Axis AX UL Smoke Detector

The Axis AX UL Smoke Detector is our most advanced detector offering suitable for a wide range of applications. It uses Purelight® high-tech sensing technology that detects smoke particles entering the chamber and substantially reduces the possibility of false alarms.

Operation

The low profile design of the Axis AX Smoke Detector is sleek and evolutionary, with a 360º LED indicator which illuminates red when in alarm.

At the heart of the smoke sensor is Purelight® Sensing Technology which incorporates:

- Cone technology combined with a high-intensity infrared LED to provide stability and accurate sensitivity to smoke.
- A sophisticated dynamic algorithm, providing transient rejection and compensation for drift whilst maintaining accurate sensitivity.

The smoke chamber of the detector is a unique cone shape which serves to reduce any stray reflection. This ultra dark internal light chamber also contains a high-intensity infrared LED that is highly sensitive to smoke particles.

When smoke enters the chamber, infra-red light is scattered and registered by the photodiode and amplifier that are included in an application-specific integrated circuit (ASIC). This circuit ensures long term reliability, even in extreme conditions.

System compatibility

Axis AX detectors have been designed to operate on Discovery loops. This allows for Axis AX detectors and bases to operate on existing systems.

Maintenance and service

Axis AX detectors have been designed with a comprehensive set of features to support maintenance and service. Maintenance has to be done in accordance with all applicable standards. Clean the detector externally using a soft damp cloth.



Features

- Built-in isolator
- Purelight® optical technology for enhanced smoke detection and false alarm management
- Drift compensation
- Backwards compatible with Discovery
- Base locking mechanism (grub screw)
- In-built self test
- XPERT card addressing

Listings and Approvals

- Approved to UL268 7th edition, CSFM, ULC S529

Please note: This detector is a direct replacement for the 58000-65AEL Axis AX Smoke Detector.

Specification

Digital communication protocol	Discovery
Supply wiring	Two wire supply, polarity sensitive
Sensitivity	1.2-2.1%/ft
Supply voltage (Vmin-Vmax)	17-28 Vdc
Sampling frequency	Once per second
Modulation voltage	5-9V peak to peak
Supervisory current	500 µA

Switch-on surge current	1.0 mA
Alarm/operated current, LED on	4.0 mA
Status indicator	Alarm - Red Fault - Flashing yellow Isolate - Yellow Poll - Flashing green
Additional remote LED current	5A maximum
Product operating temperature	32° F to 131° F (0° C to 55° C)
Effect of atmospheric pressure	None
Air velocity	0-300 fpm
Humidity	0% to 95% RH (no condensation or icing)
IP rating	IP44
Weight	2.93 ounces (83g)
Dimensions	4" (100mm) diameter x 1.42" (36mm height) 1.88" (48 mm) height with XPERT Intelligent Mounting Base
Materials	Housing: White flame-retardant polycarbonate. Terminals: Tin-plated stainless steel

All data is supplied subject to change without notice. Specifications are typical at 24 V, 73° F and 50% RH unless otherwise stated.

Isolated detector data

Maximum loop current (1c max; L1 in/out)	1A
Maximum series resistance (Z c max; L1 in/out)	100 mΩ

Order Codes and Options

SA5150-650ADV	Axis AX UL Smoke Detector
SA5000-210ADV	Axis AX UL Base - 4"
SA5000-230ADV	Axis AX UL Base - 6"

NB Built-in isolators for Axis AX Smoke and Multicriteria detectors only.

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As our policy is one of constant product improvement the right is therefore reserved to modify product specifications without prior notice.

Axis AX UL Multicriteria Detector

The Axis AX UL Multicriteria Detector (Smoke/Heat) is our most advanced detector offering suitable for a wide range of applications. It uses Purelight® high-tech smoke sensing technology to detect smoke particles entering the chamber and is fitted with two thermistors for detecting heat. It can be switched to detect smoke, heat or a combination of both, offering greater flexibility, fast detection and advanced false alarm management.



Operation

The low profile design of the Axis AX UL Multicriteria Detector (Smoke/Heat) is sleek and evolutionary, with a 360º LED indicator which illuminates red when in alarm.

At the heart of the smoke smoke sensor is Purelight® Sensing Technology which incorporates:

- Cone technology combined with a high-intensity infrared LED to provide stability and accurate sensitivity to smoke.
- A sophisticated dynamic algorithm, providing transient rejection and compensation for drift whilst maintaining accurate sensitivity.

Signals from the smoke smoke chamber and temperature sensors are independent and represent the smoke level and air temperature respectively in the vicinity of the detector; the detector's micro-controller processes both signals. The temperature signal processing extracts only rate-of-rise information for combination with the smoke signal.

The optical sensor will trigger an alarm at 1.2 %/ft and the heat sensor at 69.8 ºF (21 ºC) rise. Minimum time to alarm is ten seconds.

The detector will not respond to slow increases in temperature, but a large, sudden change can cause an alarm without the presence of smoke.

The sensor will respond to smoke or heat, or a combination of both.

System compatibility

Axis AX detectors have been designed to operate on Discovery protocol loops. This allows for Axis AX detectors and bases to operate on existing systems.

Maintenance and service

Axis AX detectors have been designed with a comprehensive set of features to support maintenance and service, from self-test capabilities to drift compensation warnings on dirty detectors.

Features

- Built-in isolator
- Purelight® optical technology for enhanced smoke detection and false alarm management
- Drift compensation
- Backwards compatible with Discovery
- Base locking mechanism (grub screw)
- In-built self test
- XPERT card addressing
- Dual heat sensors

Listings and Approvals

- Approved to UL268 7th edition, UL 521, ULC S529, ULC S530

Operating modes

Axis AX multisensor detectors give the choice of five operating modes which respond as follows:

- Modes 1, 3 and 4 - multicriteria response
- Mode 2 - optical response only
- Mode 5 - heat response only

Specification

Digital communication protocol	Discovery
Supply wiring	Two wire supply, polarity sensitive
Sensitivity	1.2-2.1%/ft
Supply voltage (Vmin-Vmax)	17-28 Vdc
Sampling frequency	Once per second
Modulation voltage	5-9V peak to peak
Supervisory current	500 µA
Switch-on surge current	1.0 mA
Alarm/operated current, LED on	4.0 mA
Status indicator	Alarm - Red Fault - Flashing yellow Isolate - Yellow Poll - Flashing green
Additional remote LED current	5mA maximum
Product operating temperature	32° F to 131° F (0° C to 55° C)
Heat element rating (Mode 5 only)	115° F (47° C)
Effect of atmospheric pressure	None
Air velocity	0-300 fpm
Humidity	0% to 95% RH (no condensation or icing)
IP rating	IP44
Weight	2.93 ounces (83g)
Mzximum spacing (Mode 5 only)	50 ft (15.24m)
Dimensions	4" (100mm) diameter x 1.51" (38.5mm height) 1.98" (50.5 mm) height with XPERT8 Intelligent Mounting Base
Materials	Housing: White flame-retardant polycarbonate. Terminals: Tin-plated stainless steel

All data is supplied subject to change without notice. Specifications are typical at 24 V, 73° F and 50% RH unless otherwise stated.

Isolated detector data

Maximum loop current (1c max; L1 in/out)	1A
Maximum series resistance (Z c max; L1 in/out)	100 mΩ

Order Codes and Options

SA5150-750ADV	Axis AX UL Multicriteria Detector
SA5000-210ADV	Axis AX UL Base - 4"
SA5000-230ADV	Axis AX UL Base - 6"

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Axis AX UL Heat Detector

The Axis AX UL Heat Detector monitors temperature by using a single thermistor which provides a voltage output proportional to the external air temperature.



Operation

In the Axis AX UL Heat Detector, the five response modes correspond to the five ‘classes’ as defined in UL 268. The classes in this standard correspond to different behaviour, each of which is designed to be suitable for a range of application temperatures. All modes incorporate ‘fixed temperature’ response, which is defined in the standard by the ‘static response temperature’.

Electrical description

The Axis AX UL Heat Detector is designed to be connected to a two wire loop circuit carrying both data and a 17 V to 28 V dc supply. The detector is connected to the incoming and outgoing supply via terminals L1 and L2 in the mounting base. A remote LED indicator requiring not more than 4 mA at 5 V may be connected between the +R and -R terminals. An earth connection terminal is also provided.

Remote test feature

The remote test feature is enabled from the fire control panel. On receipt of the command signal from the fire control panel, the detector is forced electrically into alarm. An analogue value of 85 is returned to the fire control panel to indicate that the detector is working correctly.

Rejection of transient signals

Axis AX UL detectors are designed to give low sensitivity to very rapid changes in the sensor output, since these are unlikely to be caused by real fire conditions, resulting in fewer false alarms.

Response modes

Axis AX UL Heat Detectors can be operated in any one of five UL approved response modes, which can be selected through the fire control panel. Each mode corresponds to a unique response behaviour, which is related to sensitivity to fire. Mode 1 gives a higher sensitivity to fire than Mode 5.

Flashing LEDs

Axis AX UL Heat detectors have two integral LED indicators, which can be illuminated at any time by the fire control panel to indicate detectors in alarm. A flashing LED mode can also be programmed to activate each time a detector is polled.

Features

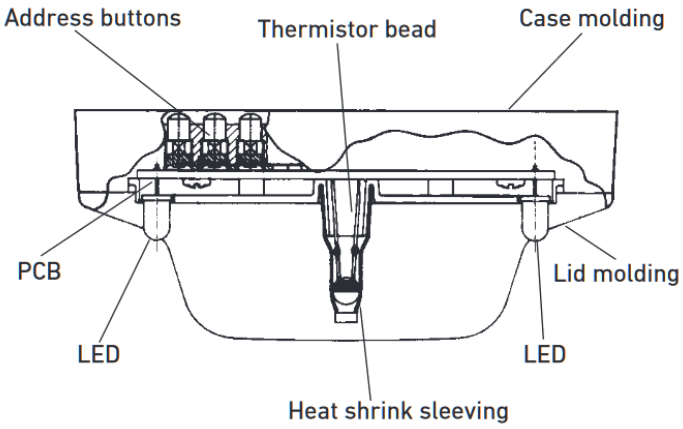
- Compatible with all devices from the Soteria UL range
- Electronic temperature sensing
- Alarm flag for fast alarm responding
- Easy installation
- Elegant design
- Unaffected by wind or atmospheric pressure
- Ideal for environments that are dirty or smoky under normal circumstances
- Well suited to warehouses, loading docks and parking garages

Listings and Approvals

- Approved to UL521

Please note: This detector is a direct replacement for the 58000-450AEL Axis AX Heat Detector.

Sectional view



Specification

Digital communication protocol	Discovery
Operating voltage (Vmin-Vmax)	17-28 Vdc
Modulation voltage	5-9V peak to peak
Supervisory current	500 µA
Surge current	1.0 mA
Alarm LED current	3.5 mA
Additional remote LED current	5A maximum
Operating temperature range	32° F to 151° F
Heat element rating	135° F to 210° F
Humidity	0% to 95% RH (no condensation or icing)
Weight	3.70 ounces
Dimensions	3.93" diameter x 1.65" height
Materials	Housing: White flame-retardant polycarbonate. Terminals: Tin-plated stainless steel
Spacing	Smooth ceiling 70 ft Wall or partition 35 ft

All data is supplied subject to change without notice. Specifications are typical at 24 V, 73° F and 50% RH unless otherwise stated.

Heat detector response modes

Mode	UL heat classification @55 counts alarm
1	135ºF fixed temperature with rate of rise
2	150ºF fixed temperature and rate of rise
3	150ºF fixed temperature
4	200ºF fixed temperature and rate of rise
5	200ºF fixed temperature

Order Codes and Options

SA5800-450ADV	Axis AX UL Heat Detector
SA5000-210ADV	Axis AX UL Base - 4"
SA5000-230ADV	Axis AX UL Base - 6"
SA5300-800	Axis AX CO Sounder Base - 6" high frequency
SA5300-802	Axis AX Sounder Base - 6" high frequency
SA5300-805	Axis AX CO Sounder Base - 6" low frequency
SA5300-806	Axis AX Sounder Base - 6" low frequency

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Advanced XP95A Smoke Detector

The Advanced XP95A Smoke Detector uses new sensing technology, Purelight®, to detect smoke particles entering the chamber. This reduces the possibility of false alarms whilst increasing the reliability of detection of a real fire. Detection uses photo-electric light scattering and the chamber has a surface-mount infrared emitter and prism, with a solid state integrated photo-diode and amplifier.

Electrical description

The Advanced XP95A Smoke Detector is designed to be connected to a two-wire loop circuit carrying both data and a 17 V - 28 V dc supply. The detector is connected to the incoming and outgoing supply via terminals L1 and L2 in the mounting base. A remote LED indicator may be connected between the +R and -R terminals. A ground connection terminal is also provided.

Operation

The low profile design is sleek and evolutionary, with a 360° LED indicator which illuminates red when in alarm.

At the heart of the smoke sensor is Purelight® Sensing Technology which incorporates:

- Cone technology combined with a high-intensity infrared LED to provide stability and accurate sensitivity to smoke
- A sophisticated dynamic algorithm, providing transient rejection and compensation for drift whilst maintaining accurate sensitivity

The smoke chamber of the detector is a unique cone shape which serves to reduce any stray reflection. This ultra dark internal light chamber also contains a high-intensity infrared LED that is highly sensitive to smoke particles. When smoke enters the chamber, infra-red light is scattered and registered by the photodiode and amplifier that are included in an application-specific integrated circuit (ASIC). This circuit ensures long term reliability, even in extreme conditions.

System compatibility

This detector has been designed to operate with XP95A detectors and loops and can operate on an approved XPERT intelligent mounting base. However, the eighth bit of the address will be ignored.

The device will compensate for drift internally and the fire panel will see this as an increase in analog value. When internal drift limits are reached a fault analog value will be generated.



Features

- Purelight® optical technology for enhanced smoke detection and false alarm management
- Internal drift compensation
- Easy installation
- Backwards compatible with XP95 systems
- Base locking mechanism (grub screw)
- Polarity insensitive wiring
- In-built self test
- XPERT card addressing

Listings and Approvals

- Approved to UL268 7th edition, ULC S529

This detector is a direct replacement for the 55000-650AEL XP95A smoke detector.

Maintenance and service

Maintenance has to be done in accordance with all applicable standards. Clean the detector externally using a soft damp cloth.

Specification

Digital communication protocol	XP95
Supply wiring	Two wire supply, polarity insensitive
Sensitivity	1.2-2.1%/ft
Supply voltage (Vmin-Vmax)	17-28 Vdc
Sampling frequency	Once per second
Modulation voltage	5-9V peak to peak
Supervisory current	340 µA
Switch-on surge current	1.0 mA
Alarm/operated current, LED on	4.0 mA
Status indicator	Alarm (red)
Additional remote LED current	5mA maximum
Product operating temperature	32° F to 131° F (0° C to 55° C)
Effect of atmospheric pressure	None
Air velocity	0-300 fpm
Humidity	0% to 95% RH (no condensation or icing)
IP rating	IP44
Weight	2.93 ounces (83g)
Dimensions	4" (100mm) diameter x 1.41" (36mm height) 1.88" (48 mm) height with XPERT8 Intelligent Mounting Base
Materials	Housing: White flame-retardant polycarbonate. Terminals: Tin-plated stainless steel

All data is supplied subject to change without notice. Specifications are typical at 24 V, 73° F and 50% RH unless otherwise stated.

Order Codes and Options

SA5050-250ADV	Advanced AX XP95A Smoke Detector
SA5000-210ADV	Axis AX UL Base - 4"
SA5000-230ADV	Axis AX UL Base - 6"

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Advanced

Axis AX

Intelligent Air Duct Detectors

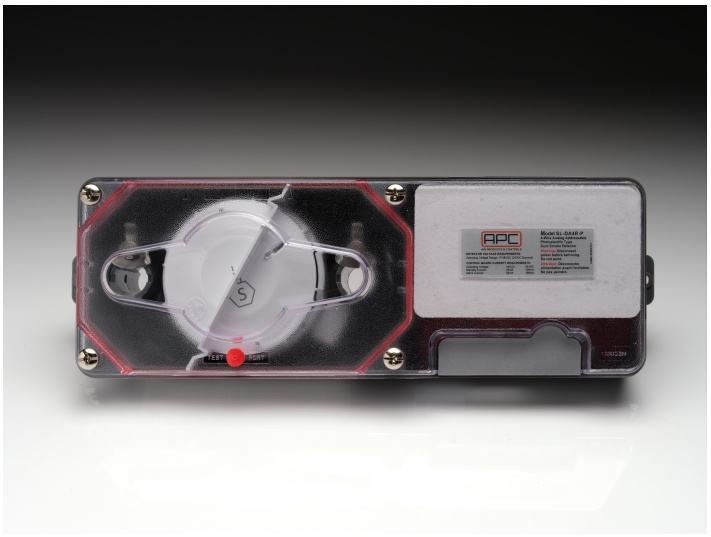
The Advanced Intelligent Air Duct Detectors are the latest innovation for early detection of smoke and products of combustion present in air moving through HVAC ducts in Commercial, Industrial, and Residential applications. The units are designed to prevent the recirculation or spread of smoke by air handling systems, fans, and blowers. Complete systems may be shut down in the event of smoke detection.

The operating principle of the Intelligent Air Duct Detectors is based on the Venturi effect. Two tubes extend into the HVAC duct. Air flowing through the duct is forced into the air intake (inlet) tube via the air intake holes (facing the air flow) and passes over the detector head. The air will be drawn out via the exhaust tube back into the HVAC duct. When the concentration of smoke particles suspended in the air stream reach the alarm threshold of the intelligent detector head the Intelligent Air Duct Detector will go into alarm thus alarming the Axis AX Series Intelligent Fire Alarm Control Panel.

The Intelligent Air Duct Detectors are designed to operate in duct widths from 6” to 10’ wide with an air velocity between 100 to 4,000 feet per minute.

Two (2) versions of the Intelligent Air Duct Detector are available from Advanced, the versions include both two and four wire operation with an intelligent photoelectric. Two wire versions do not include an alarm relay contact, and can only drive a remote LED indicator. If alarm relay contact and/or additional remote accessory options are required, beyond a remote LED, the four wire version must be provided.

The Intelligent Air Duct Detectors are built to meet all local code requirements, as well as the NFPA and ICC standards regarding HVAC supply and return duct smoke detectors. Output terminals are provided for a wide range of remote accessories such as remote status indicators, and test/reset key switches or push buttons. The Intelligent Air Duct Detectors include many features that represent true innovations from current generation duct smoke detectors.



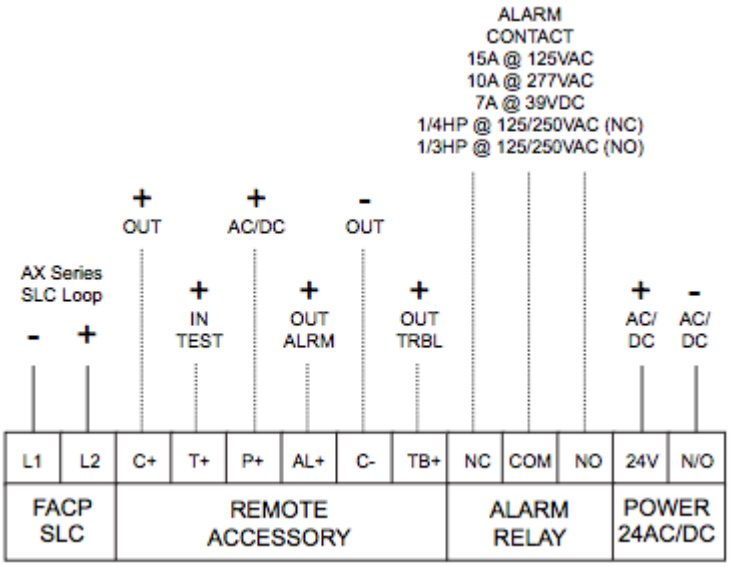
Features

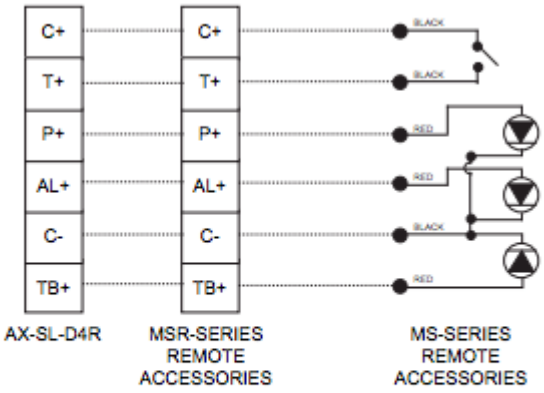
- 2/4 Wire with Intelligent Photo or Ion Detector
- Low-Flow Technology (100-4000ft/min)
- Listed for High-Temp Applications
- Patented “No-Tools Required”
- Patented “Test Port Valve”
- Instantaneous Cover Removal Indication
- Staggered Terminal Blocks for Easier Wiring
- Flashing Detector LED Indicating Normal Operation

Listings and Approvals

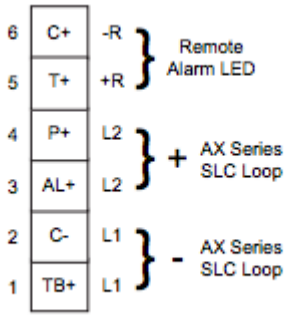
- ETL ANSI/UL 864 Listed: 101564744NYM-001
- UL File: UROX.S2829
- ULC File: UROXC.S2829
- CSFM Approved: 3240-1004:0116
- NYC MEA: 73-92-E

Wiring Diagram





X-SL-DAA (P or N) TERMINAL CONNECTIONS
AX-SL-DAA (P or N) TERMINAL CONNECTIONS



Specification

AX Series SLC Loop	
Voltage	17-28 VDC
Modulation Voltage	5-9 VDC (Peek to Peek)
Supervisory Current	0.85 mA
Surge Current	2.5 mA
Alarm Current	3.5 mA (LED On) (Max.)
Line Impedance	50 Ω(Max.)
Alarm Relay Contact Rating (4-Wire Only)	
DC Voltage	7 Amp @ 39VDC
AC Voltage	15 Amp @ 125VAC, 10 Amp @ 277VAC
Wiring	Screw In-Out Terminals
Humidity	10% to 85% RH Non-Condensing
Dimensions (Diameter & Height)	13 1/2” L x 4 1/2” W x 2 1/4” D
Weight	2.25 lbs
Ambient Temperature AX-SL-DA4R-P, AX-SL-DAA-P AX-SL-DA4R-N, AX-SL-DAA-N	 32º -140ºF (0º-60ºC) 32º -140ºF (0º-60ºC)

Air Velocity	100 to 4,000ft/min.
Radioactive Material AX-SL-DA4R-N, AX-SL-DAA-N	Americium 241, 0.9 micro curie

Order Codes and Options

AX-SL-DA4R-P	Intelligent Duct Detector, PHOTO, 4-Wire
AX-SL-DAA-P	Intelligent Duct Detector, PHOTO, 2-Wire
STN-1.0	10” Sampling Tube for Ducts 6” - 12” wide
STN-2.5	30” Sampling Tube for Ducts 1’ - 3’ wide
STN-5.0	5’ Sampling Tube for Ducts 3’ - 5’ wide
STN-10.0	10’ Sampling Tube for Ducts 5’ - 10’ wide

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Advanced XP95A Multicriteria Detector

The XP95A Multi-Criteria Detector (Smoke/Heat) uses new photoelectric sensing technology, Purelight®, to detect smoke particles entering the chamber. It reduces the possibility of false alarms whilst increasing the reliability of detecting a real fire.

Electrical description

The XP95A Multi-Criteria Detector (Smoke/Heat) is designed to be connected to a two-wire loop circuit carrying both data and a 17 V - 28 V dc supply. The detector is connected to the incoming and outgoing supply via terminals L1 and L2 in the mounting base. A remote LED indicator may be connected between the +R and -R terminals. A ground connection terminal is also provided.

Operation

The low profile design of the XP95A Multi-Criteria Detector (Smoke/Heat) is sleek and evolutionary, with a 360° LED indicator which illuminates red when in alarm. At the heart of the photoelectric smoke sensor is Purelight® Sensing Technology which incorporates: • Cone technology combined with a high-intensity infra[1]red LED to provide stability and accurate sensitivity to smoke. • A sophisticated dynamic algorithm, providing transient rejection and compensation for drift whilst maintaining accurate sensitivity. Signals from the photoelectric smoke chamber and temperature sensors are independent and represent the smoke level and air temperature respectively in the vicinity of the detector; the detectors micro-controller processes both signals. The temperature signal processing extracts only rate-of-rise information for combination with the smoke signal. The optical sensor will trigger an alarm at 1.2 %/ft and the heat sensor at 69.8 ºF (21 ºC) rise. Minimum time to alarm is ten seconds. The detector will not respond to slow increases in temperature, but a large, sudden change can cause an alarm without the presence of smoke. The sensor will respond to smoke or heat, or a combination of both.



System compatibility

The low profile design of the XP95A Multi-Criteria Detector (Smoke/Heat) is sleek and evolutionary, with a 360° LED indicator which illuminates red when in alarm. At the heart of the photoelectric smoke sensor is Purelight® Sensing Technology which incorporates: • Cone technology combined with a high-intensity infra[1]red LED to provide stability and accurate sensitivity to smoke. • A sophisticated dynamic algorithm, providing transient rejection and compensation for drift whilst maintaining accurate sensitivity. Signals from the photoelectric smoke chamber and temperature sensors are independent and represent the smoke level and air temperature respectively in the vicinity of the detector; the detectors micro-controller processes both signals. The temperature signal processing extracts only rate-of-rise information for combination with the smoke signal. The optical sensor will trigger an alarm at 1.2 %/ft and the heat sensor at 69.8 ºF (21 ºC) rise. Minimum time to alarm is ten seconds. The detector will not respond to slow increases in temperature, but a large, sudden change can cause an alarm without the presence of smoke. The sensor will respond to smoke or heat, or a combination of both.

Maintenance and service

Maintenance has to be done in accordance with all applicable standards. Clean the detector externally using a soft damp cloth.

Features

- Purelight® optical technology for enhanced smoke detection and false alarm management
- Internal drift compensation
- Easy installation
- Backwards compatible with XP95 systems
- Base locking mechanism (grub screw)
- Polarity insensitive wiring
- In-built self test
- XPERT card addressing

Listings and approvals

- Approved to UL268 7th edition, UL521

This detector is a direct replacement for the 55000-886AEL XP95A multisensor detector.

Specification

Digital communication protocol	XP95
Supply wiring	Two wire supply, polarity insensitive
Sensitivity	1.2-2.1%/ft
Supply voltage (Vmin-Vmax)	17-28 Vdc
Sampling frequency	Once per second
Modulation voltage	5-9V peak to peak
Supervisory current	340 µA
Switch-on surge current	1.0 mA
Alarm/operated current, LED on	4.0 mA
Status indicator	Alarm (red)
Additional remote LED current	5mA maximum
Product operating temperature	32° F to 131° F (0° C to 55° C)
Effect of atmospheric pressure	None
Air velocity	0-300 fpm
Humidity	0% to 95% RH (no condensation or icing)
IP rating	IP44
Weight	2.93 ounces (83g)
Dimensions	4" (100mm) diameter x 1.5" (38mm height) 2" (50 mm) height with XPERT8 Intelligent Mounting Base
Materials	Housing: White flame-retardant polycarbonate. Terminals: Tin-plated stainless steel

All data is supplied subject to change without notice. Specifications are typical at 24 V, 73° F and 50% RH unless otherwise stated.

Order Codes and Options

SA5050-350ADV	Advanced XP95A Multicriteria Detector
SA5000-210ADV	Axis AX UL Base - 4"
SA5000-230ADV	Axis AX UL Base - 6"

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Advanced XP95A Heat Detector

The XP95A Heat Detector monitors temperature by using a single thermistor which provides a voltage output proportional to the external air temperature. It is classified as an ordinary detector by UL

Electrical description

The XP95A Heat Detector is designed to be connected to a two wire loop circuit carrying both data and a 17 V to 28V dc supply. The detector is connected to the incoming and outgoing supply via terminals L1 and L2 in the mounting base. A remote LED indicator requiring not more than 1 mA may be connected between the +R and L2 terminals. An earth connection terminal is also provided. The detector is calibrated to give an analogue value of 25±5 counts at 70OF. This value increases with rising temperature. A count of 55 corresponds to the UL alarm sensitivity level of 135ºF.

When the detector is energized the ASIC regulates the flow of power and controls the data processing. The thermistor provides an output over normal operating ranges that is proportional to the external air temperature. The voltage output is processed in the analogue to digital converter and stored by the communications ASIC. It is transmitted to the control equipment when the device is interrogated. When a count of 55 is exceeded the alarm flag is initiated and the device address is added to the data stream every 32 polling cycles from its last polling for the duration of the alarm level condition, except when an alarming device is being interrogated. This can provide a location identified alarm from any device on the loop in approximately two seconds.

Operation

The XP95A Heat Detector has a common profile with the ionisation and optical smoke detectors but has a low air flow resistance case made of white polycarbonate. The device monitors heat using a single thermistor network which provides a voltage output proportional to the external air temperature.

Environmental characteristics

The XP95A Heat Detector range is unaffected by wind or atmospheric pressure. Standard detectors are rated at 200 ºF.



Features

- Compatible with all devices from the latest UL268 7th Edition approved XP95A range
- Electronic temperature sensing
- Easy installation
- XPERT card addressing
- Electronic free 4” or 6” bases
- Ideal for environments that are dirty or smoky under normal circumstances
- Well suited for warehouses, loading docks and parking areas

Listings and Approvals

- Approved to UL521 7th Edition

This detector is a direct replacement for the 55000-450AEL XP95A heat detector.

Specification

Digital communication protocol	XP95
Sensor	Single NTC thermistor
Sampling frequency	One second
Supply voltage (Vmin-Vmax)	17-28 Vdc
Modulation voltage	5-9V peak to peak
Supervisory current	250 µA
Switch-on surge current	1.0 mA
Alarm/operated current	3.0 mA
Product operating temperature	32° F to 131° F (0° C to 55° C)
Humidity	0% to 95% RH (no condensation or icing)
Weight	3.70 ounces
Dimensions	3.93" diameter x 1.65" height
Materials	Housing: White flame-retardant polycarbonate. Terminals: Tin-plated stainless steel

All data is supplied subject to change without notice. Specifications are typical at 24 V, 73° F and 50% RH unless otherwise stated.

Order Codes and Options

SA5500-450ADV	Advanced AX XP95A Smoke Detector
SA5000-210ADV	Axis AX UL Base - 4"
SA5000-230ADV	Axis AX UL Base - 6"

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Axis AX

Enhanced Mini Switch Monitor Module

The Mini Switch Monitor Module is a loop-powered device incorporating a monitored input circuit for connection to remote switches, and is for indoor use only.



Features

- Built-in isolator
- Visible LEDs
- Loop powered
- Ground fault detection
- Selectable priority to monitor equipment where a fast response is required
- Interrupt facility
- Fits into equipment that has limited space
- Improved design for ease of mounting
- Communicates with XP95 and Discovery protocols

Listings and Approvals

- UL, ULC, SII and CSFM

Specification

General	
Product Operating Temperature	32° to 120° F
Humidity	10% to 93% RH (no condensation or icing)
Standards and Approvals	UL, ULC, SII, CSFM
Dimensions	1.9" W x 3.0" H x 0.6" D
Materials	Housing UL94 V-0 polycarbonate
Wire Size	18 AWG
LED Status	
LED Colour: Green Yellow (solid) Red (alarm)	 Polling Isolation Alarm
Single Line Circuit (SLD) - Supervised Power Limited	
Supply Voltage	17 V to 28 VDC
Modulation Voltage	5 V to 9 V peak to peak
Supervisory Current	500 µA
Switch-on Surge Current	900 µA
Alarm/Operated Current, LED On	1.6 mA per LED
Maximum Loop Current	1 A

Initiating Device Circuit (IDC)	
Wiring Styles	Supervised power limited Class A and Class B
Voltage	3.3 VDC
Line Impedance	100 Ω Max
End-of-line Resistors*	47 kΩ

* A UL-listed end-of-line resistor is available - Part no. 44251-146

NB All data is supplied subject to change without notice. Specifications are typical at 24 V, 73° F and 50% RH unless otherwise stated.

Order Codes and Options

SA4705-600ADV	Enhanced Mini Switch Monitor Module

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Axis AX

Enhanced Switch Monitor Module

The Switch Monitor Module is a loop-powered device incorporating a monitored input circuit for connection to remote switches and is for indoor use only.



Features

- Built-in isolator
- Visible LEDs
- Loop powered
- Ground fault detection
- Selectable priority to monitor equipment where a fast response is required
- Interrupt facility
- Improved design for ease of mounting
- Communicates with XP95 and Discovery protocols

Listings and Approvals

- UL, ULC, SII and CSFM

Specification

General	
Product Operating Temperature	32° to 120° F
Humidity	10% to 93% RH (no condensation or icing)
Standards and Approvals	UL, ULC, SII, CSFM
Dimensions	4.9" W x 4.9" H x 1.175" D
Materials	Housing UL94 V-0 polycarbonate
Wire Size	12-24 AWG
LED Status	
LED Colour: Green Yellow (solid) Red	 Polling Isolation Alarm
Single Line Circuit (SLD) - Supervised Power Limited	
Supply Voltage	17 V to 28 VDC
Modulation Voltage	5 V to 9 V peak to peak
Supervisory Current	500 µA
Switch-on Surge Current	900 µA
Alarm/Operated Current, LED On	1.6 mA per LED
Maximum Loop Current	1 A

Initiating Device Circuit (IDC)	
Wiring Styles	Supervised power limited Class A and Class B
Voltage	3.3 VDC
Line Impedance	100 Ω Max
End-of-line Resistors*	47 kΩ

* A UL-listed end-of-line resistor is available - Part no. 44251-146

NB All data is supplied subject to change without notice. Specifications are typical at 24 V, 73° F and 50% RH unless otherwise stated.

Order Codes and Options

SA4705-700ADV	Enhanced Switch Monitor Module

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Axis AX

Enhanced Dual Switch Monitor Module

The Dual Input Monitor Module is a loop-powered device incorporating a dual monitored input circuit for connection to remote switches and is for indoor use only.



Features

- Built-in isolator
- Visible LEDs
- Loop powered
- Ground fault detection
- Selectable priority to monitor equipment where a fast response is required
- Interrupt facility
- Improved design for ease of mounting
- Communicates with XP95 and Discovery protocols

Listings and Approvals

- UL, ULC, SII and CSFM

Specification

General	
Product Operating Temperature	32° to 120° F
Humidity	10% to 93% RH (no condensation or icing)
Standards and Approvals	UL, ULC, SII, CSFM
Dimensions	4.9" W x 4.9" H x 1.175" D
Materials	Housing UL94 V-0 polycarbonate
Wire Size	12-24 AWG
LED Status	
LED Colour: Green Yellow (solid) Red	 Polling Isolation Alarm
Single Line Circuit (SLD) - Supervised Power Limited	
Supply Voltage	17 V to 28 VDC
Modulation Voltage	5 V to 9 V peak to peak
Supervisory Current	500 µA
Switch-on Surge Current	900 µA
Alarm/Operated Current, LED On	1.6 mA per LED
Maximum Loop Current	1 A

Initiating Device Circuit (IDC)	
Wiring Styles	Supervised power limited Class A and Class B
Voltage	3.3 VDC
Line Impedance	100 Ω Max
End-of-line Resistors*	47 kΩ

* A UL-listed end-of-line resistor is available - Part no. 44251-146

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Order Codes and Options

SA4705-720ADV	Enhanced Dual Switch Monitor Module

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Advanced

Axis AX

Enhanced Switch Monitor Input/Output Module

The Input/Output Module is a loop-powered device which incorporates a monitored input circuit for connection to remote switches. It also has a 240V rated volt-free relay output.



Features

- Built-in isolator
- Visible LEDs
- Loop powered
- Ground fault detection
- Improved design for ease of mounting
- Communicates with XP95 and Discovery protocols

Listings and Approvals

- UL, ULC, SII and CSFM

Specification

General	
Product Operating Temperature	32° to 120° F
Humidity	10% to 93% RH (no condensation or icing)
Standards and Approvals	UL, ULC, SII, CSFM
Dimensions	4.9" W x 4.9" H x 1.175" D
Materials	Housing UL94 V-0 polycarbonate
Wire Size	12-24 AWG
LED Status	
LED Colour: Green Yellow (solid) Red	 Polling Isolation Alarm
Single Line Circuit (SLD) - Supervised Power Limited	
Supply Voltage	17 V to 28 VDC
Modulation Voltage	5 V to 9 V peak to peak
Supervisory Current	500 µA
Switch-on Surge Current	900 µA
Alarm/Operated Current, LED On	1.6 mA per LED
Maximum Loop Current	1 A

Initiating Device Circuit (IDC)	
Wiring Styles	Supervised power limited Class A and Class B
Voltage	3.3 VDC
Line Impedance	100 Ω Max
End-of-line Resistors*	47 kΩ
Output Circuit	
Relay Output	Non-Supervised Programmable Dry contact 30 V DC - 4 A - resistive 240 V AC - 4 A - resistive

* A UL-listed end-of-line resistor is available - Part no. 44251-146

NB All data is supplied subject to change without notice. Specifications are typical at 24 V, 73° F and 50% RH unless otherwise stated.

Order Codes and Options

SA4705-703ADV	Enhanced Switch Monitor Input-Output Module

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Advanced

Axis AX

Enhanced NAC Module

The NAC Module enables sounders to be operated continuously or be pulsed. Sounders may be operated individually or in groups and whichever address mode has been applied may be synchronized when in pulsed operation.



Features

- Built-in isolator
- Visible LEDs
- Loop powered
- Can be used for public address speakers
- Power supply health monitoring
- Reverse polarity detection
- Active short circuit detection (panel/power supply dependent)
- AC/DC monitoring (limited by wire length)
- Improved design for ease of wiring
- Communicates with XP95 and Discovery protocols

Listings and Approvals

- UL, ULC, SII and CSFM

Specification

General*	
Product Operating Temperature	32° to 120° F
Humidity	10% to 93% RH (no condensation or icing)
Standards and Approvals	UL, ULC, SII, CSFM
Dimensions	4.9" W x 4.9" H x 1.175" D
Materials	Housing UL94 V-0 polycarbonate
Wire Size	12-24 AWG
LED Status	
LED Colour: Green Yellow (solid) Red	 Polling Isolation Alarm
Single Line Circuit (SLD) - Supervised Power Limited	
Supply Voltage	17 V to 28 VDC
Modulation Voltage	5 V to 9 V peak to peak
Supervisory Current	500 µA
Switch-on Surge Current	900 µA

Alarm/Operated Current, LED On	1.6 mA per LED
Maximum Loop Current	1 A
Initiating Device Circuit (IDC)	
Wiring Styles	Supervised power limited Class A and Class B
End-of-line Resistors**	47 kΩ
Max (NAC)	Regulated 24 V DC, 2A Use of regulated power limited DC supply that is listed for fire protection applications. The maximum number of connected devices must be within the output rating.
Max (Speakers)	70.7 V rms, 500 mA with wire supervision capability as per NFPA requirements. The speakers used must be listed for fire protection applications.

* Local supply failure, NAC short/open circuit or group address.

** A UL-listed end-of-line resistor is available - Part no. 44251-146

NB All data is supplied subject to change without notice. Specifications are typical at 24 V, 73° F and 50% RH unless otherwise stated.

Refer to fire control panel literature for details on how to achieve audio and visual synchronisation.

Order Codes and Options

SA4705-706ADV	Enhanced NAC Module

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Advanced

Axis AX

Enhanced Relay Output Module

The Relay Output Module is a loop-powered device which incorporates a 240 V rated volt-free relay output. The module can be used outdoors if mounted in a suitable weatherproof enclosure.



Features

- Built-in isolator
- Visible LEDs
- Loop powered
- Improved design for ease of wiring
- Communicates with XP95 and Discovery protocols

Listings and Approvals

- UL, ULC, SII and CSFM

Specification

General*	
Product Operating Temperature	32° to 120° F
Humidity	10% to 93% RH (no condensation or icing)
Standards and Approvals	UL, ULC, SII, CSFM
Dimensions	4.9" W x 4.9" H x 1.175" D
Materials	Housing UL94 V-0 polycarbonate
Wire Size	12-24 AWG
LED Status	
LED Colour: Green Yellow (solid)	Polling Isolation
Single Line Circuit (SLD) - Supervised Power Limited	
Supply Voltage	17 V to 28 VDC
Modulation Voltage	5 V to 9 V peak to peak
Supervisory Current	500 µA
Switch-on Surge Current	900 µA
Alarm/Operated Current, LED On	1.6 mA per LED
Maximum Loop Current	1 A
Relay output	Non-supervised Programmable Dry contact 30 V DC - 4 A - resistive 240 V AC - 4 A - resistive

Output Circuit	
Relay output	Non-supervised Programmable Dry contact 30 V DC - 4 A - resistive 240 V AC - 4 A - resistive

NB All data is supplied subject to change without notice. Specifications are typical at 24 V, 73° F and 50% RH unless otherwise stated.

Order Codes and Options

SA4705-701ADV	Enhanced Relay Output Module

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Intelligent Loop Isolator & Isolating Detector Bases

Available in two versions, Loop Isolator only and Isolating Detector Base for Intelligent Detector mounting, the Intelligent Isolators offer superior SLC loop protection. The Intelligent Isolating Bases sense and isolate short-circuit faults associated with Axis AX Series SLC loop wiring.

Under normal operation, the SLC loop power and communications are passed through the Isolators. If a short-circuit or an abnormally low line impedance occurs, the isolator senses the drop in voltage and isolates the negative supply of the SLC loop, in the direction of the fault. The short-circuit fault will be indicated on the Axis AX Series Intelligent Fire Alarm Control Panel's graphical display and on the isolators via an illuminated yellow LED. If an intelligent detector is associated with an active short-circuited isolating base, the detector will continue to function properly. During the isolated condition the isolating base will continually test the circuit, and when the fault is rectified will automatically restore the isolated SLC loop to normal.

If an installation requires that not a single intelligent device be lost in the event of a single short-circuit to an SLC loop ("true" NFPA Style 7 circuit), every device on the Axis AX Series SLC loop should be protected by an isolator. In applications requiring minimal short-circuit protection (not necessary to provide a "true" NFPA Style 7), isolated groups of devices can be created with one Isolator protecting a maximum group of twenty intelligent detectors/ devices. Each Axis AX Series Intelligent Fire Alarm Control Panel's SLC's have built-in isolators.

Isolating Detectors Bases are specifically designed to enable "one-way only" intelligent detector insertion without the need for force. Simply insert the detector and rotate clockwise. Incorporating a high degree of protection against unauthorized removal of detectors, each base can be locked to it's associated detector by a mini-hexagonal screw.

Both the Loop Isolator and the Isolating Dectector Bases have a wide interior diameter for ease of access for wiring to in-out terminals. Though not required for proper operation, each unit has a dedicated earth connection terminal for clean, isolated, and continuity maintenance of an earth ground connection of wire shield when shielded cable is utilized.

Utilizing the Advanced unique method of addressing intelligent detectors, the Intelligent Isolating Detector Base incorporates a patented address ("XPerT") card. The address is quickly and easily set by removing "pips" on the XPerT card according to a chart supplied with each base. To save time during installation pre-addressed XPerT cards are available. Once the address is set on the XPerT card, it is then slid into the base and locked in place. By addressing the detector in the base rather than in the detector, the all-too-common errors associated with detector removal and maintenance are eliminated.



Features

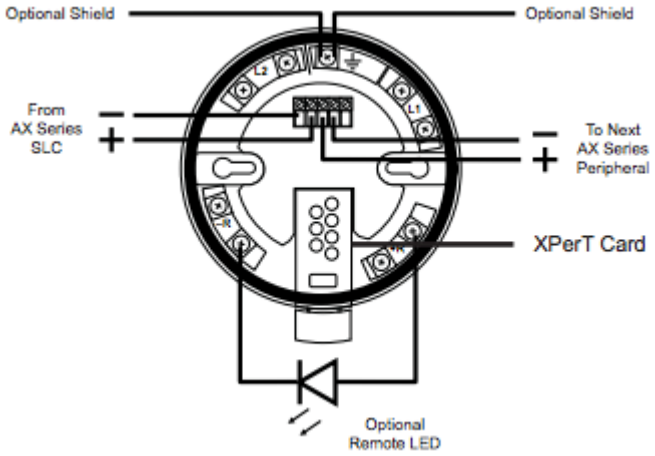
- Patented XPerT Addressing
- Short-Circuit Isolation
- Meets NFPA Style 7 Requirements
- In-Out Terminals for Ease of Wiring
- Dedicated Terminal for Shielded Cable
- Low-Profile Design
- Built-in Short Circuit Yellow LED Indicator
- 3" or 4" Square or Octagonal Electrical Box Mount
- "One-Way-Only" Detector Insertion
- Base to Detector Locking Mechanism

Listings and Approvals

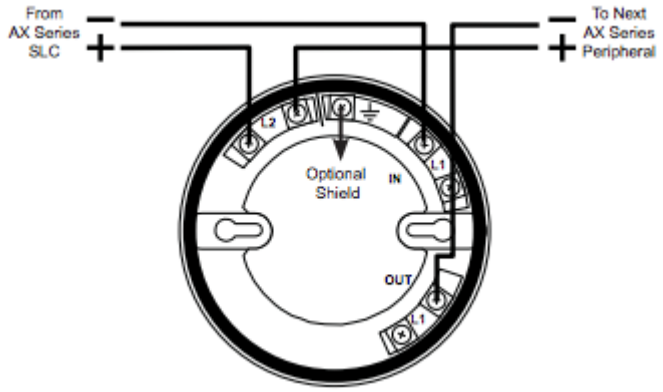
- UL file: UOXX.S24460

Each Intelligent Isolating Detector Base has the capability of supporting a remote LED. The remote LED is sub-addressable and can be programmed to activate from any cause and effect program of the Axis AX Series Intelligent Fire Alarm Control Panel. The Intelligent Isolating Detector Bases mount on 3” octagonal electrical boxes. To mount to 4” square or octagonal electrical boxes the optional Advanced adapter kit is required. **Intelligent Detector Bases:** Refer to Intelligent Detector Bases data sheet.

Intelligent Isolating Detector Base Wiring, 45681-284AEL



Intelligent Loop Isolator & Base Wiring (Not addressed) 55000-750AEL / 45681-211AEL



Specification

Remote LED Output Current	5 mA (Maximum)
Voltage	17 - 28 VDC
Environment	Indoor, Dry
Operating Temperature	32º- 120ºF (0º- 48ºC)
Operating Temperature for AX Detector Isolator Base only	-4º- 140ºF (-20º- 60ºC)
Humidity	10-93% (Non-Condensing)
Humidity for AX Detector Isolator Base only	0-95% (Non-Condensing)
Dimensions	4”D x 15/16”H
Weight	3.5 oz
Housing	Polycarbonate, 94 V0

Ordering Codes and Options

55000-750ADV	Loop Isolator (Fits 3” Octagonal Electrical Box)
45681-211ADS	Isolator Base (use with 55000-750ADV)

* Refer to Intelligent Detector Bases data sheet for Information and features pertaining to these products.

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Advanced

Axis AX

Intelligent Mini Switch Monitor Module

Designed to be a miniature interface for Axis AX Series SLC circuits, the Intelligent Mini Switch Monitor Module from Advanced offers unique fire alarm industry features that simplify installations and provide superior flexibility.

Each Intelligent Mini Switch Monitor Module provides an addressable interface for a single contact device or group of contact devices connected via an initiating device circuit (IDC). With the flexibility of the Advanced Axis AX Series Intelligent Fire Alarm Control Panel's contact devices can be normally open (N.O.) or normally closed (N.C.) dry contacts. Contact devices range from heat detectors, linear heat detectors, 4-wire conventional smoke detectors, water flow switches, tamper switches, manual pull stations, switch control inputs, etc. The Intelligent Mini Switch Monitor Module can monitor any number of contact devices; however, it is recommended not to mix alarm, supervisory, or security contacts on the same monitoring module circuit.

In addition to the standard contact monitoring for alarm type status, each Intelligent Mini Switch Monitor Module has the capability to monitor a normally open contact with a Listed 10K resistor in series with the contact. When this contact is activated, the Axis AX Series Intelligent Fire Alarm Control Panel will interpret this status change as a pre-alarm event rather than an alarm event. Through the Axis AX Series Intelligent Fire Alarm Control Panel, PCNeT programming, separate control/operations can be performed based on this pre-alarm event.

The Intelligent Mini Switch Monitor Module's initiating device circuit (IDC) is wired Class B to the monitored contact device(s). Each Intelligent Mini Switch Monitor Module incorporates three LEDs for device status; a green LED which flashes on device poll, a yellow LED which flashes when the initiating device circuit is in trouble, and a red LED which illuminates steady during an alarm condition. In addition to the onboard LEDs, the Intelligent Mini Switch Monitor Module offers a remote LED output which flashes during device polling and illuminates steady during an alarm condition.

The Intelligent Mini Switch Monitor Module incorporates an integral eight position programming DIP switch for device addressing and priority interrupt programming. DIP switch eight is utilized for programming the priority interrupt feature. The priority interrupt feature provides a less than 2 second response time for alarm reporting to the Axis AX Series Intelligent Fire Alarm Control Panel(s). When the priority interrupt device is in an active state, the monitor's priority interrupt bypasses the normal Axis AX Series SLC communications process, and immediately allows the device to communicate with the Axis AX Series Intelligent Fire Alarm Control Panel(s). The priority interrupt feature is usually utilized for monitoring of highly critical contact devices such as manual pull stations.



Features

- Miniature Device Interface
- Class B Wiring
- PC-NeT Flexible Device Type Programming
- Programmable Priority Interrupt
- Optional Remote LED Output
- Durable Construction
- Adaptable for Pre-Alarm Signaling
- Integral Status LEDs
  - Green Flashes during Device Polling
  - Yellow Flashes during Trouble
  - Red Illuminates Steady during Alarm
- Electrical Box or DIN Rail Mounting
- Optional Remote Device Polling/Alarm LED

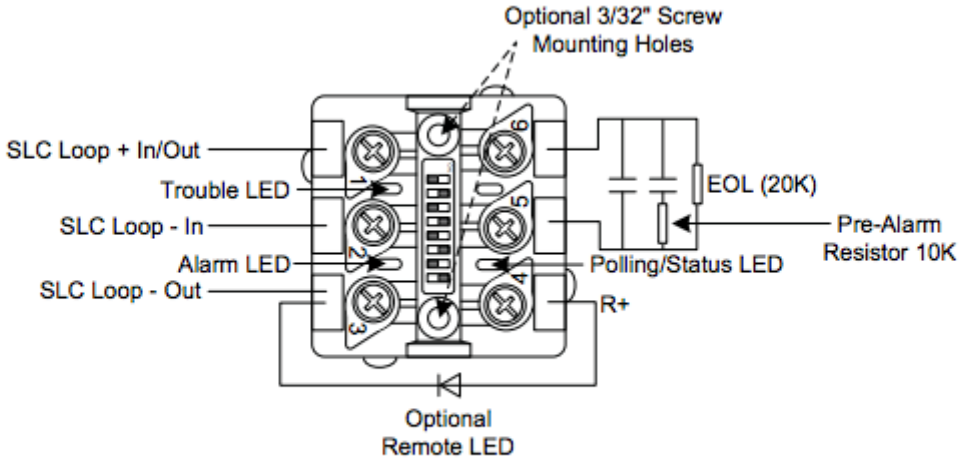
Listings and Approvals

- ETL ANSI/UL 864 Listed: 101564744NYM-001
- UL file: UOXX.S24460
- CSFM Approved: 7300-1713:0115

Engineered to fit into limited space enclosures, the Intelligent Mini Switch Monitor Module can either be installed inside the device being monitored, or it can be placed in an electrical box in the vicinity of the device being monitored. In addition, the Intelligent Mini

Switch Monitor Module can be snapped into a standard electrical 1 3/8” DIN rail track for multiple Intelligent Mini Switch Monitor Module mounting.

Wiring Diagram



Specification

Voltage	17-28 VDC 5-9 VDC (Communication Pulses)
Operating Current Quiescent Alarm With Remote LED	 0.2 mA 3.6 mA 6.4 mA
End-of-Line Resistor	20 KΩ, 0.5 Watt
Pre-Alarm Resistor	10 KΩ, 0.5 Watt
Wiring	Screw In-Out Terminals
Mounting	Electrical Box or 1 3 / 8 ” DIN Rail
Dimensions (Length, Width & Height)	1 11/16” L x 1 11/16” W x 13/16”H
Weight	1.1 oz
Operating Temperature	32º-120ºF (0º-49ºC)
Humidity	10-93% (Non-Condensing)

Order Codes and Options

55000-765ADV	Intelligent Mini Switch Monitor Module
28181-104	Listed End of Line Resistor (20K)
28181-097	Listed Pre-Alarm Resistor (10K)

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Intelligent Dual Action Polycarbonate Pull Station

The Advanced Intelligent Dual Action Polycarbonate Pull Station (56000-005ADV) is a low profile, high quality addressable manual pull station. Easily recognizable during a fire situation, the 56000-005ADV station is constructed of rugged polycarbonate for long life and reliability, with a red finish and raised white “FIRE” lettering. A red LED visible through the face of the station flashes during polling and turns on steady in alarm. Each station includes a key-lock for resetting (CAT B / CAT 30) which is common with the Axis AX Series Intelligent Fire Alarm Control Panels.

The 56000-005ADV stations are UL 38 Listed, meet the ADAAG controls and operating guidelines, and the ADA requirements for five-pound maximum activation force.

The 56000-005ADV, Intelligent Dual Action Polycarbonate Pull Station, can be mounted semi-flush onto a standard single-gang electrical outlet box. If installations require surface mounting, an optional polycarbonate surface back box (56000-006ADV) is available.



Features

- ADA and ADAAG Compliant
- Dual Action Design
- Rugged Polycarbonate Construction
- Red Status LED
- Easy Key-Lock Reset
- Yellow Activation Stripe

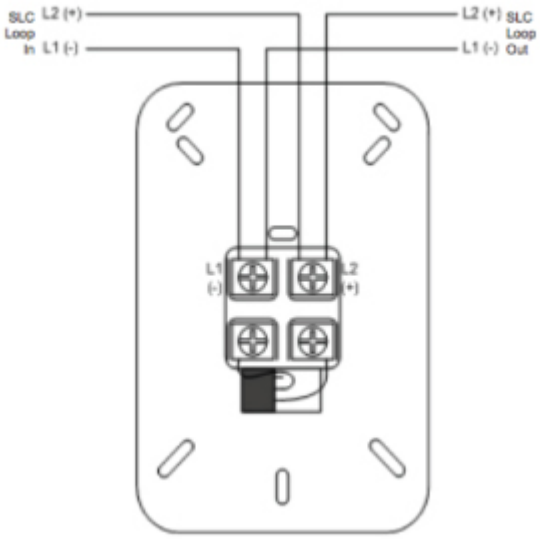
Listings and Approvals

- UL 38 Listed: UNIU.S24867 / ML File: S25235
- ETL ANSI/UL 864 Listed: 101564744NYM-001

Operation

The 56000-005ADV stations are operated by pushing in on the plate marked “PRESS”, and then pulling down on the handle marked “PUSH”, this will latch the handle in the down/activated position. Once latched, a bright yellow activated stripe will appear at the bottom of the station face. To reset the station, simply unlock the station with the reset key (keyed to match Axis AX Series Intelligent Fire Alarm Control Panels) and allow the door to open. This action resets the handle; while closing the door automatically resets the toggle switch to its “STDBY” position.

Wiring Diagram



Specification

Operating Voltage	20-28 VDC, with Communication Pulses 5-9 VDC
Operating Current Quiescent Alarm	 0.2 mA 3.8 mA
Operating Temperature	32ºF (0ºC) to 120ºF (49ºC)
Relative Humidity	10% to 93% Non-Condensing
Dimensions Pull Station Surface Back Box	 5 1/2 ” H x 4 1/4 ” W x 1” D 5 1/2 ” H x 4 1/4 ” W x 1 1/2 ” D
Weight Pull Station Pull Station with Surface Back Box	 7.04 oz 11.5 oz
Analog Value	16 = Normal, 64 = Alarm, 4 = Trouble
Address Range	1 - 126 (DIP Switch Programmable)
Color	Red with Raised White Letters, White “PRESS” and “PUSH” Bars

Order Codes and Options

56000-005ADV	Intelligent Dual Action Polycarbonate Pull Station
56000-006ADV	Polycarbonate Surface Back Box

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Intelligent Manual Pull Stations

Advanced Intelligent Manual Pull Stations (AX-APS2) consist of a family of versatile, low profile, and high quality addressable manual pull stations. Easily recognizable during a fire situation, the AX-APS2 stations are constructed of rugged die-cast metal for long life and reliability, with a high gloss red finish and raised white “FIRE” lettering. A red LED on the front of the station flashes during polling and turns on steady in alarm. Integrated into the station is a Form C relay output that activates when in alarm. All models are fitted with a common key-lock for resetting (CAT B / CAT 30) which is common with the panel key.

The AX-APS2 stations are ETL Listed to the ANSI/UL- 38 Standard and have been found to be in compliance with the latest requirements of the Americans with Disabilities Act (ADA). Activation of the pull station meets the requirements for five pound maximum pull force, and the single hand activation.

Available in either single (AX-APS2-F1) or dual (AXAPS2-F2) action configuration, the AX-APS2 stations are designed to prevent false alarms when bumped, jarred or shaken. The dual action AX-APS2-F2 further deters malicious false alarms by requiring a two process function for activation; first push the “PUSH” bar inwards which then allows the “PULL” bar to be grasped and pulled outward.

Optional surface back boxes are available for indoor applications. The Intelligent Manual Pull Stations are available in a variety of colors to meet various special application requirements. Colored stations do not include the raised white “FIRE” labeling, but are capable of accommodating labels for Alert, Alarm, Exit, Evac, etc. identification. Special applications can include; weather alert, door release, medical emergency, fire suppression activation and others.

Operation: The AX-APS2 stations are operated by pulling the handle marked “PULL” on the front of the station as far down as it will go. At this point, the station will lock in place and is easily visible from up to 50 feet away. The activation handle is reset by opening the station with the reset key (keyed to match Axis AX Series Intelligent Fire Alarm Control Panels), returning the toggle switch to its “Normal” position, moving the handle to its upright position and relocking the station. On the AXAPS2-F2 dual station model, the “PUSH” bar must be pushed inward prior to pulling the handle marked “PULL”.

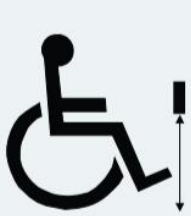


Features

- ADA Compliant
- Single or Dual Action
- Rugged Die-Cast Metal Construction
- Red Status LED
- Integrated Form C Relay Contact
- Low Profile, High Visibility Design
- Visual Indication of Activation including Red Status LED
- Surface or Semi-Flush Mount
- Available in Special Application Colors
- Key-Lock Reset

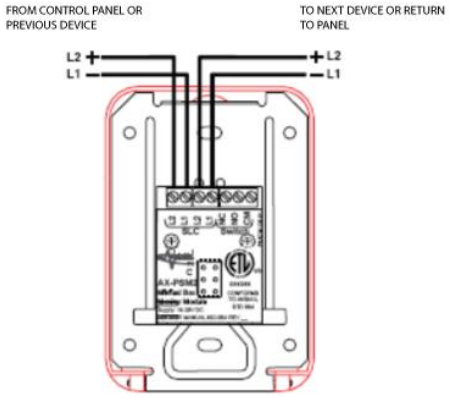
Listings and Approvals

- ETL ANSI/UL 38 Listed: 3186781NYM-001
- ETL ANSI/UL 864 Listed: 101564744NYM-001
- CSFM Approved: 7165-1713:0101
- NYCFD COA #6105



Install the AX-APS2 pull stations in accordance with local codes and regulations. To comply with the ADA requirements, locate the pull station on the wall as follows:

Front wheelchair access: < 48”
Side wheelchair access: < 54”



Specification

Operating Voltage	17-28 VDC, with Communication Pulses 5-9 VDC
Operating Current Quiescent Alarm	 1.7 mA 2.7 mA
Operating Temperature	32ºF (0ºC) to 120ºF (49ºC), for Indoor Use Only
Dimensions With Surface Mount Backbox	4 3/4 ” H x 3 1/4 ” W x 1.1” D 4 3/4 ” H x 3 1/4 ” W x 2 1/4 ” D (Cast or Sheet Metal)
Weight	1.1 lb
Analog Value	16 = Normal, 64 = Alarm, 4 = Trouble
Address Range	1 - 126 (DIP Switch Programmable)
Color	Red with Raised White Letters, White “PULL” Bar with Raised Red Letters

Order Codes and Options

AX-APS2-F1	Intelligent Manual Pull Station, Single Action
AX-APS2-F2	Intelligent Manual Pull Station, Dual Action
Options:	
AX-APS-BB1	Interior Surface Mount Backbox - Red (Sheet Metal)
AX-APS-BB1-D	Deep Interior Surface Backbox, Red
AX-APS-BB2	Weatherproof Die-Cast Back Box, Red
AX-APS-BB2-D	Deep Weatherproof Die-cast Back Box, Red
AX-APS-KEY	Pull Station lockset c/w 1 key

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Intelligent Loop Powered Enhanced Open Area Sounder Beacons

The Intelligent Loop Powered Enhanced Open Area Sounder Beacons are alarm devices which include an area sounder and a red beacon. Both the sounder and the beacon provide synchronized signaling (audible and visual) from an Axis AX Series Intelligent Fire Alarm Control Panel's SLC (Signaling Line Circuit) loop. Each Intelligent Loop Powered Enhanced Sounder Beacon receives both power and communications from the signaling line circuit.

Applications are wide and varied, but ideal applications include corridors, offices, dormitory living quarters, nursing homes, retirement homes, hospitals and patient rooms.

Tremendous installation cost advantages can be realized when installing Enhanced Sounder Beacons due to material and labor savings. Since power is provided by the Axis AX Series Intelligent Fire Alarm Control Panel's SLC loop, there is no need for additional power supplies or additional wire. In addition, installation time is sharply reduced because sounder beacons can be installed on the same circuits with pull stations, smoke detectors, and other addressable input devices.

Being installed in various locations, each Enhanced Sounder Beacon provides seven (7) different volume settings allowing installers to select a specific volume based on installation area audible requirements. Synchronization of tones and beacon flash rate ensures that signal tones and beacon flash rates from different sounder beacons do not merge into unrecognizable and visible signaling problems.

The Axis AX Series Intelligent Fire Alarm Control Panel provides a group addressing feature that can be used to simultaneously turn on a group of Intelligent Loop Powered Enhanced Sounder Beacons without delay. The Intelligent Loop Powered Enhanced Sounder Beacon can be installed indoors or outdoors based on installation requirements. Note, when installing outdoors utilize the weatherproof mounting pad and "O" ring supplied with the sounder beacon.



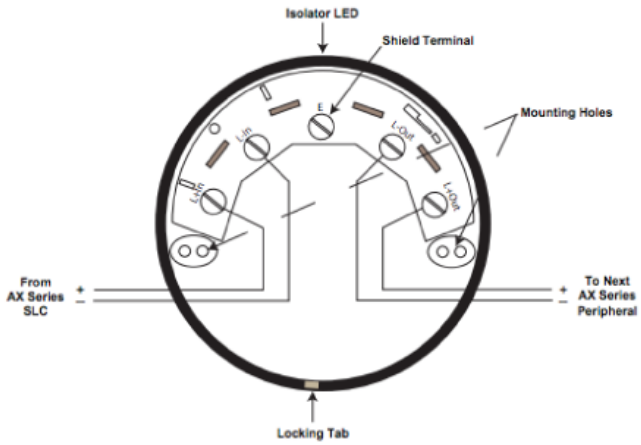
Features

- 15 Tone and 7 Volume Settings
- Integral Red Flashing Beacon
- Drastically Reduces Installation Costs
- Available in Red or White Colors
- Built-in Synchronization (Audible and Flash)
- Separate Sounder Beacon Base with Drillable Knockouts
- Listed for Indoor and Outdoor Applications
- Individual and Group Addressing
- Sounder Beacon Base Security Locking Tab
- Unique Integral Sel-Test

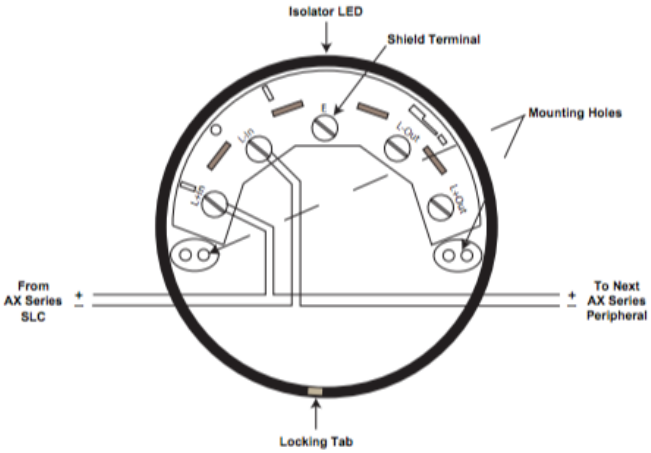
Listings and Approvals

- ETL ANSI/UL 864 Listed: 101564744NYM-001
- UL file: ULSZ.S24953 / ML file: S25051

Wiring Diagrams



Loop Powered Open Area Sounder Base Wiring with Isolation



Loop Powered Open Area Sounder Base Wiring without Isolation

Audibility Table

Device Setting	Tone	Frequency	dB (A) @ 10 Ft.
1	Apollo Evacuation Tone	550Hz for 0.5s, 825Hz for 0.5s	48.8 to 77.0
2	Alternating (Hochiki & Fulleon)	925Hz for 0.25s, 626Hz for 0.25s	48.1 to 73.8
3	Medium Sweep	800Hz to 970Hz at 1Hz	49.3 to 76.3
4	Fast Sweep	2500Hz to 2850Hz at 9Hz	52.5 to 76.3
5	Dutch Slow Whoop (Sweep)	500Hz to 1200Hz for 3.5s, 0.5s off	44.2 to 72.9
6	DIN Tone (Sweep)	1200Hz to 500Hz for 1s	46.2 to 73.4
7	Swedish Fire Tone	660Hz for 150ms on, 150ms off	46.2 to 74.0
8	Aus (Fast Rise Sweep)	3x (500Hz to 1200Hz for 0.5s) 0.5s off	43.2 to 69.8
9	NZ (Slow Rise Sweep	500Hz to 1200Hz for 3.75s, 0.25s off	43.4 to 73.7
10	US Temporal LF (ISO 8201)	3x (970Hz for 0.5s on, 0.5s off) 1s off	43.4 to 70.0
11	US Temporal HF (ISO 8201)	3x (2850Hz for 0.5s on, 0.5s off) 1s off	47.3 to 71.5
12	Simulated Bell Continuous	n/a	52.0 to 74.7
13	Emergency Warning Siren	n/a	47.4 to 74.9
14	Evacuation Tone	970Hz Continuous	50.2 to 74.8
15	Apollo Evacuation Tone	550Hz for 0.5s, 825Hz for 0.5s	49.0 to 73.4

The Intelligent Loop Powered Enhanced Open Area Sounder Beacon incorporates its own plastic mounting base which can be wired with or without device isolation. In addition, the mounting base can also be installed on a 3” square or octagonal electrical box.

The sounder beacon base is specifically designed to enable “one-way-only” sounder beacon insertion without any need for force. Simply insert the sounder beacon and rotate clockwise. Incorporating a high degree of protection against unauthorized removal of sounder beacons, each sounder beacon can be locked to its associated sounder beacon base.

Specification

Operating Voltage	17-28 VDC
Operating Current Quiescent Sounder Beacon Active Switch on Surge	 .75 mA 8.4 mA (Maximum) 2.6 mA for 1 Second
Terminals	Stainless Steel
Environment	Indoor, Dry
Operating Temperature	32ºF-120ºF (0ºF-48ºC)
Humidity	10-93% (Non-condensing)
Dimensions (Diameter & Height) Sounder Beacon with Base	 3.84”D x 4.09”H
Weight Sounder Beacon with Base	 9.1 oz
Housing	Polycarbonate, 94 V0
IP Rating	65

Order Codes and Options

58000-011ADV	Enhanced Open Area Sounder Beacon (Red)
58000-012ADV	Enhanced Open Area Sounder Beacon (White)

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Axis AX

Intelligent Loop Powered Open Area Sounders

The Intelligent Loop Powered Open Area Sounders are loop powered sounders providing synchronized signaling from an Axis AX Series Intelligent Fire Alarm Control Panel's SLC (Signaling Line Circuit) loop. Each Intelligent Loop Powered Open Area Sounder receives both power and communications from the signaling line circuit.

Applications are wide and varied, but ideal applications include corridors, offices, dormitory living quarters, nursing homes, retirement homes and hospital patient rooms.

Tremendous installation cost advantages can be realized when installing Intelligent Loop Powered Open Area Sounders due to material and labor savings. Since power is provided by the Axis AX Series Intelligent Fire Alarm Control Panel's SLC loop, there is no need for additional power supplies or additional wire. Also, installation time is sharply reduced because sounders can be installed on the same circuits with pull stations, smoke detectors, and other addressable input devices.

The low volume setting is useful in areas such as hospitals where an alert signal is initially intended to warn staff only. The high volume setting is used for alarm evacuation.

Synchronization of tones ensures that signal tones from different sounders do not merge into one signal that could be mistaken for a different tone.

The Axis AX Series Intelligent Fire Alarm Control Panel provides a group addressing feature that can be used to simultaneously turn on a group of Intelligent Loop Powered Open Area Sounders without delay.

Another benefit of the Intelligent Loop Powered Open Area Sounder is its capability of being wired as a device with isolation, allowing it to be installed in a true Style 7 configuration.

There is a built-in acoustic self-test facility which is automatically activated during normal operation or can be manually activated during walk-tests. A trouble signal is generated at the Axis AX Series Intelligent Fire Alarm Control Panel if no sound is detected at the device.

The Intelligent Loop Powered Open Area Sounder incorporates its own plastic mounting base which can be wired with or without device isolation. In addition, the mounting base can also be installed on a 3" square or octagonal electrical box.

The sounder base is specifically designed to enable "one-way-only" sounder insertion without any need for force. Simply insert the sounder and rotate clockwise. Incorporating a high degree of protection against unauthorized removal of sounders, each sounder can be locked to its associated sounder base.



Features

- Steady or Temporal Signaling
- Available in Red or White Colors
- Drastically Reduces Installation Costs
- Programmable Volume Settings
- Built-in Signal Synchronization
- Built-in Device Isolation Wiring
- Unique Integral Self-Test
- Sounder Base to Sounder Security Locking Tab
- Separate Sounder Base with Drillable Knockouts
- Two Programmable Tones and Volume Settings
  - Continuous 2900 Hz Tone
  - Low Volume 70.6 dB
  - High Volume 79.1 dB
- ANSI Temporal 2900 Hz Tone
  - Low Volume 67.8 dB
  - High Volume 75.3 dB
- Synchronization of "Alert" and "Evacuation" Tones
- Individual and Group Addressing

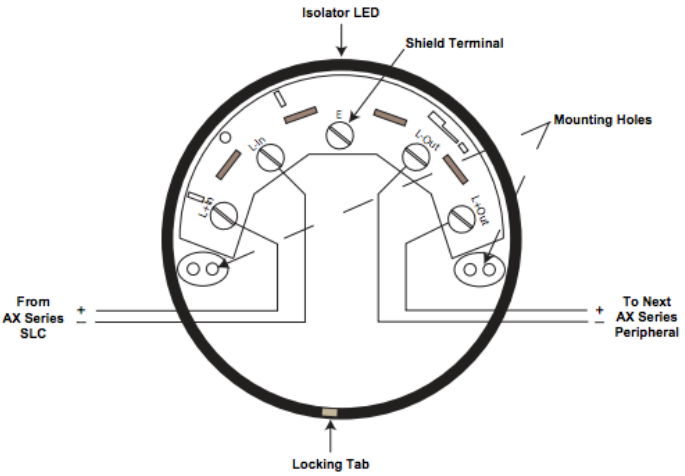
Listings and Approvals

- ETL ANSI/UL 864 Listed: 101564744NYM-001
- UL file: ULSZ.S24953 / ML file: S25051
- NYCFD COA #6105

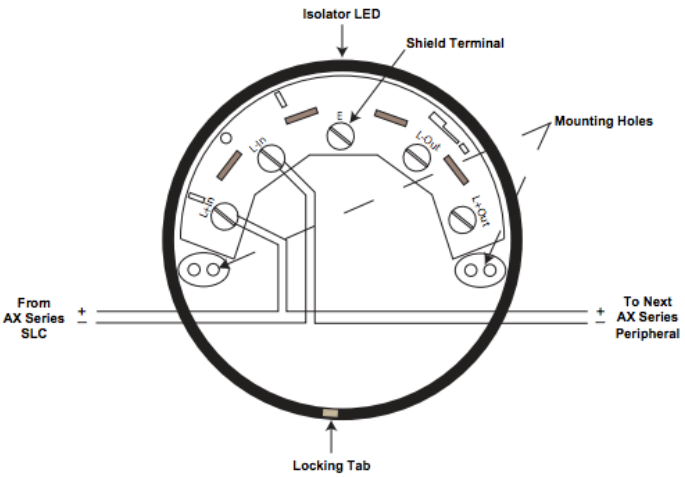
Specification

Operating Voltage	17-28 VDC
Operating Current Quiescent Sounder Active Switch on Surge	 .31 mA 5.4 mA 6 mA for 1 Second
Sound Output / Setting Continuous (Low) Continuous (High) ANSI Temporal (Low) ANSI Temporal (High)	 70.6 dB 79.1 dB 67.8 dB 75.3 dB
Terminals	Stainless Steel
Environment	Indoor, Dry
Operating Temperature	32-120^{0}F (0-48^{0}C)
Humidity	10-93% (Non-condensing)
Dimensions (Diameter & Height) Sounder with Sounder Base	3.84”D x 4.09”H
Weight Sounder with Sounder Base	 9.1 oz
Housing	Polycarbonate, 94 V0

Wiring Diagram



Loop Powered Open Area Sounder Base Wiring with Isolation



Loop Powered Open Area Sounder Base Wiring without Isolation

Order Codes and Options

55000-041ADV	Open Area Sounder (Red)
55000-042ADV	Open Area Sounder (White)

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Gentex GB Series Fire Alarm Bells

The GB Series provide durable and dependable operation required for life safety alarm systems.

Alarm bells are low current, high decibel notification appliances for use in fire and burglary systems or other signalling applications. The GB Series is available in 24 VDC with 6" or 10" housing for indoor applications.

The GB Series is ANSI/UL 464 listed and the units are warranted for 3 years from the date of purchase.



GB 24 VDC Fire Alarm Bell

Model number	Voltage	Housing size	current draw (mA)	dBA at 10ft
28-GB6-24	24 VDC	6”	100 mA	95 dBA
28-GB10-24	24 VDC	10”	100 mA	96 dBA

Notes

- Indoor operating temperature 32° to 120°F (0° to 49°C)

Features

- Available in 24 VDC
- Available in 6” or 10” housing
- Four wire 24 VDC operation
- High dbA output
- Mounts to a standard 4” square electrical box
- 18 AWG wire leads
- Available in red metal finish

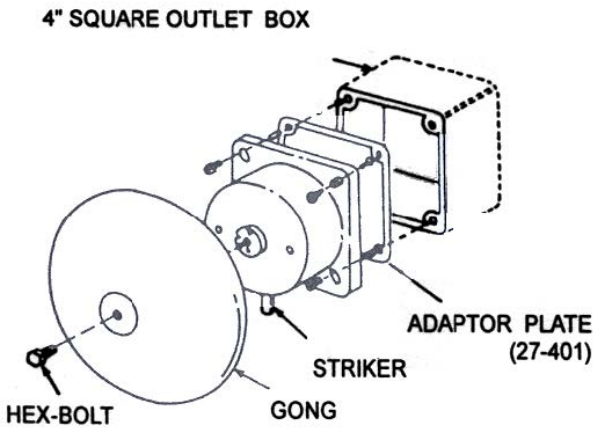
Listings and Approvals

- ANSI/UL 464 Listed
- CSFM: 7135-0569:139
- MEA #285-91-E
- NFPA 72
- Quality Management System is certified to: ISO 9001:2008

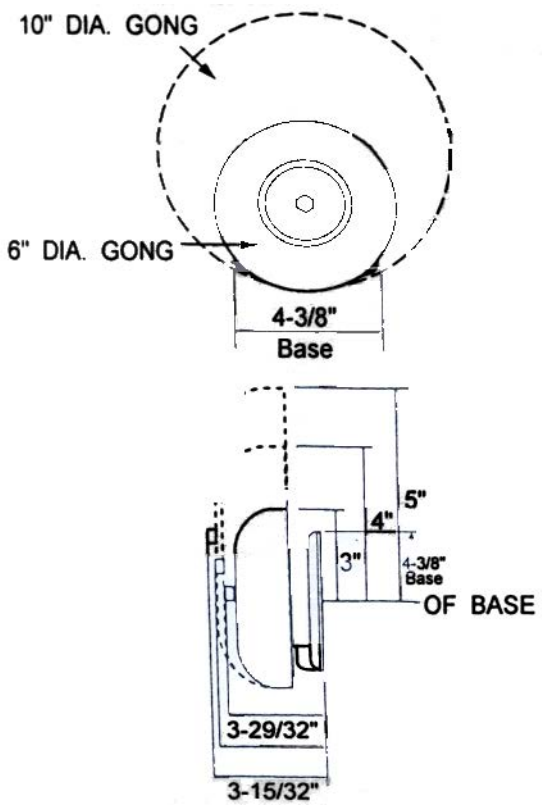
Order Codes and Options

28-GB6-24	GB 6" 24VDC Fire Alarm Bell
28-GB10-24	GB 10" 24VDC Fire Alarm Bell

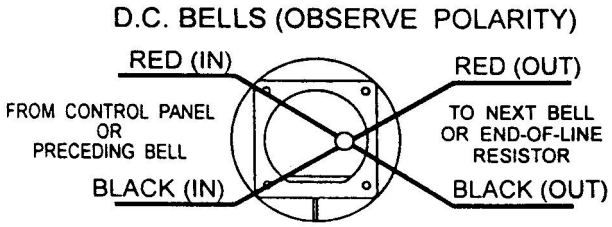
Mounting



Dimensions



Wiring



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