

Features

The following items are features of the MX Technology addressable smoke sensors, heat sensors, and multi sensors:

- Smoke sensors with accurate photoelectric sensing
- Heat sensors with electronic heat sensing and multiple alarm options
- Multi-sensors combine photoelectric sensing with heat sensing.
- Triple sensors combine photoelectric, heat and CO sensing.
- Sounder bases with multiple tone and volume selections, available as MX Loop powered
- Accessories include remote LED indicators and base adapters.
- Smoke sensors and accessories are listed to UL 268 7th edition, heat sensors to UL 521.

Compatibility

- For use with Simplex 2050 and 2250 Foundation Series fire alarm control units (FACUs).
- Analog sensor information is communicated to the host FACU using the MX Technology.

Installation and service features

- Each sensor comes with an integral dust cover for protection during storage and installation which you can easily remove when commissioning the system.
- Unique park position for commissioning and service
- Use a DIP switch in the sensor to hard address the address, or use the Digital Enrolment mobile application to soft address the address.
- Bases with multiple mounting options to simplify installation

Description

Rugged construction

MX compatible sensors provide robust and reliable construction which has undergone stringent environmental testing. Electrical contacts are molded into the plastic to eliminate movement. Construction uses durable, fire resistant FR110 plastic.

Detection modes

The sensors communicate to the Foundation Series FACUs using MX Technology communications. Each detector can operate in one of several detection modes to ensure it is easily optimized to the relevant risk.



Figure 1: Heat detector, on standard 4 in. base



Figure 2: Photo, Photo-Heat, or Photo-Heat-CO detector, on standard 4 in. base

Sensor details

The 4098-5290 Triple Sensor, see Figure 2, incorporates optical and heat sensors combined with a CO sensor. The Triple Sensor uses powerful algorithms for use in life safety applications, and applications where environmental conditions present challenges to standard sensors. It is a multi-sensor device which simultaneously monitors smoke, heat, and CO levels to accurately determine the presence of fire.

The 4098-5291 Multi-sensor, see Figure 2, has the features of the 4098-5292 Photoelectric Sensor and the Heat Sensor from the 4098-5293. This means the 4098-5291 can satisfy detection applications with multiple risks.

The 4098-5292 Photoelectric Sensor, see Figure 2, incorporates a unique optical chamber design with a signal-to-noise ratio. This provides high resilience to dust, dirt, and small insects for reduced service cost. The unique chamber cover draws slow moving smoke into the chamber for more responsive detection.

The 4098-5293 Heat Sensor, see Figure 1, returns analog temperature readings to the FACU for evaluation. Construction includes a high quality thermistor with very low thermal mass to provide fast and accurate temperature readings for heat detection determination. Select heat detection settings at the FACU for 135°F (57.2°C) or 200°F (93°C) either with or without rate-of-rise detection, 15°F (8.4°C) a minute.

Standard sensor base and accessories details

The 4098-5261 4 in. base, see Figure 3, is a standard mounting base.

The 4098-5207 5 in. base, see Figure 5, is a standard mounting base for use with 4 in. octagonal back boxes.

Both standard bases can drive the 2098-9808 Remote LED Alarm Indicator.

Use the 4098-9799 6 in. adaptor, see Figure 4, with a 5 in. base when mounting on a 4 in. octagonal back box.

The 2098-9808 or Remote LED Alarm Indicator, see Figure 6, provides a remote indication that the sensor is in alarm. Refer to Table 7 for dimensions.



Figure 3: 4098-5261 4 in. base



Figure 4: 4098-9799 6 in. adaptor for 5 in. base

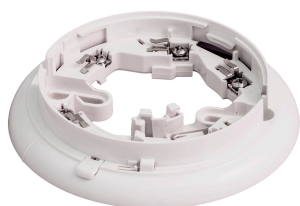


Figure 5: 4098-5207 5 in. base

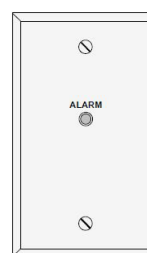


Figure 6: 2098-9808 Remote LED Alarm Indicator

4098-5210 non-addressable Loop Power sounder base details

General features

- The non-addressable low power sounder bases are loop powered from the 2050 and 2250 Foundation Series FACUs
- Use as a single point of installation for detector and sounders.
- Listed to UL 268
- The sounder base requires an associated detector to operate as it uses the address of the detector that is fitted to it.
- The sounder stops operating if the detector is removed, or if there is a loss of power to the loop.
- MX Loop powered, no separate power connection is required
- The maximum sound level output is 85 dBA at 10 ft (3 m)
- The maximum alarm current is 24 mA, from the SLC
- The standard base diameter is 4 in., 5 in. and 6 in. adaptor plates are also available.

Multiple output tones

Eight tone selections are available. Select these using the DIP switch at the base to satisfy local requirements.

Adjustable volume at each base

For applications requiring reduced sound level, you can adjust the output volume at the sounder base using the Volume Trimmer Tool 517.050.015



Figure 7: 4098-5210 sounder base, with supplied mounting flange



Figure 8: 4098-5227 5 in. adaptor for 4098-5210 sounder base

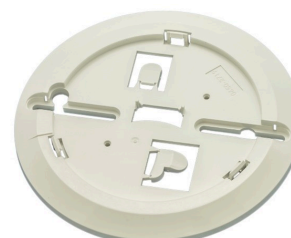


Figure 9: 4098-5228 6 in. adaptor for 4098-5210 sounder base

Product selection

Table 1: Sensors and bases product selection

Model	Description	Installation instructions
4098-5290	MX Photo/Heat/CO Sensor with address switch	579-1452
4098-5291	MX Photo/Heat Sensor with address switch	
4098-5292	MX Photo Sensor with address switch	
4098-5293	MX Heat Sensor with address switch	
4098-5210	Non-addressable Loop Powered Low Power Sounder Base, 85 dB at 10 ft (3 m)	579-925
4098-5261	4 in. Detector Base with Remote LED Output	579-1089
4098-5207	5 in. Addressable Sensor Base with remote LED output. Use with 4098-9799 on a 4 in. square box.	579-936
2098-9808	Remote LED Alarm Indicator, for use with the bases listed above	—

Table 2: Sensor base accessories

Model	Description	Installation instructions
4098-9799	6 in. adaptor for 5 in. base. Also compatible with a 4 in. octagonal box	579-1475
4098-5227	5 in. adaptor for LP sounder base 4098-5210	579-1475
4098-5228	6 in. adaptor for LP sounder base 4098-5210	579-1475
553-805	Detector removal adaptor	—
4098-5214	Addressable duct sensor housing, see note.	579-962

Note: For further details on the 4098-5214 addressable duct sensor housing refer to datasheet reference 4098-0046

Specifications

Current is supplied by 2050 or 2250 FACU SLC, except where noted.

Table 3: Sensor current requirements

Product	Supervisory	In alarm/activated Note: Does not include remote LED current
4098-5290 Triple sensor	350 μ A	4.0 mA maximum in alarm
4098-5291 Photo/heat sensor		
4098-5292 Photo sensor		
4098-5293 Heat sensor		

Table 4: Audio output and current requirements for loop powered sounder base

Product	Volume	Supervisory current	Activated current for each audio output
4098-5210 sounder base	Full volume at 85 dB at 10 ft (3 m)	10 μ A	24 mA

Table 5: General specifications

Specification	Rating
Communications	MX Loop, one address for each sensor base
Sounder base voltage	MX Loop powered, 20 VDC to 40 VDC maximum. No separate power connection is required.
Sensor base wire connections	Terminal blocks, for wire size 20 AWG to 14 AWG (0.5 mm ² to 2.5 mm ²)

Table 6: Operating temperature range, for indoor use only

Product	Operating temperature	Storage temperature
4098-5290 Triple sensor	33.8°F to 111.2°F (1°C to 44°C)	-4°F to 131°F (-20°C to 55°C)
4098-5291 Photo/heat sensor	-13°F to 158°F (-25°C to 70°C)	
4098-5292 Photo sensor	33.8°F to 120.2°F (1°C to 49°C)	-22°F to 158°F (-30°C to 70°C)
4098-5293 Heat sensor	-13°F to 158°F (-25°C to 70°C) Short term to 194°F (90°C)	
4098-5261 4 in. base with remote LED output	-13°F to 158°F (-25°C to 70°C) continuous, up to 194°F (90°C) short term	
4098-5207 5 in. addressable sensor base with remote LED output		
4098-9799 6 in. adaptor for 5 in. base		
4098-5227 5 in. adaptor for LP sounder base		
4098-9788 6 in. adaptor for LP sounder base		
4098-5210 sounder base	32°F to 104°F (0°C to 40°C)	-13°F to 158°F (-25°C to 70°C)
2098-9808 remote LED annunciator	32°F to 100°F (0°C to 38°C)	

Table 7: Additional specifications

Specification		Rating
Humidity range (for indoor use only)		Up to 93% RH non-condensing
Sensor dimensions		108 mm x 42 mm (4.252 in. x 1.653 in.)
4098-5210 sounder base		110 mm x 37.5 mm (4.33 in. x 1.48 in.)
2098-9808 remote LED indicator	Dimensions	Overall: 114 mm x 70 mm (H x W) (4 1/2 in. x 2 3/4 in.) Mounting holes: 83 mm (3 9/32 in.) apart (standard US single-gang box mounting)
	Current	1 mA
	Connections	Color coded wire leads, 18 AWG (0.82 mm ²)