RP-2002(E)

AgentReleaseControl Panel

NOTIFIER® by Honeywell

Conventional Releasing Panels

General

The RP-2002 is a six-zone FACP for single and dual hazard agent releasing applications. The RP-2002 provides reliable fire detection, signaling and protection for commercial, indus- trial and institutional buildings requiring agent-based releasing. The RP-2002 is compatible with System Sensor's i3 detectors which are conventional smoke detectors that can transmit a maintenance trouble signal to the FACP indicating the need for cleaning and a supervisory 'freeze' signal when the ambient temperature falls below the detector rating of approximately 45°F (7.22°C). In addition, the control panel is compatible with conventional input devices such as two-wire smoke detectors, four-wire smoke detectors, pull stations, waterflow devices, tamper switches and other normally-open contact devices. Refer to the Notifier Device Compatibility Document for a com- plete listing of compatible devices.

Four outputs are programmable as NACs (Notification Appli- ance Circuits) or releasing circuits. Three programmable Form-C relays (factory programmed for Alarm, Trouble and Supervisory) and 24 VDC special application resettable and non-resettable power outputs are also included on the main circuit board. The RP-2002 supervises all wiring, AC voltage, battery charger and battery level.

Activation of a compatible smoke detector or any normally- open fire alarm initiating device will activate audible and visual signaling devices, illuminate an indicator, display alarm infor- mation on the panel's LCD, sound the piezo sounder at the FACP, activate the FACP alarm relay and operate an optional module used to notify a remote station or initiate an auxiliary control function.

The RP-2002E offers the same features as the RP-2002 but allows connection to 220/240 VAC. Unless otherwise speci- fied, the information in this data sheet applies to both the 110/ 120 VAC and 220/240 VAC versions of the panels.

Features

- Listed to UL Standard 864, 9th edition.
- FM Approved.
- Designed for agent releasing standards NFPA 12, 12A, 12B, and 2001.
- Meets International Building Code (IBC) seismic require- ments.
- Disable/Enable control per input zone and output zone.
- Extensive transient protection.
- Dual hazard operation.
- Adjustable pre-discharge, discharge and waterflow delay timers.
- Cross-zone (double-interlock) capability.
- Six programmable Style B (Class B) IDCs (Initiating Device Circuit).
- System Sensor i3 series detector compatible.
- Four programmable Style Y (Class B) output circuits - (spe- cial application power).
- Strobe synchronization:
  - –System Sensor
  - – Wheelock
  - – Gentex
  - – Faraday
  - – Amseco
- Three programmable Form-C relays.
- 7.0 amps total 24 VDC output current.
- Resettable and non-resettable output power.
- Built-in Programmer.
- ANN-BUS connector for communication with optional devices (up to 8 total of any of the following):
  - –N-ANN-80 Remote LCD Annunciator
  - –N-ANN-I/O LED Driver
  - –N-ANN-S/PG Printer Modules
  - –N-ANN-RLY Relay Module
  - –N-ANN-LED Annunciator Module
- 80-character LCD display (backlit).
- Real-time clock/calendar with daylight savings time control.
- History log with 256 event storage.
- Piezo sounder for alarm, trouble and supervisory.
- 24 volt operation.
- Low AC voltage sense.
- Outputs Programmable for:
  - –Releasing Circuits or NACS
- NACs programmable for:
  - –Silence Inhibit
  - – Auto-Silence
  - –Strobe Synchronization
  - –Selective Silence (horn-strobe mute)
  - –Temporal or Steady Signal
  - –Silenceable or Non-silenceable
  - –Release Stage Sounder

- Automatic battery charger with charger supervision.
- Optional Dress Panel DP-51050 (red).
- Optional Trim Ring TR-CE (red) for semi-flush mounting the cabinet.
- Optional N-CAC-5X Class A Converter Module for Outputs and IDCs.
- Optional 4XTM Municipal Box Transmitter Module.
- Optional Digital Alarm Communicators (411, 411UD, 411UDAC).

  Optional ANN-SEC card for a secondary ANN-BUS.

PROGRAMMING AND SOFTWARE:

- Custom English labels (per point) may be manually entered or selected from an internal library file.
- Programmable Abort operation.
- Three programmable Form-C relay outputs.
- Pre-programmed and custom application templates.
- Continuous fire protection during online programming at the front panel.

  Program Check automatically catches common errors not linked to any zone or input point.

USER INTERFACE:

- Integral 80-character LCD display with backlighting.
- Real-time clock/calendar with automatic daylight savings adjustments.
- ANN-Bus for connection to remote annunciators.
- Audible or silent walk test capabilities.
- Piezo sounder for alarm, trouble, and supervisory.

Controls and Indicators

LED INDICATORS

- FIRE ALARM (red)
- SUPERVISORY (yellow)
- TROUBLE (yellow)
- AC POWER (green)
- ALARM SILENCED (yellow)
- DISCHARGED (red)
- PRE-DISCHARGE (red indicator)
- ABORT (yellow indicator)

CONTROL BUTTONS

- ACKNOWLEDGE
- ALARM SILENCE
- SYSTEM RESET (lamp test)
- DRILL

AC Power – TB1

- ***RP-2002:*** 120 VAC, 60 Hz, 3.66 amps.
- ***RP-2002E:*** 240 VAC, 50/60 Hz, 2.085 amps.
- ***Wire size:*** minimum #14 AWG (2.0 mm2) with 600V insulation.
- Supervised, nonpower-limited.

Battery (sealed lead acid only) – J12:

- ***Maximum Charging Circuit - Normal Flat Charge:*** 27.6 VDC @ 1.4 amp. Supervised, nonpower-limited.
- ***Maximum Charger Capacity:*** 26 Amp Hour battery (two 18 Amp Hour batteries can be housed in the FACP cabinet. Larger batteries require separate battery box such as the BB-26 or NFS-LBBR).
- ***Minimum Battery Size:*** 7 Amp Hour.

Initiating Device Circuits - TB4 and TB6

- Zones 1 - 5 on TB4.
- Zone 6 on TB6.
- Supervised and power-limited circuitry.
- Style B (Class B) wiring with Style D (Class A) option.
- Normal Operating Voltage: Nominal 20 VDC.
- Alarm Current: 15 mA minimum.
- Short Circuit Current: 40 mA max.
- Maximum Loop Resistance: 100 Ohms.
- End-of-Line Resistor: 4.7K Ohms, 1/2 watt (PN 71252).
- Standby Current: 4 mA.

Refer to the Notifier Device Compatibility Document for listed compatible devices.

Notification Appliance and Releasing Circuit(s) - TB5 and TB7

- Four Output Circuits.
- Style Y (Class B) or Style Z (Class A) with optional converter module.
- Special Application power.
- Supervised and power-limited circuitry.
- Normal Operating Voltage: Nominal 24 VDC.
- Maximum Signaling Current: 7.0 amps (3.0 amps special application, 300 mA regulated maximum per NAC).

  End-of-Line Resistor: 4.7K Ohms, 1/2 watt (PN 71252).

- Max. Wiring Voltage Drop: 2 VDC.

Refer to the Notifier Device Compatibility Document for compatible listed devices.

Form-C Relays - Programmable - TB8

- Relay 1 (factory default programmed as Alarm Relay)
- Relay 2 (factory default programmed as fail-safe Trouble Relay)
- Relay 3 (factory default programmed as Supervisory Relay)
- Relay Contact Ratings:

  –2 amps @ 30 VDC (resistive)

  –0.5 amps @ 30 VAC (resistive)

Auxiliary Trouble Input – J6

The Auxiliary Trouble Input is an open collector circuit which can be used to monitor external devices for trouble conditions. It can be connected to the trouble bus of a peripheral, such as a power supply, which is compatible with open collector circuits.

Special Application Resettable Power - TB9

- ***Operating Voltage:*** Nominal 24 VDC.
- ***Maximum Available Current:*** 500 mA - appropriate for powering 4-wire smoke detectors (see note).
- Power-limited Circuitry.

Refer to the Notifier Device Compatibility Document for compatible listed devices.

NOTE: Total current for resettable power, nonresettable power and Output Circuits must not exceed 7.0 amps.

Special Application Resettable or Nonresettable Power - TB9

- ***Operating Voltage:*** Nominal 24 VDC.
- ***Maximum Available Current:*** 500 mA (see note 1).
- Power-limited Circuitry.
- Jumper selectable by JP31 for resettable or nonresettable power.

Refer to the Notifier Device Compatibility Document for compatible listed devices.

Product Line Information

RP-2002: Six-zone, 24 volt Agent Release Control Panel (includes backbox, power supply, technical manual, and a frame & post operating instruction sheet) for single and dual hazard agent releasing applications.

RP-2002E: Same as above but allows connection to 220/240 VAC.

N-CAC-5X: Class A Converter Module can be used to convert the Style B (Class B) Initiating Device Circuits to Style D (Class A) and Style Y (Class B) Output Circuits to Style Z (Class A).

NOTE: Two Class A Converter modules are required to convert all four Output Circuits and six Initiating Device Circuits.

4XTM: Transmitter Module provides a supervised output for local energy municipal box transmitter and alarm and trouble reverse polarity. It includes a disable switch and disable trouble LED.

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 or outside the cabinet, provides 10 programmable Form-C relays. (See ***DN-7107***).

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***).

ANN-SEC: Optional card for a secondary ANN-BUS. ***See #53944.***

NBG-12LR: Agent Release Pull Stations designed for use with Notifier Fire Alarm Control Panels with releasing capabilities.

DP-51050: Dress panel (red) is available as an option. The dress panel restricts access to the system wiring while allowing access to the membrane switch panel.

TR-CE: Trim-ring (red) is available as an option. The trim-ring allows semi-flushing mounting of the cabinet.

BB-26: Battery box, holds up to two 26 Amp Hour batteries and CHG-75.

NFS-LBBR: Battery box, houses two 55 Amp Hour batteries, red.

SEISKIT-COMMENC: Seismic mounting kit; required for seismic-certified installations.

BAT Series Batteries: Refer to DN-6933.

PRN-6: UL-listed compatible event printer. Dot-matrix, tractor-fed paper, 120 VAC. ***PRN-7:*** UL-listed compatible event printer. Dot-matrix, tractor-
fed paper, 120 VAC.

PRT-PK-CABLE: Programming cable. Used to update the FACP's flash firmware. (Also requires an RS485 to RS232 converter).

SYSTEM SPECIFICATIONS

System Capacity

- Annunciators.....8

Electrical Specifications

- ***RP-2002 (FLPS-7 PowerSupply):***120 VAC, 60 Hz, 3.66 amps
  RP-2002E (FLPS-7 Power Supply): 240 VAC, 50/60 Hz, 2.085 amps
- ***Wire size:*** minimum 14 AWG (2.0 mm²) with 600 V insulation, supervised, nonpower-limited

Cabinet Specifications

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

Shipping Specifications

Weight: 24.05 lbs. (10.9 kg)

Dimensions:

–Height 20.00" (50.80cm)

–Width 22.50" (57.15cm)

–Depth 8.50" (21.59cm)

Temperature and Humidity Ranges

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

NFPA Standards

TheRP-2002(E) complies with the following NFPA 72 Fire Alarm Systems requirements:

–NFPA 12 CO2 Extinguishing Systems

–NFPA 12A Halon 1301 Extinguishing Systems

–NFPA 12B Halon 1211 Extinguishing Systems

–NFPA 72 National Fire Alarm Code for Local Fire Alarm Systems and Remote Station Fire Alarm Systems (requires an optional Remote Station Output Module)

–NFPA 2001 Clean Agent Fire Extinguishing Systems

Agency Listings and Approvals

The listings and approvals below apply to the basic RP-2002(E) control panels. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- ***UL:*** S635
- ***FM approved***
- ***CSFM:*** 7165-0028:0245
- ***MEA:*** 333-07-E
- ***Seismic Listing: Reference certificiate of compliance VMA - 45894-01 by the VMC Group***

NOTE: For ULC-listed model, see DN-60444.

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.

Assembled in the USA

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

NBG-12LR and NBG-12LRA

Dual-ActionAgentRelease Stations

Releasing Panels

General

The NBG-12LR and NBG-12LRA are Agent Release Stations designed for use with NOTIFIER Fire Alarm Control Panels with releasing capabilities.

Features

•Non-coded, dual-action operation.

•Made with durable polycarbonate.

•Optional surface backbox.

NBG-12LRA

- Abortswitch.
- Power-on indication.
- Released indication. Manual
- release (dual-action).

NBG-12LR

- Dual-action release only.

Applications

The NBG-12LRA and NBG-12LR are ideal for areas such as clean rooms and computer rooms where a chemical agent is used to extinguish a fire.

Specifications

- **TemperatureRange:** 32°F to 120°F (0°C to 49°C).
- **Relative Humidity:** 10% to 93% (noncondensing).
- **For use indoors in a dry location.**

Product Line Information

NBG-12LRA: Agentreleasestationwith abort switch, Release LED, and Normal LED.

NBG-12LR: Dual-action agent release station.

SBA-10: Surface backbox for NBG-12LRA, metal. Dimensions 4.5” (11.43 cm) W x 8.188” (20.8 cm) L x 1.375” (3.49 cm) D.

SB-10: Surface backbox for NBG-12LR, metal. Dimensions 4.125” (10.48 cm) W x 5.5” (13.97 cm) L x 1.375” (3.49 cm) D.

SB-I/O: Surface backbox for NBG-12LR, plastic.

BG12TR: Optional trim ring for semi-flush mounting.

Agency Listings and Approvals

Insome cases,certain modules may notbelisted by certain approval agencies, or listing may be in progress. Consult factory for latest listing status.

- **UL/ULC Listed:** S692.
- **MEA Listed:** 67-20-E.
- **FM Approved.**
- **CSFM:** 7150-0028:0199.
- **FDNY:** COA#6114 (NFS2-3030), COA#6121 (NFS2-640, NFS-320).
- **U.S. Coast Guard, Lloyd’s Register, American Bureau of Shipping (ABS):** For information on marine applications, see DN-60688.

Dual Action NBG-12LR

Dual Action NBG-12LRA

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www.notifier.com

NBG-12LX

AddressableManual Pull Station

NOTIFIER® by Honeywell

Intelligent/Addressable Devices

‘General

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

Features

- Maintenance personnel can open station for inspection and address setting without causing an alarm condition.
- Built-in bicolor LED, which is visible through the handle of the station, flashes in normal operation and latches steady red when in alarm.
- Handle latches in down position and the word “ACTIVATED” appears to clearly indicate the station has been operated.
- Captive screw terminals wire-ready for easy connection to SLC loop (accepts up to 12 AWG/3.25 mm^2 wire).
- Can be surface mounted (with SB-10 or SB-I/O) or semi-flush mounted. Semi-flush mount to a standard single-gang, double-gang, or 4" (10.16 cm) square electrical box.
- Smooth dual-action design.
- Meets ADAAG controls and operating mechanisms guidelines (Section 4.1.3[13]); meets ADA requirement for 5 lb. maximum activation force.
- Highly visible.
- Attractive shape and textured finish.
- Key reset.
- Includes Braille text on station handle.
- Optional trim ring (BG12TR).
- Meets UL 38, Standard for Manually Actuated Signaling Boxes.
- Up to 99 NBG-12LX stations per loop on CLIP protocol loops.
- Up to 159 NBG-12LX stations per loop on FlashScan® protocol loops.
- Dual-color LED blinks green to indicate normal on FlashScan® systems.

Construction

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

Specifications

- **Shipping Weight:** 9.6 oz. (272.15 g)
- **Normal operating voltage:** 24 VDC.
- **Maximum SLC loop voltage:** 28.0 VDC.
- **Maximum SLC standby current:** 375 µA.
- **Maximum SLC alarm current:** 5 mA.
- **Temperature Range:** 32°F to 120°F (0°C to 49°C)
- **Relative Humidity:** 10% to 93% (noncondensing)
- **For use indoors in a dry location**

The NBG-12LX
Addressable Manual Pull Station

Installation

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

Operation

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

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

Architectural/Engineering Specifications

Manual Fire Alarm Stations shall be non-coded, with a key-operated reset lock in order that they may be tested, and so designed that after actual Emergency Operation, they cannot be restored to normal except by use of a key. An operated sta- tion 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 operat- ing instructions provided on the cover. The word FIRE shall appear on the front of the stations in white letters, 1.00 inches (2.54 cm) or larger. Stations shall be suitable for surface mounting on matching backbox SB-10 or SB-I/O; or semi-flush mounting on a standard single-gang, double-gang, or

4"(10.16 cm) square electrical box, and shall be installed within the limits defined by the Americans with Disabilities Act (ADA) or per national/local requirements. Manual Stations shall be Underwriters Laboratories listed.

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

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

ProductLineInformation

NBG-12LX: Dual-action addressable pull station. Includes key locking feature. (Listed for Canadian and non-Canadian applications.)

NBG-12LXSP: Spanish/English labelled version.

NBG-12LXP: Portuguese labelled version.

SB-10: Surface backbox; metal.

SB-I/O: Surface backbox; plastic.

BG12TR: Optional trim ring.

17021: Keys, set of two.

NY-Plate: New York City trim plate.

Agency Listings and Approvals

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

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

FM Approved.

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

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

Made in the U.S. A.

NBG-12 Series

Non-Coded Conventional Manual Fire Alarm Pull Stations

NOTIFIER® by Honeywell

Conventional Initiating Devices

General

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

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

Features

- Aesthetically pleasing, highly visible design and color.
- Attractive contoured shape and light textured finish. Meets
- ADA 5 lb. maximum pull-force. Meets UL 38, Standard for
- Manually Actuated Signaling Boxes. Easily operated (single-
- or dual-action, model dependent),
  yet designed to prevent false alarms when bumped, shaken, or jarred. PUSH IN/PULL DOWN handle latches in the down position to
- clearly indicate the station has been operated.
- The word “ACTIVATED” appears on top of the handle in bright yellow, further indicating operation of the station.
- Operation handle features white arrows showing basic opera- tion direction for non-English-speaking persons.
- Braille text included on finger-hold area of operation handle and across top of handle.
- Multiple hex- and key-lock models available.
- U.S. patented hex-lock needs only a quarter-turn to lock/ unlock.
- Station can be opened for inspection and maintenance with- out initiating an alarm.
- Product ID label viewable by simply opening the cover; label is made of a durable long-life material.
- The words “NORMAL” and “ACTIVATED” are molded into the plastic adjacent to the alarm switch (located inside).
- Four-position terminal strip molded into backplate.
- Terminal strip includes Phillips combination-head captive 8/32
- screws for easy connection to Initiating Device Circuit (IDC).
- Terminal screws backed-out at factory and shipped ready to accept field wiring (up to 12 AWG/3.1 mm^2).
- Terminal numbers are molded into the backplate, eliminating the need for labels.
- Switch contacts are normally open.
- Can be surface-mounted (with **SB-10** or **SB-I/O**) or semi-
- flush mounted. Semi-flush mount to a standard single-gang, double-gang, or 4" (10.16 cm) square electrical box.
  Backplate is large enough to overlap a single-gang backbox cutout by 1/2" (1.27 cm).
- Optional trim ring (**BG12TR**).
- Spanish versions (FUEGO) available (**NBG-12LSP**, **NBG-12LPSP**).
- Designed to replace the legacy **NBG-10** Series.
- Models packaged in attractive, clear plastic (PVC), clam-
- shell-style, Point-of-Purchase packages. Packaging includes a cutaway dust/paint cover in shape of pull station.

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Construction

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

Operation

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

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

Specifications

PHYSICAL SPECIFICATIONS:

pull station		*SB-10*	*S B -I/O*	*WBB*	*WP -1 0*
H	5.500 in. (13.97 cm)	5.500 in. (13.97 cm)	5.601 in. (14.23 cm)	4.25 in. (10.79 cm)	6.000 in. (15.24 cm)
W	4.121 in. (10.467 cm)	4.125 in. (10.478 cm)	4.222 in. (10.72 cm)	4.25 in. (10.79 cm)	4.690 in. (11.913 cm)
D	1.390 in. (3.531 cm)	1.375 in. (3.493 cm)	1.439 in. (3.66 cm)	1.75 in. (4.445 cm)	2.000 in. (5.08 cm)

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ELECTRICAL SPECIFICATIONS:

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

ENGINEERING/ARCHITECTURAL SPECIFICATIONS

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

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

Pre-Signal Models

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

Agency Listings and Approvals

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

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

Product Line Information

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

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

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

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

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

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

NBG-12LOB: Dual-action pull station with key lock, outdoor applications listings (**NBG-12LO**), and backbox. Includes **SB-I/O** indoor/outdoor backbox, and sealing gasket. Model will also mount to **WP-10** weatherproof backbox in retrofit applications.
NOTE: NBG-12LOnot available separately;
NBG-12LO + approved backbox = NBG-12LOB.
Outdoor applicationslistingsapply toNBG-12LOBcombination.

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

SB-10: Surface-mount backbox, metal.

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

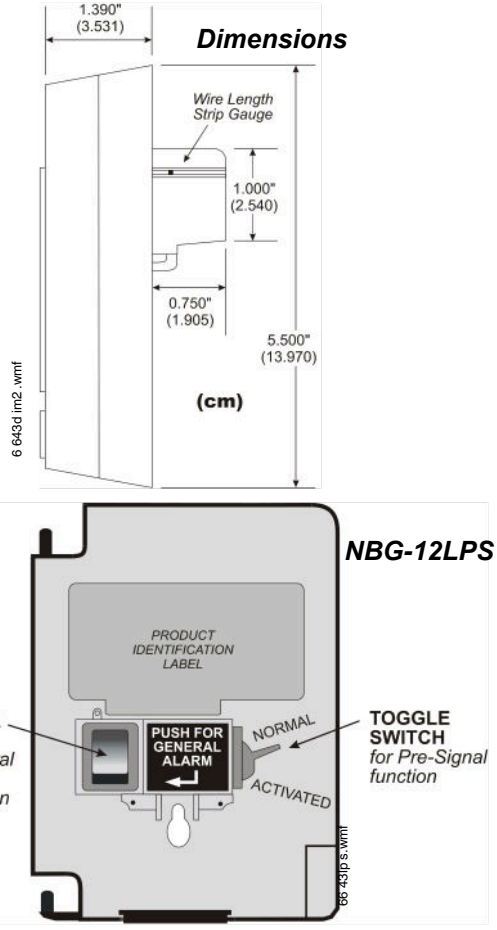
BG12TR: Optional trim ring for semi-flush mounting.

WP-10: Outdoor use backbox.

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

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

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



1151 and 2151

Low-ProfilePlug-InPhotoelectric and Ionization Smoke Detectors

Section: Conventional Initiating Devices

GENERAL

The System Sensor 1151 and 2151 are low-profile ionization and photoelectric, plug-in type smoke detector heads. They offer superb performance and reliability, meeting the stringent performance criteria designated by UL 268 and ULC, in a profile of just 1.66" (42 mm). Aesthetically pleasing to engineers, architects, building owners and homeowners, the 1151 and 2151 can be used with four different adapter bases in a variety of wiring configurations and voltages. Model 1151 (ionization sensor) and 2151 (photoelectronic sensor) share the same sleek low-profile design.

FEATURES

- Sleek, low-profile design — only 1.66" (42 mm).
- Same aesthetically pleasing housing design for ion and photo models.
- Two LEDs blink in standby mode, providing 360° visibility.
- Low standby current.
- Field sensitivity metering of detector to meet NFPA 72 requirement.
- Broad range of adapter bases available — four different voltages/wiring configurations.
- Removable cover for field cleaning.
- Sealed against back pressure air flow, dirt and insects.
- Built-in tamper resistant feature.
- Built-in magnetic test switch.
- Head easily plugs into adapter mounting base.
- Remote LED option.
- Listed to UL 268.
- Auxiliary relay contacts(optional).

CONSTRUCTION AND OPERATION

1151 Ionization The single source dual-chamber smoke detector which will sense the presence of smoke particles produced by fast combustion as well as slow smoldering fires. This chamber exhibits increased stability, significantly reduces nuisance alarms, and provides better performance at higher velocities.

The ***2151 Photoelectric*** smoke detector contains a unique optical sensing chamber designed to sense the presence of smoke particles produced by a wide range of combustion sources. A custom integrated circuit incorporates signal processing to help reduce false alarms. The sensing chambers of both models are sealed from back pressure air flow, dirt, and insects. The chambers are protected by a fine mesh screen which can be cleaned or replaced. Additional key features include interchangeable ion and photo heads, a variety ofmounting bases, and a full line of accessories.

GENERAL SPECIFICATIONS

Operating voltage/alarmcurrent:mountingbase dependent (seechart onpage2).

UL LISTED S911

MEA 205-94-E

FM 0X5A4.AY

California State Fire Marshal 7271-1209:157 *(1151)* 7272-1209:159 *(2151)*

1151 shown with flange-style base.

2151 shown with flangeless base.

Standby current: ***Ion (1151):*** 40 µA. ***Photo (2151):*** 85 µA.

Sensitivity: ***1151:*** 1.9% ± 0.62%/ft. ***2151:*** 3% ± 0.7%/ft.

Weight: 3.6 oz. (102 g). **Size:** 1.66" (42.164 mm) high; 4.1" (104.14 mm) diameter for ***unflanged base***;6.1" (154.94 mm) diameter for ***flanged base***.

Construction: Flame-retardant thermoplastic. **Temperature:** 32°F to 120°F (0°C to 49°C). **Humidity range:** 10 - 93% RH non-condensing.

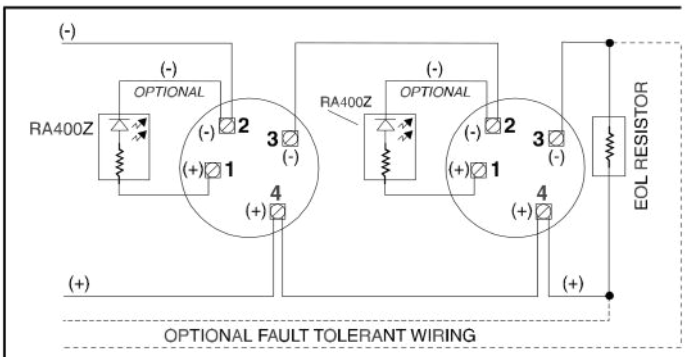
Air velocity: ***1151 Ion:*** 0 – 1,200 ft. (365.76 m)/min. ***2151 Photo:*** 0 – 3,000 ft. (914.4 m)/min.

A **MOUNTING BASE SELECTION GUIDE** is included on page 2 of this document.

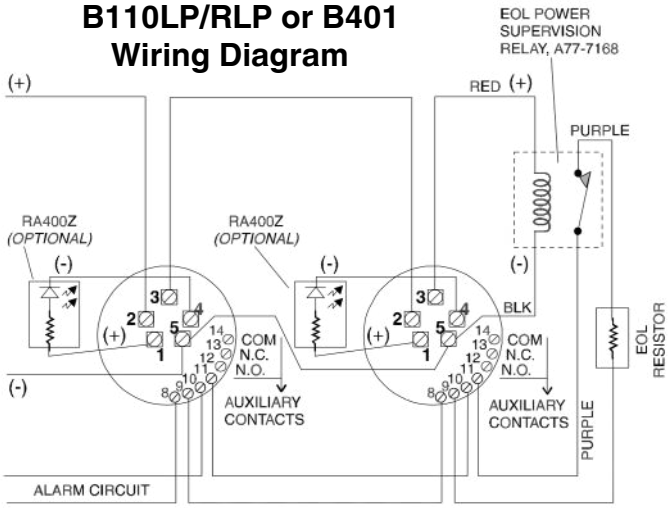
JUNCTION BOX SELECTION GUIDE: Box depth is contingent on base and wire size. Refer to National Electrical Code or local applicable codes for appropriate recommendations. ***Base B401*** can utilize a 50 mm or 60 mm junction box. ***Bases B110LP/RLP*** can utilize a single-gang, 3-1/2" (88.9 mm) octagonal, 4" (101.6 mm) octagonal, or 4" square junction box. ***Bases B112LP and B116LP*** can utilize a single-gang, 3-1/2" octagonal, 4" octagonal, 4" square, 50 mm, 60 mm, or 75 mm junction box. ***Base B114LP*** can utilize a 4" octagonal or 4" square junction box.

PRODUCT LINE INFORMATION

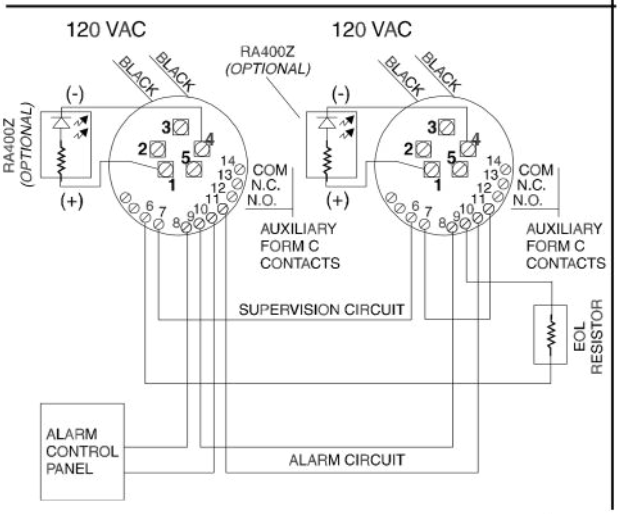
Model	*Description*
1151	Low-profile ***ionization*** detector *(requires*
2151	*B100LP Series base)* .
B110LP	Low-profile ***photoelectronic*** detector *(requires B100LP Series base)* .
B112LP	Base, 2-wire, low-profile flangeless, 12/24 VDC.
B114LP	Base, 4-wire, low-profile, Form-A & -C, 24 VDC.
B116LP	Base, 4-wire, low-profile, Form-A & -C + A
RA400Z	Supervisory, 120 VAC.
	Base, 2-wire, low-profile, Form-C, 24 VDC.
	Remote annunciator for two- or four-wire systems, 3 - 32 V. Use with ion and photo plug-in detectors. Fits standard single-gang electrical box.
B401BH	Sounder base. Requires an external 24 VDC power supply. Mounts to a 4" (101.6 mm) square electrical box (1-1/2" [38.1 mm] minimum depth, 2-1/8" [53.975 mm] recommended).
MOD400R	Detector sensitivity test tool. Use with most analog or digital multimeters. Satisfies NFPA 72 requirement for sensitivity testing.
SMK400	Surface-mounting kit provides for entry of surface wiring conduit. Use with B401 or B401R mounting bases only.
A77-716B	End-of-line relay for power supervision, 12/24 VDC systems.
M02-04-01	Test magnet.
XR-2	Detector removal tool. Allows installation and/or removal of 100 Series detector heads from base in high ceiling installations when used with the XP-4.
XP-4	Extension pole for XR-2. Comes in three five-foot sections.



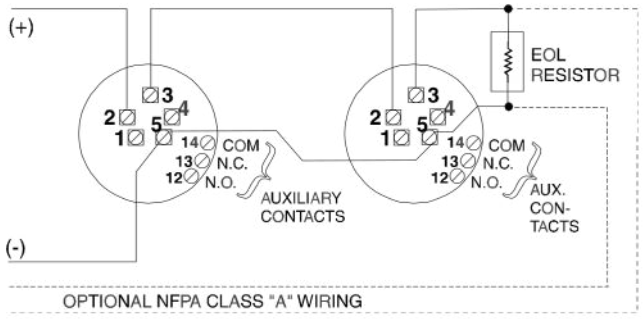
B110LP/RLP or B401 Wiring Diagram



B112LP Wiring Diagram



B114LP Wiring Diagram



B116LP Wiring Diagram

MOUNTING BASE SELECTION GUIDE

*Functionalitycontingenton panel compatibility. **Must be limited by control panel. ***Flangeless base.

RELAY CONTACT RATINGS: resistive or Inductive (60% power factor) load. ***Form-A:*** 2.0 A at 30 VAC/DC. ***Form-C:*** 0.6 A at 110 VDC; 2.0 A at 30 VDC; 1.0 A at 125 VAC; 2.0 A at 30 VAC.

Base Model Number	Loop Type	Current Limit Resistor	Alarm Contact Type	Nominal Voltage	Current Draw on Alarm (mA)
B110LP	2-wire *	No	—	12/24 VDC	10 to 100**
B110RLP	2-wire *	Yes	—	24 VDC	22 to 62
B112LP	4- wire	Yes	Form-A & -C	24 VDC	14 to 39
B114LP	4- wire	Yes	Form-A & -C + A Supervisory	120 VAC	75 mA AC maximum
B116LP	2-wire *	No	Form-C	24 VDC	12 to 100**
B401*	2-wire *	No	—	12/24 VDC	10 to 100**

SYSTEM SENSOR®
3825 Ohio Avenue, St. Charles, Illinois 60174
1-800-SENSOR2, FAX: 630-377-6495
www.systemsensor.com

5151 Plug-In Heat Detector

SPECIFICATIONS

Height:	1.64 inches (42 mm)
Diameter:	4.0 inches (102 mm)
Weight	2.8 oz. (80g)
Operating Temperature Range:	32° to 100°F (0° to 38°C)
Operating Humidity Range:	10% to 93% Relative Humidity noncondensing
Operating voltage:	8.5 to 35VDC
Standby Current:	80µA @24VDC
Alarm Current:	10mA Min. 130mA Max. (Must be limited by control panel)
Latching Alarm:	Reset by momentary power interruption
Sensitivity:	135°F (57°C) Fixed or 15°F/min rate-of-rise

BEfORE INSTALLING

This detector must be installed in compliance with the control panel installation manual and meet the requirements of the authority having jurisdiction. Inaddition, the National Fire Protection Association has published codes, standards, and recommended practices for the installation and use of detectors, NFPA 72.

Therefore, the installer must be familiar with these requirements, with local codes, and any special requirements of the authority having jurisdiction.

NOTICE: This manual should be left with the owner/user of this equipment.

IMPORTANT: The detector must be tested and maintained regularly following NFPA 72 requirements. The detector should be cleaned at least once a year.

GENERAL DESCRIPTION

The 5151 is a rate-of-rise with fixed temperature alarm, conventional 2-wire thermal detector. This detector is designed to provide open area protection with 50-foot spacing capability as approved by UL 521, RTI rating is classified as FAST in accordance with FM 3210.

Two LEDs on each detector provide local 360° visible alarm indication. They flash every five seconds indicating that power is applied and the detector is working properly. The LEDs latch on in alarm. LEDs will be off when a trouble condition exists indicating that the detector sensitivity is outside the listed limit. Remote LED annunciator capability is standard and may be implemented through an optional accessory RA100Z. The alarm can be reset only by a momentary power interruption. This detector may be tested by activating the internal reed switch with a magnet.

BASE WIRING GUIDE

Refer to the installation instructions for the plug-in detector base for electrical specifications and wiring instructions. The base provides screw terminals for power and remote annunciator connections.

INSTALLATION

NOTE: All wiring must conform to applicable local codes, ordinances, and regulations.

NOTE: Verify that all detector bases are installed, that the initiating-device circuits have been tested, and that the wiring is correct. (Refer to detector base manual for testing procedure.)

⚠WARNING

Remove power from initiating-device circuits before installing detectors.

1. Install detectors:
   a. Place the detector into the detector base.
   b. Turn the detector clockwise until the detector drops into place.
   c. Continue turning detector clockwise to lock it in place.
2. Tamper Resistance:
   The detector bases can be made tamper resistant. When capability is enabled, detectors cannot be removed from the base without the use of a tool. See the detector base installation manual of the detector base for details in using this capability.
3. After all detectors have been installed, apply power to the control unit.
4. Test the detector using the magnet as described under TESTING.
5. Reset the detector at the system control panel.
6. Notify the proper authorities that the system is back on line.

TAMPERRESISTANCE

The detector bases include a feature that, when activated, prevents removal of the detector without the use of a tool. Refer to the installation instruction manual of the detector base to make use of this capability.

TESTING

Before testing, notify the proper authorities that the smoke detector system is undergoing maintenance and will temporarily be out of service. Disable the zone or system undergoing maintenance to prevent unwanted alarms. Detec- tors must be tested after installation and as part of periodic maintenance. Test 5151 as follows:

NOTE: Before testing the detector, check to ensure the LEDs blink. If they do not, the detector has lost power (check the wiring), it is defective (return it for repair), or the detector sensitivity is outside the listed limits.

A. Test Magnet (p/n M02-04-01 or M02-09-00)

1. Place the magnet against the cover in the location designated by the raised mark to activate the test feature (see Figure 1).
2. The LEDs should latch ON within 5 seconds indicating alarm and annunciating the panel.

B. Direct Heat Method (Hair dryer of 1000-1500 watts)

1. A hair dryer of 1000-1500 watts should be used to test the thermistor. Direct the heat toward the thermistors, holding the heat source approximately 12 inches from the detector in order to avoid damaging the plastic housing.
2. The LEDs on the detector should light when the temperature at the detector reaches the set point.
3. Reset the detector at the system control panel. The detector will reset only after it has had sufficient time to cool.

Notify the proper authorities that the system is back on line.

Detectors that fail these tests should be cleaned as described under MAINTENANCE and retested. If the detectors still fail these tests, they should be returned for repair.

MAINTENANCE

NOTE: Before cleaning notify the proper authorities that the system is undergoing maintenance, and therefore the system will temporarily be out of service. Disable the loop or system undergoing maintenance to prevent unwanted alarms.

It is recommended that the sensor be removed from its mounting base for easier cleaning and that sensors be cleaned at least once a year. Use a vacuum cleaner to remove dust from the sensing chamber.

fIGURE 1. VIEWS SHOWING POSITION Of TEST MAGNET:

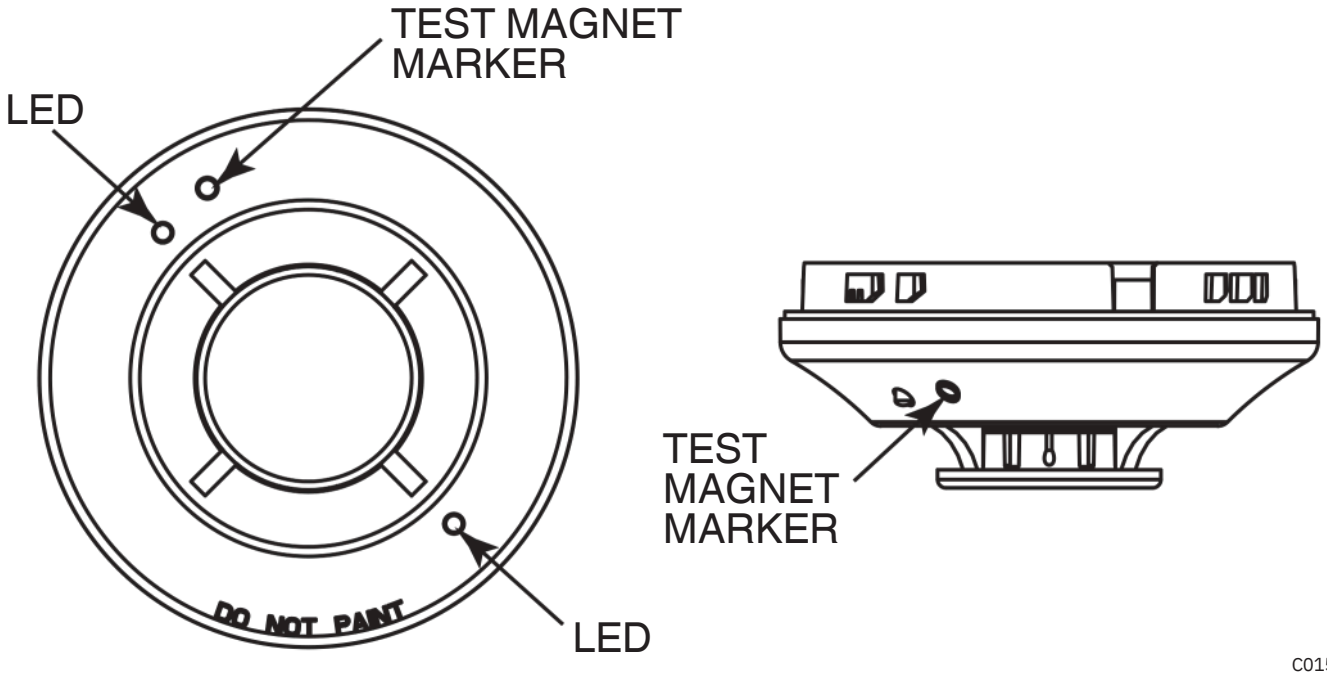


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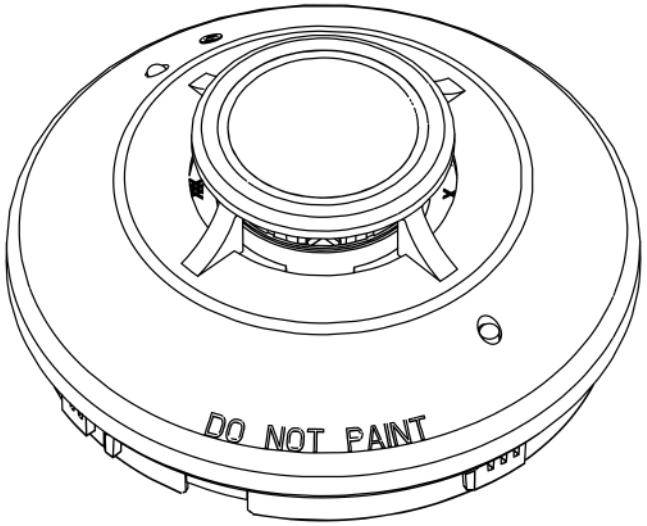
fIGURE 2.



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Please refer to insert for the Limitations of Fire Alarm Systems

THREE-YEAR LIMITED WARRANTY

System Sensor warrants its enclosed heat detector to be free from defects in materials and workmanship under normal use and service for a period of three years from date of manufacture. System Sensor makes no other express warranty for this heat detector. No agent, representative, dealer, or employee of the Company has the authority to increase or alter the obligations or limitations of this Warranty. The Company's obligation of this Warranty shall be limited to the repair or replacement of any part of the heat detector which is found to be defective in materials or workmanship under normal use and service during the three year period commencing with the date of manufacture. After phoning System Sensor's toll free number 800-SENSOR2 (736-7672) for a Return Authorization number, send defective units postage prepaid to: System Sensor, Repair Department, #_____,3825 Ohio Avenue, St. Charles, IL 60174. Please include a note describing the malfunction and suspected cause of failure. The Company shall not be obligated to repair or replace units which are found to be defective because of damage, unreasonable use, modifications, or alterations occurring after the date of manufacture. In no case shall the Company be liable for any consequential or incidental damages for breach of this or any other Warranty, expressed or implied whatsoever, even if the loss or damage is caused by the Company's negligence or fault. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

SSM Series

Alarm Bells

Audio/Visual Appliances

General

System Sensor's SSM Series alarm bells are low-current, high-decibel notification appliances for use in fire and burglary systems or other signaling applications. They come pre-wired to reduce installation time, and also incorporate a polarized electrical design for use with supervision circuitry.

With reliable performance, SSM Series alarm bells provide loud, resonant tones. They operate on 24 VDC and are motor-driven.

SSM Series alarm bells offer simplified installation. For indoor use, SSM Series alarm bells mount to a standard 4" (10.16 cm)square electrical box. For outdoor applications, a WBB weatherproof backbox is used.

6910pho1.jpg

Features

- Approved for indoor or outdoor (with WBB backbox) use. Low
- current draw. High dB output. Three sizes available: 6" (15.24
- cm), 8" (20.32 cm), and
- 10" (25.40 cm) diameter.
  24 VDC models; polarized for use with supervision circuitry.
- Bells mount directly to standard 4" (10.16 cm) square elec-
- trical box.

Specifications

Regulated voltage: 24VDC.

Operating voltagerange: 16 to 33 VDC.

Maximum Current: DC 31.1 mA/FWR - 53.5 mA.

Operating temperaturerange: –31°F (–35°C) to +150°F (+66°C).

Termination: provided with two sets of leads for in/out wiring.

Service use: Fire Alarm, General Signaling, Burglar Alarm.

Engineering and Architectural Specifications

Modelshall be a SSM Series alarm bell. Bells shall have underdome strikers and operating mechanisms. Gongs on said bell shall be no smaller than nominal 6" (15.24 cm), 8" (20.32 cm), or 10" (25.40 cm) (specify size) with an operating voltage of 24 VDC. Bells shall be suitable for surface or semi- flush mounting. Outdoor surface-mounted installations shall be weatherproof (using optional WBB weatherproof backbox); otherwise, bells shall mount to a standard 4" (10.16 cm) square electrical box having a minimum projection of 2.5" (6.35 cm). Bells shall be located as shown on the installation drawings or as determined by the Authority Having Jurisdic- tion. Bells shall be Listed for indoor/outdoor use by Underwrit- ers Laboratories, ULC (Canada), and the California State Fire Marshal, and approved by Factory Mutual and MEA.

Agency Listings and Approvals

These listings and approvals applyto themodules 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:** S4011
- **ULC Listed:** CS549
- **MEA Listed:** 331-01-E
- **FM Approved**
- **CSFM:** 7135-1653:125

Ordering Information

SSM24-6: 6" (15.24 cm) bell, 24 VDC, polarized, 82 dBA.

SSM24-8:8" (20.32 cm) bell, 24 VDC, polarized, 80 dBA.

SSM24-8A: Canadian model of 8" bell above.

SSM24-10: 10" (25.40 cm) bell, 24 VDC, polarized, 81 dBA.

WBB: Weatherproof backbox.

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

Indoor Selectable-Output Horns, Strobes, and Horn Strobes for Wall Applications

Audio/Visual Devices

General

The L-Seriesoffers the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry with lower current draws and modern aesthetics. With white and red plastic housings, standard and small footprint devices, and plain, FIRE-printed devices, L-Series can meet virtually any applica- tion requirement.

The L-Series product line of wall-mount horns, strobes, and horn strobes include a variety of features that increase their application versatility while simplifying installation. All devices feature plug-in designs with minimal intrusion into the back box, making installations fast and foolproof while virtually eliminating costly and time-consuming ground faults.

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

Installers can also easily adapt devices to a suit a wide range of application requirements using field-selectable candela settings, automatic selection of 12- or 24-volt operation, and a rotary switch for horn tones with two volume selections.

P2RL

P2GWL

SGWL

HWL

Features

- Updated modern aesthetics.
- Small profile devices for Horns and Horn Strobes.
- Plug-in design with minimal intrusion into the back box.
- Tamper-resistant construction.
- Automatic selection of 12- or 24-volt operation at 15 and 30 candela.
- Field-selectable candela settings on wall units: 15, 30, 75, 95, 110, 135, and 185.
- Horn rated at 88+ dBA at 16 volts.
- Rotary switch for horn tone and two volume selections.
- Universal mounting plate for all standard and all compact wall units.
- Mounting plate shorting spring checks wiring continuity. before device installation.
- Electrically Compatible with legacy SpectrAlert® and SpectrAlert Advance devices.
- Compatible with MDL3 sync module.
- Listed for wall mounting only.

Architectural/Engineering Specifications

General: L-Series standard horns, strobes, and horn strobes shall mount to a standard 2" x 4" x 17/8" back box, 4" × 4" × 1½" back box, 4" octagon back box, or double-gang back box. L-Series compact products shall mount to a single-gang 2" × 4" × 17/8" back box. A universal mounting plate shall be used for mounting ceiling and wall products for all standard-size models and a separate universal mounting plate shall be used for mounting compact wall models. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, L-Series products, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt-rated notification appliance circuit outputs shall operate between 8.5 and 17.5 volts; 24-volt-rated c appliance circuit outputs shall operate between 16.5 and 33 volts. Indoor L-Series products shall operate between 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified unaltered power supply. Strobes and horn strobes shall have field-select- able candela settings including 15, 30, 75, 95, 110, 135, and 185.

Strobe. The strobe shall be a L-Series 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 L-Series 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 visi- ble 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 two audibility options and an option to switch between a temporal three pattern and a non-temporal (contin- uous) pattern. These options are set by a multiple position switch. The horn on horn strobe models shall operate on a coded or non-coded power supply.

Synchronization Module. The module shall be a Sync•Circuit model MDL3 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 three. 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 411/6"×411/16"×2/8" back box. 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.

PHYSICAL/ELECTRICAL SPECIFICATIONS

- **Standard Operating Temperature:** 32°F to 120°F (0°C to 49°C).
- **Humidity Range:** 10 to 93% non-condensing.
- **Strobe Flash Rate:** 1 flash per second.
- **Nominal Voltage:** Regulated 12 DC or regulated 24 DC/ FWR1 (full wave rectified).
- **Operating Voltage Range2:** 8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal).
- **Operating Voltage Range:** MDL3 Sync Module 8.5 to 17.5 V (12 V nominal) or 16.5 to 33 V (24 V nominal).
- **Input Terminal Wire Gauge:** 12 to 18 AWG.
- **Wall-Mount Dimensions (including lens):** 5.6" L × 4.7" W × 1.25" D (143 mm L × 119 mm W × 32 mm D).
- **Compact Wall-Mount Dimensions (including lens):** 5.26" L x 3.46" W x 1.93" D (133 mm L x 88 mm W x 49 mm D).
- **Horn Dimensions:** 5.6" L × 4.7" W × 1.25" D (143 mm L × 119 mm W × 32 mm D).
- **Compact Horn Dimensions:** 5.25" L x 3.45" W x 1.25" D (133mm L x 88mm W x 32mm D).

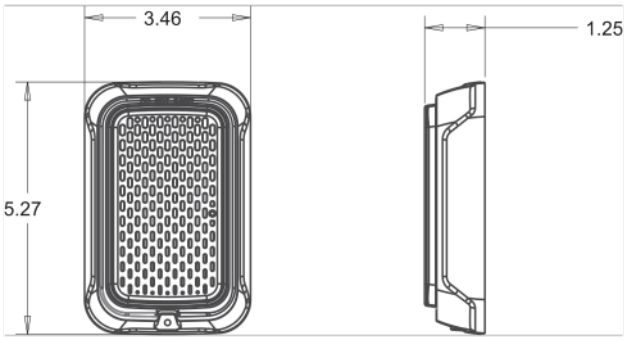
NOTE:

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

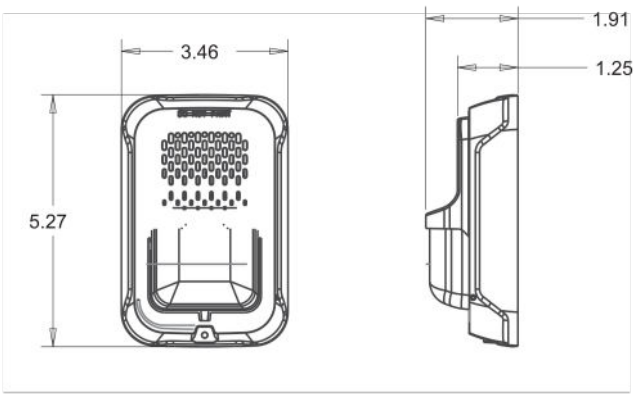
2. P, S, PC, and SC products will operate at 12 V nominal only for 15 cd and 30 cd.

L-Series Drawings

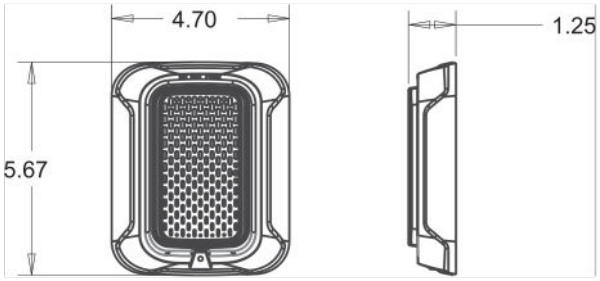
Compact Horn



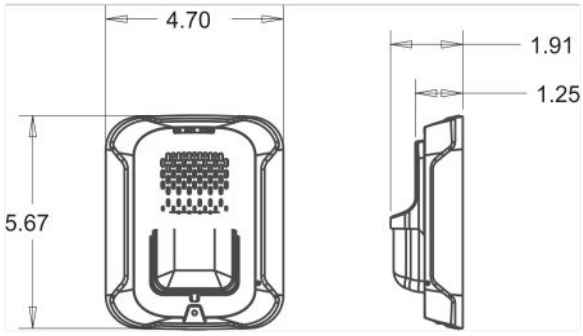
Compact Combo



Horn



Combo



UL Current Draw Data

ULMAX.STROBECURRENTDRAW (MA RMS)

	8-17.5 Volts	16-33 Volts	
Candela	**DC**	**DC**	**FWR**
15	88	43	60
30	143	63	83
75	N/A	107	136
95	N/A	121	155
110	N/A	148	179
135	N/A	172	209
185	N/A	222	257

UL MAX. HORN CURRENT DRAW (MA RMS)

The3.1k is thesound ofthe mini-horns. The EM (which stands for Electro-mechanical) is the sound of the SpectrAlert Advance line which uses an algorithm that hops frequencies between 2Hz and 4Hz.

		8-17.5 Volts	16-33 Volts	
Sound Pattern	**dB**	**DC**	**DC**	**FWR**
Temporal	High	39	44	54
Temporal	Low	28	32	54
Non-Temporal	High	43	47	54
Non-Temporal	Low	29	32	54
3.1 KHz Temporal	High	39	41	54
3.1 KHz Temporal	Low	29	32	54
3.1 KHz Non-Temporal	High	42	43	54
3.1 KHz Non-Temporal	Low	28	29	54
Coded	High	43	47	54
3.1 KHz Coded	High	42	43	54

UL MAX. CURRENT DRAW (MA RMS), 2-WIRE HORN STROBE, CANDELA RANGE (15-115 CD)

The 3.1k is the sound of the mini-horns. The EM (which stands for Electro-mechanical) is the sound of the SpectrAlert Advance line which uses an algorithm that hops frequencies between 2Hz and 4Hz.

	DCInput: 8-17.5 Volts		DC Input: 16-33 Volts							FWR Input: 16 FWR						
	15 cd	**30 cd**	**15 cd**	**30 cd**	**75 cd**	**95 cd**	**110 cd**	**135 cd**	**185 cd**	**15 cd**	**30 cd**	**75 cd**	**95 cd**	**110 cd**	**135 cd**	**185 cd**
Temporal High	98	158	54	74	121	142	162	196	245	83	107	156	177	198	234	287
Temporal Low	93	154	44	65	111	133	157	184	235	68	91	145	165	185	223	271
Non-Temporal High	106	166	73	94	139	160	182	211	262	111	135	185	207	230	264	316
Non-TemporalLow	93	156	51	71	119	139	162	190	239	79	104	157	175	197	235	283
3.1K Temporal High	93	156	53	73	119	140	164	190	242	81	105	155	177	196	234	284
3.1K Temporal Low	91	154	45	66	112	133	160	185	235	68	90	145	166	186	222	276
3.1K Non-Temporal High	99	162	69	90	135	157	175	208	261	104	131	177	204	230	264	326
3.1K Non-Temporal Low	93	156	52	72	119	138	162	192	242	77	102	156	177	199	234	291

HORN TONES AND SOUND OUTPUT DATA: HORN AND HORN STROBE OUTPUT (DBA)

The 3.1k is the sound of the mini-horns. The EM (which stands for Electro-mechanical) is the sound of the SpectrAlert Advance line which uses an algorithm that hops frequencies between 2Hz and 4Hz. In the coded positions, temporal coding must be provided by the NAC. If the NAC voltage is held constant, the horn output will remain constantly on.

Pos.	Sound Pattern	dB	8-17.5 Volts	16-33 Volts	
			DC	DC	FWR
1	Temporal	High	84	89	89
2	Temporal	Low	75	83	83
3	Non-Temporal	High	85	90	90
4	Non-Temporal	Low	76	84	84
5	3.1 KHz Temporal	High	83	88	88
6	3.1 KHz Temporal	Low	76	82	82
7	3.1 KHz Non-Temporal	High	84	89	89
8	3.1 KHz Non-Temporal	Low	77	83	83
9†	Coded	High	85	90	90
10†	3.1 KHz Coded	High	84	89	89

†Settings 9 and 10 are not available on the 2-wire horn strobes.

Agency Listings and Approvals

The listings and approvals below apply to L-series devices. 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**
  - –S4011 Wall Horn Strobes
  - –S5512 Wall Strobes
  - –S5512 Wall Horns
  - –S5512 Strobe-only ALERT devices
- **FM Approved** (All except ALERT models)
- **CSFM Listed:** 7135-1653:0503 (Wall Horns and Wall Horn Strobes), 7125-1653:0504 (Wall Strobes)

Product Line Information

WALL HORN STROBES

P2WL(A)(-E)(-F), P2RL(A)(-E)(-F). 2-Wire, Horn Strobe (White, Red).

P2GWL(A)(-E)(-F), P2GRL(A)(-E)(-F). 2-Wire, Compact Horn Strobe (White, Red).

P2WL(A)-P, P2RL(A)-P. 2-Wire, Horn Strobe, Plain (White, Red).

P2WL-SP, P2RL-SP. 2-Wire, Horn Strobe, FUEGO (White, Red).

WALL STROBES

SWL(A)(-E)(-F),SRL(A)(-E)(-F). Strobe, Red (White, Red).

SGWL(A)(-E)(-F), SGRL(A)(-E)(-F). Compact Strobe (White, Red).

SWL(A)-P, SRL(A)-P. Strobe, Plain (White, Red).

SRL-SP. Strobe, FUEGO (Red).

SWL-CLR-ALERT. Strobe, ALERT (White).

SWL-ALERT. Strobe, Wall, Amber Lens, ALERT (White).

HORNS

HWL(A),HRL(A). Horn (White, Red).

HGWL(A), HGRL(A). Compact Horn (White, Red).

ACCESSORIES

TR-2W, TR-2. Universal Wall Trim Ring (White, Red).

SBBWL, SBBRL. Wall Surface Mount Back Box (White, Red).

SBBGWL, SBBGRL. Compact Wall Surface Mount Back Box (White, Red).

NOTE: "A" suffix indicates ULC-Listed model. ULC-listed devices include required French labeling. See Agency Listings for listing details.

NOTE: "A" suffix indicates ULC-listed models, ULC models have FIRE/FEU marking on cover.

NOTE: ULC-listed models add "-E" suffix for English only "FIRE" marking on cover.

NOTE: ULC-listed models add "-F" suffix for French only "FEU" marking on cover.

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

Outdoor Selectable-Output Horns, Strobes, and Horn Strobes

SpectrAlert® Advance outdoor selectable-output horns, strobes, and horn strobes are rich with features that cut installation times and maximize profits.

SPECTRAlert ADVANCE from System Sensor

Features

- Automaticselection of 12- or 24-volt operation at 15 and 15/75 candela
- Field-selectable candela settings on wall and ceiling units: 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185
- Plug-in design with minimal intrusion into the back box
- Tamper-resistant construction
- Universal mounting plate for wall- and ceiling-mount units
- Mounting plate shorting spring tests wiring continuity before devices are installed
- Weatherproof per NEMA 4X, IP56
- Listed to UL 1638 (strobe) and UL 464 (horn)
- Rated from –40°F to 151°F
- Horn rated at 88+ dBA at 16 volts
- Rotary switch for horn tone and three volume selections
- Compatible with System Sensor synchronization protocol and legacy SpectrAlert products

The SpectrAlert Advance series offers the broadest line of outdoor horns, strobes, and horn strobes in the industry. With white and red plastic housings, wall and ceiling mounting options, and plain and FIRE-printed devices, SpectrAlert Advance can meet virtually any application requirement.

SpectrAlert Advance outdoor horns, strobes, and horn strobes can be used indoors or outdoors in wet or dry applications, and can provide reliable operation from –40°F to 151°F.

Like the entire SpectrAlert Advance product line, these devices include a variety of features that increase their application versatility while simplifying installation. All devices feature plug-in designs with minimal intrusion into the back box, which make installations fast and foolproof while virtually eliminating costly and time-consuming ground faults.

All horns, strobes, and horn strobes use a universal mounting plate with an onboard shorting spring that tests wiring continuity before the device is installed, protecting devices from damage. In addition, field-selectable candela settings, automatic selection of 12- or 24-volt operation, and a rotary switch for horn tones with three volume selections enables installers to easily adapt devices to suit a wide range of application requirements.

Agency Listings

SIGNALING UL LISTED
S4011 (chimes, horn strobes, horns)
S3593 (outdoor and alert strobes)

FM APPROVED
3023572

MEA approved
MEA452-05-E

7300-1653:187 (outdoor strobes)
7125-1653:188 (horn strobes, chime strobes)
7135-1653:189 (horns, chimes)

SpectrAlert Advance Outdoor Horn, Strobe, and Horn Strobe Specifications

Architect/Engineer Specifications

General

SpectrAlert Advance outdoor horns, strobes and horn strobes shall mount to a weatherproof back box. 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. Outdoor SpectrAlert Advance products shall operate between –40 and 151 degrees Fahrenheit 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, and 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. The strobe must be installed with its weatherproof back box in order to remain outdoor approved per UL. The strobe shall be suitable for use in wet environments.

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 three-pattern and a non-temporal (continuous) pattern. These options shall be set by a multiple position switch. On four-wire products, the strobe shall be powered independently of the sounder. The horn or horn strobe models shall operate on a coded or non-coded power supply. The horn strobe must be installed with its weatherproof back box in order to remain outdoor approved per UL. The horn strobe shall be suitable for use in wet environments.

Physical/Electrical Specifications

Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12 DC/FWR or regulated 24 DC/FWR1
Operating Voltage Range2	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Ceiling-Mount Dimensions (including lens)	6.8″ diameter × 2.5″ high (173 mm diameter × 64 mm high)
Wall-Mount Dimensions (including lens)	5.6″ L × 4.7″ W × 2.5″ D (142 mm L × 119 mm W × 64 mm D)
Horn Dimensions	5.6″ L × 4.7″ W × 1.3″ D (142 mm L × 119 mm W × 33 mm D)
Wall-Mount Weatherproof Back Box Dimensions (SA-WBB)	5.7″ L × 5.1″ W × 2.0″ D (145 mm L × 130 mm W × 51 mm D)
Ceiling-Mount Weatherproof Back Box Dimensions (SA-WBBC)	7.1″ diameter × 2.0″ high (180 mm diameter × 51 mm high)

Notes:

1. Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.
2. P, S, PC, and SC products will operate at 12 V nominal only for 15 and 15/75 cd.

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

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

UL Max. Horn Current Draw (mA RMS)

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

UL Max. Current Draw (mA RMS), 2-Wire Horn Strobe, Standard Candela Range (15–115 cd)

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

UL Max. Current Draw (mA RMS), 2-Wire Horn Strobe, High Candela Range (135–185 cd)

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

Candela Derating

For K series products used at low temperatures, listed candela ratings must be reduced in accordance with this table.

Strobe Output (cd)

Listed Candela	Candela rating at –40°F
15	Do not use below 32°F
15/75	
30	
75	44
95	70
110	110
115	115
135	135
150	150
177	177
185	185

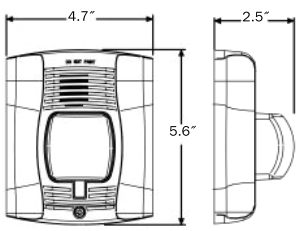
Horn Tones and Sound Output Data

Horn and Horn Strobe Output (dBA)

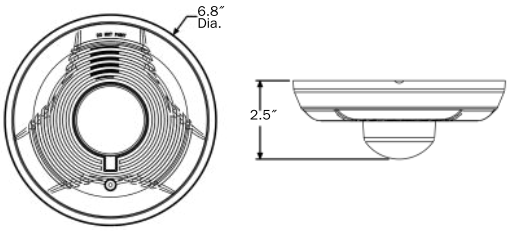
			8–17.5 Volts DC		16–33 Volts DC		24-Volt Nominal Reverberant		24-Volt Nominal Anechoic	
Switch Position	Sound Patern	dB	78	FWR	84	FWR	DC	FWR	DC	FWR
1	Temporal	High	74	78	80	84	88	88	99	98
2	Temporal	Medium	71	74	76	80	86	86	96	96
3	Temporal	Low	82	73	88	76	83	80	94	89
4	Non-Temporal	High	78	82	85	88	93	92	100	100
5	Non-Temporal	Medium	75	78	81	85	90	90	98	98
6	Non-Temporal	Low	82	75	88	81	88	84	96	92
7†	Coded	High	78	82	85	88	93	92	101	101
8†	Coded	Medium	75	78	81	85	90	90	97	98
9†	Coded	Low		75		81	88	85	96	92

† Settings 7, 8, and 9 are not available on 2-wire horn strobe.

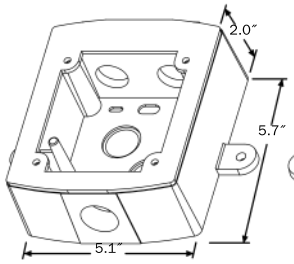
SpectrAlert Advance Dimensions



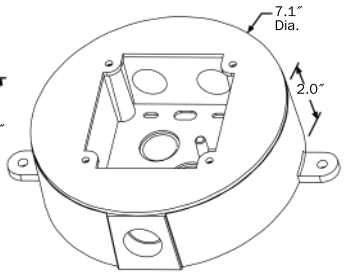
Wall-mount horn strobes



Ceiling-mount horn strobes



Wall weatherproof back box



Ceiling weatherproof back box

SpectrAlert Advance Ordering Information

Model	Description
Wall Horn Strobes	
P2RK* † P2RHK* †	2-Wire Horn Strobe, Standard cd, Red, Outdoor 2-Wire Horn
P2WK*† P2WHK*†	Strobe, High cd, Red, Outdoor 2-Wire Horn Strobe, Standard cd,
P4RK † P4WK	White, Outdoor 2-Wire Horn Strobe, High cd, White, Outdoor 4-
P2RHK-120 **Wall**	Wire Horn Strobe, Standard cd, Red, Outdoor 4-Wire Horn Strobe,
Strobes SRK* †	Standard cd, White, Outdoor 2-Wire Horn Strobe, High cd, Red,
SRHK* † SWK* †	Outdoor, 120 V
SWHK*†	
	Strobe, Standard cd, Red, Outdoor
	Strobe, High cd, Red, Outdoor
	Strobe, Standard cd, White, Outdoor
	Strobe, High cd, White, Outdoor

Model	Description
Ceiling Horn Strobes	
PC2RK	2-Wire Horn Strobe, Standard cd, Red, Outdoor
PC2RHK	2-Wire Horn Strobe, High cd, Red, Outdoor
PC2WK	2-Wire, Horn Strobe, Standard cd, White, Outdoor
PC2WHK	2-Wire, Horn Strobe High cd, White, Outdoor
PC4WK	4-Wire, Horn Strobe, Standard cd, White, Outdoor
PC4WHK	4-Wire, Horn Strobe, High cd, White, Outdoor
Ceiling Strobes	
SCRK	Strobe, Standard cd, Red, Outdoor
SCRHK	Strobe, High cd, Red, Outdoor
SCWK	Strobe, Standard cd, White, Outdoor
SCWHK	Strobe, High cd, White, Outdoor
Horns	
HRK	Horn, Red, Outdoor

Notes:

* Add "-P" to model number for plainhousing (no"FIRE" marking on cover), e.g., P2RK-P.
† Add "-R" to model number for weatherproof replacement device (no back box included), only for use with weatherproof outdoor flush mounting plate, WTP and WTPW.

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

When replacing standard outdoor units both the device and back box must be replaced.

SYSTEM SENSOR

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Phone: 800-SENSOR2 • Fax: 630-377-6495

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