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Project 24-2500

Permit Submittals



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Duct Smoke Detector Accessories

for Notifier/System Sensor Products



Miscellaneous

General

Duct smoke detector accessories add functionality to the duct smoke system by allowing quick, convenient inspections at eye level and effective audible and visual notification options. All System Sensor duct smoke detectors and accessories are UL listed.

Specifications

APA151 PIEZO ANNUNCIATOR

The **APA151** piezo annunciator, which replaces the APA451 with a new, improved look, provides an audible alarm signal, a red LED to indicate alarm status, and a green LED to indicate power status. It is intended for use with System Sensor 4-wire conventional duct smoke detector applications without a system control panel, to comply with NFPA 90A.



APA151.wmf

APA151 Piezo Annunciator	
Voltage	Regulated 24 VDC
Operating Voltage	16 to 33 VDC
Maximum Alarm Current	30 mA
Temperature Range	32°F to 120°F (0°C to 49°C)
Relative Humidity	10 to 93%, non-condensing
Wire Gauge	12 to 18 AWG
Dimensions	4.6" H x 2.9" W x .45" D

MHR/MHW MINI-HORNS

The **MHR** and **MHW** SpectrAlert® Advance mini-horns feature temporal or continuous tones at high and low volume settings. Their small footprint allows mounting to single-gang back boxes for applications where a small device is desired.



MHR.wmf, MHW.wmf



60535cov.wmf

MHR/MHW SpectrAlert Advance Mini-Horns	
Voltage	Regulated 12 DC or FWR (Full Wave Rectified) or Regulated 24 VDC or FWR
Operating Voltage	8 to 33 VDC (9 to 33 VDC with Sync-Circuit™ Module)
Sounder Current Draw	22 mA RMS max. at 8 to 17.5 Volts DC 17 mA RMS max. at 8 to 17.5 Volts FWR 29 mA RMS max. at 16 to 33 Volts DC 25 mA RMS max. at 16 to 33 Volts FWR
Temperature Range	32°F to 120°F (0°C to 49°C)
Humidity Range	10 to 93% non-condensing
Nominal Sounder Frequency	3 kHz
Wire Gauge	12 to 18 AWG
Dimensions	4.6"H x 2.9"W x 0.45"D

RA100Z/RA100ZA REMOTE ANNUNCIATORS

The RA100Z and RA100ZA remote annunciators are designed for both conventional and intelligent applications. Their red LED provides visual indication of an alarm condition.



RA100Z.wmf

RA100Z/RA100ZA Remote Annunciator	
Voltage Range	Conventional System: 3.1 to 32 VDC Intelligent System: 18 to 32 VDC
Maximum Alarm Current	10 mA
Dimensions	4.6"H x 2.8"W x 1.3"D

RTS151/RTS151KEY REMOTE TEST STATIONS

The RTS151 and RTS151KEY remote test stations are automatic fire detector accessories designed to test duct smoke detectors from a convenient location. For 4-wire detectors, the RTS151KEY test station features a multi-colored LED that alternates between steady green and red. For 2-wire detectors, the LED illuminates red for alarm.



RTS151.wmf, RTS151KEY.wmf

RTS151 Remote Test Station	
Power Requirements	Alarm LED 2.8 to 32 VDC, 10 mA max. Total Current: 95 mA max.
Test Switch	10 VA @ 32 VDC
Reset Switch	10 VA @ 32 VDC
Alarm Response Time	40 seconds max.
Temperature Range	14°F to 140°F (-10°C to 60°C)
Relative Humidity	95% non-condensing
Wire Gauge	14 to 18 AWG
Dimensions	4.8"H x 2.9W x 1.4"D

RTS151KEY Remote Test Station with Key	
Power Requirements	Power LED (Green): 14 to 35 VDC, 12 mA max. Alarm LED (RED): 2.8 to 32 VDC, 12 mA max.
Alarm Response Time	40 seconds max.
Temperature Range	14°F to 140°F (-10°C to 60°C)
Relative Humidity	95% non-condensing
Wire Gauge	14 to 18 AWG
Dimensions	4.6"H x 2.75W x 1.8"D

RTS2/RTS-AOS MULTI-SIGNALLING ACCESSORIES

The RTS2 and RTS2-AOS multi-signalling accessories are designed to work with InnovairFlex 4-wire conventional duct smoke detectors. These accessories include a key switch that can be used to select one of two connected sensors to be tested, reset, or both by a push button switch. They also enable sensitivity measurements using the SENS-RDR sensitivity reader (sold separately). The AOS (Add-On Strobe) is an optional accessory included with the RTS2-AOS model.



RTS-AOS.wmf, AOS.wmf

RTS2 and RTS-AOS Multi-signalling Accessory	
Voltage	20 to 29 VDC
Power Requirements	Standby: 3.0 mA max. Trouble: 16.0 mA max. Alarm without Strobe: 30 mA max. Alarm with Strobe: 55 mA max.
Sounder	85 dBA at 10 ft.
Temperature Range	14°F to 140°F (-10°C to 60°C)
Relative Humidity	95% non-condensing
Wire Gauge	14 to 22 AWG
Dimensions	4.8"W x 5.3"H x 1.6"D

Product Line Information

APA151: Piezo Annunciator

MHR: Mini-Horn, Red

MHW: Mini-Horn, White

RA100Z/RA100ZA: Remote Annunciator

RTS151: Remote Test Station

RTS151KEY: Remote Test Station with Key

RTS2: Multi-signaling Accessory

AOS: Add-On Strobe

RTS2-AOS: Multi-Signaling Accessory

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.

Agency Listings and Approvals

The listings and approvals below apply to the basic products. 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: S4011 (APA 151, MHR, MHW), S2522 (RTS2, RA100Z, RTS151, RTS151KEY, RTS2-AOS)**
- **FM Approved**
- **CSFM: 7135-1653:0212**

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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

ND-100 and ND-100R

Low-Flow Photoelectric Duct Smoke Detectors for FireWarden Series Panels

 **NOTIFIER**[®]
by Honeywell

Addressable

General

NOTIFIER ND-100 and ND-100R Intelligent Photoelectric Smoke Duct Detectors provide **low-flow** technology that enables duct smoke detection throughout a broad range of air-flow environments in HVAC applications. The low-flow technology can detect smoke at air speed velocities of 100 feet per minute (0.5 m/sec) or greater, while continuing the same reliable performance to 4,000 feet per minute (20.32 m/sec). The intelligent low-flow duct detectors sample air currents passing through a duct and gives dependable performance for shutdown of fans, blowers, and air conditioning systems, preventing the spread of toxic smoke and fire gases through the protected area.

ND-100 and ND-100R are used exclusively with the NOTIFIER FireWarden Series addressable control panels. ND-100 and ND-100R provide a remote alarm output for use with auxiliary devices, such as the RA400Z(A) remote LED annunciator, as well as remote test capability with the RTS451(A) or RTS451KEY(A) Remote Test Stations. The ND-100R features a Form-C relay.

Applications

Duct smoke detectors have specific limitations, they are:

- **NOT** a substitute for open area smoke detectors.
- **NOT** a substitute for early warning detection.
- **NOT** a replacement for a building's regular fire detection system.

Please call NOTIFIER for a copy of System Sensor's application guide, *Proper Use of Smoke Detectors in Duct Applications*, (A05-1004-00).

Features

- Air velocity rating from 100 to 4,000 feet per minute (0.5 to 20.32 m/sec).
- Patented telescopic sampling tube.
- Easily accessible code wheels for addressing detector.
- Outside mounting tabs.
- Mounts to round or rectangular ducts from 1' to 12' (0.3 to 3.7 meters) wide.
- Transparent cover for convenient visual inspection.
- Powered outputs for remote LED, and remote test and sounder.
- Two Form-C auxiliary contacts (ND-100R).
- Patented cover-tamper trouble signal (ND-100R).
- ND-100R requires both com line power and one of the following: 24 VAC/VDC or 120/220 VAC for operation.

Installation

Refer to installation manuals for control panel and duct detector for detailed information or to install equipment. Installation manuals for detectors: I56-2853-000R for ND-100, I56-2854-000R for ND-100R.

Wiring: For signal wiring (the wiring between detectors or from detectors to auxiliary devices), it is recommended that single conductor wire be no smaller than 18 AWG (0.821 mm²). The duct smoke detector terminals accommodate wire sizes up to 12 AWG (3.31 mm²). Flexible conduit is recommended for the last



foot (30.48 cm) of conduit; solid conduit connections may be used if desired.

Smoke detectors and alarm system control panels have specifications for Signaling Line Circuit (SLC) wiring. Consult the control panel specifications for wiring requirements before wiring the detector loop. The detectors are designed for ease of wiring; their housing provides a terminal strip with clamping plates.

LED Features: If programmed with the system control panel, two LEDs on each duct smoke detector light to provide local visible indication.

Programming specifications/requirements for intelligent system control panels: The number of devices that can have their LEDs programmed to illuminate is limited by the features of the panel and the individual devices. The actual number of devices is determined by the control panel and its ability to supply LED current. Refer to the control panel installation manual for details.

Product Line Information

NOTE:

ND-100: Addressable low-flow duct detector housing with photoelectric smoke detector.

ND-100R: Addressable low-flow duct detector housing with photoelectric smoke detector with DPDT relay.

A5053FL: Replacement photoelectric sensor board.

A5067: Replacement power board (without relay).

A5060: Replacement power board (with relay).

ST-1.5: Metal sampling tube, duct widths 1' to 2' (see *Inlet Tube Selection table on page 2 for metric lengths*).

ST-3: Metal sampling tube, duct widths 2' to 4'.

ST-5: Metal sampling tube, duct widths 4' to 8'.

ST-10: Metal sampling tube, duct widths 8' to 12'.

RA400Z: Remote annunciator alarm LED.

RTS451: Remote test station. Mounts in single-gang box. Includes red alarm LED and magnet test switch.

RTS451KEY: Key-activated remote test station.

F36-09-11: Replacement filters.

M02-04-00: Test magnet.

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

S08-39-01: Replacement photo insect screen.

P48-61-00: Replacement end cap for plastic sampling tube.

P48-21-00: Replacement end cap for metal sampling tube.

T80-71-00: Replacement plastic sampling tube.

Specifications

FOR ND-100

Operating voltage range: 15 to 30 VDC.

Standby current: 300 μ A @ 24 VDC (one communication every 5 seconds with LED blink enabled).

Operating temperature range: 32° to 131°F (0° to 55°C).

Operating humidity range: 10% to 93% relative humidity (non-condensing).

Storage temperature range: -22°F to +158°F (-30°C to +70°C).

Duct air velocity: 100 to 4,000 feet/min (0.5 to 20.32 m/s).

Shipping weight: 3.35 lbs. (1.5 kg).

Dimensions: 14.75" (37 cm) length x 5.50" (14 cm) width x 2.75" (7 cm) deep.

ND-100 accessory current loads @ 24 VDC: **PA400:** refer to PA400 data sheet DN-2405. **RA400Z:** 0 mA standby, 10 mA maximum in alarm. **RTS451 and RTS451KEY:** 0 mA standby, 7.5 mA maximum in alarm.

FOR ND-100R

Operating voltage range: 20 to 30 VDC, 24 VAC/VDC, 120/240 VAC auxiliary power (requires a separate auxiliary source).

Standby current: 300 μ A @ 24 VDC (one communication every 5 seconds with LED blink enabled).

Operating temperature range: 32° to 131°F (0° to 55°C).

Operating humidity range: 10% to 93% relative humidity (non-condensing).

Storage temperature range: -22°F to +158°F (-30°C to +70°C).

Duct air velocity: 100 to 4,000 feet/min (0.5 to 20.32 m/s).

Shipping weight: 3.90 lbs. (1.8 kg).

Dimensions: 14.75" (37 cm) length x 5.50" (14 cm) width x 2.75" (7 cm) deep.

ND-100R CONTACT RATINGS

Alarm auxiliary contacts (DPDT): 10 A @ 30 VDC; 10 A @ 277 VAC (0.75 power factor); 240 VA @ 249 VAC (0.4 power factor); 1/8 HP @ 120 VAC; 1/4 HP @ 240 VAC.

Minimum switching current for auxiliary contact must be 100 mA DC minimum @ 5 VDC.

Supervisory contact (SPST): 2.0 A @ 30 VDC (resistive).

ND-100R accessory current loads @ 24 VDC: **PA400:** refer to PA400 data sheet DN-2405. **RA400Z:** 0 mA standby, 12 mA maximum in alarm. **RTS451 and RTS451KEY:** 0 mA standby, 10 mA maximum in alarm.

ND-100R CURRENT REQUIREMENTS (USING NO ACCESSORIES)

20 – 30 VDC power supply voltage: 26 mA maximum standby current; 87 mA maximum alarm current; 3 to 10 second alarm response time; 2 second power-up time.

24 VAC, 50/60 Hz power supply voltage: 65 mA RMS maximum standby current; 182 mA RMS maximum alarm current; 3 to 10 second alarm response time; 2 second power-up time.

120 VAC, 50/60 Hz power supply voltage: 44 mA RMS maximum standby current; 52 mA RMS maximum alarm current; 3 to 10 second alarm response time; 2 second power-up time.

220/240 VAC, 50/60 Hz power supply voltage: 25 mA RMS maximum standby current; 30 mA RMS maximum alarm current; 3 to 10 second alarm response time; 2 second power-up time.

Agency Listings and Approvals

The listings and approvals below apply to ND-100 and ND-100R Intelligent Low-Flow Photoelectric Smoke Duct 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:** files S635 (ND-100), S1115 (ND-100R).
- **CSFM approved:** files 3240-0028:232 (ND-100R) and 3240-0028:236 (ND-100).
- **FM approved.**
- **MEA approved:** 320-02-E Vol. 2.
- **Maryland State Fire Marshal approved:** Permits #2173 (ND-100R), #2174 (ND-100).

Inlet Tube Selection

Outside Duct Width	Inlet Tube*
Up to 2 feet (0.6096 m)	ST-1.5(A)
2 to 4 feet (0.6096 to 1.21292 m)	ST-3(A)
4 to 8 feet (1.21292 to 2.4384 m)	ST-5(A)
8 to 12 feet (2.4384 to 3.6576 m)	ST-10(A)

*Inlet tube is required and must be purchased separately. Order one inlet tube for each duct smoke detector ordered.

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www.notifier.com

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

Control and Relay Modules



Intelligent / Addressable Devices

General

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

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

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



FCM-1(A)

Features

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

Applications

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

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

Construction

- The face plate is made of off-white heat-resistant plastic.
- Controls include two rotary switches for direct-dial entry of address (01-159).

- The FCM-1(A) is configured for a single Class B (Style Y) or Class A (Style Z) Notification Appliance Circuit.
- The FRM-1(A) provides two Form-C dry contacts that switch together.

Operation

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

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

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

Specifications for FCM-1(A)

Normal operating voltage: 15 to 32 VDC.

Maximum current draw: 6.5 mA (LED on).

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

Maximum NAC Line Loss: 4 VDC.

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

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

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

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

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

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

Accessories: SMB500 Electrical Box; CB500 Barrier

Specifications for FRM-1(A)

Normal operating voltage: 15 to 32 VDC.

Maximum current draw: 6.5 mA (LED on).

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

EOL resistance: not used.

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

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

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

Accessories: SMB500 Electrical Box; CB500 Barrier

Agency Listings and Approvals

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

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

Contact Ratings for FRM-1(A)

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

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

Product Line Information

NOTE: "A" suffix indicates ULC Listed model.

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

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

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

SMB500: Optional Surface-Mount Backbox.

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

NOTE: For installation instructions, see the following documents:

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

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www.notifier.com

SMOKE DETECTORS

FSP-951 Series Photoelectric Smoke Detector

Notifier FSP-951 Series intelligent plug-in smoke detectors are designed for both performance and aesthetics.

Overview



Feedback

Notifier FSP-951 Series intelligent plug-in smoke detectors are designed for both performance and aesthetics. A new modern, sleek, contemporary design and enhanced optical sensing chamber is engineered to sense smoke produced by a wide range of combustion sources in accordance with more stringent code standards. The FSP-951 Series detector sensitivity can be programmed in the control panel software. Sensitivity is continuously monitored and reported to the panel. Point ID capability allows each detector's address to be set with rotary, decimal address switches, providing exact detector location for selective maintenance when chamber contamination reaches an unacceptable level. The FSP-951R is a remote test capable detector for use with DNR Series duct detector housings. FSP-951 series detectors are available for both FlashScan[®] and CLIP applications as designated.

Features & Benefits:

- New modern profile for improved aesthetics
- Low standby current
- Stable communication technique with noise immunity

Certifications:

- UL/ULC Listed: S911
- FM Approved
- CSFM: 7272-0028:0503

Specifications

- **Brand** : NOTIFIER
- **Product Type** : Smoke Detector

Product Number



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FS 51

Photoelectric Smoke Detector, FSP-951 Series, 32 to 120F, White

FS 51-BP

Photoelectric Smoke Detector, FSP-951 Series, 32 to 120F, White, Bulk Pack of 10

FS 51-IV

Photoelectric Smoke Detector, FSP-951 Series, 32 to 120F, Ivory

[Feedback](#)



Indoor Selectable-Output Speaker Strobes and Dual Voltage Evacuation Speakers for Ceiling Applications

SpectrAlert® Advance selectable-output speaker strobes and dual-voltage evacuation speakers can reduce ground faults and enable faster installation.

Features

- Plug-in design and protective cover reduce ground faults
- Universal mounting plate with an onboard shorting spring tests wiring continuity before installation
- No extension ring required
- Field selectable candela settings:
Standard: 15, 15/75, 30, 75, 95, 110, 115
High: 135, 150, 177, 185
- Automatic selection of 12- or 24-volt operation at 15 and 15/75 candela
- Rotary switch simplifies field selection of speaker voltage (25 and 70.7 Vrms) and power settings (¼, ½, 1 and 2 watts)
- SP speakers offer high fidelity sound output
- SPV speakers offer high volume sound output
- Compatible with System Sensor synchronization protocol
- Electrical compatibility with existing SpectrAlert products
- Tamper-resistant construction
- Listed for ceiling or wall mounting

Agency Listings



The SpectrAlert Advance Series of speakers and speaker strobes reduce costly ground faults using a plug-in design and universal mounting plate that allow the installer to pre-wire mounting plates, dress the wires, and confirm wiring continuity before plugging in the speakers. In addition, a protective plastic cover prevents nicked wires by covering exposed speaker components.

These devices also enable faster installations by providing instant feedback to ensure that wiring is properly connected, rotary switches to select voltage and power settings, and 11 field-selectable candela settings for both wall and ceiling speaker strobes.

The low total harmonic distortion of the SP speaker offers high fidelity sound output while the SPV speaker offers high volume sound output for use in high ambient noise applications.

SpectrAlert Advance makes installation easy

- Attach a universal mounting plate to a 4 × 4 × 21/8 inch back box. Flush-mount applications do not require an extension ring.
- Connect the notification appliance circuit or speaker wiring to the terminals on the mounting plate.
- Attach the speaker or speaker strobe to the mounting plate by inserting the product tabs into the mounting plate grooves. Hinge the device into position to lock the product pins into the mounting plate terminals. The device will temporarily hold in place with a catch until it is secured with a captured mounting screw.

SpectrAlert Advance Speaker and Speaker Strobe Specifications

Architectural/Engineering Specifications

General

SpectrAlert Advance speaker and speaker strobes shall mount to a 4 x 4 x 2 1/8-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit and amplifier wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance speaker strobes, 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 notification appliance circuit outputs shall operate between 16.5 and 33 volts. Indoor SpectrAlert Advance products shall operate between 32°F and 120°F from a regulated DC, or full-wave rectified, unfiltered power supply. Speaker strobes shall have field-selectable candela settings including 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, 185.

Speaker

The speaker shall be a System Sensor SpectrAlert Advance model _____ dual-voltage transformer speaker capable of operating at 25.0 or 70.7 nominal Vrms. It should be listed to UL 1480 and shall be approved for fire protective service. The speaker shall have a frequency range of 400 to 4,000 Hz and shall have an operating temperature between 32°F and 120°F. The speaker shall have power taps and voltage that are selected by rotary switches.

Speaker Strobe combination

The speaker strobe shall be a System Sensor SpectrAlert Advance model _____ listed to UL1480 and UL 1971 and be approved for fire protective signaling systems. The speaker shall be capable of operating at 25.0 or 70.7 nominal Vrms selected via rotary switch, and shall have a frequency range of 400 to 4,000 Hz. The speaker shall have power taps that are selected by rotary switch. The strobe shall comply with the NFPA 72 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.

Synchronization Module

The module shall be a System Sensor Sync•Circuit model MDL3 listed to UL 464 and shall be approved for fire protective service. The module shall synchronize SpectrAlert strobes at 1 Hz. The module shall mount to a 4 1/16 x 4 1/16 x 2 1/8-inch 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 Specifications

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

Humidity Range 10 to 93% non-condensing

Dimensions, Ceiling-Mount

	Diameter	Depth
SPC Speaker	6.8 in, 173 mm	2.8 in, 71 mm
SPCV Speaker	6.8 in, 173 mm	2.9 in, 74 mm
With Surface Mount Back Box	6.9 in, 175 mm	3.4 in, 86 mm
SPSC Speaker Strobe	6.8 in, 173 mm	2.8 in, 71 mm
SPSCV Speaker Strobe	6.8 in, 173 mm	2.9 in, 74 mm
With Surface Mount Back Box	6.9 in, 175 mm	5.325 in, 135 mm

Electrical/Operating Specifications

Nominal Voltage (speakers) 25 Volts or 70.7 Volts (nominal)

Maximum Supervisory Voltage (speakers) 50 VDC

Strobe Flash Rate 1 flash per second

Nominal Voltage (strobes) Regulated 12 V DC/FWR or regulated 24 DC/FWR

Operating Voltage Range (includes fire alarm panels with built in sync) 8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)

Operating Voltage with MDL3 Sync Module 8.5 to 17.5 V (12 V nominal) or 16.5 to 33 V (24 V nominal)

Frequency Range 400 to 4,000 Hz

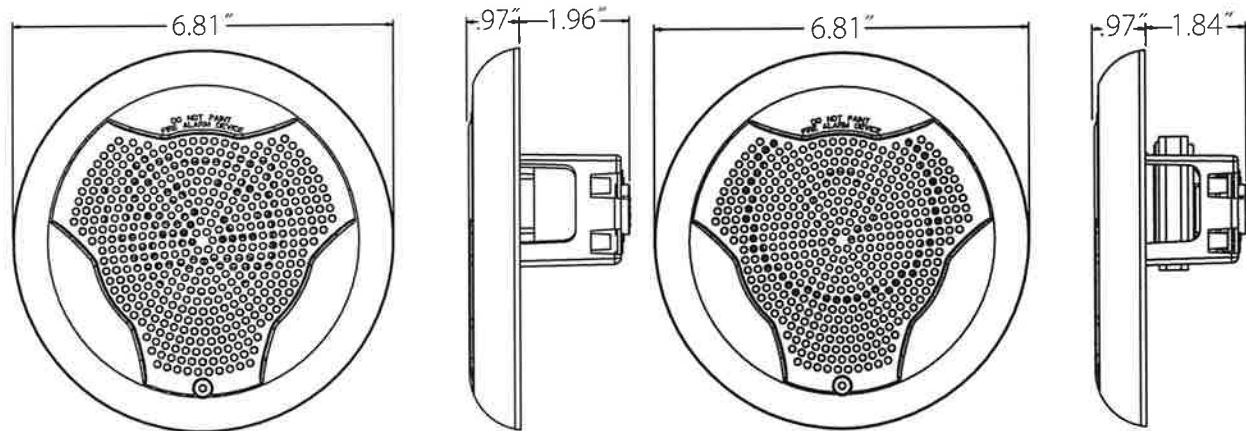
Power ¼, ½, 1, 2 watts

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)					
	Candela	8 to 175 Volts		16 to 33 Volts	
		DC	FWR	DC	FWR
Standard	15	123	128	66	71
Candela Range	15/75	142	148	77	81
	30	NA	NA	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

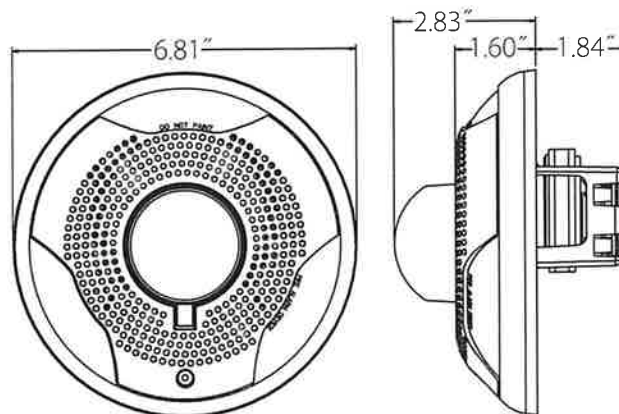
Sound Output				
UL Reverberant (dBA @ 10 ft.)	2W	1W	½ W	¼ W
Ceiling-Mount SPCV Series	86	83	80	77
Ceiling-Mount SPCV Series	90	87	84	81
Ceiling-Mount SPSC Series	85	82	79	76
Ceiling-Mount SPSCV Series	89	86	83	80

Dimensions



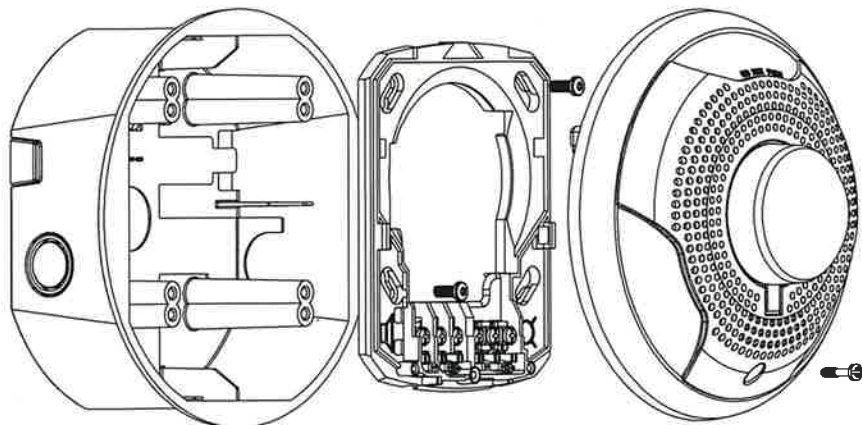
Ceiling-Mount SPV Speaker

Ceiling-Mount SP Speaker



Ceiling-Mount SPS Speaker Strobe

Surface Mounting



Ceiling-Mount Speaker with SBBCR/SBBCW Surface Mount Back Box Skirt

Ordering Information for SpectrAlert® Advance Speakers and Speaker Strobes

Ceiling Mount		
White	Red	Description
SPCW	SPCR	Speaker only
SPCWV	SPCRV	Speaker only, High dB
SPSCW	SPSCR	Speaker Strobe, Standard cd
SPSCW-P	—	Plain Speaker Strobe, Standard cd
SPSCWH	SPSCRH	Speaker Strobe, High cd
SPSCWH-P	—	Plain Speaker Strobe, High cd
SPSCWV	SPSCRV	Speaker Strobe, Standard cd, High dB
SPSCWV-P	—	Plain Speaker Strobe, High Volume, Clear Lens, White
SPSCWVH	SPSCRVH	Speaker Strobe, High cd, High dB
SPSCW-CLR-ALERT	—	Speaker Strobe, Standard cd, Clear Lens
Accessories		
White	Red	Description
RFPW	RFP	7 in x 9.5 in Retrofit Plate
SBBCW	SBBCR	Surface Mount Back Box
TRCW	TRC	Ceiling Mount Trim Ring

Notes:

All -P models have a plain housing (no "FIRE" marking on cover)

"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.



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 for current product information, including the latest version of this data sheet.
 AVDS11102 • 2/15

Indoor Selectable-Output Speaker Strobes and Dual Voltage Evacuation Speakers for Wall Applications

 **NOTIFIER**[®]
by Honeywell

Audio/Visual Devices

General

System Sensor L-Series selectable output speaker strobes and dual-voltage evacuation speakers can reduce ground faults and enable faster installation with lower current draw and modern aesthetics.

The System Sensor L-Series of speakers and speaker strobes reduce costly ground faults using a plug-in design and universal mounting plate that allow the installer to pre-wire mounting plates, dress the wires, and confirm wiring continuity before plugging in the speakers. In addition, a protective plastic cover prevents nicked wires by covering exposed speaker components.

These devices also enable faster installations by providing instant feedback to ensure that wiring is properly connected, rotary switches to select voltage and power settings, and 7 field-selectable candela settings for wall speaker strobes.

The low total harmonic distortion of the speaker offers high fidelity sound output while still offering high volume sound output for use in high ambient noise applications.

System Sensor L-Series makes installation easy.

- Attach a universal mounting plate to a 4 × 4 × 2¹/₈ inch back box. Flush-mount applications do not require an extension ring.
- Connect the notification appliance circuit or speaker wiring to the terminals on the mounting plate.
- Attach the speaker or speaker strobe to the mounting plate by inserting the product tabs into the mounting plate grooves. Hinge the device into position to lock the product pins into the mounting plate terminals. The device will temporarily hold in place with a catch until it is secured with a captured mounting screw.

Features

- Plug-in design and protective cover reduce ground faults.
- Universal mounting plate with an onboard shorting spring tests wiring continuity before installation.
- No extension ring required.
- Field selectable candela settings on wall units: 15, 30, 75, 95, 110, 135, 185.
- Automatic selection of 12- or 24-volt operation at 15 and 30 candela.
- Rotary switch simplifies field selection of speaker voltage (25 and 70.7 Vrms) and power settings (¼, ½, 1 and 2 watts).
- Speakers offer high fidelity and high volume sound output.
- UL 464 (520 Hz) listed and complies with NFPA 72 requirements for low frequency with compatible fire alarm control panel.
- Compatible with System Sensor synchronization protocol.
- Electrical compatibility with existing SpectrAlert and SpectrAlert Advance products.
- Tamper-resistant construction.
- Updated modern aesthetics.



SPSWL

SPSRL

Architectural/Engineering Specifications

GENERAL

L-Series speaker and speaker strobes shall mount to a 4 × 4 × 2¹/₈ inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit and amplifier wiring shall terminate at the universal mounting plate. Also, L-Series speaker strobes, 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 notification appliance circuit outputs shall operate between 16.5 and 33 volts. Indoor L-Series products shall operate between 32°F and 120°F from a regulated DC, or full-wave rectified, unfiltered power supply. Wall-mount speaker strobes shall have field-selectable candela settings including 15, 30, 75, 95, 110, 135, 185.

SPEAKER

The speaker shall be a System Sensor L-Series model _____ dual-voltage transformer speaker capable of operating at 25.0 or 70.7 nominal Vrms. It should be listed to UL 1480 and shall be approved for fire protective service. The speaker shall have a frequency range of 400 to 4,000 Hz and shall have an operating temperature between 32°F and 120°F. The speaker shall have power taps and voltage that are selected by rotary switches.

SPEAKER STROBE COMBINATION

The speaker strobe shall be a System Sensor L-Series model _____ listed to UL1480 and UL 1971 and be approved for fire protective signaling systems. The speaker shall be

capable of operating at 25.0 or 70.7 nominal Vrms selected via rotary switch, and shall have a frequency range of 400 to 4,000 Hz. The speaker shall have power taps that are selected by rotary switch. The strobe shall comply with the NFPA 72 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.

SYNCHRONIZATION MODULE

The module shall be a System Sensor Sync•Circuit model MDL3 listed to UL 464 and shall be approved for fire protective service. The module shall synchronize SpectraAlert strobes at 1 Hz. The module shall mount to a 4¹¹/₁₆ x 4¹¹/₁₆ x 2¹/₈ inch 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.

DIMENSIONS, WALL-MOUNT

- SP Speaker: 6.5 in x 5 in x 2.3 in. (165 mm x 127 mm x 58 mm)
- SP Speaker with Surface Mount Back Box: 6.6 in x 5.1 in x 3.2 in (168 mm x 130 mm x 82 mm)
- SPS Speaker/Strobe (including lens and speaker): 6.5 in x 5.0 in x 2.3 in (165 mm x 127 mm x 58 mm)
- SPS Speaker/Strobe (including lens and speaker) with Surface Mount Back Box: 6.6 in x 5.1 in x 4.55 in. (168 mm x 130 mm x 116 mm)

ELECTRICAL/OPERATING SPECIFICATIONS:

- **Nominal Voltage (speakers):** 25 or 70.7 (nominal)
- **Maximum Supervisory Voltage (speakers):** 50 VDC
- **Strobe Flash Rate:** 1 flash per second
- **Nominal Voltage (strobes):** Regulated 12 VDC or regulated 24 DC/FWR
- **Operating Voltage Range (includes fire alarm panels with built in sync):** 8 to 17.5 V (12 V nominal) or 16 to 33V (24 V nominal)
- **Operating Voltage with MDL3 Sync Module:** 8.5 to 17.5 V (12 V nominal) or 16.5 to 33V (24 V nominal)
- **Frequency Range:** 400 to 4000 Hz. 520Hz capable with compatible fire alarm control panel.
- **Power:** ¼, ½, 1, 2 watts

UL Current Draw Data

UL MAX. STROBE CURRENT DRAW (MA RMS)

Candela	8–17.5 Volts		16–33 Volts	
	DC	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	

SOUND OUTPUT SPEAKER STROBE

	¼ W	½ W	1 W	2 W
UL Reverberant (dBA @10 ft)	77	80	83	86
UL Anechoic (dBA @10 ft)	77	80	83	86

SOUND OUTPUT SPEAKER

	¼ W	½ W	1 W	2 W
UL Reverberant (dBA @10 ft)	79	82	85	88
UL Anechoic (dBA @10 ft)	79	82	85	88

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-Listed:**
 - S4048 Plain Speaker Strobes (Wall)
 - S4048 Spanish-labeled Speaker Strobes (Wall)
 - S4048 Speaker Strobe ALERT devices.
- **UL/ULC-Listed:**
 - S4048 Speakers (Wall)
 - S4048 Speaker Strobes (Wall)
- **FM Approved** (All except ALERT models)
- **CSFM Listed:** 7320-1653:0505

Product Line Information

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

WALL MOUNT

- SPWL(A), SPRL(A).** Speaker only (White, Red).
- SPSWL(A), SPSRL(A).** Speaker Strobe (White, Red).
- SPSWL-P(A), SPSRL-P(A).** Plain Speaker Strobe (White, Red).
- SPSWL-ALERT.** Speaker Strobe, Amber Lens, ALERT (White).
- SPSWL-CLR-ALERT.** Speaker Strobe Clear Lens, ALERT (White).
- SPSRL-SP.** Speaker Strobe, Fuego (White).

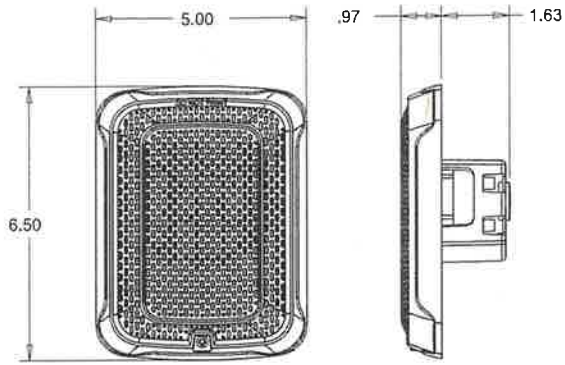
ACCESSORIES

RFPW, RFP. 7 in x 9.5 in Retrofit Plate (White, Red).

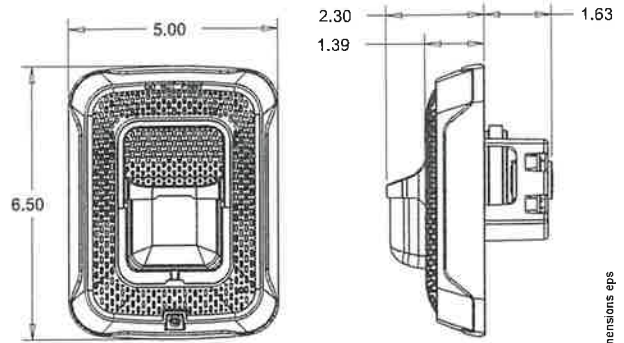
SBBSPW, SBBSPR. Surface Mount Back Box for Speakers and Speaker Strobes (White, Red).

TRW, TR. Wall Mount Trim Ring (White, Red).

Product Drawings: Dimensions and Surface Mounting

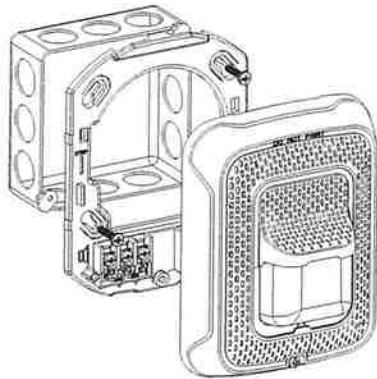


Wall-Mount Speaker



Wall-Mount Speaker Strobe

60942dimensions eps



Wall-Mount Speaker Strobe with SBBSPRL Surface Mount Back

A0522-00 eps