAC		●	●		
9123F	917-0015-002	120VAC				●	●
9123TF	917-0017-002	120VAC	●			●	●
9123HF	917-0016-002	120VAC		●		●	●
9223	917-0032-002	220VAC			●		
9223T	917-0033-002	220VAC	●		●		
9223H	917-0034-002	220VAC		●	●		
9223F	917-0035-002	220VAC				●	●
9223TF	917-0037-002	220VAC	●			●	●
9223HF	917-0036-002	220VAC		●		●	●

NOTES:

- Series available in round configuration only.
- When testing 9123 Series, it may take up to 16 seconds longer for smoke alarm to go in or out of alarm mode.
- It is recommended that 9000/9003 Series smoke alarm be tested weekly.
- Refer to Technical Bulletin 002 for *Easy Wash*™ on site washing instructions
- 9120/9220 units produce a non-temporal audible alarm and are therefore not intended for locations where the desired action of the occupant(s) is evacuation.
- 9123/9223 units produce a temporal 3 audible alarm. Per NFPA 72, the American National Standard Audible Emergency Evacuation Signal as defined in ANSI S3.41, is required whenever the intended response is to evacuate the building.

9000/9003 Series Wiring Diagrams

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 02/17/16

Tandem Wiring Diagram

LIMITATIONS:
Maximum of 12 alarms (9120/9123, 9120/9123T, 9120/9123H, 9220/9223, 9220/9223T, 9220/9223H) may be connected together. Do not exceed 125 feet between each detector. Do not exceed 1125 feet between the first and last alarm. NOTE: Gentex smoke alarms can not be interconnected to detectors from other manufacturers.

A MAXIMUM OF SIX (6) ALARMS WITH A RELAY MAY BE TANDEM INTERCONNECTED. (9120/9123F, 9120/9123TF, 9120/9123HF, 9220/9223F, 9220/9223TF, 9220/9223HF)

Relay Models

Models
9120/9123F
9120/9123TF
9230/9223F
9220/9223TF

CAUTION:
RED/YELLOW wire to be capped when not in use. This wire is for tandem connection only. Do not connect to any other circuit.

Isolated Thermal with Optional Accessory Contacts

Models
9120/9123H
9120/9123HF
9220/9223H
9220/9223HF

RELAY CONTACTS
RATED LOAD RESISTIVE
1.0 AMP @ 24 VDC
0.6 AMP @ 125 VAC MAX
0.3 AMP @ 220 VAC MAX

9000/ 9003 SERIES

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Electrical Specifications

Operating Voltage (9120/9123)	120VAC, 60Hz
Operating Voltage (9220/9223)	220VAC, 50Hz
Operating Current	.045 amps
Operating Current (Relay Options)	.070 amps
Operating Ambient Temp Range	40°F to 100°F
Alarm Horn Rating	90dBA at 10 feet
Nominal Sensitivity	2.5% obscuration
"F" Auxiliary Relay	1 Form A & 1 Form C (0.6 amp)
"T" Integral Thermal (Self-Restoring)	135°F at 50 feet
"H" Isolated Thermal Form A (Self-Restoring)	135°F at 50 feet
Size	Diameter: 6.5 in. OA (5.75 in. at Ceiling) Depth: 2.625 in.
Secondary Power Source	Alkaline 9VDC battery

Architect & Engineering Specifications

The Photoelectric Smoke alarm shall be a Gentex Model 9120/9123/9220/9223 or approved equal which shall provide at least the following features and functions.

1. Nominal sensitivity shall be 2.5%.
2. The alarm shall utilize an infrared LED sensing circuit which pulses in 4 to 5 second intervals when subjected to smoke. After 2 consecutive pulses in smoke, the alarm will activate.
3. The alarm shall have a 9VDC alkaline battery as a back-up in the event building power is lost.
4. The 9VDC battery impedance shall be verified by the circuit of the smoke alarm.
5. The alarm shall provide an indicator when the battery is low in power or high impedance or is missing.
6. The alarm shall provide minimum 5-to-1 signal-to-noise ratio in the optics frame to assure stability of operation in environments of high RF and transient conditions.
7. The sensing chamber shall be fully screened to prevent entrance of small insects, thus reducing the probability of false alarms.
8. A solid state piezo alarm rated at 90dBA at 10ft.
9. A visual LED monitor (condition indicator) will slow pulse in normal operation and rapid pulse in alarm.
10. An easily accessible test knob shall be provided. The test knob in the TEST position will simulate an actual smoke condition of approximately 3.5% causing the detector to alarm within 20-36 seconds. It will also have the capability of testing to 0.85% as a required minimum. A magnetic switch closure or other switch closure, or smoke generating equipment which does not scatter the light beam or test sensitivity is not sufficient, as indicated in National Code.
11. The detector shall have interconnect capabilities of up to 12 units or 6 units with relay.
12. The alarm shall have interconnection capabilites of 12 units on 9120/9120T/9120H/9123/9123T/9123H/9220/922T/9220H/9223/9223T/9223H and shall have interconnection capabilites of 6 units on 9120F/9120TF/9120HF/9123F/9123TF/9123HF/9220F/9220TF/9220HF/9223F/9223TF/9223HF.
13. The manufacturer shall provide other compatible alarm models with the following optional features: a) 135°F isolated thermal with normally opened contact for remote connection to local alarm or annunciator; b) 135°F integral thermal; c) auxiliary Form A/Form C relay contacts for initiating remote functions and annunciation; d) relay option that is capable of activation by tandem interconnect wire. Thermal sensor shall be self-restoring.
14. Unit must be UL 217 and UL 1730 listed for both wall and ceiling mount.
15. Unit shall be listed by Underwriters Laboratories, California State Fire Marshal (CSFM) and the Bureau of Standards and Appeals (NYC).

All equipment shall be completely factory assembled, wired and tested, and the contractor shall be prepared to submit a certified letter testifying to this condition. Alarms which do not meet all of the requirements of this specification will not be considered.

24 units per carton
34 pounds per carton

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120VAC Remote Visual Signal

GXS-120

SERIES

Applications

The GXS-120 Series is a high quality remote visual signaling appliance that offers dependable remote annunciation. The GXS-120 is ideal for applications where a dependable visual alarm is required in applications such as hotels, dormitories and apartments.

The GXS-120 Series has a constant flash rate of 1Hz. The GXS-120 Series is provided with a two position terminal block (12-18AWG).

The GXS-120 has a 177 candela strobe that meet the requirements of the ADA. GXS-120 appliances are ANSI/UL 1971 listed and are warranted for three years from the date of purchase.

Standard Features

- Nominal voltage 120VAC
- 177 candela strobe meets the requirements of NFPA 72 and meets the requirements of ADA
- Unit Dimensions: 4.5” high x 4.56” wide x 2.25” deep
- Terminal blocks (12-18 AWG)
- Flash rate 1Hz
- Wide variety of mounting options for new construction and retrofit applications
- ANSI/UL 1971 listed for fire protective service/signal for hearing impaired
- Faceplate available in red or off-white

GXS-120 Series Remote Strobe		
Model Number	**Part Number**	**Candela (ANSI/UL 1971)**
GXS-120177WR	904-0780-002	177
GXS-120177WW	904-0758-002	177
GXS-120177CR	904-0781-002	177
GXS-120177CW	904-0759-002	177

GXS-120 Series Strobe Current Ratings	
Candela	**177cd**
UL Max	209mA

NOTES:

Operating temperature: 32° to 120°F (0° to 49°C)
GXS-120 Series is not listed for outdoor use

“W” = Wall mount “C” = Ceiling mount
“R” = Red faceplate “W” = Off-White faceplate
“P” = Plain (no lettering)

The plain “P” units are non-returnable.

Product Listings

SIGNALING UL LISTED

- ANSI/UL 1971
- CSFM Listing 7125-569:114
- MEA #285-91-E
- BFP (City of Chicago)

Product Compliance

- Americans with Disabilities Act (ADA)
- NFPA 72
- IBC/IFC/IRC
- Quality Management System is certified to: ISO 9001:2008

NEMA MEMBER

ASSEMBLED IN THE USA

GXS-120

SERIES

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Date: 02/17/16

Mounting Rough-in Box and Run Wiring

Wiring Diagram GXS-120

NOTE:
- EACH WIRE RUN MUST BE BROKEN TO PROVIDE SUPERVISION OF SIGNAL CIRCUIT.
- VOLTAGE SUPPLIED TO REMOVE SIGNAL WHEN PANEL IS LATCHED.
- ALTHOUGH ELECTRICALLY COMPATIBLE, STROBE DEVICE UNITS ARE NOT RECOMMENDED FOR USE ON CODED OR PULSING SIGNALING CIRCUITS.

Architect & Engineering Specifications

The visual signal shall be the Gentex Model GXS-120 or approved equal. The visual appliance shall be ANSI/UL 1971 listed by Underwriters Laboratories.

The visual appliance shall be installed in accordance with the appropriate provisions of the National Fire Protection Association, American National Standards or other applicable state and local requirements.

The visual signal shall be capable of mounting to a single gang, double gang, double work box or 4" square back box. The visual signal shall have a constant flash rate of 1Hz regardless of listed input voltage.

24 units per carton
12 pounds per carton

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551-0036-03

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Date: 02/17/16

120VAC/9VDC Single/Multiple Station Carbon Monoxide Alarm

CO1209 SERIES

Applications

The CO1209 (120VAC/9VDC) Series of electrochemical sensor carbon monoxide alarms is for use as an evacuation device in all dwelling units, including but not limited to homes, apartments, hospitals, hotels and motels. The CO1209 Series is in compliance with ANSI/UL 2034 and NFPA 720.

The CO1209 Series is engineered to virtually eliminate nuisance alarms and deliver outstanding performance wherever reliable CO protection is required.

The CO1209 Series is provided with a 9VDC alkaline battery for electrical back-up in the event building power is lost. The battery impedance is verified and the alarm provides a low or missing battery warning. The battery drawer provides easy replacement without removing the unit from the wall or ceiling.

The Gentex CO1209 Series is provided with a push button test that simulates an actual CO condition in full compliance with NFPA 720 and UL Standards.

Features of the CO alarm series include, a temporal 4 tone for CO alarm annunciation, DUALINK® - differentiating tones indicating a smoke alarm (temporal 3) or a CO alarm (temporal 4), tandem capabilities with all Gentex tandem interconnect capable alarms, signal indicating CO sensor has reached end of life and solid state red LED to indicate CO presence. Options include Form A/Form C dry contacts for remote annunciation.

Product Listings

SIGNALING UL LISTED

- ANSI/UL 2034 Listed
- CSFM: 5276-0659:143

Product Compliance

- NFPA 720
- IBC/IFC/IRC
- City & State Ordinances & Laws
- Quality Management System is certified to: ISO 9001:2008

NEMA MEMBER

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Standard Features

- CO1209 available in 120VAC with 9VDC battery back-up
- Electrochemical sensor
- Horn frequency 3100 Hz (nominal)
- Meets sensitivity requirements of ANSI/UL 2034
- DUALINK® - differentiating tones indicating a smoke alarm (temporal 3) or a CO alarm (temporal 4)
- Temporal 4 sounding pattern for CO annunciation
- Optional auxiliary Form A/Form C relay contacts
- Relay contacts operate on battery back-up
- Tandem interconnect with current Gentex alarm models
- Push button self test and functional test feature
- Quick-disconnect wiring harness
- Non-latching (self restoring) alarm
- Red LED pulses every 15-30 seconds, green LED for AC power on
- Solid State red LED to indicate CO presence
- Mounting hardware adapts to standard junction boxes
- Dust cover to prevent contamination during installation
- Low or missing battery indicator
- End of life signal indicates CO sensor has reached depletion state and time to replace
- 1 year warranty from date of purchase
- 5 year limited warranty on CO sensor

CO1209 Series Carbon Monoxide Alarm

Model Number	Part Number	Voltage	Form A/ Form C Relay
CO1209	918-0009-002	120VAC/9VDC	
CO1209F	918-0010-002	120VAC/9VDC	●

Electrical Specifications

Operating Voltage.....120VAC, 60Hz
Operating Current.....0.045 amps
Operating Current (Relay Options).....0.070 amps
Operating Ambient Temp Range.....40°F to 100°F
Alarm Horn Rating.....85dBA at 10 feet
Size.....Diameter: 6.25 in. (15.875 cm) OA
(5.75 in. (14.605 cm) at Ceiling)
Depth: 1.8 in. (4.572 cm)
Secondary Power Source.....Alkaline 9VDC battery
Duracell® MN 1604
CO Sensing Cell.....Electrochemical Cell

CO1209 SERIES

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Approved with Conditions

Date: 02/17/16

CO1209 Series Wiring Diagrams

LIMITATIONS:

A Maximum of 18 CO1209 Series CO alarms may be connected together. Do not exceed 125 feet between each alarm. Do not exceed 1125 feet between the first and last alarm. NOTE: Gentex CO alarms can not be interconnected to alarms from other manufacturers.

The CO1209 may be tandem interconnected with current Gentex alarm models. To interconnect with Gentex 9000 Series, 7000 Series, 710CS Series, 7109CS Series, GN-200 Series & GN-300 Series the LEGACY TANDEM WIRE (RED/YELLOW) must be used. To interconnect with Gentex S1209 Series, GN-503 Series or to additional CO1209 Series, use the BROWN/YELLOW wire. Refer to installation manual for detailed information.

Relay Models

Models CO1209F

CAUTION:

RED/YELLOW & BROWN/YELLOW wire to be capped when not in use. This wire is for tandem connection only. Do not connect to any other circuit.

Architect & Engineering Specifications

The carbon monoxide alarm shall be a Gentex Model CO1209/CO1209F or approved equal which shall provide at least the following features and functions:

1. The carbon monoxide alarm shall utilize an electrochemical sensing element with expected 5-year life.
2. The carbon monoxide alarm is calibrated not to detect CO levels below 30PPM and will not alarm when exposed to constant levels of 30PPM for 30 days. The device will alarm at the following levels: 70 PPM CO between 1 to 4 hours. 150 PPM CO between 10 to 50 minutes. 400 PPM 4 to 15 minutes.
3. The CO1209 Series device shall have a Duracell® MN 1604 9VDC alkaline battery as a back-up in the event building power is lost.
4. The 9VDC battery impedance shall be verified by the circuit of the smoke/CO alarm.
5. The CO alarm shall provide an indicator when the battery is low in power or high impedance or is missing.
6. The CO alarm will provide an audible indicator at end of life of CO sensor.
7. A solid state piezo alarm rated at 85dBA at 10ft.
8. A visual LED monitor (condition indicator) will slow pulse in normal operation.
9. A red color LED will indicate presence of CO at the unit.
10. An easily accessible test button shall be provided. Push down on button for self test. Push button and hold until CO alarm activates for functional test. If device does not go into alarm, the device is not working properly.
11. The device shall have tandem interconnect capability of up to 12 units or 6 units with relay.
12. The CO1209 Series alarm shall have the capability to tandem interconnect with all Gentex tandem capable CO alarms, smoke alarms or combination smoke/CO alarms, including 7000/70003 Series, 9000/9003 Series, 710CS/713CS Series, 7109CS/7139CS Series, GN-200/ GN-300 Series, S1209 Series and GN-503 Series.
13. The CO alarm shall be non-latching (self-restoring).
14. Unit must be ANSI/UL 2034 listed for both wall and ceiling mount.
15. Unit shall be listed by Underwriters Laboratories and California State Fire Marshal (CSFM).

All equipment shall be completely factory assembled and tested, and the contractor shall be prepared to submit a certified letter testifying to this condition. Alarms which do not meet all of the requirements of this specification will not be considered.

For complete product specifications, refer to product installation manual.

24 units per carton
24 pounds per carton

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