Fire & Life Safety
Products
CATALOG

SYSTEM SENSOR®

Audible/Visible Notification
Beam Smoke Detection
Carbon Monoxide Detection
HVAC Duct Smoke
Detection and Monitoring
Smoke Detection
Fire Sprinkler
Systems Monitoring

ASPIRATION | AV | BEAM | CO | HVAC | SPOT | SPRINKLER | MODULES | RELAYS

Innovation is our **way of life.**

At System Sensor, innovation is our way of life. Every day we design new products that are convenient to install and efficient to operate, providing our customers with the highest levels of reliability. We make it our business to develop advanced ideas that deliver advanced solutions.

Four Areas of Expertise

- **Conventional Detection** – a complete line of smoke detectors, heat detectors, carbon monoxide detectors, and accessories.

- **Audible/Visible Notification** – the SpectrAlert® Advance line, the industry's most refined series of notification devices for fire alarm and ECS/MNS systems.

- **HVAC Systems Monitoring** – the InnovairFlex™ line and other specialty detectors designed to detect smoke in air duct networks.

- **Fire Sprinkler System Monitoring** – products designed to sense the flow of water through the fire sprinkler system piping, and monitor air pressure and valve positions within the system.

AV   BEAM
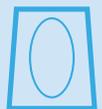
CO   HVAC

SPOT   SPRINKLER

Conventional Detection

i³ Series™ Photoelectric Smoke Detectors and Accessories

Installation ease, intelligence, and instant inspection are the guiding principles of the System Sensor i³ Series photoelectric smoke detectors. The i³ Series is a complete line – standard, sounder, auxiliary Form C relay, and isolated thermal models – featuring plug-in bases, removable covers, remote maintenance signaling, drift compensation and smoothing algorithms, green and red LEDs, and simplified sensitivity measurement. A host of accessories designed to enhance installation, testing, operation, and maintenance complement the i³ line of detectors.

i³ Series Photoelectric Smoke Detectors

Model No.	Loop Type	Thermal	Sounder	Form C Relay	Operating Voltage	Avg. Standby Current	Max. Alarm Current
2W-B	2-wire	No	No	No	8.5–35 VDC	50 µA	130 mA limited by control panel
2WT-B	2-wire	Yes	No	No	8.5–35 VDC	50 µA	130 mA limited by control panel
4W-B	4-wire	No	No	No	8.5–35 VDC	50 µA	23 mA
4WT-B	4-wire	Yes	No	No	8.5–35 VDC	50 µA	23 mA
2WTA-B	2-wire	Yes	Yes	No	8.5–35 VDC	50 µA	130 mA*
2WTR-B	2-wire	Yes	No	Yes	8.5–35 VDC	50 µA	130 mA limited by control panel
4WTA-B	4-wire	Yes	Yes	No	10–35 VDC	50 µA	35 mA
4WTR-B	4-wire	Yes	No	Yes	10–35 VDC	50 µA	35 mA
4WTAR-B	4-wire	Yes	Yes	Yes	10–35 VDC	50 µA	50 mA
4WITAR-B	4-wire	Isolated	Yes	Yes	10–35 VDC	50 µA	50 mA

*In direct power (non-reverse polarity), the maximum alarm current is 130 mA limited by the panel. In reverse polarity power, the maximum current is 30 mA for the 2WTA-B in alarm; 12 mA for all other 2WTA-B units on the loop. Add 25 mA for the RRS-MOD reversing relay alarm current.

i³ Series Accessories

| Model No.	Description
SENS-RDR	i³ Series infrared sensitivity reader
RRS-MOD	i³ Series reversing relay synchronization module
2W-MOD2	i³ Series loop test and maintenance module
RT	i³ Series removal/replacement tool
A77-AB2	i³ Series retrofit adapter bracket

Carbon Monoxide Detectors

The CO1224T and CO1224TR detectors features RealTest,® the industry's first functional test for the detector's CO sensing cell. RealTest enables you to know the detector is providing the protection it promises. Designed for system connection, the CO1224T and CO1224TR enables you to maximize profits and minimize installation costs with code-compliant features, such as a trouble relay that sends a sensor failure or end-of-life signal to the control panel and SEMS-type terminal Philips-head screws that provide a quick and positive wiring connection while facilitating wiring supervision. The CO1224T and CO1224TR unit also features a low current draw, which allows more detectors to be connected to the panel without having to purchase a more expensive panel or extra power supply.

Carbon Monoxide Detectors

Model No.	Detection Type	Wiring	Operating Voltage	Max. Standby Current	Max. Alarm Current
CO1224T	Electrochemical	4-wire	12/24 VDC	20mA	40mA
CO1224TR	Electrochemical	4-wire	12/24 VDC	20mA	40mA

Model No.	Description
CO-PLATE	Carbon monoxide detector replacement plate

Conventional Detection
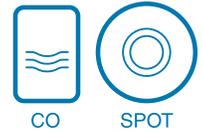
i⁴ Series Combination CO/Photoelectric Smoke Detectors and Modules

Integration, installation ease, intelligence, and instant inspection are the guiding principles of the System Sensor i⁴ Series Combination Carbon Monoxide (CO)/Photoelectric smoke detectors. The i⁴ Series is a conventional low-voltage detector that provides distinct CO or smoke alerts to the panel and to the homeowner. It has an integral sounder with Temporal 3 and Temporal 4 capability and when one device goes into alarm, they all sound. Its replaceable electromechanical CO cell can be easily replaced without tools at CO cell end-of-life. Its external infrared LED allows sensitivity testing from a distance using the SENS-RDR.

The required interface module integrates up to 12 detectors to conventional panels. On 2-wire devices, it initiates EZ Walk loop verification test. It can be programmed to send maintenance signals to the panels maintenance zone or to its smoke zone. The module is also compatible with our i³ Series smoke detectors with thermal and built-in sounders.

i⁴ Series Combination CO/Photoelectric Smoke Detectors

Model No.	Loop Type	Sounder	Operating Voltage	Max. Standby Current	Max. Alarm Current
COSMO-2W	2-wire	Yes	8.5-35 VDC	50µA	50mA
COSMO-4W	4-wire	Yes	8.5-35 VDC	50µA	40mA

i⁴ Series Modules

Model No.	Loop Type	Sounder	Operating Voltage	Max. Standby Current	Max. Alarm Current
COSMOD2W	2-wire	No	8.5-35 VDC	62mA	174mA**
COSMOD4W	4-wire	No	10-35 VDC	52mA*	75mA**

*Does not include current draw from attached detectors or EOL relay.
**Does not include reverse polarity current draw from attached detectors.

100 Series™ Plug-In Smoke Detectors and Bases

The 100 Series™ low-profile, plug-in smoke detectors are ideal for light commercial applications. Offered with a photoelectric sensor, the 100 Series units may be installed with a range of plug-in bases to accommodate a variety of wiring configurations and voltages. The 100 Series bases are designed for use with the System Sensor 100 and 400 Series plug-in smoke detectors and accommodate 2- or 4-wire loops and 12, 24, or 120 operating voltages to address a broad range of applications.

100 Series™ Plug-in Smoke Detectors

Model No.	Detection Type	Wiring	Thermal	Operating Voltage	Avg. Standby Current	Max. Alarm Current
2151	Photoelectric	Mounting base dependent	No	See bases	85µA	Mounting base dependent
2151T	Photoelectric	Mounting base dependent	No	See bases	85µA	Mounting base dependent

100 Series™ Plug-In Smoke Detector Bases

Model No.	Loop Type	Operating Voltage	Alarm Current
B110LP	2-wire	12/24 VDC	10-100 mA limited by the control panel
B110RLP	2-wire	24 VDC	22–62 mA
B112LP	4-wire	24 VDC	14–39 mA
B114LP	4-wire	120 VAC	75 mA (AC) maximum
B114LPBT	4-wire	24 VAC/DC	75 mA (AC) maximum
B116LP	2-wire	24 VDC	12–100 mA limited by the control panel

Conventional Detection

100 Series Plug-In Heat Detector

The 100 Series plug-in heat detector offers thermal detection in a 135°F combination fixed/rate-of-rise configuration. The 5151 detector may be installed with a range of plug-in bases to accommodate a variety of wiring configurations and voltages.

100 Series Plug-In Electronic Heat Detector

Model No.	Temperature Range	Activation Method	Max. Standy Current
5151	135°F (57°C)	Fixed/Rate-of-rise	80µA @ 24VDC

400 Series Plug-In Smoke Detector Base

The 400 Series base is designed for use with System Sensor 400 Series and 100 Series plug-in smoke detectors.

400 Series Plug-In Smoke Detector Base

Model No.	Loop Type	Alarm Contact Type	Operating Voltage	Max. Alarm Current
B401	2-wire	—	12/24 VDC	10-100 mA limited by the control panel

5600 Series Mechanical Heat Detectors

The 5600 Series mechanical heat detectors offer a low-cost means to protect property against fire and for non-life-safety installations where smoke detectors are inappropriate. To accommodate a broad range of applications, the 5600 Series units are available in a full line of configurations. Single- and dual-circuit models are available with low or high temperature ratings and with fixed temperature or combination fixed temperature/rate-of-rise (ROR) activation.

5600 Series Mechanical Heat Detectors

Model No.	Circuit	Identification Method on Exterior	Temperature Range	Activation Method	Protected Spacing**
5601P	Single	Non-lettered	135°F (57°C)	Fixed/Rate-of-rise	50 feet by 50 feet
5602	Single	Lettering	194°F (90°C)	Fixed/Rate-of-rise	50 feet by 50 feet
5603	Single	Lettering	135°F (57°C)	Fixed temperature	25 feet by 25 feet
5604	Single	Lettering	194°F (90°C)	Fixed temperature	25 feet by 25 feet
5621	Dual	Lettering	135°F (57°C)	Fixed/Rate-of-rise	50 feet by 50 feet
5622	Dual	Lettering	194°F (90°C)	Fixed/Rate-of-rise	50 feet by 50 feet
5623	Dual	Lettering	135°F (57°C)	Fixed temperature	25 feet by 25 feet
5624	Dual	Lettering	194°F (90°C)	Fixed temperature	25 feet by 25 feet

**Refer to NFPA 72 guidelines for spacing reductions when ceiling heights exceed 10 feet.

Conventional Detection

BEAM SPOT
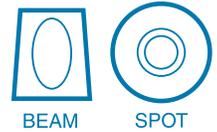
Reflected Beam Smoke Detectors

The BEAM1224 Series reflected beam smoke detectors are equipped with both a transmitter and a receiver in one unit. They are easy to install and align with the included reflector. With six sensitivity levels, the BEAM1224 unit can be set to respond accurately in its respective environment. Plus, with multiple accessories ranging from multi-mounting to device heating, the BEAM1224 detector is capable of protecting any high ceiling area. The BEAM1224S model comes with an integral sensitivity test feature.

Reflected Beam Smoke Detectors

Model No.	Wiring	Operating Voltage	Avg. Standby Current	Avg. Alarm Current	Range
BEAM1224	4-wire	10.2–32 VDC	17 mA max. @ 24 VDC	38.5 mA max. @ 24 VDC	16–328 ft. (5m to 100m)
BEAM1224S	4-wire	15–32 VDC	17 mA max. @ 24 VDC	38.5 mA max. @ 24 VDC	16–328 ft. (5m to 100m)

Multi-Voltage Conventional Relays

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

Multi-Voltage Conventional Relays

Model No.	Description	Operating Voltage	Operating Current	Contact Ratings
PR-1	Epoxy encapsulated (SPDT) relay with an activation LED	18–35 VDC, 18–35 VAC, 120 VAC	15 mA DC max. @ 24 VDC, 24 VAC, 120 VAC	24 VDC: 7 A with L/R = 5 mS; 120 VAC: 7 A max. (0.35 PF) 250 VAC: 10 A resistive; 30 VDC: 10 A resistive
PR-2	Epoxy encapsulated (SPDT) relay with an activation LED	10–40 VDC	30 mA DC max.	120 VAC: 10 A max. (resistive load); 120 VAC: 7 A max. (0.35 PF) 250 VAC: 10 A max. (resistive load); 30 VDC: 10 A max. (resistive load)
PR-3	Epoxy encapsulated (SPDT) relay with an activation LED	10–40 VDC	30 mA DC max.	120 VAC: 10 A max. (resistive load); 120 VAC: 7 A max. (0.35 PF) 250 VAC: 10 A max. (resistive load); 30 VDC: 10 A max. (resistive load)

Multi-Voltage Conventional Relays (continued)

Model No.	Description	Operating Voltage	Operating Current	Contact Ratings
R-10T	Single (SPDT) relay with an activation LED	18–35 VDC, 18–35 VAC, 115 VAC, 230 VAC	20 mA DC max. @ 24 VDC, 24 VAC, 115 VAC, 230 VAC	24 VDC: 7 A with L/R = 5 mS; 120 VAC: 10 A 120 VAC: 1/6 HP; 230 VAC: 7 A
R-14T	4-gang (SPDT) relay with 4 activation LEDs	18–35 VDC, 18–35 VAC, 115 VAC, 230 VAC	20 mA DC max. @ 24 VDC, 24 VAC, 115 VAC, 230 VAC	24 VDC: 7 A with L/R = 5 mS; 120 VAC: 10 A 120 VAC: 1/6 HP; 230 VAC: 7 A
R-20T	Single (DPDT) relay with an activation LED	18–35 VDC, 18–35 VAC, 115 VAC, 230 VAC	40 mA DC max. @ 24 VDC, 24 VAC, 115 VAC, 230 VAC	24 VDC: 7 A with L/R = 5 mS; 120 VAC: 10 A 120 VAC: 1/6 HP; 230 VAC: 7 A
R-24T	4-gang (DPDT) relay with 4 activation LEDs	18–35 VDC, 18–35 VAC, 115 VAC, 230 VAC	40 mA DC max. @ 24 VDC, 24 VAC, 115 VAC, 230 VAC	24 VDC: 7 A with L/R = 5 mS; 120 VAC: 10 A 120 VAC: 1/6 HP; 230 VAC: 7 A
R-10E	Single (SPDT) relay with an activation LED and steel enclosure	18–35 VDC, 18–35 VAC, 115 VAC, 230 VAC	20 mA DC max. @ 24 VDC, 24 VAC, 115 VAC, 230 VAC	24 VDC: 7 A with L/R = 5 mS; 120 VAC: 10 A 120 VAC: 1/6 HP; 230 VAC: 7 A
R-14E	4-gang (SPDT) relay with 4 activation LEDs and steel enclosure	18–35 VDC, 18–35 VAC, 115 VAC, 230 VAC	20 mA DC max. @ 24 VDC, 24 VAC, 115 VAC, 230 VAC	24 VDC: 7 A with L/R = 5 mS; 120 VAC: 10 A 120 VAC: 1/6 HP; 230 VAC: 7 A
R-20E	Single (DPDT) relay with an activation LED and steel enclosure	18–35 VDC, 18–35 VAC, 115 VAC, 230 VAC	40 mA DC max. @ 24 VDC, 24 VAC, 115 VAC, 230 VAC	24 VDC: 7 A with L/R = 5 mS; 120 VAC: 10 A 120 VAC: 1/6 HP; 230 VAC: 7 A
R-24E	4-gang (DPDT) relay with 4 activation LEDs and steel enclosure	118–35 VDC, 18–35 VAC, 115 VAC, 230 VAC	40 mA DC max. @ 24 VDC, 24 VAC, 115 VAC, 230 VAC	24 VDC: 7 A with L/R = 5 mS; 120 VAC: 10 A 120 VAC: 1/6 HP; 230 VAC: 7 A
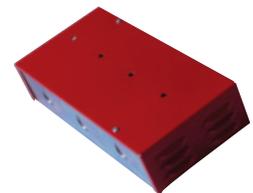
Conventional Detection

Conventional Detection Accessories

A host of accessories designed to enhance installation, testing, operation, and maintenance complement the conventional line of detection products.

Conventional Detection Accessories

Model No.	Description
XR2B	100 Series installation/removal tool
A77-AB	100 Series retrofit adapter bracket
SMB600	100/400 Series surface mount kit
EOLR-1	End-of-line power supervision relay
APA151	Remote annunciator with piezo alarm
BEAMLRK	Long-range kit for BEAM1224/BEAM1224S
BEAMMMK	Multi-mount kit for BEAM1224/BEAM1224S
BEAMSMK	Surface-mount kit for BEAM1224/BEAM1224S
BEAMHK	Heater kit for transmitter/receiver unit for BEAM1224/BEAM1224S
BEAMHKR	Heater kit for reflector for BEAM1224/BEAM1224S
RA100Z	Remote annunciator for spot and duct smoke detectors
RTS151	Remote test station accessory
RTS151KEY	Remote test station accessory with key
6500-MMK	Heavy-duty multi-mount bracket for BEAM1224/BEAM1224S
6500-SMK	Mounts beam transmitter receiver to 6500-MMK

Audible Visible Notification

SpectrAlert Advance® Strobes

SpectrAlert Advance strobes – which are available in ceiling-mount or wall-mount varieties to meet a wide variety of applications – are ideal for warning hearing-impaired individuals during an emergency event. For convenient installation, the universal mounting plate with its snap-in feature holds the product in place for the screw attachment. Strobes feature 11 field-selectable candela settings and are compatible with 12- or 24-volt systems for a high level of customization. SpectrAlert Advance strobes are listed to UL 1971 for public mode evacuation. Please note that model numbers with a "K" suffix are outdoor-rated products listed to UL 1638 and rated from -40° F to 151° F (-40° C to 66° C), with a NEMA 4X rating. See page 16 for our line of plain strobes for ECS/MNS applications.

Ceiling-Mount Strobes

Location	Red Model No.	White Model No.	Candela	Marking	Description
Indoor	SCR	SCW	Standard	FIRE	Clear lens
	SCRH	SCWH	High	FIRE	Clear lens
Outdoor	SCRK	SCWK	Standard	FIRE	Clear lens
	SCRHK	SCWHK	High	FIRE	Clear lens

Wall-Mount Strobes

Location	Red Model No.	White Model No.	Candela	Marking	Description
Indoor	SR	SW	Standard	FIRE	Clear lens
	SR-SP	—	Standard	FUEGO	Clear lens
	SRH	SWH	High	FIRE	Clear lens
Outdoor	SRK	SWK	Standard	FIRE	Clear lens
	SRK-R	SWK-R	Standard	FIRE	Clear lens, Device only
	SRHK	SWHK	High	FIRE	Clear lens
	SRHK-R	—	High	FIRE	Clear lens, Device only

Notes:
Standard Candela settings: 15, 15/75, 30, 75, 95, 110, and 115
High Candela settings: 135, 150, 177, and 185
-SP denotes "FUEGO" printed housing.
-R represents replacement device only, ships minus plastic weatherproof back box.
-R outdoor replacement models are meant for use with WTP series of weatherproof flush-mount plates or SA-WBB outdoor metal weatherproof back boxes.

Audible Visible Notification

SpectrAlert Advance® Chimes

SpectrAlert Advance chimes were designed to produce a distinctive chime tone to meet UL 464 private mode applications for alerting trained personnel to investigate possible emergency situations and take appropriate actions. Devices feature rotary switches to select from a multitude of sound patterns and volume settings, and are compatible with 12- or 24-volt systems for additional customization. Using the shorting spring feature to provide instant feedback to ensure that wiring is properly connected – in conjunction with our plug-in design – simplifies the process and cuts install time. Chimes are also compatible with the System Sensor synchronization protocol.

Chimes

Location	Red Model No.	White Model No.	Description
Indoor	CHR	CHW	Chime with selectable chime tones and volume settings

SpectrAlert Advance® Chime Strobes

SpectrAlert Advance indoor chime strobes were designed to produce a distinctive chime tone to meet UL 464 and UL 1638 in private mode applications, when alerting trained personnel to investigate possible emergency situations and take appropriate actions. Using the shorting spring feature to provide instant feedback to ensure that wiring is properly connected – in conjunction with our plug-in design – simplifies the process and cuts install time. With 7 field-selectable candela settings and 12- or 24-volt operation in one device, chime strobes maximize profits and provide a high level of customization.

Chime Strobes

Location	Red Model No.	White Model No.	Candela	Description
Indoor	CHSR	CHSW	Standard	2-wire, Clear lens

SpectrAlert Advance® Mini-Horns

The SpectrAlert Advance series of mini-horn sounders is ideal for providing primary and secondary signaling for fire and security applications such as hotel, motel, or residential fire system applications, or where smaller notification devices are desired. Mini-horns offer 2 volume settings, high or low, as well as temporal or non-temporal tones. Compatible with 12- or 24-volt systems. Mini-horns are compatible with the System Sensor synchronization protocol, and they can be mounted to single-gang back boxes for aesthetically pleasing applications.

Mini Horns

Location	Red Model No.	White Model No.	Description
Indoor	MHR	MHW	Mini Horn with two volume settings

SpectrAlert Advance® Horns

SpectrAlert Advance horns increase application flexibility for indoor or outdoor installations. Intended for full building notification as well as on the property ground, they produce a loud sound to notify occupants to evacuate the buildings. Installers can easily adapt devices to suit a wide range of application requirements by using field-selectable sound patterns and volume settings. Compatible with 12- or 24-volt systems. The universal mounting plate's plug-in design simplifies installation, too. SpectrAlert Advance horns are listed to UL 464 for public mode application, and "K" series outdoor products are listed to UL 464 for private mode applications and rated from -40° F to 151° F (-40° C to 66° C), with a NEMA 4X rating.

Wall-Mount Horns

Location	Red Model No.	White Model No.	Description
Indoor	HR	HW	Horn
Outdoor	HRK	—	Horn
	HRK-R	—	Horn, Device only

Notes:
-R represents replacement device only, ships minus plastic weatherproof back box.
-R outdoor replacement models are meant for use with WTP series of weatherproof flush-mount plates or SA-WBB outdoor metal weatherproof back boxes.

Audible Visible Notification

SpectrAlert Advance® Horn Strobes

SpectrAlert Advance horn strobes are rich with features guaranteed to cut installation time and maximize profits. Intended for full building notification as well as on the property ground, they produce a loud sound to notify occupants to evacuate the buildings; the strobe is intended to notify those that may have a hearing impairment. Features include a universal mounting plate with a preliminary snap-in feature to hold the product in place for the screw attachment, 11 field-selectable candela settings, and rotary switches to select horn tone and volume settings. Compatible with 12- or 24-volt systems. SpectrAlert Advance horn strobes are listed to UL 1971 and UL 464 for public mode evacuation. Model numbers with a "K" suffix are outdoor products that are listed to UL 1638 and UL 464 for private mode evacuation. The outdoor products are rated from -40° F to 151° F (-40° C to 66° C) and have a NEMA 4X rating.

Ceiling-Mount Horn Strobes

Location	Red Model No.	White Model No.	Candela	Marking	Description
Indoor	PC2R	PC2W	Standard	FIRE	2-Wire, Clear Lens
	—	PC2W-SP	Standard	FUEGO	2-Wire, Clear Lens
	PC2RH	PC2WH	High	FIRE	2-Wire, Clear Lens
	PC4R	PC4W	Standard	FIRE	4-Wire, Clear Lens
	PC4RH	—	High	FIRE	4-Wire, Clear Lens
Outdoor	PC2RK	PC2WK	Standard	FIRE	2-Wire, Clear Lens
	PC2RHK	PC2WHK	High	FIRE	2-Wire, Clear Lens

Wall-Mount Horn Strobes

Location	Red Model No.	White Model No.	Candela	Marking	Description
Indoor	P2R	P2W	Standard	FIRE	2-Wire, Clear Lens
	P2R-SP	—	Standard	FUEGO	2-Wire, Clear Lens
	P2RH	P2WH	High	FIRE	2-Wire, Clear Lens
	P4R	P4W	Standard	FIRE	4-Wire, Clear Lens
	P4RH	—	High	FIRE	4-Wire, Clear Lens
Outdoor	P2RK	P2WK	Standard	FIRE	2-Wire, Clear Lens
	P2RK-R	—	Standard	FIRE	2-Wire, Clear Lens, Device Only
	P2RHK	P2WHK	High	FIRE	2-Wire, Clear Lens
	—	P2WHK-R	High	FIRE	2-Wire, Clear Lens, Device Only
	P2RHK-120	—	High	FIRE	2-Wire, Clear Lens, 120 V
	P4RK	P4WK	Standard	FIRE	4-Wire, Clear Lens
	P4RK-R	—	Standard	FIRE	4-Wire, Clear Lens, Device Only

Notes:
Standard Candela settings: 15, 15/75, 30, 75, 95, 110, and 115
High Candela settings: 135, 150, 177, and 185
-SP denotes "FUEGO" printed housing.
-R represents replacement device only, ships minus plastic weatherproof back box.
-R outdoor replacement models are meant for use with WTP series of weatherproof flush-mount plates or SA-WBB outdoor metal weatherproof back boxes.

Audible Visible Notification

SpectrAlert Advance® Directional Sounder

The ExitPoint Directional Sounder with Voice Messaging is a unique life safety product. It produces pulsating sound consisting of broadband low-, mid-, and high-range sound that helps occupants determine the location of the sound. When placed strategically within a building, they can lead building occupants to the nearest and safest exit or area of refugee, even in low-to-no visibility. Sounder can also play a recorded voice alert message in 15 different language combinations to instruct occupants what to do as they approach, which allows them to act quickly. It includes 4-speed selections and 5 power settings for 24-volt operation.

Directional Sounders

Location	White Model No.	Description
Indoor	PF24V	ExitPoint™ Directional Sounder with Voice Messaging

SpectrAlert Advance® Low Frequency Sounders

SpectrAlert Advance low frequency sounders are custom designed to meet the 520Hz low frequency requirements. Studies show that a lower frequency, centered around 520Hz, is the most ideal to awaken sleeping occupants, even those with mild to severe hearing loss. Their tamper-resistant construction and universal mounting plate with plug-in design provide durability and flexibility. Sounders also offer field-selectable settings – such as a rotary switch for the low frequency tones in 3 sound patterns – and are compatible with 12-or 24 volt systems. Devices come enabled with System Sensor synchronization protocol.

Low Frequency Sounders

Location	Red Model No.	White Model No.	Description
Indoor	HR-LF	HW-LF	Low Frequency 520 Hz

SpectrAlert Advance® Low Frequency Sounder Strobes

SpectrAlert Advance low frequency sounder strobes are custom designed to meet the 520Hz low frequency requirements while providing visual notification requirements. Studies show that a lower frequency, centered around 520Hz, is the most ideal to awaken sleeping occupants, even those with mild to severe hearing loss. Sounders offer field-selectable candela settings, as well as a rotary switch for the low frequency tone's 2 sound patterns. Their tamper-resistant construction, 24-volt operation, and universal mounting plate with plug-in design provide durability and flexibility.

Low Frequency Sounder Strobes

Location	Red Model No.	White Model No.	Candela	Marking	Description
Indoor	P2RH-LF	P2WH-LF	High	FIRE	Low Frequency 520 Hz

Notes:
-LF denotes low frequency 520 Hz sound
-High Candela setting: 135,150,177 and 185 cd

Audible Visible Notification

SpectrAlert Advance® Speakers

Dual-voltage (25/70.7 Vrms) evacuation speakers were designed for fast installation and top performance in noisy environments. 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. Evacuation speakers also feature a plug-in design for reducing ground faults. The outdoor models ship with a plastic outdoor back box, featuring removable side flanges and improved saltwater corrosion resistance. Model numbers with a "K" suffix are outdoor rated products that are listed to UL 1480 and rated from -40° F to 151° F (-40° C to 66° C), with a NEMA 4X rating.

Ceiling-Mount Speakers

Location	Red Model No.	White Model No.	Description
Indoor	SPCR	SPCW	Dual-voltage evacuation speaker
	SPCRV	SPCWV	Dual-voltage evacuation speaker with high-volume dB sound output
Outdoor	—	SPCWK	Dual-voltage evacuation speaker
	—	SPCWK-R	Dual-voltage evacuation speaker, Device only

Wall-Mount Speakers

Location	Red Model No.	White Model No.	Description
Indoor	SPR	SPW	Dual-voltage evacuation speaker
	SPRV	SPWV	Dual-voltage evacuation speaker with high-volume dB sound output
Outdoor	SPRK	SPWK	Dual-voltage evacuation speaker
	SPRK-R	—	Dual-voltage evacuation speaker, Device only

Notes:
-R represents replacement device only, ships minus plastic weatherproof back box.
-R outdoor replacement models are meant for use with WTP series of weatherproof flush-mount plates or MWBB outdoor metal weatherproof back boxes.

Audible Visible Notification

SpectrAlert Advance® Speaker Strobes

During an emergency, building occupants and those on property grounds need to quickly understand what is happening and what actions to take. SpectrAlert Advance speaker strobes transmit the clear, intelligible messages and visible notification necessary to meet code, save lives, and protect property. In addition, selectable-output speaker strobes offer many features to reduce ground faults and simplify installation. Rotary switches allow installers to select voltage and power, and the 11 field-selectable candela settings accommodate any application. Low total harmonic distortion of the SP series provides high fidelity sound output while the SPV speakers offer high volume output, making them ideal for use in high-ambient noise environments. The plug-in design and universal mounting plate provides additional flexibility. Model numbers with a "K" suffix are outdoor rated products that are listed to UL 1971 and UL 1480 and are rated from -40° F to 151° F (-40° C to 66° C), with a NEMA 4X rating. The outdoor models ship with the plastic outdoor back box.

Ceiling-Mount Speaker Strobes

Location	Red Model No.	White Model No.	Candela	Marking	Description
Indoor	SPSCR	SPSCW	Standard	FIRE	Clear lens
	SPSCRV	SPSCWV	Standard	FIRE	High volume dB, Clear lens
	SPSCRH	SPSCWH	High	FIRE	Clear lens
	SPSCRVH	SPSCWVH	High	FIRE	Clear lens
Outdoor	—	SPSCWK	Standard	FIRE	Clear lens
	—	SPSCWK-R	Standard	FIRE	Clear lens, Device only
	—	SPSCWHK	High	FIRE	Clear Lens

Wall-Mount Speaker Strobes

Location	Red Model No.	White Model No.	Candela	Marking	Description
Indoor	SPSR	SPSW	Standard	FIRE	Clear lens
	SPSRV	SPSWV	Standard	FIRE	High volume dB, Clear lens
	SPSRH	SPSWH	High	FIRE	Clear lens
Outdoor	SPSRK	SPSWK	Standard	FIRE	Clear lens
	SPSRK-R	SPSWK-R	Standard	FIRE	Clear lens, Device only
	SPSRHK	—	High	FIRE	Clear Lens

Notes:
Standard Candela settings: 15, 15/75, 30, 75, 95, 110, and 115
High Candela settings: 135, 150, 177, and 185
-R represents replacement device only, ships minus plastic weatherproof back box.
-R outdoor replacement models are meant for use with WTP series of weatherproof flush-mount plates or MWBB outdoor metal weatherproof back boxes.

Audible Visible Notification

SpectrAlert Advance® Plain Notification Appliances

SpectrAlert Advance plain horn strobes, speaker strobes, and strobes were designed to reduce installation time and meet a wide variety of Mass Notification and Emergency Communication applications. All of the plain notification appliances carry the same product specifications as the "FIRE" marked products. Compatible with our colored lenses and decal kits to provide distinctive visual signaling during and emergency. Model numbers with a "K" suffix are outdoor rated products that are listed to UL 1638 and UL 1480 and are rated from -40° F to 151° F (-40° C to 66° C) and have a NEMA 4X rating. The outdoor models ship with the plastic outdoor back box.

Ceiling-Mount Horn Strobes

Location	Red Model No.	White Model No.	Candela	Marking*	Description
Indoor	PC2R-P	PC2W-P	Standard	None	2-Wire, Clear Lens
	—	PC2WH-P	High	None	2-Wire, Clear Lens
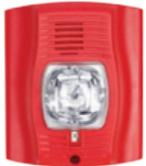
Wall-Mount Horn Strobes

Location	Red Model No.	White Model No.	Candela	Marking*	Description
Indoor	P2R-P	P2W-P	Standard	None	2-Wire, Clear Lens
	—	P2WH-P	High	None	2-Wire, Clear Lens
	P4R-P	P4W-P	Standard	None	4-Wire, Clear Lens
Outdoor	P2RK-P	P2WK-P	Standard	None	2-Wire, Clear Lens
	P2RHK-P	P2WHK-P	High	None	2-Wire, Clear Lens

Plain Ceiling-Mount Speaker Strobes

Location	Red Model No.	White Model No.	Candela	Marking*	Description
Indoor	—	SPSCW-P	Standard	None	Clear lens
	—	SPSCWV-P	Standard	None	High volume dB, Clear lens
	—	SPSCWH-P	High	None	Clear lens
Outdoor	—	SPSCWHK-P	High	None	Clear lens

Plain Wall-Mount Speaker Strobes

Location	Red Model No.	White Model No.	Candela	Marking*	Description
Indoor	SPSR-P	SPSW-P	Standard	None	Clear lens
	—	SPSWH-P	High	None	Clear lens
Outdoor	SPSRK-P	SPSWK-P	Standard	None	Clear lens

Plain Ceiling-Mount Strobes

Location	Red Model No.	White Model No.	Candela	Marking*	Description
Indoor	—	SCW-P	Standard	None	Clear Lens

Plain Wall-Mount Strobes

Location	Red Model No.	White Model No.	Candela	Marking*	Description
Indoor	SR-P	SW-P	Standard	None	Clear lens
	—	SWH-P	High	None	Clear lens
Outdoor	SRK-P	SWK-P	Standard	None	Clear lens
	SRHK-P	SWHK-P	High	None	Clear lens

Notes:
Standard Candela settings: 15, 15/75, 30, 75, 95, 110, and 115
High Candela settings: 135, 150, 177, and 185
-P denotes plain devices with no markings.
*Compatible with DECAL-R and DECAL-RC for white devices (red letters) and DECAL-W or DECAL-WC for red devices (white letters).

Audible Visible Notification

Alert Devices for Emergency Communication Systems

ALERT-printed devices include all the time and cost-saving benefits of the rest of the SpectrAlert Advance line, while also meeting NFPA Chapter 24 and UFC strobe requirements. Amber lens strobes are listed to UL 1638 for private mode applications. Clear lens strobes are listed to UL 1971 for public mode evacuation and are compatible with colored lenses and decal kits. Speaker meets UL 1480.

Model numbers with a "K" are outdoor rated products that are listed to UL 1480 and UL 1638 and rated from -40° F to 151° F (-40° C to 66° C), with a NEMA 4X rating.

ALERT Ceiling-Mount Strobes and Speaker Strobes

Location	White Model No.	Candela	Marking	Description
Indoor	SCW-CLR-ALERT	Standard	ALERT	Strobe, Clear lens
	SPSCW-CLR-ALERT	Standard	ALERT	Speaker Strobe, Clear lens
Outdoor	SPSCWK-CLR-ALERT	Standard	ALERT	Speaker Strobe, Clear lens

ALERT Wall-Mount Strobes and Speaker Strobes

Location	White Model No.	Candela	Marking	Description
Indoor	SW-ALERT	Standard	ALERT	Strobe, Amber lens
	SW-CLR-ALERT	Standard	ALERT	Strobe, Clear lens
	SWH-ALERT	High	ALERT	Strobe, Amber lens
	SPSW-ALERT	Standard	ALERT	Speaker Strobe, Amber lens
	SPSW-CLR-ALERT	Standard	ALERT	Speaker Strobe, Clear lens
Outdoor	SPSWK-CLR-ALERT	Standard	ALERT	Speaker Strobe, Clear lens

Notes:
Standard Candela settings: 15, 15/75, 30, 75, 95, 110, and 115
High Candela settings: 135, 150, 177, and 185
-ALERT models are Amber Lens marked ALERT
-CLR-ALERT models are Clear Lens marked ALERT

Dual Strobe Expander Plates for Emergency Communications

The SpectrAlert Advance Dual Strobe and Dual Strobe with Speaker Expander Plates provide lower costs and improve aesthetics by performing the functions of 2-3 devices for emergency communication systems. Devices are compatible with 12- or 24-volt systems and come enabled with System Sensor synchronization protocol. Please note that the amber lens strobe is listed to UL 1638 for private mode applications, and the clear lens strobe is listed to UL 1971 for public mode applications. The clear lens strobes are compatible with colored lenses for UL 1638 private mode applications.

Dual Strobe Expander Plates

Location	White Model No.	Candela	Marking	Description
Indoor	SEP-SW	Standard	ALERT	Strobe, Amber lens
	SEP-SW-P	Standard	None*	Strobe, Clear lens
	SEP-SPSW	Standard	ALERT	Speaker Strobe, Amber lens
	SEP-SPSW-P	Standard	None*	Speaker Strobe, Clear lens

Notes:
Standard Candela settings: 15, 15/75, 30, 75, 95, 110, and 115
High Candela settings: 135, 150, 177, and 185
-P suffix denotes plain housing (no "FIRE" print)

Audible Visible Notification

SpectrAlert Advance® Accessories

SpectrAlert Advance devices can be adapted to nearly any application with the appropriate accessory. Our mounting options allow our strobes, speakers, horns, chimes, and strobe combinations to be placed in new or existing construction with professional results.

Ceiling-Mount Back Boxes

Location	Red Model No.	White Model No.	Description
Indoor	SBBCR	SBBCW	Surface-mount back box for ceiling-mount horns, strobes, horn strobes, speakers, and speaker strobes
Outdoor	SA-WBBC	SA-WBBCW	Metal outdoor back box for ceiling-mount horns, strobes, and horn strobes
	—	MWBBCW	Metal weatherproof back box for speakers and speaker strobes

Wall-Mount Back Boxes

Location	Red Model No.	White Model No.	Description
Indoor	SBBR	SBBW	Surface-mount back box for wall-mount horns, strobes, and horn strobes
	SBBSPR	SBBSPW	Surface-mount back box for wall-mount speakers and speaker strobes
Outdoor	SA-WBB	SA-WBBW	Metal outdoor back box for wall-mount horns, strobes, and horn strobes
	MWBB	MWBBW	Metal outdoor back box for speakers and speaker strobes

Back Box Skirts

Mounting	Red Model No.	White Model No.	Description
Wall	—	BBS-SP201W	Wall-mount back box skirt for ExitPoint Directional Sounder
	—	SEP-BBSW	Strobe expander plate back box skirt for Dual Strobe Expander Plates
	—	SPSEP-BBSW	Speaker strobe expander plate back box skirt for Dual Strobe Expander Plates

Colored Lenses - For use with plain (non-FIRE marked) strobe devices.

Ceiling Model No.	Wall Model No.	Color	Description
LENS-AC	LENS-A	Amber	Lens attachment for all SpectrAlert Advance plain (non-FIRE marked) indoor or outdoor, ceiling- or wall-mounted strobes
LENS-BC	LENS-B	Blue	
LENS-GC	LENS-G	Green	
LENS-RC	LENS-R	Red	

Decal Kits - For use with plain (non-FIRE marked) devices.

Mounting	Model No.	Color	Description
Ceiling	DECAL-RC	Red Letters	60 decals* for up to 5 white devices (3 decals are required per device)
	DECAL-WC	White Letters	60 decals* for up to 5 red devices (3 decals are required per device)
Wall	DECAL-R	Red Letters	40 decals* for up to 5 white devices (2 decals are required per device)
	DECAL-W	White Letters	40 decals* for up to 5 red devices (2 decals are required per device)

*All decals include labels "AGENT, EVAC, ALERT and FIRE" for up to 5 devices.

Audible Visible Notification

SpectrAlert Advance® Accessories (cont.)

Mounting Plates

Model No.	Mounting	Description
MP120K	Wall or Ceiling	Indoor/Outdoor 120 VAC adapter mounting plate for use with SpectrAlert Advance horns, strobes, 2-wire horn strobes, chimes and chime strobes

Retrofit Plates

Red Model No.	White Model No.	Description
RFP	RFPW	Retrofit plate for SpectrAlert Advance devices

Weatherproof Plates

Red Model No.	White Model No.	Description
WTP	WTPW	Weatherproof plate for flush mounting outdoor horns, strobes, and horn strobes
WTP-SP	WTP-SPW	Weatherproof plate for flushing mounting outdoor speakers and speaker strobes

Sync-Circuit Module

Red Model No.	White Model No.	Description
MDL3R	MDL3W	12 and 24 V sync-ciruit module

Trim Rings

Mounting	Red Model No.	White Model No.	Description
Ceiling	TRC	TRCW	Trim ring for SpectrAlert Advance speakers and speaker strobes
Wall	TR	TRW	Trim ring for SpectrAlert Advance speakers and speaker strobes
	TR-HS	—	Trim ring for SpectrAlert Advance horns, strobes, and horn strobes
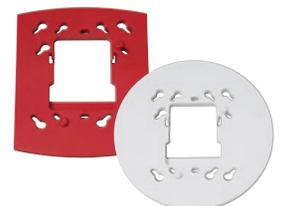
HVAC Systems Monitoring

InnovairFlex™ Duct Smoke Detectors

InnovairFlex™ combines an impressive collection of innovations designed to save you time and money and provide the flexibility you need in the field. An adjustable housing overcomes mounting constraints. Plug-in, tool-free sampling tubes speed installation. The front cover test/reset button simplifies test/maintenance. With these features and many more, InnovairFlex is reshaping duct smoke detection.

InnovairFlex Duct Smoke Detectors

Model No.	Description	Wiring	Air Velocity Range	Operating Temp. Range	Rating	Operating Voltage	Alarm Current	Auxiliary Contact
D2	Photoelectric low-flow duct smoke detector	2-wire	100–4,000 ft/min	−4° to 158°F (−20° to 70°C)	—	12/24 VDC	130 mA max.	—
D4120	Photoelectric low-flow duct smoke detector	4-wire	100–4,000 ft/min	−4° to 158°F (−20° to 70°C)	—	24 VAC/DC or 120 VAC	65 mA max. at 24 VDC	2 Form C Auxiliary
D4120W	Watertight photoelectric low-flow duct smoke detector	4-wire	100–4,000 ft/min	−4° to 158°F (−20° to 70°C)	NEMA 4	24 VAC/DC or 120 VAC	65 mA max. at 24 VDC	2 Form C Auxiliary
D4S	Photoelectric low-flow sensor- only component	4-wire	100–4,000 ft/min	−4° to 158°F (−20° to 70°C)	—	24 VAC/DC or 120 VAC	65 mA max. at 24 VDC	—
D4P120	Power-board-only component	4-wire	—	−40° to 158°F (−40° to 70°C)	—	24 VAC/ VDC or 120 VAC	65 mA max. at 24 VDC	2 Form C Auxiliary
D4240	Photoelectric low-flow duct smoke detector	4-wire	100–4,000 ft/min	−4° to 158°F (−20° to 70°C)	—	120 VAC/DC or 240 VAC	65 mA max. at 24 VDC	2 Form C Auxiliary
2D51	Photoelectric no-flow/low-flow smoke detector	4-wire	0–4,000 ft/min	−4 to 158°F (−20° to 70°C)	—	24 VAC/DC or 120 VAC w/ B210LP	75 mA max.	1 Form A & 1 Form C Auxiliary Relay

InnovairFlex™ Special Applications

Photoelectric low-profile detectors and bases for use in no-flow/low-flow air handling systems.

Special Applications

Model No.	Description
2151	Photoelectronic low-profile plug-in detector for special applications
2D51	Photoelectronic low-profile plug-in detector for special applications
B114LP	120VAC detector base for use with 2151 special applications duct smoke detector
B114LPBT	24VAC/DC detector base for use with 2151 special applications duct smoke detector
B210LP	Intelligent base - 15-32 VDC
D4P120	4-wire photoelectric power board component only

Note: 2151 with B114LP or B114LPBT is not remote test capable, for remote testing use 2D51, B210LP with D4P120.

HVAC Systems Monitoring

InnovairFlex™ Duct Smoke Accessories

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

InnovairFlex Accessories

Model No.	Description	Operating Voltage
RTS2	Multi-signaling accessory	20–29 VDC
AOS	Add-on strobe	—
RTS2-AOS	Multi-signaling accessory with add-on strobe	20–29 VDC
APA151	Remote annunciator with piezo alert	16–33 VDC
RA100Z	Remote annunciator	3.1–32 VDC
RTS151	Remote test station	2.8–32 VDC (Alarm LED)
RTS151KEY	Remote test station with key test/reset	14–35 VDC (Power LED); 2.8–32 VDC (Alarm LED)
DST1	InnovairFlex sampling tube for ducts up to 1 foot	
DST1.5	InnovairFlex sampling tube for ducts 1 to 2 feet	
DST3	InnovairFlex sampling tube for ducts 2 to 4 feet	
DST5	InnovairFlex sampling tube for ducts 4 to 8 feet	
DST10	InnovairFlex sampling tube for ducts 8 to 12 feet	
ETX	InnovairFlex twelve-inch exhaust tube	
DH400OE-1	Weatherproof outdoor enclosure	

Sprinkler Systems Monitoring

WFDN Series Water Flow Detectors

The WFDN Series detectors provide an easy to see, feel, and set time delay mechanism. The timer dial is large and easy to turn, with high contrast pad-printed markings. Set by feel in dimly lit locations with tactile features for approximate setting at 30 and 60 seconds. The delay/switch assembly is field replaceable for ease of maintenance.

WFDN Series Water Flow Detectors

Model	Pipe Size	Hole Size	Pressure Rating	Contact Ratings	Pipe Schedule	Triggering Threshold
WFD20N	2 in.	1¼ in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	Approved for Schedule 7, 10, and 40	4–10 GPM
WFD25N	2½ in.	1¼ in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	Approved for Schedule 7, 10, and 40	4–10 GPM
WFD30N	3 in.	2 in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	Approved for Schedule 7, 10, and 40	4–10 GPM
WFD40N	4 in.	2 in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	Approved for Schedule 7, 10, and 40	4–10 GPM
WFD50N	5 in.	2 in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	Approved for Schedule 10 and 40	4–10 GPM
WFD60N	6 in.	2 in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	Approved for Schedule 10 and 40	4–10 GPM
WFD80N	8 in.	2 in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	Approved for Schedule 10 and 40	4–10 GPM

WFD Series Water Flow Detectors

The WFD Series water flow detectors are available in a range of sizes to accommodate fire sprinkler risers from two to eight inches. All units feature vane-type paddles and an adjustable mechanical relay.

WFD Series Water Flow Detectors

Model	Pipe Size	Hole Size	Pressure Rating	Contact Ratings	Triggering Threshold
WFD20	2 in.	1¼ in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	4–10 GPM
WFD25	2½ in.	1¼ in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	4–10 GPM
WFD30-2	3 in.	2 in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	4–10 GPM
WFD40	4 in.	2 in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	4–10 GPM
WFD50	5 in.	2 in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	4–10 GPM
WFD60	6 in.	2 in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	4–10 GPM
WFD80	8 in.	2 in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	4–10 GPM

WFDTN T-Tap Series Water Flow Detectors

The WFDTN T-Tap Series Waterflow detectors are designed for residential and branch-line signaling; all have a NEMA 4 rating. Two versions are available one with a built-in time delay and one with instant activation.

WFDTN T-Tap Series Water Flow Detectors

Model	Compatible Tee Fittings	Pressure Rating	Contact Ratings	Triggering Threshold
WFDTN	1 in. NPT branch, including: 1in., 1¼in., 1½ in. and 2in. NPT threaded ferrous and brass tees; 1in., 1¼in., 1½in. and 2in. copper sweat tees; Tyco, Spears, NIBBCO brand 1 in. CPVC tees	375 PSI	2 Form C: 10 A @ 125/250 VAC, 2.5 A 24 VDC	4–10 GPM
WFDTNRN	1 in. NPT branch, including: 1in., 1¼in., 1½ in. and 2in. NPT threaded ferrous and brass tees; 1in., 1¼in., 1½in. and 2in. copper sweat tees; Tyco, Spears, NIBBCO brand 1 in. CPVC tees	375 PSI	2 Form C: 10 A @ 125/250 VAC, 2.5 A 24 VDC	4–10 GPM

Sprinkler Systems Monitoring

T-Tap Series Water Flow Detectors

The T-Tap water flow detectors are compatible with one-inch NPT-style connections, making them ideal for residential or branch line signaling applications.

T-Tap Series Water Flow Detectors

Model	Compatible Tee Fittings	Pressure Rating	Contact Ratings	Triggering Threshold
WFDT	1 in. to 1½ in. NPT threaded ferrous and brass, 1 in. to 2 in. sweat brass, 1½ in. polybutylene plastic, 1 in. PVC plastic tees having a 1 in. threaded NPT branch, and 2 in. cast and malleable threaded tees.	250 PSI	2 Form C: 10 A @ 125/250 VAC, 2.5 A 24 VDC	4–10 GPM
WFDTH	1 in. to 1½ in. NPT threaded ferrous and brass, 1 in. to 2 in. sweat brass, 1½ in. polybutylene plastic, 1 in. PVC plastic tees having a 1 in. threaded NPT branch, and 2 in. cast and malleable threaded tees.	250 PSI	2 Form C: 10 A @ 125/250 VAC, 2.5 A 24 VDC	4–10 GPM
WFDTNR	1 in. to 1½ in. NPT threaded ferrous and brass, 1 in. to 2 in. sweat brass, 1½ in. polybutylene plastic, 1 in. PVC plastic tees having a 1 in. threaded NPT branch, and 2 in. cast and malleable threaded tees.	250 PSI	2 Form C: 10 A @ 125/250 VAC, 2.5 A 24 VDC	4–10 GPM

Supervisory Switches

System Sensor manufactures devices for supervising a variety of control valves, including outside screw and yoke, post indicator, butterfly, and rising and non-rising stem gate.

Supervisory Switches

Model	Description	Valve Size	Contact Rating	Maximum Operating Current
OSY2	Used to monitor the open position of an outside screw-and-yoke type gate valve	1 in. to 12 in.	10 A @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	—
PIBV2	Used to monitor the open position of post indicator and butterfly control valves	—	10 A @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	—
PSP1	A plug-in special application supervisory switch designed for applications where no other type of listed valve supervisory switch can be used	—	Plug Contacts: 250 mA @ 6/12/24 VAC/DC, normally open Cover Tamper: 5 A @ 125/250 VAC, 2.5 A @ 6/12/24 VAC	250 mA

EPS Series Pressure Switches

The EPS Series pressure switches are offered in three varieties and with one or two SPDT contacts. The EPS10 alarm pressure switches are ideal for dry pipe systems, while the EPS40 and EPS120 supervisory pressure switches are intended for supervising air pressure in pipes or pressure tanks.

EPS Series Pressure Switches

| Model	Maximum Operating Pressure	Maximum Adjustment Range	Differential	Contact Rating	Threaded Connection
EPS10-1 EPS10-2	250 psi	4 to 20 psi	3 psi	10 A, ½ HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	½ NPT male reinforced nylon
EPS40-1 EPS40-2	250 psi	10 to 100 psi	3 psi @ 10 psi and 6 psi @ 100 psi	10 A, ½ HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	½ NPT male reinforced nylon
EPS120-1 EPS120-2	250 psi	10 to 200 psi	3 psi @ 10 psi and 9 psi @ 200 psi	10 A, ½ HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	½ NPT male reinforced nylon

Sprinkler Systems Monitoring

WFD Series Explosion-Proof Water Flow Detectors

The WFD-EXP line of explosion-proof waterflow detectors is intended for use in hazardous locations where volatile vapors or particulates may be present. System Sensor also offers a complete line of explosion-proof alarm and supervisory pressure switches.

WFD Series Explosion-Proof Water Flow Detectors

Model	Pipe Size	Hole Size	Pressure Rating	Contact Ratings	Triggering Threshold
WFD20EXP	2 in.	1¼ in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	4–10 GPM
WFD25EXP	2½ in.	1¼ in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	4–10 GPM
WFD30-2EXP	3 in.	2 in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	4–10 GPM
WFD40EXP	4 in.	2 in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	4–10 GPM
WFD50EXP	5 in.	2 in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	4–10 GPM
WFD60EXP	6 in.	2 in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	4–10 GPM
WFD80EXP	8 in.	2 in.	450 PSI	2 Form C: 10 A, 1/2 HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	4–10 GPM

Explosion-Proof Supervisory Switches

Hazardous Location Classification: Class I, Groups B, C, D, Division 1 & 2; Class II, Groups E, F, G, Division 1 & 2

Explosion-Proof Supervisory Switches

Model	Description	Valve Size	Contact Rating
OSY2EXP	Explosion-proof supervisory switch used to monitor the open position of an outside screw-and-yoke type gate valve	1 in. to 12 in.	10 A @ 125/250 VAC; 2.5 A @ 6/12/24 VDC
PIBV2EXP	Explosion-proof supervisory switch used to monitor the open position of post indicator and butterfly control valves	—	10 A @ 125/250 VAC; 2.5 A @ 6/12/24 VDC

Sprinkler Systems Monitoring

Explosion Proof Pressure Switches

Hazardous Location Classification: Class I, Groups B, C, D, Division 1 & 2; Class II, Groups E, F, G,Division 1 & 2; Class III, Division 1 & 2

Explosion Proof Pressure Switches

Model	Maximum Operating Pressure	Maximum Adjustment Range	Differential	Contact Rating	Threaded Connection
EPS10EXP	250 psi	4 to 20 psi	3 psi	10 A, ½ HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	½ NPT male brass fitting
EPS40EXP	250 psi	10 to 100 psi	3 psi @ 10 psi and 6 psi @ 100 psi	10 A, ½ HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	½ NPT male brass fitting
EPS120EXP	250 psi	10 to 200 psi	3 psi @ 10 psi and 9 psi @ 200 psi	10 A, ½ HP @ 125/250 VAC; 2.5 A @ 6/12/24 VDC	½ NPT male brass fitting

Alarm Bells

The alarm bells offer high-output notification in security and fire alarm systems. Six-inch, eight-inch, and ten-inch models are available for 24 VDC and 120 VAC systems.

Alarm Bells

Model	Gong Size	Nominal Voltage	Operating Voltage	Sound Output	MaximumCurrent
SSM24-6	6 in.	24 VDC	16–33 VDC	82 dB	DC–31.1 mA / FWR–53.5 mA
SSM24-8	8 in.	24 VDC	16–33 VDC	80 dB	DC–31.1 mA / FWR–53.5 mA
SSM24-10	10 in.	24 VDC	16–33 VDC	81 dB	DC–31.1 mA / FWR–53.5 mA
SSV120-6	6 in.	120 VAC	96–132 VAC	85 dB	53 mA
SSV120-8	8 in.	120 VAC	96–132 VAC	82 dB	53 mA
SSV120-10	10 in.	120 VAC	96–132 VAC	82 dB	53 mA

CO

SPOT

AV

HVAC

ASPIRATION

BEAM

SPRINKLER

MODULES

RELAYS
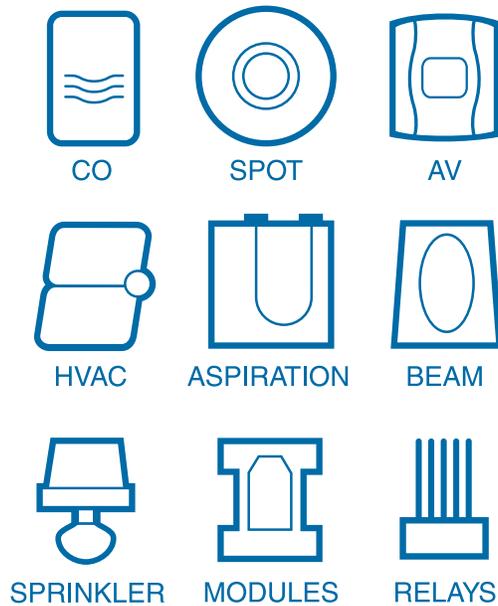
Founded in 1984, System Sensor is a global manufacturer of fire and life safety devices, specializing in smoke detection, carbon monoxide detection, and notification technology. System Sensor develops products for real-world applications worldwide. With sales, service, and manufacturing facilities throughout the Americas, Europe, and Asia, System Sensor places a premium on research and development to provide the most reliable, innovative, and comprehensive line of products in the industry.

System Sensor®

WBB
Weatherproof Back Box
Accessory

SYSTEM SENSOR®

Specifications

Dimensions:

Box:	4.33″L × 1.55″W × 4.33″H
Foam gasket:	0.125″ thick, adheres to box top
Conduit opening:	(2) ½″ NPT, fully threaded with
	(2) ½″ NPT plug, (1) ⅞″ knockout plug

Rear mounting tabs with 0.25″ diameter eyelets

Top mounting holes, #8-32 × 0.50″ DP

This accessory is UL listed for use with:
- H12/24K, S1224MCK, P1224MCK, and P12015K series SpectrAlert® wall horn, strobe and horn/strobe models
- SSM24 and SSV120 series alarm bells

Refer to specific model installation instructions for weatherproof rating, temperature operating range, indoor and outdoor application information.

Mounting Instructions

Figure 1: SpectrAlert horn, strobe, and horn/strobe ('K' suffix models) mounting with universal plate
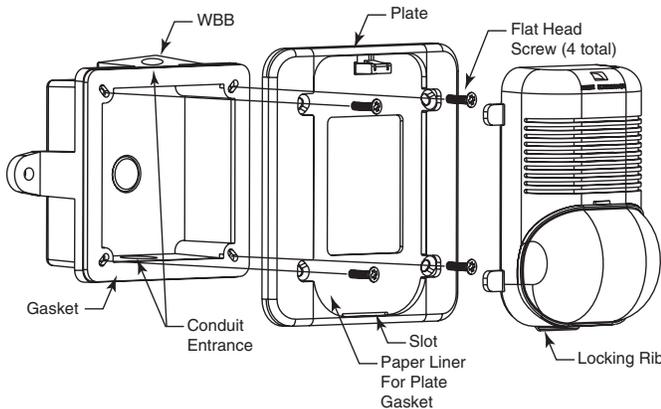
A0135-01

1. Mount back box in desired location (See Figure 1).
2. Install ½″ NPT plug into unused conduit opening.
3. For SpectrAlert models, mount plate to back box using 4 #8-32 x ½″ screws (Figure 1) supplied with product.
4. Complete field wiring.
5. Remove paper liner on plate gasket – **NOTE: Perform electrical tests first, then remove liner. Paper liner must be removed from gasket before final installation.**
6. Insert locking rib into slot on plate.
7. Press into plate; the SpectrAlert model will make a "click" when it has locked into place.

NOTE: The weatherproof or outdoor notification appliance must be used with the System Sensor WBB back box when installed in applications requiring the appliance to be weatherproof or outdoor-listed. In such applications, using a back box other than the System Sensor WBB will void the UL designation.

NOTE: All System Sensor weatherproof wall-mount horns and horn/strobes can be surface mounted or flush mounted when used with the System Sensor WBB.

Figure 2: Typical SSM and SSV bell weatherproof installation
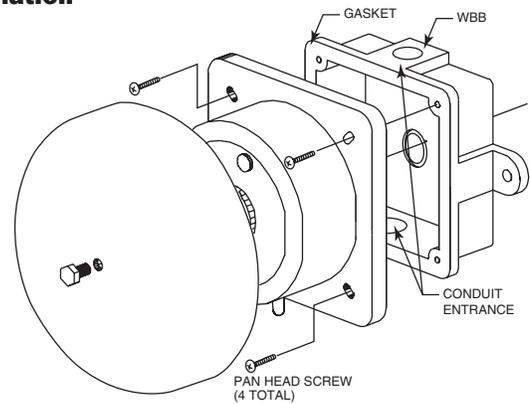
W0169-01

1. Mount back box in desired location (See Figure 2).
2. Install ½″ NPT plug into unused conduit opening.
3. For SSM24 and SSV120 alarm bells, remove gong (refer to SSM and SSV bell series installation manual) and complete field wiring.
4. Mount bell to WBB with 4 #8-32 x ¾″ screws (Figure 2) supplied with product.

Figure 3: Knockout plug removal

A0134-00

1. If a rear conduit entry is required, remove the knockout plug using a flat blade screwdriver as shown in Figure 3. Strike sharply with a hammer to pierce the wall of the knockout plug. Move to an adjacent wall section and repeat until the plug falls out. Make sure that the back box is supported adequately during this operation to avoid injury.
2. To meet weatherproof or outdoor listing, the conduit entrance must be gasketed.
3. Install ½″ NPT plugs (2) into unused conduit openings.
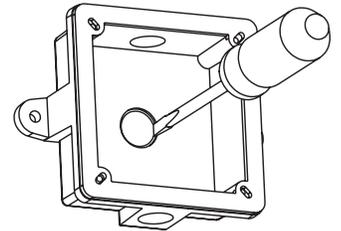
SYSTEM SENSOR
FIRE ALARM
CONTROL PANEL

FEATURES

Low profile design

• Low current draw

• Backward compatible with Series 100 detector range of bases

• Wide operating voltage 8 to 30VDC

• Bi-colour LED detector status indicator

• Automatic drift compensation

• Programmable sensitivity

• Addressable feature

• Advanced maintenance features via remote hand-held test unit

• Range of detector bases available

• Tested and approved to EN54 – 7:2000 (Amendment 1)
  EN54 – 5:2000 Class A1R; (Amendment 1) CEA4021

USER INTERFACE

Display: 16*2 Char LCD Screen

Control Keys: Silence Buzzer, Silence/Resound Alarm, Reset, Evaluate, Accept delay

Indicators: Fault, NAC Fault, Earth Fault, Fire, Power, System Fault.

KEY FEATURES

16*2 Char LCD Display, Aesthetically designed Front Facia/LED's	Fire, Fault, Configurable Relay	C E certificate
Individual Zone Isolation	Certified for Safety standard	Earth Fault Monitoring
Customizable text inserts	NAC Enable/Disable facility	Battery Charging/Battery Internal Resistance Monitoring
Input for remote reset/evacuate/alert/fire	Monitored NAC and Zone Circuit for Open/Short/Faults	Aux output facility
Event Logging	Data/Time/Password configuration	On board memory lock switch to prevent unauthorized panel configuration changes.
Lamp Test Facility	One Man walk test facility	Configurable delays to output, with timer to fire indication
Detectors/MCPs in same zone	Upto 600 cable connectivity per zone, Typically 20 Detectors per zone+ 5 MCP's etectors/MCPs in same zone	Mechanical Keylock etectors/MCPs in same zone

Honeywell

WIRING DETAILS

2, 4, 6 & 8 Zone Detection Circuits

Input 1

Input 2

Sounder Circuit 1 — EOL

Sounder Circuit 2 — EOL

Auxiliary Power output — +24 Vdc / 0 Vdc

Fire Relay output

Fault Relay output

Programmable Relay output
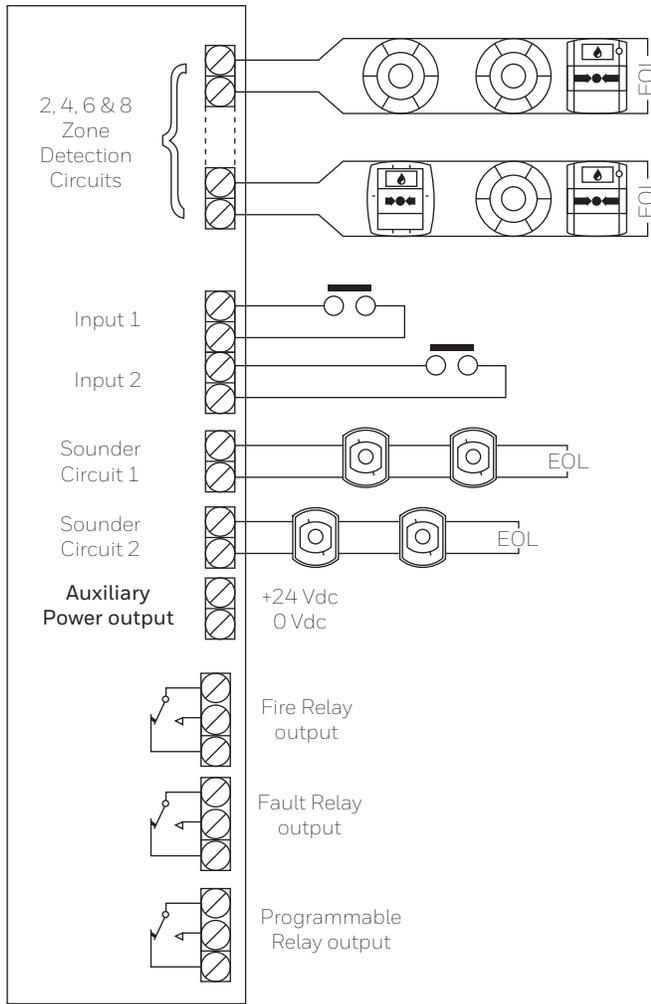
Circuit diagram*

Number of Programmable input might vary based on panel model, minimum 1 would be supported in all varients, check Installation Manual

Mechanical Specifications	
Dimensions (H X W X D)	360 X 422 X 122.8 mm (Front Facia), 360 X 380 X 92.3 mm (Back Box)
Weight	5.8 Kg Approx. (No Battery Fitted)
Construction	Powder coated Cold Rolled STEEL 1.2mm thick
Cable Entry	15 X 20mm Knockout
Operating Temperature	0 to 49°C
Relative Humidity	5% to 95% Non-Condensing
Electrical Specifications	
Operating Voltage	230V-AC +/- 20% Output current 2A maximum, Alarm Load 1A Maximum
Standby Batteries	Minimum capacity 2 x 12 V 2.8Ah, Maximum capacity 2 x 12 V 7 Ah
Detection Circuits	2, 4, 6, 8 zone, Max 2mA per Detector Circuit
Input Trigger	Extended closing contact
Trigger External Outputs	Sounder Outputs: • 2 monitored outputs • 0.5 Amps per circuit Auxiliary Output: • 18.5 to +28.5 Vdc, 0.5 Amp. (max)

COMPATIBLE DEVICES

Product Model Nos	Description
2351/EC	System Sensor Photo-Electric Smoke Detector
2351/TEM	System Sensor Photo-Electric Smoke & Heat Detector
5351/E	System Sensor Heat Detector
B/401	System Sensor Plug-in detector base

Honeywell

ORDERING PART CODES

Order Codes	Manufacturer Part No.
SS/2ZE	System Sensor 2 Zone Fire Alarm Control Panel
SS/4ZE	System Sensor 4 Zone Fire Alarm Control Panel
SS/6ZE	System Sensor 6 Zone Fire Alarm Control Panel
SS/8ZE	System Sensor 8 Zone Fire Alarm Control Panel
MCP2A/R470FF/01	System Sensor MCP Red W/O Back Box
MCP2A/R470SF/01	System Sensor MCP Red with Back Box
MUS4A/Y000SF/12	System Sensor MCP Yellow, Dual Pole, Flexi Element with Back Box
MUS3A/G000SF/12	System Sensor MCP Green, Single Pole, Flexi Element with Back Box
MUS3A/Y000FF/11	System Sensor MCP Yellow, Single Pole, Flexi Element, W/O Back Box
MUS4A/G000SF/12	System Sensor MCP Green, Dual Pole, Flexi Element with Back Box
W1A-R470SF-K013-01	System Sensor WCP Red, Flexible Element
SYS/HS	System Sensor Horn cum Strobe, Wall, Red, Standard Candela
SYS/HS/C	System Sensor Horn cum Strobe, Ceiling, Red, Standard Candela
SYS/ST	System Sensor Strobe, Wall, Red, Multi Candela
SYS/ST/C	System Sensor Strobe, Ceiling Mount, Red, Multi Candela
MHR/1	System Sensor Red Mini Horn, Red, UL certified

For more information,

www.honeywellbuildings.in
Call: 1-800-103-0339
Email: HBT-Indiabuildings@honeywell.com

Honeywell HBT India Buildings

Unitech Trade Center, 5th Floor,
Sector-43, Block C, Sushant Lok
Phase - I, Gurgaon - 122 002.

SYSTEM SENSOR
FIRE ALARM
CONTROL PANEL

Honeywell

M400K Conventional Callpoint

SYSTEM SENSOR®

Model Available

M400K

Description

The M400K is designed to provide a manual interface for causing an alarm on the fire alarm system. The two wire circuit design allows remote communication with the monitoring control panel while also providing a localized LED.

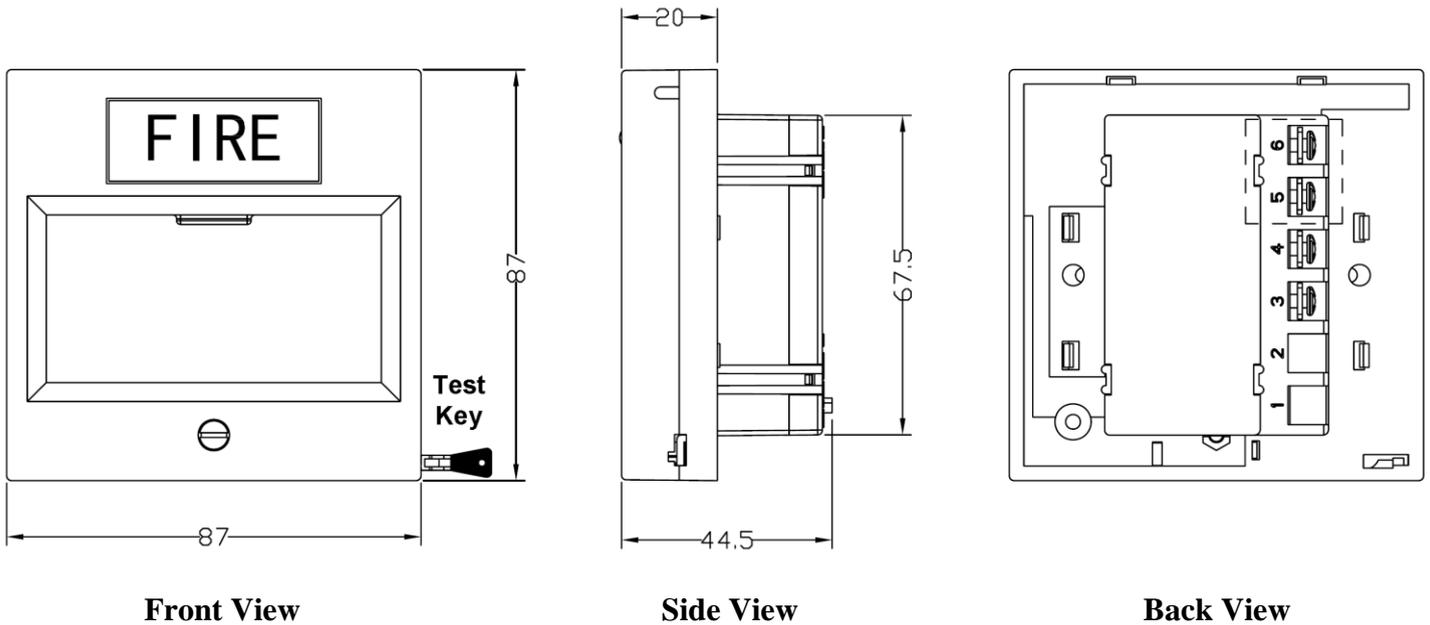## Specifications

Operating Temperature: 0℃-50℃
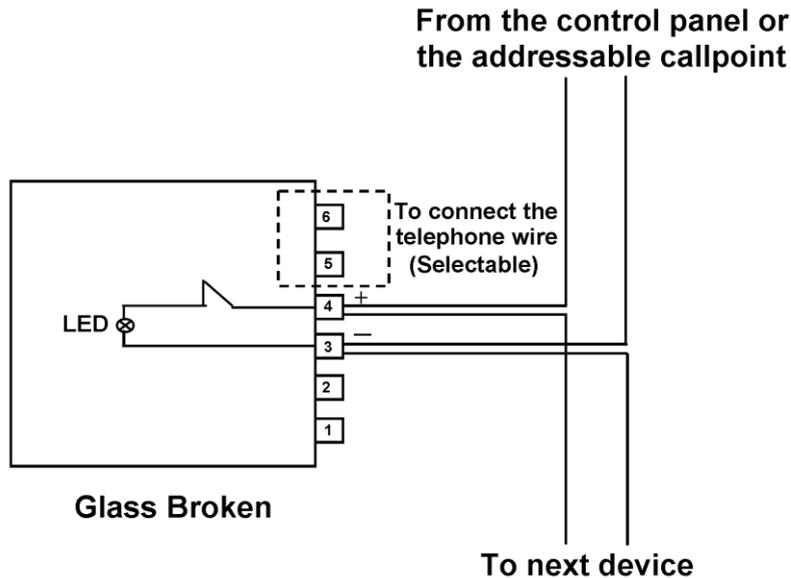Current Rating： Max. Alarm Current- 30 mA

Mounting Arrangements

The M400K is designed for indoor application. If hazardous or external application is desired, please contact your supplier for additional application recommendations.
Flush: Will fit to standard 76x76mm2 box (60mm center) .

Mechanical Specifications

Front View

Side View

Back View

Wiring Diagram

From the control panel or the addressable callpoint

To connect the telephone wire (Selectable)

LED

Glass Broken

To next device

Ordering Information

Model Number	Ordering Number	Product Description	UOM
M400K	M400K	Conventional Callpoint with LED indicating	EA.
	M400K/T	Conventional Callpoint with LED indicating & phone jack	EA.
M400KR	M400KR	Conventional Callpoint with certain resistance	EA.
M400KA	M400KA	Conventional Callpoint without LED indicating	EA.
F35-500-07C	F35-500-07C	Pack of 10 pcs replacement glass	Pack
BBS-X	BBS-X	Mounting box	EA.

SYSTEM SENSOR®

![System Sensor logo]

5600 Series Mechanical Heat Detectors

System Sensor's 5600 series mechanical heat detectors offer a low-cost means for property protection against fire, and for non-life-safety installations where smoke detectors are inappropriate.

5601P

135°F/57°C   5621

Features

- Multiple configurations for installations:
  - Single- and dual-circuit models
  - Fixed temp and combination fixed- temp/rate-of-rise 135°F or 194°F ratings.
- Plain housing for residential installations (Model 5601P)
- Easy-to-use terminal screws
- A broad range of back box mounting options:
  - Single gang
  - 3.5″ and 4″ Octagonal
  - 4″ square with square to round plaster ring
- Reversible mounting bracket

Multiple configurations. The 5600 series offers a full-line of configurations to accommodate a broad range of applications. Both single- and dual-circuit models are available for low- and high-temperature ratings with either fixed temperature or combination fixed temperature/rate-of-rise (ROR) activation. The ROR element of the fixed/ROR models is restorable to accommodate field-testing.

Installation flexibility. To satisfy a variety of installation needs, the 5600 series easily mounts to single-gang and octagonal back boxes. And these models accommodate four-square back boxes, when used with a square to round plaster ring. The reversible mounting bracket permits both flush- and surface-mount back box installations.

Visual identification. The 5600 series provides clear markings on the exterior of the unit to ensure that the proper detector is being used. Alphanumeric characters identify the activation method, as well as the temperature rating, in Fahrenheit and Celsius degrees. Fixed temperature models are identified FX, while combination fixed/rate-of-rise units are marked FX/ROR. The 5600 series also provides a post-activation indicator in the form of a collector. When the detector is activated, the collector drops from the unit, making it easy to identify the unit in alarm.

Agency Listings

UL LISTED
S2101

FM APPROVED
3016008

ULC
CS630

7270-1653:0167

Specifications

Mechanical heat detector shall be a System Sensor 5600 series model number _____, listed to Underwriters Laboratories UL 521 for Heat Detectors for Fire Protective Signaling Systems. The detector shall be either a single-circuit or a dual-circuit type, normally open. The detector shall be rated for activation at either 135°F (57°C) or 194°F (90°C), and shall activate by means of a fixed temperature thermal sensor, or a combination fixed temperature/rate-of-rise thermal sensor. The rate-of-rise element shall be activated by a rapid rise in temperature, approximately 15°F (8.3°C) per minute. The detector shall include a reversible mounting bracket for mounting to 3½-inch and 4-inch octagonal, single gang, and 4-inch square back boxes with a square to round plaster ring. Wiring connections shall be made by means of SEMS screws that shall accommodate 14–22AWG wire. The detector shall contain alphanumeric markings on the exterior of the housing to identify its temperature rating and activation method. The rate-of-rise element of combination fixed temperature/rate-of-rise models shall be restorable, to allow for field-testing. The detectors shall include an external collector that shall drop upon activation to identify the unit in alarm.

Physical/Operating Specifications

Maximum Installation Temperature	5601P, 5603, 5621, and 5623: 100°F (38°C)
	5602, 5604, 5622, and 5624: 150°F (65.6°C)
Operating Humidity Range	5 to 95% RH non-condensing
Dimensions with mounting bracket	Diameter: 4.57 inches (11.6cm)
	Height: 1.69 inches (4.3cm)
Alarm Temperature	5601P, 5603, 5621, and 5623: 135°F (57°C)
	5602, 5604, 5622, and 5624: 194°F (90°C)
Weight	6 oz. (170 grams)
Rate-of-Rise Threshold	15°F (8.3°C) rise per minute (models 5601P, 5602, 5621, and 5622 only)
Mounting	3½-inch octagonal back box
	4-inch octagonal back box
	Single gang back box
	4-inch square back box with a square to round plaster ring

Electrical Specifications

Operating Voltage / Contact Ratings	6–125VAC / 3A
	6–28VDC / 1A
	125VDC / 0.3A
	250VDC / 0.1A
Input Terminals	14–22 AWG

| 5601P | 5602, 5622 | 5603, 5623 | 5604, 5624 | 5621 |
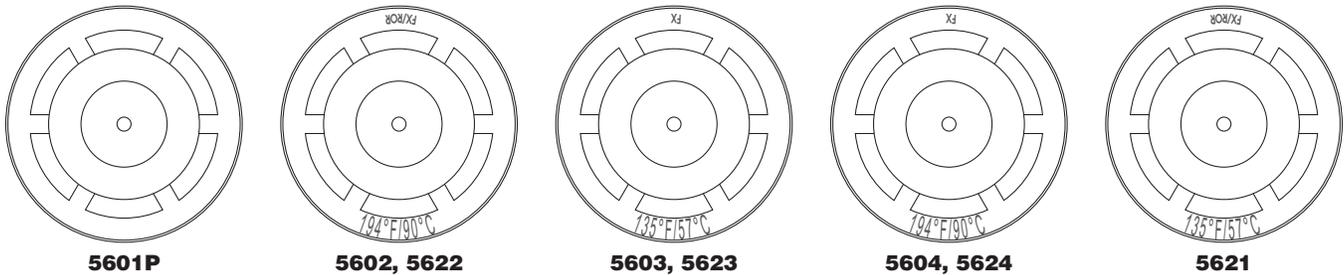
Ordering Information

Model	Circuit	Identification Method on Exterior	Temperature Rating	Activation	UL Protected Spacing – 10 Foot Ceiling*
5601P	Single	None	135°F (57°C)	Fixed Temperature / Rate-of-Rise	50 feet × 50 feet (15.24m × 15.2m)
5602	Single	Lettering	194°F (90°C)	Fixed Temperature / Rate-of-Rise	50 feet × 50 feet (15.24m × 15.2m)
5603	Single	Lettering	135°F (57°C)	Fixed Temperature	25 feet × 25 feet (7.62m × 7.62m)
5604	Single	Lettering	194°F (90°C)	Fixed Temperature	25 feet × 25 feet (7.62m × 7.62m)
5621	Dual	Lettering	135°F (57°C)	Fixed Temperature / Rate-of-Rise	50 feet × 50 feet (15.24m × 15.2m)
5622	Dual	Lettering	194°F (90°C)	Fixed Temperature / Rate-of-Rise	50 feet × 50 feet (15.24m × 15.2m)
5623	Dual	Lettering	135°F (57°C)	Fixed Temperature	25 feet × 25 feet (7.62m × 7.62m)
5624	Dual	Lettering	194°F (90°C)	Fixed Temperature	25 feet × 25 feet (7.62m × 7.62m)

*NOTE: Refer to NFPA72 guidelines for spacing reductions when ceiling heights exceed 10 feet.

Models Available

882 Photoelectronic Detector
885 Heat Detector

882

885

General Description

System Sensor's 800 series detectors are 2-wire conventional profile plug-in detectors aimed to meet the performance criteria designated by UL. The design for these detectors emphasizes economical and highly reliable. A LED will latch on when the detector is in alarm to provide a local alarm signal. The (-) IN and (-) OUT terminals are short circuited inside the detectors. When the detector is mounted, it will continue the wire to the next device or EOL resistor. When it is removed, the wire will be open for wiring supervision.

The new model 882, a 2-wire conventional photoelectric smoke detector, that uses a state of art optical sensing chamber, has a remote LED connecting feature. This detector is designed to provide an open area protection and to be used with compatible UL listed panels.

The model 885, a 2-wire conventional fixed temperature heat detector, is also designed to provide an open area protection and to be used with compatible UL listed panels.

Specifications

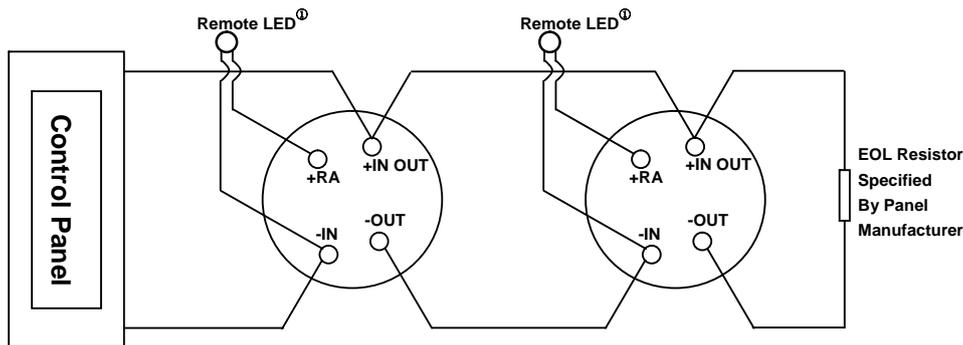|	
Diameter:	10.2 cm (4")
Height(including base):	4.8 cm (1.8") for Heat
	5.0cm(2.0") for Photoelectronic
Operating Temperature Range:	0~38°C (32°F to 100°F) for Heat
	0~49°C (32°F to 120°F) for Photoelectronic
Operating Humidity Range:	10% to 93%Relative Humidity, Non-condensing
Max .Air Velocity:	20m/s (heat only)
Latching Alarm:	Reset by momentary power interruption
Sensitivity:	63°C (145.4°F) Fixed (heat only)
Operating Voltage:	8.5~30 VDC for heat
	8.5~35 VDC for photoelectronic
Standby Current:	≤50μA for heat
	≤90μA for photoelectronic
Alarm Current:	Min. : 2 mA for heat ; 10mA for photoelectronic
	Max. : 80 mA for heat ; 130mA for photoelectronic

Agency Listings

(UL)

Mounting Bracket for 800 Series Detector

TEMPER ARM
(CUT OFF SMALL TAB TO ACTUATE TAMPER-RESIST FEATURE-DEPRESS ARM WITH KEY TO REMOVE DETECTOR)

DO NOT PAINT

TAMPER KEY

ALIGNMENT NOTCHES
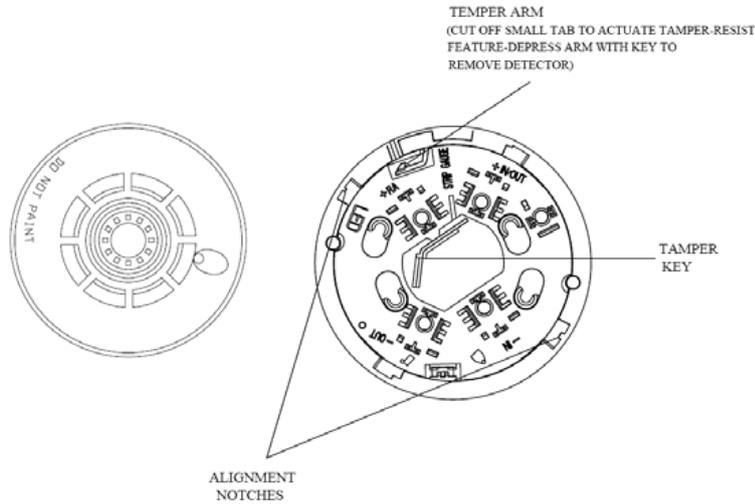
Wiring Diagram For 800 Series Detector

Remote LED[①]

Remote LED[①]

Control Panel

+RA   +IN OUT

-IN   -OUT

+RA   +IN OUT

-IN   -OUT

EOL Resistor
Specified
By Panel
Manufacturer

Note：
① **For 882： If Remote LED is not used, +RA terminal should be free and polarity of these terminals may be reversed.**
For 885： +RA terminal should be free and polarity of these terminals may be reversed.

Ordering information

Detector	Product Description	Photo	Thermal	Wiring	Alarm Current	UL	FM
882	Photoelectronic Detector	Yes	No	2-Wire	10mA~130mA	Yes	No
885	Heat Detector	No	Yes	2-Wire	2mA~80mA	Yes	No
Base							
B801RA	Detector Base	NA	NA	NA	NA	Yes	No

Selectable Output Horns, Strobes & Horn Strobes

System Sensor selectable output horns, strobes & horn strobes are rich with features guaranteed to reduce installation and maximize profits.

Features : Horn, Strobes & Horn Strobes

- Mounting plate included for compatibility with a wide range of back box sizes,
- Three field selectable candela settings: 15, 75, and 115,
- Easy to use rotary dials for selection of candela and horn settings,
- Built in synchronization feature keeps strobes in sync for up to 30 minutes,
- Strobes Listed to UL 1638; Horns Listed to UL 464,
- Horn settings on the horn strobe model include high and low volume, continuous or temporal 3 tone,
- Round trim ring available for ceiling mount applications,
- Universal Fire symbol is language independent,
- Trim plate allows mini horn to mount to a variety of backboxes and fit aesthetically with the horn strobe and strobe.

Features : Mini-Horn

- 12 and 24V operation,
- High and low volume settings,
- Temporal and non-temporal tones,
- Mounts to single gang back box,
- Compatible with MDL sunc module,
- Mechanically and electrically compatible with PA400 series Mini-Alert ™ sounders.

Agency Listing

SIGNALING

LISTED

The System Sensor line of notification devices offers the most flexible and easy-to-use line of horns, strobes, and horn strobes in the industry. With red housing, universal fire symbol and a ceiling mount accessory available these devices can meet virtually any application. They also mount to a wide variety of back box sizes to offer the most flexibility in installation.

This line of devices features a wide variety of features that simplifies installations. The mounting plate allows the devices to be compatible with a wide range of back box sizes. Settings for the strobe and horn are done using easy to set rotary switches on the back of the device. Synchronization is achieved without the use of additional modules; when powered with a filtered DC source, the strobe portion is capable of self synchronization for 30 minutes per NFPA 72.

Devices work on 24 volts DC or full wave rectified power. Three candela options are available for the strobe. On the horn strobe model, high and low volume are options for the horn as well as a continuous tone or temporal 3 output. The mini horn model has a continuous tone output and one volume setting.

Available accessories include a round trim ring to adapt the wall device for ceiling mount applications. Simply install the round ring over the square device for a perfect fit on the ceiling. An adapter plate is also available for the mini horn. It fits to a wider range of back boxes and fits with the family look of the horn strobe and strobe devices.

System Sensor Specifications

General

System Sensor strobe and horn strobes shall mount to a 2"x4", 4"x4", Single Gang, Double Gang, 4" Octagon, 3.7" x 3.7", 2" round, 2.36" x 2.36", 3.54" x 2.6", 1.77" back box. System Sensor devices shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 24 volts. 24-volt-rated notification appliance circuit outputs shall operate between 17 and 33 volts. Devices operate between 32 and 120 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, 75 and 115 cd. The devices shall not operate on a coded power supply. Horn - strobe and strobe devices shall have built-in synchronization capability. Upon initial power up the devices shall be synchronized for up to 30minutes.

Strobe

The strobe shall be a System Sensor Model SYS-ST or SYS-ST-C listed to UL 1638 and shall be approved for fire protective service. The strobe shall be wired as a primary signaling notification appliance flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

Horn Strobe Combination

The horn strobe shall be a System Sensor Model listed to UL 1638 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 two audibility options and an option to switch between a temporal three-pattern and a non-temporal (continuous) pattern. These options are set by a multiple position switch.

Mini Horn

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

Physical/Electrical Specifications: Horn, Strobes & Horn Strobes

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 or regulated 24 DC/FWR1
Operating Voltage Range2	16 to 33 V (24 V nominal)
Input Terminal Wire Gauge	14 to 18 AWG*
Strobe and horn strobes dimensions(including lens)	5.15" L x 5.0"W x 1.5" D (131mm x 127mm x 38mm)
Ceiling trim ring dimensions (sold as a pack of 5)	6.8 " dia / 1.5" depth (173mm dia / 1.5" depth)

Mini-Horn UL Sound Output and Current Draw Data

Sounder Output (dBA)

Switch Setting	Pattern	Output Level	8–17.5 VDC	8–17.5 VFWR	Nominal 12 VDC	Nominal 12 VFWR	16–33 VDC	16–33 VFWR
1	Temporal	High	68	67	71	70	78	76
2	Temporal	Low	66	65	69	68	76	75
3	Non-temporal	High	72	71	75	74	80	79
4	Non-temporal	Low	70	69	73	72	78	77

Sounder Current Draw (mA RMS)

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

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

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

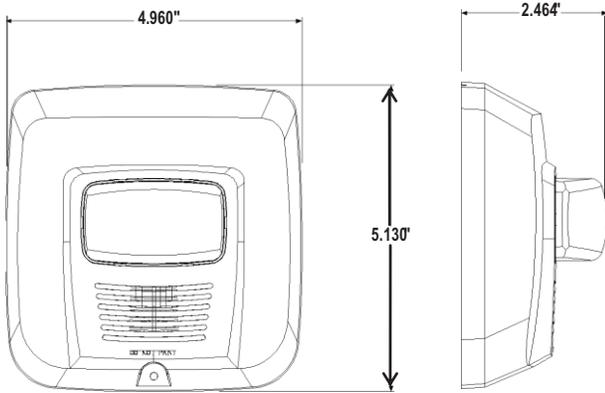|	Switch Position	Candela	16–33 Volts	
			DC	FWR
Standard Candela Range	Position 1	15	34	45
	Position 2	75	63	74
	Position 3	115	79	89

UL Max. Current Draw Horn Strobe

	16–33 Volts		
DC Input	15	15/75	30
Temporal High	36	67	84
Temporal Medium	34	65	82
Continuous High	40	72	90
Continuous Low	37	68	85
FWR Input			
Temporal High	51	77	83
Temporal Low	49	75	92
Continuous High	55	82	98
Continuous Low	50	78	94

Horn Tones and Sound Output Data

Horn Strobe Output (dBA)

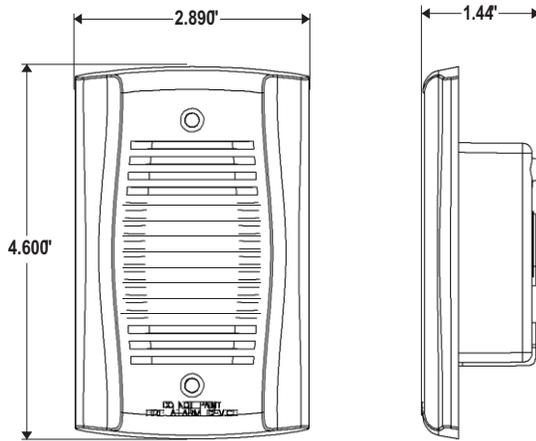|			16–33 Volts†		24-Volt Nominal			
					Reverberant		Anechoic	
Switch Position	Sound Pattern	dB	DC	FWR	DC	FWR	DC	FWR
1	Temporal	High	78	77	78	77	100	104
2	Temporal	Low	74	73	74	73	103	101
3	Continuous	High	82	80	82	80	100	104
4	Continuous	Low	80	78	80	78	103	101

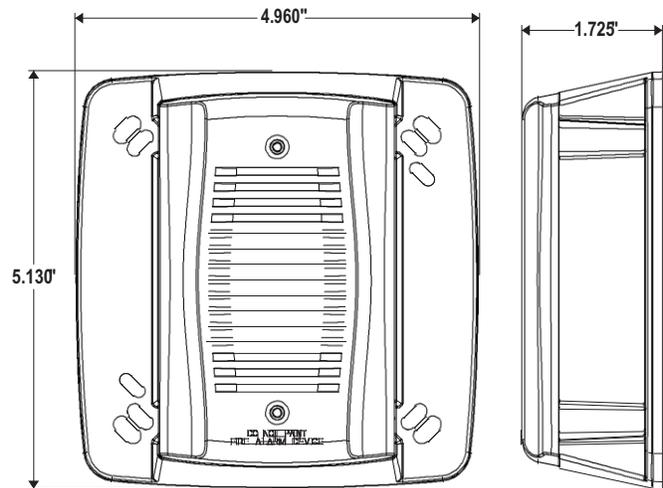†Minimum dB rating for Operational Voltage Range as per UL 464.

Wall Mount Horn Strobe Product
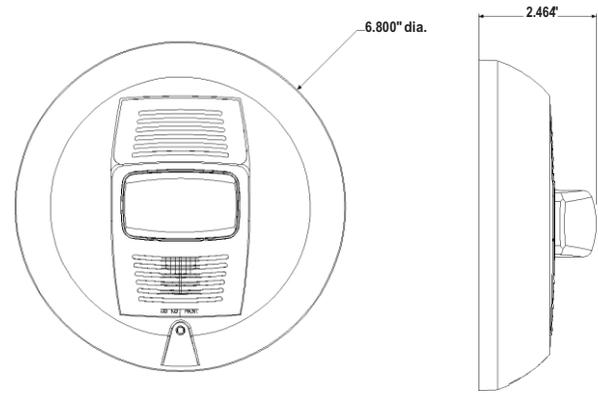
4.960"

2.464'

5.130'

Ceiling Mount Horn Strobe

6.800" dia.

2.464'

Mini Horn

2.890'

4.600'

1.44'

Mini Horn with Optional Trim Plate

4.960"

5.130'

1.725'

System Sensor Ordering Information

Model	Description
Wall Horn Strobes	
S YS-HS	Horn Strobe, Wall Mount
S YS-HS-C	Horn Strobe, Ceiling Mount
Wall Strobes	
S YS-ST	Strobe, Wall Mount
SYS-ST-C	Strobe, Ceiling Mount
S YS-CTP	Ceiling Mount Trim Plate

Model	Description
Mini Horn	
MH R1	Mini-Horn, Red
S YS-MH-TP	Trim Ring for use with the Mini Horn

SYSTEM SENSOR®

Selectable Output Horns, Strobes, and Horn Strobes

System Sensor selectable output horns, strobes, and horn strobes are rich with features guaranteed to reduce installation times and maximize profits.

Features

- Mounting plate included for compatibility with a wide range of back box sizes
- Three field selectable candela settings: 15, 75, and 115
- Easy to use rotary dials for selection of candela and horn settings
- Built in synchronization feature keeps strobes in sync for up to 30 minutes
- Strobes Listed to UL 1638; Horns Listed to UL 464
- Horn settings on the horn strobe model include high and low volume, continuous or temporal 3 tone
- Round trim ring available for ceiling mount applications
- Universal Fire symbol is language independent
- Trim plate allows mini horn to mount to a variety of backboxes and fit aesthetically with the horn strobe and strobe

Agency Listings

SIGNALING
(UL)®
LISTED

The System Sensor line of notification devices offers the most flexibile and easy-to-use line of horns, strobes, and horn strobes in the industry. With red housing, universal fire symbol and a ceiling mount accessory available these devices can meet virtually any application. They also mount to a wide variety of back box sizes to offer the most flexibility in installation.

This line of devices features a wide variety of features that simplifies installations. The mounting plate allows the devices to be compatible with a wide range of back box sizes. Settings for the strobe and horn are done using easy to set rotary switches on the back of the device. Synchronization is achieved without the use of additional modules; when powered with a filtered DC source, the strobe portion is capable of self synchronization for 30 minutes per NFPA 72.

Devices work on 24 volts DC or full wave rectified power. Three candela options are available for the strobe. On the horn strobe model, high and low volume are options for the horn as well as a continuous tone or temporal 3 output. The mini horn model has a continuous tone output and one volume setting.

Available accessories include a round trim ring to adapt the wall device for ceiling mount applications. Simply install the round ring over the square device for a perfect fit on the ceiling. An adapter plate is also available for the mini horn. It fits to a wider range of back boxes and fits with the family look of the horn strobe and strobe devices.

System Sensor Specifications

General

System Sensor strobe and horn strobes shall mount to a 2"x4", 4"x4", single-gang, double-gang, 4" Octagon, 105mm x 105mm, 65mm round, 86mm x 86 mm, 60mm x 60mm back box. System Sensor devices shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 24 volts. 24-volt-rated notification appliance circuit outputs shall operate between 17 and 33 volts. Devices operate between 32 and 120 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, 75 and 115 cd. The devices shall not operate on a coded power supply. Horn - strobe and strobe devices shall have built-in synchronization capability. Upon initial power up the devices shall be synchronized for up to 30 minutes.

Strobe

The strobe shall be a System Sensor Model SYS-ST or SYS-STR listed to UL 1638 and shall be approved for fire protective service. The strobe shall be wired as a primary-signaling notification appliance flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

Horn Strobe Combination

The horn strobe shall be a System Sensor Model _____ listed to UL 1638 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 two audibility options and an option to switch between a temporal three-pattern and a non-temporal (continuous) pattern. These options are set by a multiple position switch.

Mini Horn

The mini horn shall mount to a single-gang back box. With the accessory trim plate it shall mount to a 2"x4", 4"x4", single-gang, double-gang, 105mm × 150mm, 65mm round, 86mm × 86mm, 60mm × 60mm back box. The mini horn shall provide a continuous tone output.

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 or regulated 24 DC/FWR[1]
Operating Voltage Range[2]	16 to 33 V (24 V nominal)
Input Terminal Wire Gauge	14 to 18 AWG*
Strobe and horn strobes dimensions(including lens)	5.15" L x 5.0" W x 1.5" D (131 mm x 127mm x 38mm)
Ceiling trim ring dimensions (sold as a pack of 5)	6.8 " dia / 1.5" depth (173 mm dia / 1.5" depth)
Mini Horn Dimensions	4.6"L x 2.9" W x 1.44" D (117 mm x 74 mm x 37mm)
Mini horn trim plate (sold as a pack of 5)	5.1" L × 5.0" W × 1.73" D (151 mm L × 129 mm W × 43 mm D)

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

* Mini horn is rated for 12 to 18 AWG

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)			16–33 Volts	
	Switch Position	Candela	DC	FWR
Standard Candela Range	Position 1	15	34	45
	Position 2	75	63	74
	Position 3	115	79	89

UL Max. Current Draw Horn Strobe	16–33 Volts		
DC Input	15	15/75	30
Temporal High	36	67	84
Temporal Medium	34	65	82
Continuous High	40	72	90
Continuous Low	37	68	85
FWR Input			
Temporal High	51	77	83
Temporal Low	49	75	92
Continuous High	55	82	98
Continuous Low	50	78	94

Horn Tones and Sound Output Data

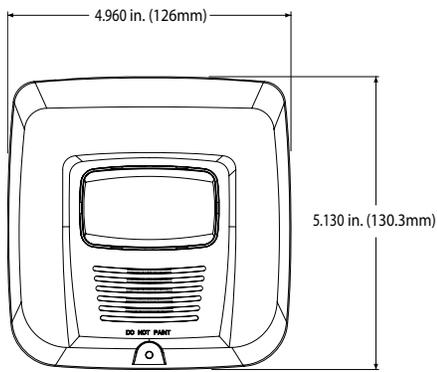| Horn Strobe Output (dBA)								
					24-Volt Nominal			
			16–33 Volts†		Reverberant		Anechoic	
Switch Position	Sound Pattern	dB	DC	FWR	DC	FWR	DC	FWR
1	Temporal	High	78	77	78	77	103	104
2	Temporal	Low	74	73	74	73	100	101
3	Continuous	High	82	80	82	80	103	104
4	Continuous	Low	80	78	80	78	100	101

†Minimum dB rating for Operational Voltage Range as per UL 464.
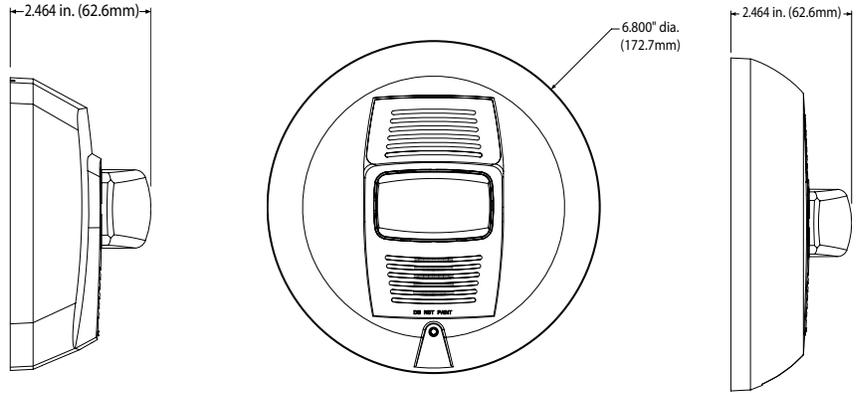
Mini Horn Sound Output Data

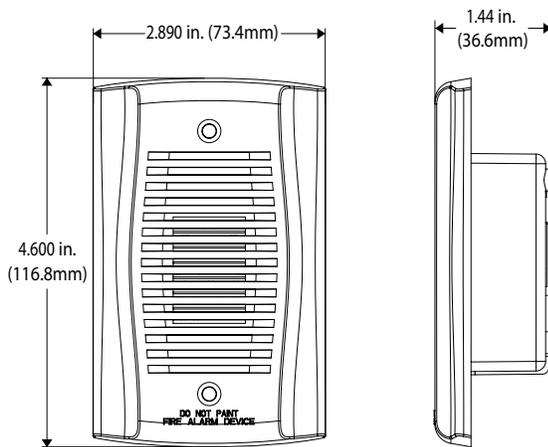| Tone	Power Supply	12V	24V
Continuous	DC	75 dBA	82 dBA
	FWR	75 dBA	80 dBA

Mini Horn Current Draw

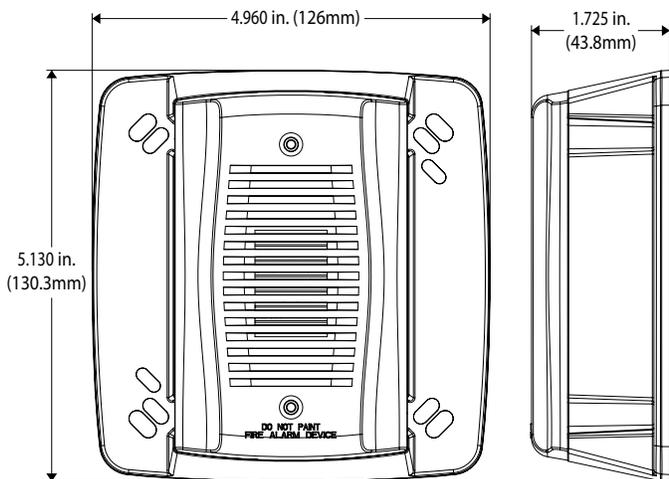| Tone	Power Supply	12V	24V
Continuous	DC	13	21
	FWR	13	22

4.960 in. (126mm)

2.464 in. (62.6mm)

5.130 in. (130.3mm)

Wall Mount Horn Strobe Product

6.800" dia. (172.7mm)

2.464 in. (62.6mm)

Wall Mount Horn Strobe with Optional Ceiling Trim Ring

2.890 in. (73.4mm)

4.600 in. (116.8mm)

1.44 in. (36.6mm)

DO NOT PAINT
FIRE ALARM DEVICE

Mini Horn

4.960 in. (126mm)

1.725 in. (43.8mm)

5.130 in. (130.3mm)

DO NOT PAINT
FIRE ALARM DEVICE

Mini Horn with Optional Trim Plate

System Sensor Ordering Information

Model	Description
Wall Horn Strobes	
SYS-HS	Horn Strobe
SYS-HSR	Horn Strobe, Red Lens with Chinese Lettering
SYS-HSR-FIRE	Horn Strobe, Red Lens with Letter "FIRE"
Wall Strobes	
SYS-ST	Strobe
SYS-STR	Strobe, Red Lens with Chinese Lettering
SYS-STR-FIRE	Strobe, Red Lens with Letter "FIRE"

Model	Description
Trim Plate	
SYS-CTP	Round Trim Ring for Ceiling Installation
SYS-CTPR	Round Trim RingRound with Chinese Lettering for Ceiling Installations For Use with Red Lens Strobes and Horn Strobes
SYS-CTPR-FIRE	Round Trim RingRound with Letter "Fire" for Ceiling Installations For Use with Red Lens Strobes and Horn Strobes
Mini Horn	
MHR1	Mini-Horn, Red
SYS-MHTP	Trim Ring for use with the Mini Horn

Selectable Output Horns, Strobes, and Horn Strobes

System Sensor selectable output horns, strobes, and horn strobes are rich with features guaranteed to reduce installation times and maximize profits.

Features

- Mounting plate included for compatibility with a wide range of back box sizes
- Three field selectable candela settings: 15, 75, and 115
- Easy to use rotary dials for selection of candela and horn settings
- Built in synchronization feature keeps strobes in sync for up to 30 minutes
- Strobes Listed to UL 1638; Horns Listed to UL 464
- Horn settings on the horn strobe model include high and low volume, continuous or temporal 3 tone
- Round trim ring available for ceiling mount applications
- Universal Fire symbol is language independent
- Trim plate allows mini horn to mount to a variety of back boxes and fit aesthetically with the horn strobe and strobe

Agency Listings

The System Sensor line of notification devices offers the most flexibile and easy-to-use line of horns, strobes, and horn strobes in the industry. With white and red housing, universal fire symbol and a ceiling mount accessory available these devices can meet virtually any application. They also mount to a wide variety of back box sizes to offer the most flexibility in installation.

This line of devices features a wide variety of features that simplifies installations. The mounting plate allows the devices to be compatible with a wide range of back box sizes. Settings for the strobe and horn are done using easy to set rotary switches on the back of the device. Synchronization is achieved without the use of additional modules; when powered with a filtered DC source, the strobe portion is capable of self synchronization for 30 minutes per NFPA 72.

Three candela options are available for the strobe when it works on 24 volts or full wave rectified power. Only 15 candela is available for strobe when it works on 12 volts. On the horn strobe model, high and low volume are options for the horn as well as a continuous tone or temporal 3 output. The mini horn model has a continuous tone output and one volume setting.

Available accessories include a round trim ring to adapt the wall device for ceiling mount applications. Simply install the round ring over the square device for a perfect fit on the ceiling. An adapter plate is also available for the mini horn. It fits to a wider range of back boxes and fits with the family look of the horn strobe and strobe devices.

System Sensor Specifications

General

System Sensor strobe and horn strobes shall mount to a 2"x4", 4"x4", single-gang, double-gang, 4" Octagon, 105mm x 105mm, 65mm round, 86mm x 86 mm, 60mm x 60mm back box. System Sensor devices shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12/24 volts. 12-volt-rated notification appliance circuit outputs shall operate between 8 and 17.5 volts. 24-volt-rated notification appliance circuit outputs shall operate between 17 and 33 volts. Devices operate between 32 and 120 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, 75 and 115 cd. When devices work on 12 volts, only 15 candela is available. The devices shall not operate on a coded power supply. Horn - strobe and strobe devices shall have built-in synchronization capability. Upon initial power up the devices shall be synchronized for up to 30 minutes.

Strobe

The strobe shall be a System Sensor Model _____ listed to UL 1638 and shall be approved for fire protective service. The strobe shall be wired as a primary-signaling notification appliance flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

Horn Strobe Combination

The horn strobe shall be a System Sensor Model _____ listed to UL 1638 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 two audibility options and an option to switch between a temporal three-pattern and a non-temporal (continuous) pattern. These options are set by a multiple position switch.

Mini Horn

The mini horn shall mount to a single-gang back box. With the accessory trim plate it shall mount to a 2" × 4", 4" × 4", single-gang, double-gang, 105mm × 150mm, 65mm round, 86mm × 86mm, 60mm × 60mm back box. The mini horn shall provide a continuous tone output.

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 24 DC/FWR[1] or regulated 12 DC/FWR[#]
Operating Voltage Range	16 to 33 V (24 V nominal); 8 to 17.5 V (12 V nominal)
Input Terminal Wire Gauge	14 to 18 AWG*
Strobe And Horn Strobes Dimensions(including lens)	5.15" L × 5.0" W × 1.5" D (131 mm L× 127mm W × 38mm D)
Ceiling Trim ring Dimensions (sold as a pack of 5)	6.8 " dia / 1.5" depth (173 mm dia / 38mm depth)
Mini Horn Dimensions	4.6"L × 2.9" W × 0.45" D (117 mm L× 74 mm W× 11.5mm D)
Mini Horn Trim Plate (sold as a pack of 5)	5.1" L × 5.0" W × 1.73" D (131 mm L × 127 mm W × 43 mm D)

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

* Mini horn is rated for 12 to 18 AWG

UL Current Draw Data

HORN/STROBE CURRENT DRAW（mA）				
DC Input	**16–33 Volts**			**8-17.5 Volts**
	15 cd	**75 cd**	**115 cd**	**15 cd**
Temporal High	48	80	98	63
Temporal Low	43	75	95	63
Continuous High	48	80	98	65
Continuous Low	43	75	95	63
FWR Input				
Temporal High	55	89	108	62
Temporal Low	50	84	103	62
Continuous High	55	89	108	65
Continuous Low	50	84	103	63

STROBE CURRENT DRAW（mA）						
Switch Position		**Candela**	**16–33 Volts**		**8–17.5 Volts**	
			DC	**FWR**	**DC**	**FWR**
Standard Candela Range	Position 1	15	37	45	58	58
	Position 2	75	71	71	N/A	N/A
	Position 3	115	89	92	N/A	N/A

Horn Tones and Sound Output Data

HORN OUTPUT （dBA） IN UL REVERBERANT ROOM														
Switch Postition	**Sound Pattern**	**Volume**	**16–33 Volts †**		**24 V Nominal Measurements**				**8-17.5 Volts †**		**12V Nominal Measurements**			
					Reverberant		**Anechoic**				**Reverberant**		**Anechoic**	
			DC	**FWR**	**DC**	**FWR**	**DC**	**FWR**	**DC**	**FWR**	**DC**	**FWR**	**DC**	**FWR**
1	Temporal	High	78	77	78	77	103	104	72*	71*	76	73*	88	85
2	Temporal	Low	74*	73*	74*	73*	100	101	70*	69*	72*	70*	86	83
3	Continuous	High	82	80	82	80	103	104	76	75	80	77	87	85
4	Continuous	Low	80	78	80	78	100	101	74*	72*	77	75	86	82

† Minimum dB rating for Operational Voltage Range as per UL 464.
*For Private Mode use only.

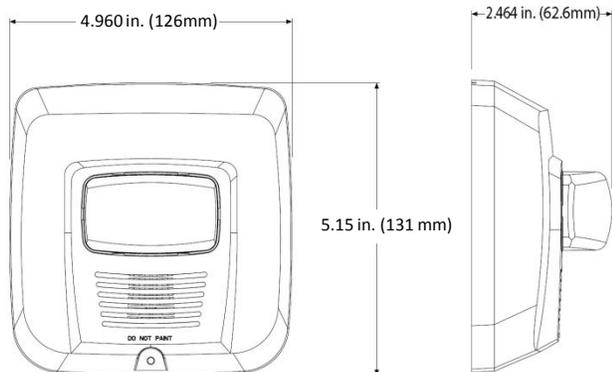## Mini Horn Sound Output Data （dBA）

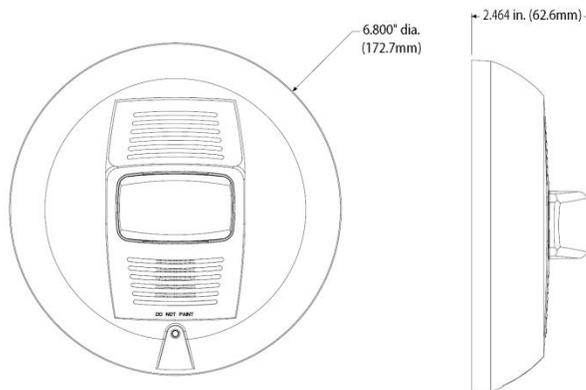| Tone	Power Supply	12V	24V
Continuous	DC	75	82
	FWR	75	80

Mini Horn Current Draw （mA）

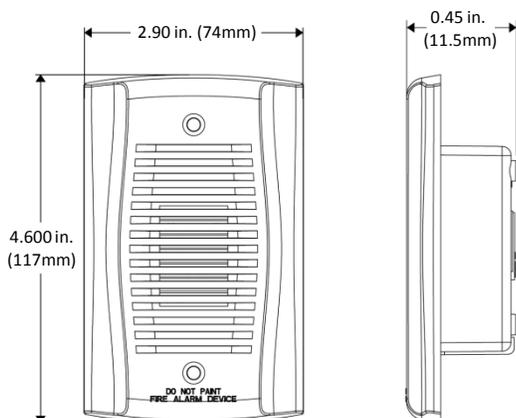| Tone	Power Supply	12V	24V
Continuous	DC	13	21
	FWR	13	22

Candela Settings

Rotary Switch Position	Candela Output - Clear lens	Candela Output - Red lens
1	15	3
2	75	16
3	115	25

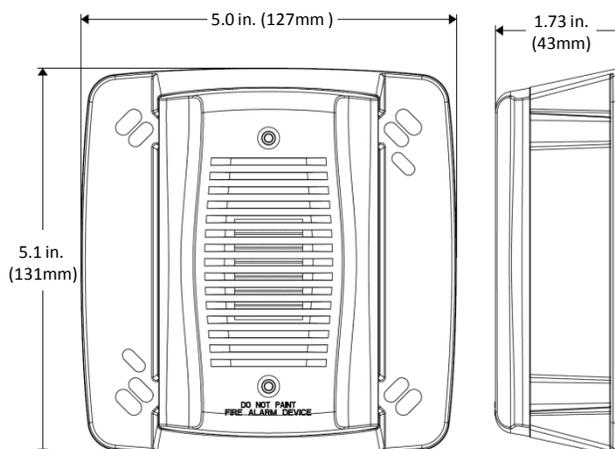**Wall Mount Horn Strobe Product**

Wall Mount Horn Strobe with Optional Ceiling Trim Ring

Mini Horn

Mini Horn with Optional Trim Plate

System Sensor Ordering Information

Model	Type				Housing Color		Lens Color		Lettering		House on Fire Symbol
	Horn Strobe	Horn	Strobe	Trim Plate	Red	White	Red	Clear	Chinese	English	
SYS-HS	✓				✓			✓			✓
SYS-HS-FIRE*	✓				✓			✓		✓	✓
SYS-HSR	✓				✓		✓		✓		✓
SYS-HSR-FIRE	✓				✓		✓			✓	✓
SYS-HSW	✓					✓		✓			✓
SYS-HSRW	✓					✓	✓		✓	✓	
SYS-HSRW-FIRE	✓					✓	✓			✓	✓
SYS-ST			✓		✓			✓			✓
SYS-ST-FIRE*			✓		✓			✓		✓	✓
SYS-STR			✓		✓		✓		✓		✓
SYS-STR-FIRE			✓		✓		✓			✓	✓
SYS-STW			✓			✓		✓			✓
SYS-STW-FIRE*			✓			✓		✓		✓	✓
SYS-STRW			✓			✓	✓		✓	✓	
SYS-STRW-FIRE			✓			✓	✓			✓	✓
SYS-CTP				✓	✓						✓
SYS-CTPR				✓	✓				✓		✓
SYS-CTPR-FIRE				✓	✓					✓	✓
SYS-CTPW				✓		✓					✓
SYS-CTPRW				✓		✓			✓	✓	
SYS-CTPRW-FIRE				✓		✓				✓	✓
MHR1		✓			✓						
SYS-MHTP				✓	✓						

*The marked models are only ordering model number. The model number on the product label, UL approval and instruction manual remains without "-FIRE"
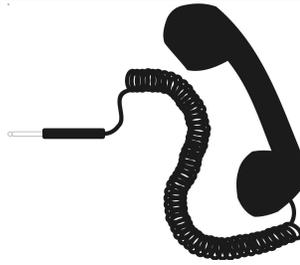
SYSTEM SENSOR®
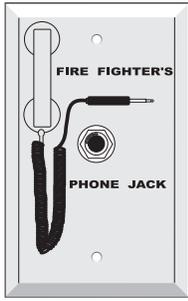
FPJ-F
Remote Phone Jack

FHS-F
Fire Fighter's Hand Set

FIRE·LITE ALARMS
by Honeywell
FPJ-F
Firefighter Phone Jack
Product Installation Drawing

Document 53246 Rev: B1 3/22/11 ECN 11-097

FPJ-F Installation

The FPJ-F Firefighter Phone Jack mounts to a single-gang electrical box (4 x 2-1/8 x 2-1/2) or, when an addressable mini-monitor module is installed with it, a deep single-gang electrical box (4" x 2-1/8" x 3-1/4").
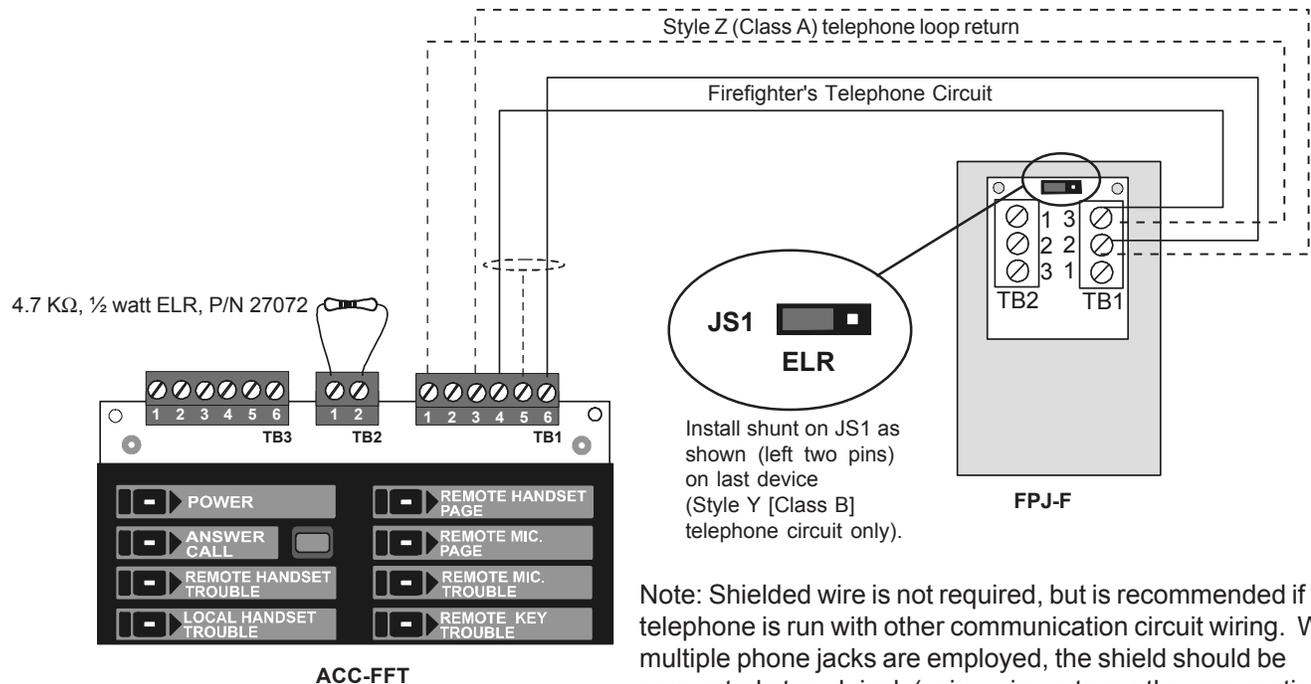
Connect the telephone audio loop between the FPJ-F and ACC-FFT as detailed in the following table and illustration below.

Telephone Loop Wiring	
ACC-FFT TB1	**FPJ-F TB1**
Terminal 4	Terminal 3
Terminal 5 connect shield	Terminal 1 (reserved)
Terminal 6	Terminal 2

All circuits are power-limited and supervised.

FPJ-F Operation

To make a call to the main panel, insert the handset plug into the FPJ-F phone jack. When call is completed, remove the handset from the jack.

Style Z (Class A) telephone loop return

Firefighter's Telephone Circuit

4.7 KΩ, ½ watt ELR, P/N 27072

TB3   **TB2**   **TB1**

POWER

ANSWER CALL

REMOTE HANDSET TROUBLE

LOCAL HANDSET TROUBLE

REMOTE HANDSET PAGE

REMOTE MIC. PAGE

REMOTE MIC. TROUBLE

REMOTE KEY TROUBLE

ACC-FFT

JS1   **ELR**

Install shunt on JS1 as shown (left two pins) on last device (Style Y [Class B] telephone circuit only).

TB2   TB1

FPJ-F

Note: Shielded wire is not required, but is recommended if the telephone is run with other communication circuit wiring. Where multiple phone jacks are employed, the shield should be connected at each jack (using wire nuts or other connection method) and isolated at the last jack.

Annunciation of FPJ-F Activation *(MS-9600, MS-9600LS, MS-9200UD, and MS-9200UDLS Only)*

The ACC-FFT Fire Fighter Telephone Module has the capability of annunciating up to 24 FPJ-F locations or zones when the ACC-25/50ZST is used with an MS-9600, MS-9600LS, MS-9200UD, or MS-9200UDLS Fire Alarm Control Panel. In order to accomplish this, an addressable monitor module, such as the MMF-300 or MMF-301 must be connected to each FPJ-F or group of FPJ-Fs to be annunciated as illustrated below.

ACC-FFT
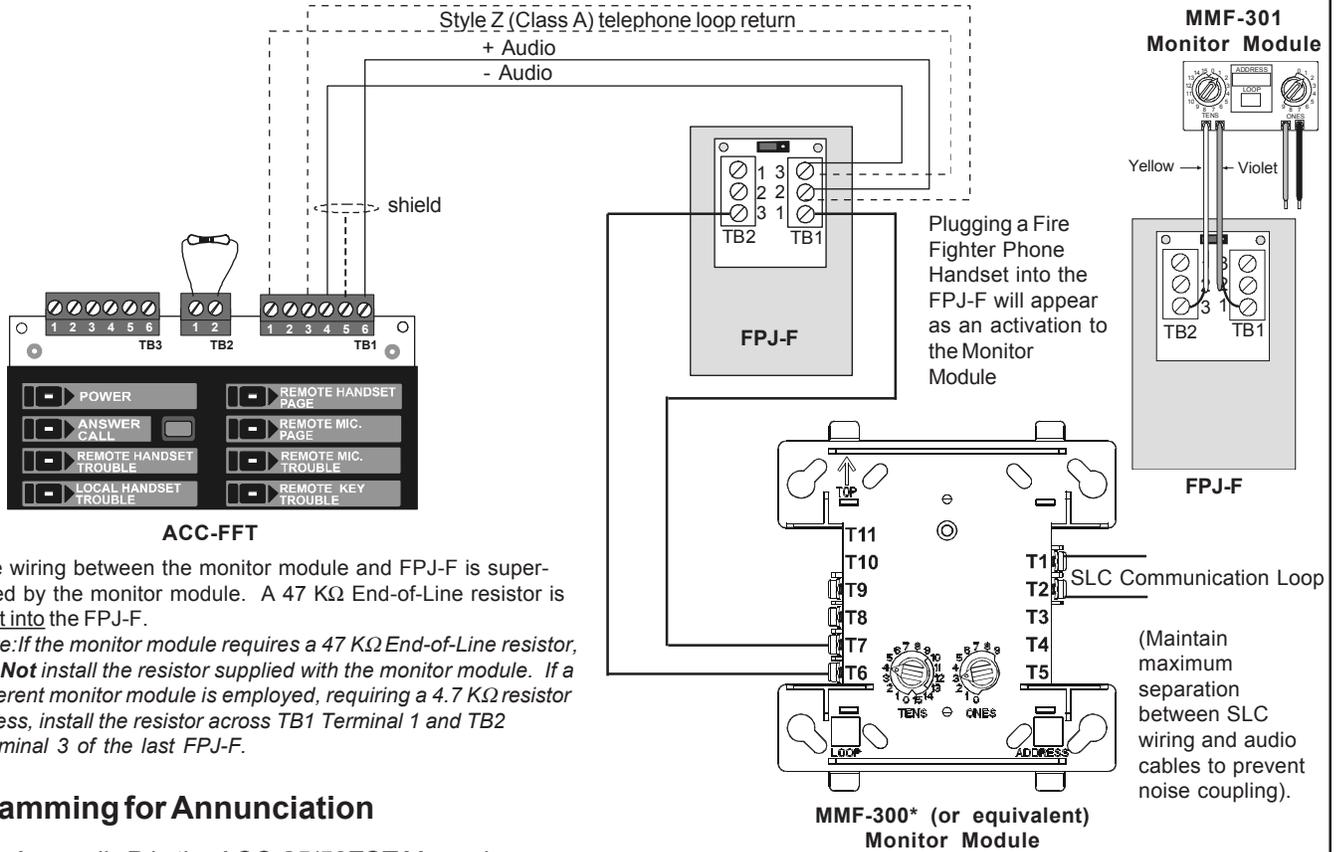
The wiring between the monitor module and FPJ-F is super-vised by the monitor module. A 47 KΩ End-of-Line resistor is built into the FPJ-F.

*Note: If the monitor module requires a 47 KΩ End-of-Line resistor, **Do Not** install the resistor supplied with the monitor module. If a different monitor module is employed, requiring a 4.7 KΩ resistor or less, install the resistor across TB1 Terminal 1 and TB2 Terminal 3 of the last FPJ-F.*

Plugging a Fire Fighter Phone Handset into the FPJ-F will appear as an activation to the Monitor Module

MMF-301 Monitor Module

FPJ-F

SLC Communication Loop

(Maintain maximum separation between SLC wiring and audio cables to prevent noise coupling).

**MMF-300* (or equivalent) Monitor Module**

* If your SLC device does not match the one in this illustration, refer to the SLC manual (document #51309) devices wiring conversion charts for the legacy and newer type devices.

Programming for Annunciation

Refer to Appendix D in the ACC-25/50ZST Manual and the Programming Section in the appropriate Fire Alarm Control Panel Manual.

The ACC-FFT is capable of annunciating up to 24 telephone circuits. The MS-9600, MS-9600LS, MS-9200UD, or MS-9200UDLS must be programmed to allow the annunciation of these circuits. This is accomplished as follows:

- Connect a monitor module to the desired FPJ-F as described above.
- Program the monitor module as described in the appropriate FACP manual, selecting *Telephone* for the Type Code.
- Program the monitor module to the desired Zone as described in the appropriate FACP manual.
  Note: Zones 75 through Zone 98 in the MS-9200UD and MS-9200UDLS are reserved for telephone circuit annunciation when the Telephone Type Code is selected. Programming an FPJ-F monitor module to Zone 75 in the MS-9200UD and MS-9200UDLS or Zone 135 in the MS-9600 and MS-9600LS will turn on the first LED on the ACC-FFT when that phone is activated; Zone 76/Zone 136 will cause the second LED to turn, etc. Refer to the illustration at right.

MS-9200UD/ MS-9200UDLS/ MS-9600/MS-9600LS

Zone 75/Zone 135	FFT 1
Zone 76/Zone 136	FFT 2
Zone 77/Zone 137	FFT 3
Zone 78/Zone 138	FFT 4
Zone 79/Zone 139	FFT 5
Zone 80/Zone 140	FFT 6
Zone 81/Zone 141	FFT 7
Zone 82/Zone 142	FFT 8
Zone 83/Zone 143	FFT 9
Zone 84/Zone 144	FFT 10
Zone 85/Zone 145	FFT 11
Zone 86/Zone 146	FFT 12

FFT 13	
FFT 14	
FFT 15	
FFT 16	
FFT 17	
FFT 18	
FFT 19	
FFT 20	
FFT 21	
FFT 22	
FFT 23	
FFT 24	

MS-9200UD/ MS-9200UDLS MS-9600/MS-9600LS

Zone 87/Zone 147	
Zone 88/Zone 148	
Zone 89/Zone 149	
Zone 90/Zone 150	
Zone 91/Zone 151	
Zone 92/Zone 152	
Zone 93/Zone 153	
Zone 94/Zone 154	
Zone 95/Zone 155	
Zone 96/Zone 156	
Zone 97/Zone 157	
Zone 98/Zone 158	
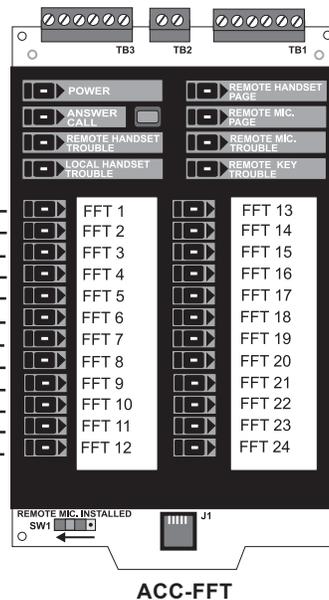
ACC-FFT

FIRE ALARM MID-SEGMENT - MORLEY LITE CONVENTIONAL

HML/RHSE
MORLEY LITE
HEAT DETECTOR
+
B/401
DETECTOR BASE
Rp 637,000

- Enhanced smoke chamber design to reduce false alarms by dust or contamination.
- Dual integrated LED for 360° visibility.
- Base complements the detector and is easy to installe and wire.

HML/PSE
MORLEY LITE
PHOT O-ELECTRIC
SMOKE DETECTOR
+
B/401
DETECTOR BASE
Rp 637,000

- Advanced protocol and smoothing filter to suppress false alarm.
- Rotary decade address switches.
- Analog addressable communication.
- Dual integrated LED for 360° visibility.

HML/100/8A
MORLEY LITE 8 CIRCUIT
CLASS B FIRE ALARM
CONTROL PANEL
Rp 17,158,000

- Addressable Fire Alarm Panel
- Display: 16x4 Char LCD Screen
- Control Keys: Silence Buzzer, Silence/ Resound Alarm, Evacuate, Accept delay
- Indicators: Fault, NAC Fault, Fire, Power, System Fault

M400K/T
Rp 545,500

The M400K is designed to provide a manual interface for causing an alarm on the fire alarm system. The two wire circuit design allows remote communication with the monitoring control panel while also providing a localized LED.

FIRE
BREAK GLASS
→●←
PRESS HERE
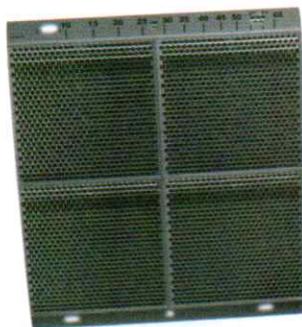
BEAMLRK
Longrange Kit For
Reflective Projected
Beam Detector
Rp 2,632,000

FM APPROVED   UL LISTED

- Long-Range Kit
- For use with Reflective Projected Beam Smoke Detector
- Allows reflected beam detectors to be installed at separations between 230 and 328 fee
- This kit is not compatible with the multi-mount kit (BEAMMMK)

BEAM1224(S)
Conventional
Single-ended
Reflected Type Beam
Smoke Detector
Rp 18,316,000

FM APPROVED   UL LISTED

System Sensor Model BEAM1224(S) is a four-wire conventional reflected beam smoke detector, which is uniquely suited for protecting open areas with high ceilings, where other methods of smoke detection are difficult to install and maintain.

Honeywell
MORLEY IAS FIRE SYSTEMS

RETAIL SELLING PRICE

Honeywell
System Sensor

SMOKE DETECTOR ANALOG

882 + B801RA
PHOTO 2W
CONV. DETECTOR
Rp. 447,500

UL LISTED

5601P
O HEAT DETECTOR
MECH FIX/ROR
Rp. 284,500

FM APPROVED   UL LISTED

SYS-HS
CONV. HORN AND
STROBE, IN
(speaker dan sirine)
Rp. 1,216,000

UL LISTED

- A LED will latch on when the detector is in alarm
  to provide a local alarm signal.
- The (-) IN and (-) OUT terminals are short circuited
  inside the detectors.
- When the detector is mounted, it will continue the wire
  to the next device or EOL resistor. When it is removed,
  the wire will be open.

System Sensor's 5600 series mechanical heat detectors
offer a low-cost means for property protection against fire,
and for non-life-safety installations where smoke detectors
are inappropriate.

- Easy to use rotary dials for selection of
  candela and horn settings
- Built in synchronization feature keeps strobes
  in sync for up to 30 minutes
- Horn settings on the horn strobe model include
  high and low volume, continuous or temporal
  3 tone.
- Round trim ring available for ceiling mount
  applications.

BATTERY POWERED DETECTORS (STAND ALONE)

XH100-EN-A
HEAT ALARM
Rp. 1,216,000

CE

XS100-EN-A
SMOKE ALARM
Rp. 1,216,000

CE

- Heat Detector, ideal for kitchens and bathrooms
- Fewer nuisance alarm in dusty and smoke affected rooms
- Clearly visible status indication LEDs: Power, Alarm, Fault
- Easy sleep feature – abilityto deactivate LED flash in bedrooms
- Loud 85dB audible alarm
- Large button – can be easily pressed with a broom stick from floor level
- Alarm hush
- Fault hush – no repetitive bleeps
- Clean, intuitive user interface

- Optical sensor, ideal for bedrooms and lounges
- Easy push fit, tamper proof installation
- Clearly visible status indication LEDs: Power, Alarm, Fault
- Easy sleep feature – abilityto deactivate LED flash in bedrooms
- Loud 85dB audible alarm
- Large button – can be easily pressed with a broom stick from floor level
- Alarm hush
- Fault hush – no repetitive bleeps
- Clean, intuitive user interface

FIRE ALARM MID-SEGMENT- MMFACP (CONVENTIONAL)

SS/8ZE
SYSTEM SENSOR 8 ZONE
FIRE ALARM
CONTROL PANEL
Rp. 11,368,500

CE

- Conventional Fire Alarm Panel
- 8 detection zones, 2 sounder outputs, surface mounting, fire and fault relays.
- Equipped with configurable class change inputs, coincidence detection,
  programmable delays to allow alarm verification and the facility to interface
  to larger house alarm systems.
- A combination of quick installation, an enhanced feature set and advanced
  programming allows installers to quickly and simply meet the demands of end user.

OSI-R-SS, OSI-RA-SS Conventional Reflective Imaging Beam Smoke Detector

This conventional, single-ended beam smoke detector is easy to install – only one side needs to be wired.

Features

- Combined transmitter/receiver unit
- Wide 12° field of view
- Fast, easy, and intuitive beam alignment indicated by directional LED cross-hair arrows
- Long range coverage of 5-100 m (16-328 ft) is standard; no separate long-range kit required
- Highly resistant to building movement; tolerates +/- 1° movement
- Resistant to strong light sources; does not alarm when saturated by sunlight
- Resistant to solid object intrusion
- Automatic sensitivity threshold level setting
- 50° horizontal and 20° vertical beam adjustment
- Built-in imager heater is standard
- Remote test station capable for electronic simulated smoke test from ground level
- Standby, fault and alarm LED indicators visible from the front and bottom
- Automatic drift compensation
- Paintable housing/cover
- Removable plug-in terminal blocks
- Optional heater kit available for the reflector

Agency Listings

UL LISTED
S911

ULC
S911

FM APPROVED
PR449231

7260-1653:
0514

OSI-R-SS is a 4-wire conventional reflector-type linear optical beam smoke detector for use in fire alarm systems. The beam operates primarily on the principle of light obscuration using an infrared beam. Optical beam smoke detectors are uniquely suited to protecting buildings with large open areas with high ceilings such as a warehouse or atrium. The OSI-R-SS detector is a combined transmitter/receiver unit that can be directly connected to a conventional detector circuit.

Fast and Easy Alignment

Aligning the imager to the reflector is extremely intuitive, fast, and accurate. Both the infrared transmitter and the CMOS imager are contained in a moveable "eyeball" – an adjustable lens assembly that can move +/- 20° in the vertical direction and 50° in the horizontal direction.

Four LED arrows indicate the direction to move the lens, guiding the user to find the imager's perfect alignment with the reflector.

Once the optimum alignment is found, indicated by all green arrows, the lens is locked with a slide lever. A paintable cover is then placed over the front to secure the lever in locked position.

Resistant to Building Movement

The infrared transmitter and receiver imager generates a beam of light towards a high-efficiency reflector. The reflector returns the beam to the receiver where the received signal is analysed. The change in the strength of the received signal when smoke enters the area between the unit and the reflector is used to determine the alarm condition. The receiver imager has a wide 12° field of view that automatically tracks the reflector in case of building movement or movement of its support structure. It is virtually impossible for the receiver to lose sight of the reflector from its field of view without structural damage being caused to the building. As a result of this operation, OSI-R-SS is highly resistant to building movement, eliminating the number one cause of false alarms and/or faults with traditional beam detectors.

Resistant to Sunlight

Optical filtering, high-speed image acquisition and intelligent software algorithms provide the OSI-R-SS system with higher levels of stability and greater resistance to high level lighting variability. This provides better resistance to sunlight in its field of view, helping to prevent false alarms when saturated by sunlight, reflected sunlight or any other very bright light sources. The worst-case scenario is for the detector to go into a trouble condition unlike other traditional beam detectors which go into alarm.

Resistant to Foreign Object Intrusion

Advanced smoke imaging techniques allow the detector to avoid false alarms from partial and sudden blockage from foreign object intrusion.

Time-saving Automatic Sensitivity Setting

Unique in the market, the sensitivity of the detector is selected and set automatically at the optimum sensitivity based on the size of the reflector measured in the field of view.

Drift Compensation

The detector incorporates automatic drift compensation, whereby the detector will adjust its detection thresholds in line with any long-term signal reduction of the beam caused by dust or other contamination of the optical surfaces.

Equipped with Built-in Imager Heater

The imager ships standard with an internal heating option to prevent condensation on the optical surface. (External power supply required.)

Specifications

Physical/Operating Specifications	
Dimensions (Detector)	Height 6" (152.4 mm); Width 10" (254 mm); Depth 4.5" (114.3 mm)
Dimensions (Reflector)	Height 9.06" (230 mm); Width 7.87" (200 mm)
Weight (Installed)	2.48 lbs (1.12 kg)
Weight (Shipping):	3.91 lbs (1.77 kg)
Wire Gauge for Terminals	14 AWG (2.08 mm²)

Electrical Specifications: OSI-R-SS, OSI-RA-SS	
Operating Voltage Range	10.2 to 32 VDC (12 or 24VDC nominal)
Maximum Standby Current	7 mA @ 32 VDC 11 mA @ 24 VDC 20 mA @ 12 VDC 50 mA @ 10.2 VDC
Maximum Alarm Current (LED on)	11 mA @ 32 VDC 15 mA @ 24 VDC 24 mA @ 12 VDC 54 mA @ 10.2 VDC

Environmental Specifications	
Operating Humidity Range	0 to 95% Relative Humidity, Non-condensing
Operating Temperature Range	UL-Listed for use from 32°F to 100°F (0°C to 37.8°C) Application Temperature Range: -20°C to +55°C (-4°F to 131°F)

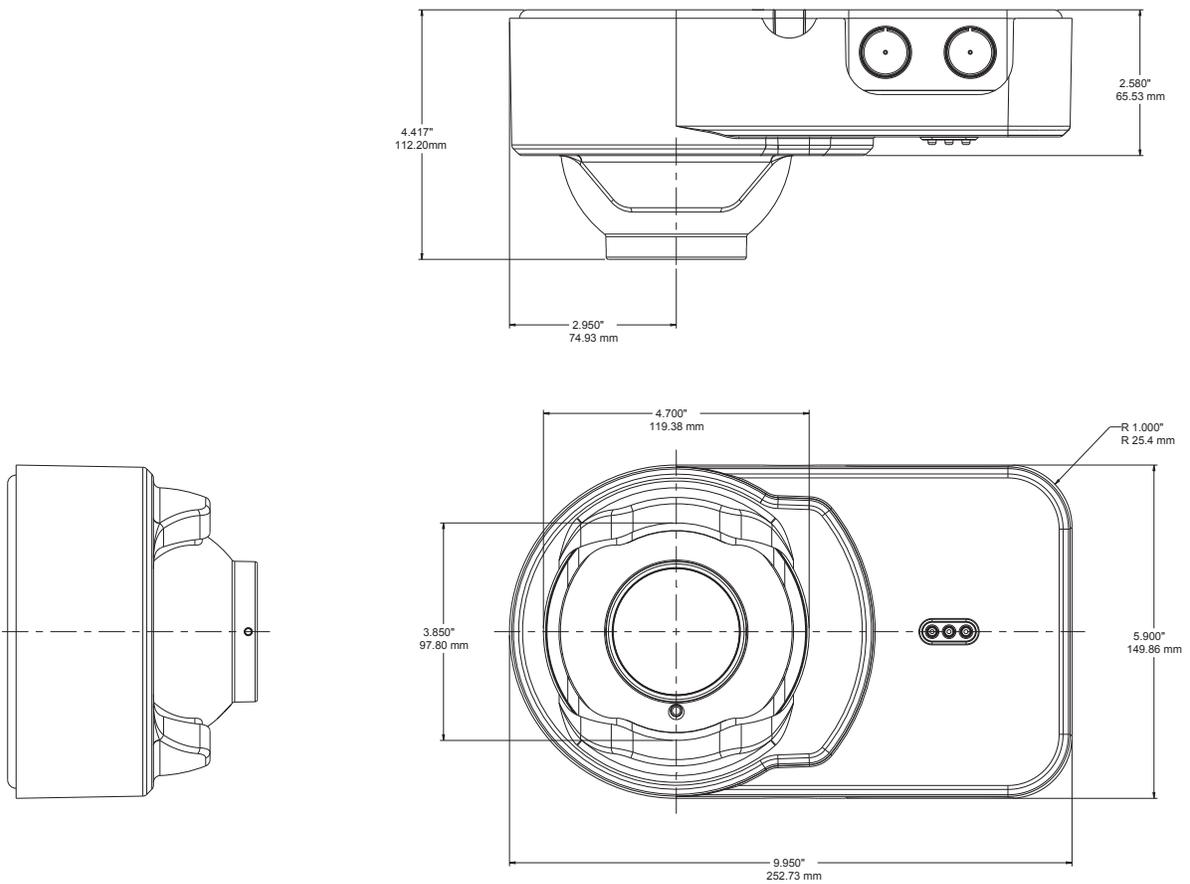| Operational Specifications	
Protection Range	16 ft to 328 ft (5 m to 100 m)
Adjustment Angle	20 degrees vertical, 50 degrees horizontal
Sensitivity Levels	Level 1 25%, Level 2 30%, Level 3 40%, Level 4 50%
Fault Condition (Trouble)	Long-term drift reference out of 20% range, beam blockage or detector out of alignment, imager saturated.
Alignment Aid	LED directional arrows
Alarm Indicator	Local red LED and remote output
Trouble Indicator	Local yellow LED and remote trouble output
Normal Indicator	Local flashing green LED
Test/Reset Features	Local alarm test switch, local alarm reset switch, Remote test and reset switch (Compatible with RTS151 and RTS151KEY(-A) test stations), Uses OSID-R test filter.
Smoke Detector Spacing	On smooth ceilings, 30-60 feet between projected beams and not more than one-half that spacing between a projected beam and a sidewall. Other spacing may be used depending on the ceiling height, airflow characteristics, and response requirements. See NFPA 72 (S524 in Canadian applications).

Electrical Specifications: BEAMHKR	
Voltage Range	15 to 32 V
Maximum Current	450 mA Max at 32 V
Power Consumption	7.7 W @ 24 V
	15 W @ 32 V

Electrical Specifications: RTS151KEY(-A)	
Voltage Range	10.2 to 32 VDC
Current Range	9 mA Min to 11 mA Max

Dimensions

4.417"
112.20mm

2.580"
65.53 mm

2.950"
74.93 mm

4.700"
119.38 mm

R 1.000"
R 25.4 mm

3.850"
97.80 mm

5.900"
149.86 mm

9.950"
252.73 mm

C20151-00

Ordering Information

Part No.	Description
OSI-R-SS	Conventional imaging beam smoke detector including reflector, UL listed
OSI-RA-SS	Conventional imaging beam smoke detector including reflector, ULC listed
OSP-002	Laser alignment tool
OSP-004	Test filter, 10-pack
RTS151	Remote test station
RTS151KEY	Test and reset station with key lock, flush mount, UL listed
RTS151KEY-A	Test and reset station with key lock, flush mount, ULC listed
BEAMHKR	Heater kit for the reflector
6500-MMK	Multi-mount accessory for ceiling or wall mounting with additional mounting adjustment

SYSTEM SENSOR®

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

B501 Plug-in Detector Base

SPECIFICATIONS

Base Diameter:	4.0 inches (10.2cm)
Base Height:	.74 inches (18.8 mm)
Operating Temperature:	Refer to applicable sensor Operating Temperature Range using the Base/Sensor Cross Reference Chart at systemsensor.com

Electrical Ratings – includes base and detector

Operating Voltage:	15 to 32 VDC
Standby Current:	150µA

BEFORE INSTALLING

Please read the *System Smoke Detectors Application Guide*, which provides detailed information on detector spacing, placement, zoning, wiring, and special applications. Copies of this application guide are available from System Sensor. NFPA 72 guidelines should be observed.

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

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

GENERAL DESCRIPTION

The B501 is a plug in detector base intended for use in an intelligent system with screw terminals provided for power (+) and (–), and remote annunciator connections. Communication takes place over the power (+) and (–) lines.

BASE TERMINALS

No.	Function
1	Power (–), Remote Annunciator (–)
2	Power (+)
3	Remote Annunciator (+)

FIGURE 1. TERMINAL LAYOUT:
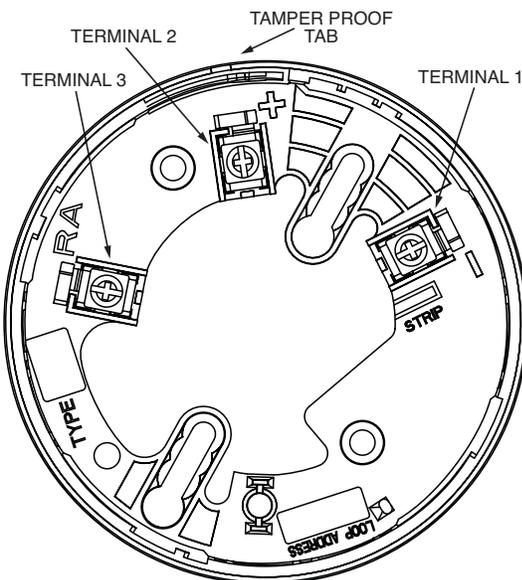
C0131-01

MOUNTING

This detector base mounts directly to 4 inch square with plaster ring, 3.5 inch octagon, 50 mm, 60 mm, and 70 mm centers.

INSTALLATION AND WIRING GUIDELINES (SEE FIGURE 2)

All wiring must be installed in compliance with all applicable local codes and any special requirements of the local authority having jurisdiction. Proper wire gauges should be used. The conductors used to connect smoke detectors to control panels and accessory devices should be color-coded to reduce the likelihood of wiring errors. Improper connections can prevent a system from responding properly in the event of a fire.

For signal wiring (the wiring between interconnected detectors and modules), it is recommended that the wiring be no smaller than 18 AWG (0.823 square mm). Wire sizes up to 12 AWG (3.31 square mm) may be used with the base.

Alarm system control panels have specifications for allowable loop resistance. Consult the control panel specifications for the total loop resistance allowed before wiring the detector loops.

Make wiring connections by stripping about 3/8 inch (10 mm) of insulation from the wire end (use strip gauge molded in base). Then slide the wire under the clamping plate and tighten the clamping plate screw. Do not loop the wire under the clamping plate. (see Figure 3)

Check the zone wiring of all bases in the system before installing the detectors. This includes checking the wiring for continuity, correct polarity, ground fault testing and performing a dielectric test.

The base includes an area for recording the zone, address, and type of detector to be installed at that location. This information is useful for setting the detector head address and for verification of the detector type required for that location.

Once all detector bases have been wired and mounted, and the loop wiring has been checked, the detector heads may be installed in the bases.
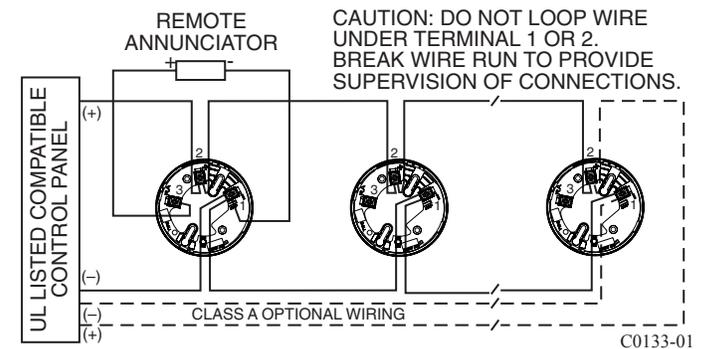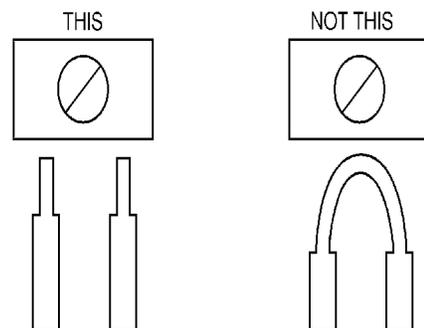
FIGURE 2. TYPICAL WIRING DIAGRAM FOR 2-WIRE LOOP:

C0133-01

FIGURE 3.:

C0473-00

TAMPER-RESIST FEATURE

NOTE: Do not use the tamper-resist feature if the removal tool is to be used.

The detector base includes a tamper-resist feature that prevents removal of the detector without using a small screwdriver or similar tool.

To activate this feature, use needle-nose pliers to break the tab on the detector base as shown in Figure 4A. Then, install the detector.

To remove the detector from the base once the tamper-resist feature has been activated, insert a small-bladed screwdriver into the small hole on the side of the base and push the plastic lever away from the detector head (see Figure 4B). This allows the detector to be rotated counterclockwise for removal.

The tamper-resist feature can be defeated by breaking and removing the plastic lever from the base. However, this prevents the feature from being used again.

FIGURE 4A. ACTIVATING TAMPER-RESIST FEATURE:

PLASTIC LEVER

BREAK TAB AT DOTTED LINE BY TWISTING TOWARD CENTER OF BASE
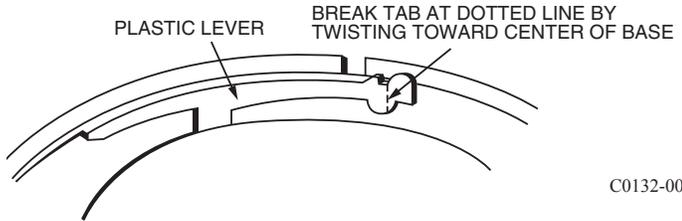
C0132-00

FIGURE 4B. REMOVING DETECTOR HEAD FROM BASE:

USE SMALL-BLADED SCREWDRIVER TO PRESS PLASTIC LEVER IN DIRECTION OF ARROW
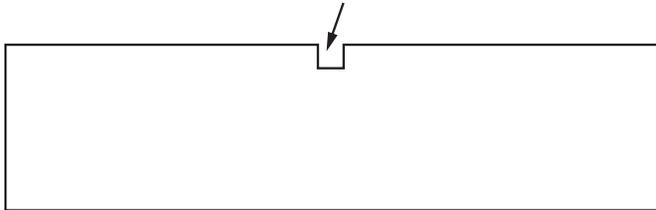
C0132-01

REMOTE ANNUNCIATOR (RA400Z/RA100Z)

The remote annunciator is connected between terminals 1 and 3 using the spade lug terminal packed with the remote annunciator. The spade lug terminal is connected to the base terminal as shown in Figure 5.

It is not acceptable to have three stripped wires under the same wiring terminal unless they are separated by a washer or equivalent means. The spade lug supplied with the model RA400Z/RA100Z is considered an equivalent means. See Figure 2 for proper installation.

FIGURE 5. CONNECTION TO REMOTE ANNUNCIATOR TERMINAL:

STRIPPED WIRE

WIRE WITH SPADE LUG

C0116-00

Please refer to insert for the Limitations of Fire Alarm Systems

---

200 Series Mounting Base Options

System Sensor mounting bases and kits provide a variety of ways to install detectors in any application.

Features

• Easy plug-in of detector to base

• SEMS screws, 12-24 AWG (14-24 for B224RB and B224BI)

• Multiple accessories for mounting flexibility

• UL 464 and UL 864 Compliant Sounder Bases

200 Series detectors can be mounted in either flanged or flangeless bases depending on junction box selection (see junction box selection guide).

Features. Relay, isolator, and sounder bases can be used to meet local code requirements. Relay bases provide one form C contact relay for control of auxiliary functions such as door closure and elevator recall. Isolator bases allow loops to continue to operate under fault conditions and automatically restore when the fault is removed. Sounder bases are available in temporal and non-temporal pattern versions depending on whether the signal is to be used for evacuation purposes.

Mounting. The recessed mounting kit provides the most aesthetically pleasing installation. Surface mounting boxes are available when flush mounting isn't possible. Whatever the installation challenge, System Sensor has the solution.

Agency Listings

Model	Listings
B501	UL, ULC,* FM, CSFM, MEA
B210LP	UL, ULC, FM, CSFM, MEA
B501BH, B501BH-2, and B501BHT-2	UL, ULC, CSFM, MEA
B501BHT	UL, ULC, CSFM
B224RB	UL, ULC, CSFM, MEA
B224BI	UL, ULC, FM, CSFM, MEA

* For ULC listed products, add "A" to the model number (e.g., B501A).

Specifications, 200 Series Bases

Physical Specifications	
Diameter	B501: 4.1 in (104 mm); B210LP, B224RB, B224BI: 6.1˝ (155 mm); B501BH, B501BHT, B501BH-2, B501BHT-2: 6.0 in (152 mm)
Wire Gauge	B224BI, B224RB: 24 to 14 AWG; B501, B210LP, B501BH, B501BHT, B501BH-2, B501BHT-2: 24 to 12 AWG
Temperature Range	32°F to 120°F (0°C to 49°C); B501, B210LP: −4°F to 150°F (−20°C to 66°C)
Humidity Range	10% to 93% RH non-condensing

B224RB/B224BI Electrical Ratings		B501BH/B501BHT/B501BH-2/B501BHT-2 Electrical Ratings	
Operating Voltage	15 to 32 VDC (powered by SLC)	External Supply Voltage	17 to 32 VDC
Standby Ratings	<500 μA maximum @ 24 VDC	Standby Current	1.0 mA max.
Set Time (B224RB only)	Short Delay: 55 to 90 msec Long Delay: 6 to 9 sec	Set Time	B501BH/B501BHT: 6 to 15 sec B501BH-2/B501BHT-2: 0.75 to 5.7 sec
Reset Time (B224RB only)	20 msec max.	Maximum Ripple Voltage	10% of supply voltage
Relay Characteristics (B224RB only)	2 coil latching relay 1 Form C contact UL/CSA Rating: 0.9 A @ 125 VAC 0.9 A @ 110 VDC 3 A @ 30 VDC	Sound Output	Greater than 90 dBA measured in anechoic room at 10 feet, 24 volts. 85 dBA minimum in UL reverberant room
		Alarm Current	15 mA max.
		Start-up Capacitance	200 μF

200 Series Junction Box Selection Guide

Model	Single Gang	3.5 in Octagonal	4 in Octagonal	4 in Square	4 in Square*	50 mm	60 mm	70 mm	75 mm
B501	No	Yes	No	No	Yes	Yes	Yes	Yes	No
B210LP	Yes	Yes	Yes	Yes	Yes	No	No	No	No
B224RB	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes
B224BI	No	Yes	Yes	Yes	No	No	No	Yes	Yes
B501BH /B501BH-2	No	No	No	Yes	No	No	No	No	No
B501BHT /B501BHT-2	No	No	No	Yes	No	No	No	No	No

* with 3.0 in mud ring

Note: Box depth contingent on base and wire size. Refer to National Electric Code or applicable local codes for appropriate recommendations.

Ordering Information, 200 Series Bases

| Model	Description
B501*	Flangeless Mounting Base
B210LP*	Flanged Mounting Base
B501BH*	Standard Sounder Base
B501BHT*	Temporal Tone Sounder Base
B501BH-2	Standard Sounder Base, UL 864 9th edition compliant
B501BHT-2	Temporal Tone Sounder Base, UL 864 9th edition compliant
B224RB*	Relay Base
B224BI*	Isolator Base
RMK400	Recessed Mounting Kit
SMK400	Surface Mounting Kit (flangeless)
SMB600	Surface Mounting Kit (flanged)
F110	Retrofit flange for B501B/B524
200 Series Accessories	
RA400Z* / RA100Z*	Remote LED Annunciator
M02-04-01	Detector Test Magnet
M02-09-00	Test Magnet with Telescoping handle
XR2B	Detector Removal Tool (T55-127-000 Included)
XP-4	Extension Pole for XR2B (5 to 15 ft.)
T55-127-000	Detector Removal Head
BCK-200B	Black Detector Kit
WCK-200B	White Detector Kit

* Add "A" to model number for ULC listed product (e.g., B501A)

Recessed Mounting Kit Product Overview

Used with B501, the RMK400 provides a simple installation solution in applications that demand a lower profile smoke detector. Kit is suitable for use with 4˝ octagon, 50mm, and 60mm junction boxes connected to flexible conduit. Junction boxes are not included in kit.

• Drywall or suspended ceiling

• Standard junction boxes

• Aesthetically pleasing
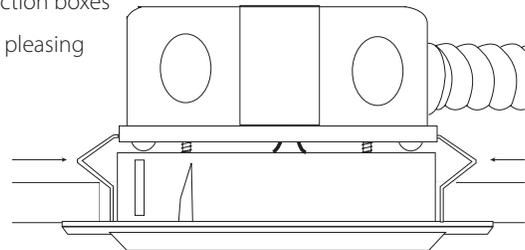
B401 Plug-In Detector Base

SYSTEM SENSOR®

For use with the following detectors:

US Models:	1151, 1451, 2151, 2451, 2451TH, 5451
European Models:	1151E, 1451E, 2151E, 2451E, 5451E
Australian Models:	1151AUS, 1451AUS, 2151AUS, 2451AUS, 4451AUS
	5451AUS, 51A51, 51B51, 51C51, 51D51

Specifications

Base Diameter:	10.2 cm (4.0 inches)
Base Height:	2.0 cm (0.8 inches)
Weight:	152 g (0.34 lb.)
Mounting:	50 mm box
	60 mm box
Operating Temperature Range:	−10° to +60°C (14° to 140°F) — European Installation
	0° to 49°C (32° to 120°F) — US/Australian Installation
Operating Humidity Range:	10% to 93% Relative Humidity

Electrical Ratings — includes base and detector

	Base And Smoke Detector	Base And Heat Detector
System Voltage:	12/24 VDC	24 VDC
Maximum Ripple Voltage:	4 Volts peak to peak	4 Volts peak to peak
Start-up Capacitance:	0.02 µF Maximum	0.02 µF Maximum
Standby Ratings:*	8.5 VDC Minimum	15 VDC Minimum
	35 VDC Maximum	35 VDC Maximum
	120 µA Maximum	100 µA Maximum
Alarm Ratings:	4.2 VDC Minimum at 10 mA**	4.2 VDC Minimum at 10 mA**
	6.6 VDC Maximum at 100 mA**	6.6 VDC Maximum at 100 mA**
Reset Voltage:	2.5 VDC Minimum	2.5 VDC Minimum
Reset Time:	0.3 Seconds Maximum	0.3 Seconds Maximum
Start-up Time:	34 Seconds Maximum	34 Seconds Maximum

* 1151E: 30 µA Maximum.

** Alarm current MUST be limited to 100 mA maximum (130 mA for models 1151 and 2151) by the control panel.
If used, the RA400Z Remote Annunciator operates within the specified detector alarm currents.

Before Installing

Please thoroughly read the *System Smoke Detectors Application Guide*, which provides detailed information on detector spacing, placement, zoning, wiring, and special applications. Copies of this manual are available from System Sensor.

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

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

General Description

This B401 plug-in detector base is used with System Sensor smoke and heat detector heads. The capability of plugging these detectors into a variety of special bases makes them more versatile than equivalent direct-wired models. Refer to the System Sensor catalog for other available plug-in detector bases.

The B401 base is intended for use in 2-wire systems, with screw terminals provided for power and remote annunciator connections.

Mounting

Figure 1 shows mechanical mounting details. These detector bases mount to typical junction boxes. Attach the base to the box using the screws supplied with the junction box.

Installation Guidelines

All wiring must be installed in compliance with applicable codes and the authority having jurisdiction. Proper wire gauges should be used. The conductors used to connect smoke detectors to control panels and accessory devices should be color-coded to reduce the likelihood of wiring errors. Improper connections can prevent a system from responding properly in the event of a fire.

For signal wiring (the wiring between interconnected detectors), it is recommended that the wire be no smaller than 18 gauge. Wire sizes up to 12 gauge may be used with the base. For best system performance, the power (+) and (−) loop wires should be twisted pair and installed in separate grounded conduit to protect the loop from extraneous electrical interference.

Smoke detectors and alarm system control panels have specifications for allowable loop resistance. Consult the control panel manufacturer's specifications for the total loop resistance allowed for the control panel being used before wiring the detector loops.

Wiring Instructions

⚠CAUTION

Do not loop wire under terminals. Break wire run to ensure supervision of connections.

Wire connections are made by stripping about $3/8$" of insulation from the end of the wire (use strip gauge molded in base), sliding the bare end of the wire under the clamping plate, and tightening the clamping plate screw.

Two-wire initiating devices receive their power from the initiating circuit of a control panel. Electrical specifications of the control panel and the detector-base combination must be compatible for the system to function properly.

System Sensor maintains a list of two-wire detectors and control panels that are listed as compatible. The 2-Wire Compatibility Chart is available from System Sensor at no charge.
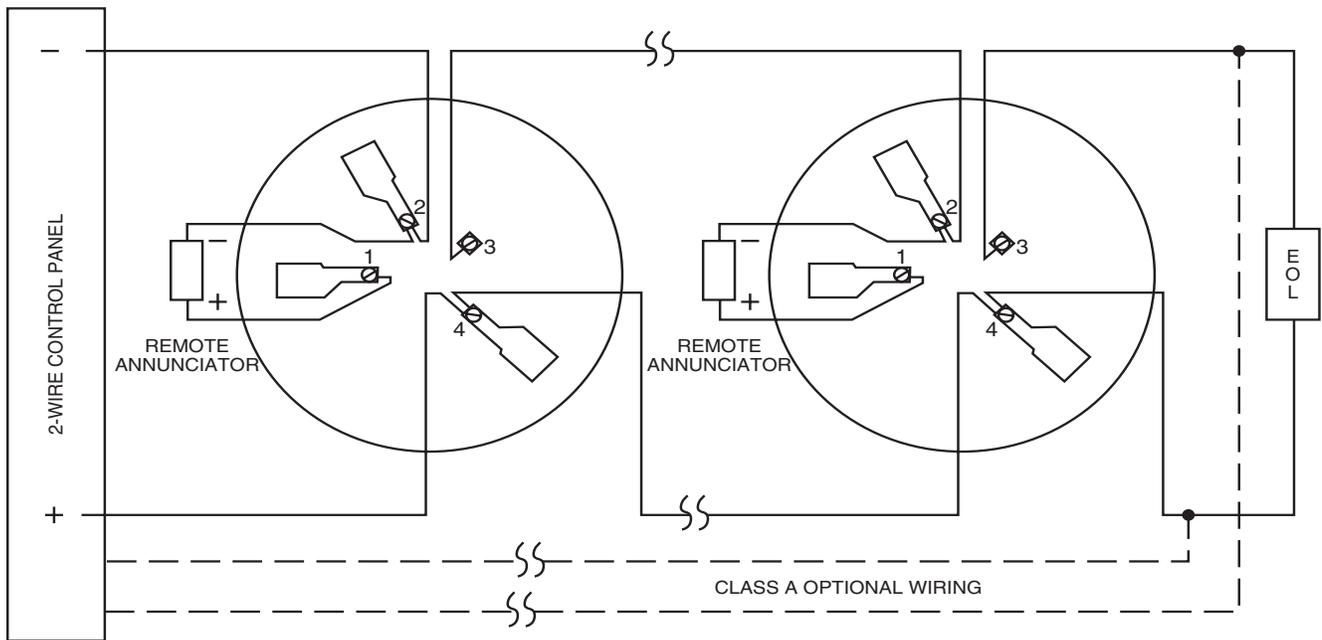
The zone wiring of the detector bases should be checked before the detector heads are installed. To make this possible, this base contains a special spring-type shorting jumper (shown in Figure 1). After a detector base is prop-

Figure 1. Mounting base to box:
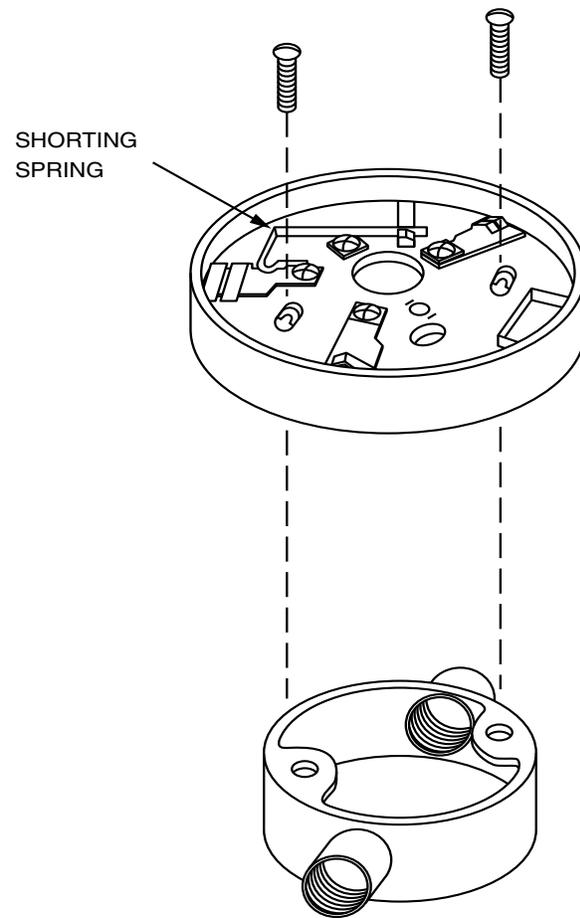
SHORTING SPRING

C0589-00

Figure 2. Typical 2-wire detector wiring configuration:

CLASS A OPTIONAL WIRING

C0529-00

erly wired and mounted to an electrical box, make sure that the shorting spring is in contact with terminal 3. This temporary connection permits the wiring of the loop to be checked for continuity before installation of the detector heads. The shorting spring in the base automatically disengages when the detector head is removed from the base. DO NOT remove the shorting spring since it reengages as the detector head is turned in the base, completing the circuit.

Tamper-resistance Feature
This detector includes an optional tamper-resistance feature that prevents its removal from the base without the use of a tool.

NOTE: DO NOT use the tamper-resistant feature if the XR-5 or XR-2 removal tool is to be used.

To make the detector tamper-resistant, remove the smaller tab by breaking it at the scribed line on the tamper-resis-

tant tab before installing the detector (see Figure 3A). The tamper-resistant tab is on the detector mounting base.
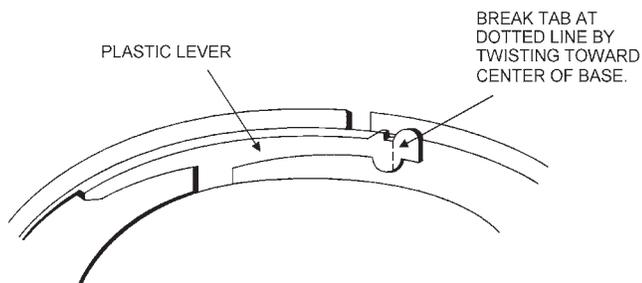To remove a tamper-resistant detector from the base, use a pocket screwdriver, or similar tool, to depress the tamper-resistant tab and turn the detector counterclockwise. The tab is accessible through the slot on the mounting base (see Figure 3B).

The tamper-resistance feature can be defeated by breaking and removing the plastic lever from the base. However, this permanently disables the tamper-resistance feature.
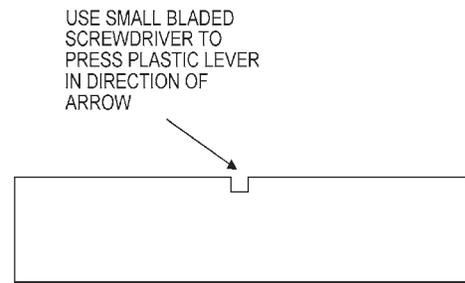
Optional Remote Annunciator Units
The model RA400Z remote LED annunciator is available as an optional accessory. This unit has a rectangular plate that fits U.S. single-gang light switch boxes. If a different type of remote annunciator is used, it must be rated for the appropriate voltage, which is 2.75 to 3.0V.

Figure 3A. Activating tamper-resistance feature:

PLASTIC LEVER

BREAK TAB AT DOTTED LINE BY TWISTING TOWARD CENTER OF BASE.

C0590-00

Figure 3B. Removing detector head from base:

USE SMALL BLADED SCREWDRIVER TO PRESS PLASTIC LEVER IN DIRECTION OF ARROW

C0591-00

<div style="border: 2px solid black; padding: 20px; text-align: center;">

Please refer to insert for the Limitations of Fire Alarm Systems

</div>

Three-Year Limited Warranty

System Sensor warrants its enclosed smoke detector base 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 smoke detector base. 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 smoke detector base 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: Honeywell, 12220 Rojas Drive, Suite 700, El Paso TX 79936 USA. 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.

System Sensor

100 Series™ Plug-In Thermal Detectors

System Sensor 100 Series Plug-in Thermal Detectors offer superb performance and reliability in a sleek, low-profile design.

Features

- Low standby current
- Compatible with 400 Series product
- Two visible LEDs "blink" in standby and provide a 360° field viewing angle
- Detector head plugs easily into base
- Built-in test switch
- Wide variety of mounting bases with built-in shorting spring

The **5151 thermal detector** meets the needs for applications where rapid response is vital and rapid temperature increases would only be caused by a fire emergency.

The detector initiates an alarm in response to both rapid rate-of-rise conditions (increases in excess of 15°F per minute) and fixed heat (135°F). This enables the heat detector to communicate an alarm to the central control panel prior to reaching its fixed set point for high rates of rise, providing a timely response to both rapid and slow temperature increases.

A full line of accessories are available for this product.

Agency Listings

UL LISTED
S2101

FM APPROVED
OB3AO.AY

7270-1653:104

100 Series Plug-in Thermal Detector Specifications

Physical Specifications	
Height	1.64˝(42 mm)
Diameter	4.0˝(102 mm)
Shipping Weight	2.8 oz. (80g)
Operating Humidity Range	10 % – 93 % RH non-condensing
Application Temperature Range	32° to 100°F (0° to 38°C)
Electrical Specifications	
Operating Voltage Range	8.5 to 35VDC
Standby Current	80µA @24VDC
Thermal Detector Spacing	On smooth ceilings (as defined in NFPA 72), spacing of 50 feet (2500 sq ft) may be used. Other spacing may be used depending on ceiling height, high air movements, and other conditions or response requirements.

Adapter Base Selection Guide					
Base Model Number	Loop Type	Current Limit Resistor	Contact Type	Nominal Voltage	Current Draw on Alarm (mA)
B110LP	2-wire*	No	—	12/24VDC	10–130†
B110RLP	2-wire*	Yes	—	24VDC	10–62
B112LP	4-wire	Yes	Form A&C	24VDC	17–36
B114LP	4-wire	Yes	Form A&C + A Supervisory	120VAC	75 mA AC Max
B116LP	2-wire*	No	Form C	24VDC	20–100†
B401††	2-wire*	No	—	12/24VDC	10–130†

* Functionality contingent on panel compatibility
 † Must be limited by control panel
†† Flangeless base.

Relay Contact Ratings:	Resistive or Inductive (60% power factor) load.
Form A:	2.0A at 30 VAC/DC
Form C:	0.6A at 110VDC, 2.0A at 30VDC ; 1.0A at 125VAC, 2.0A at 30VAC

Junction Box Selection Guide*							
Base Model Number	Single Gang	3½˝ Octagon	4˝ Octagon	4˝ Square	50 mm	60 mm	75 mm
B401	No	No	No	No	Yes	Yes	No
B110LP/RLP	Yes	Yes	Yes	Yes	No	No	No
B112LP/B116LP	Yes	Yes	Yes	Yes	Yes	Yes	Yes
B114LP	No	No	Yes	Yes	No	No	No

*Box depth contingent on base and wire size. Refer to National Electrical Code or local applicable codes for appropriate recommendations.

Ordering Information

Part No.	Description
5151	Fixed heat detector with rate-of-rise. Alarm point at 57.2°C (135°F). Must be mounted to one of the 100 Series or 400* Series Bases listed in Adapter Mounting Base Guide.
Accessories	
F110	Accessory Flange Ring for 6" Base
RA100Z	RA100Z Remote annunciator for 2 or 4 wire systems, 3 – 32V. Fits standard U.S. single-gang electrical box.
EOLR-1	End of line relay for power supervision,12/24 VDC , 4-wire only.
M02-04-01	Detector Test Magnet
M02-09-00	Telescoping Test Magnet
XR2B	Detector removal tool. Allows installation and/or removal of detector heads from base in high-ceiling installations
XP-4	Extension pole for XR2B. Comes in three 5 ft. sections.

*F110 Flange Ring required when using 400 Series Bases.