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INSTALLATION AND MAINTENANCE INSTRUCTIONS

MIX-4110 MULTI-CRITERIA SMOKE DETECTOR

MIX-4110-ISO MULTI-CRITERIA SMOKE DETECTOR

ABOUT THIS MANUAL

This manual is included as a quick reference for installation. For further information on the use of this device with an FACP, please refer to the panel's manual. For compatibility information, see compatibility document LT-1023. For more information regarding maintenance, testing, spacing, and locating detectors, please refer to the LT-9420 MIX-4000 series detector technical bulletin rev2 [10/30/26].

Note: This manual should be left with the owner/operator of this equipment.

DETECTOR DESCRIPTION

The MIX-4110 smoke detector continuously checks air obscuration and reports it to the fire alarm panel using a fully digital communication protocol. These detectors must be used with a MIX-4000 series compatible control panel. The MIX-4110 and MIX-4110-ISO will trigger an alarm when smoke obscuration exceeds the configured levels. Sensitivity indicating means is available through the compatible FX-4000 series panel displays. Refer to LT-6865 sensitivity indicating means procedure rev0 [10/30/26]. These detectors can also have an optional remote output that can be controlled by the panel. Please see specifications for compatible devices that can use the remote output feature.

Note: MIX-4110-ISO is equipped with a bi-directional short-circuit isolator to help protect against wiring faults that may otherwise result in a loop failure.

Note: Detectors with built-in isolators (ending with -ISO) will add some resistance to the SLC loop. The total allowable loop resistance must be reduced by 0.22 ohms for each device with a built-in isolator.

Before installing this device please thoroughly read this manual and refer to the applicable codes for guidance on location, spacing and acceptable use. Also seek guidance from the compatible control panel instructions for the device operation modes and the configuration requirements.

Note: The RA100Z remote indicator operates only if the SLC loop voltage is 18V or greater.

FIGURE 1: DETECTOR FRONT:



SPECIFICATIONS

Normal Operating Voltage:	15 to 30VDC
Maximum Alarm Current (LED on):	3.3mA (LED on)
Maximum Alarm Current (with RA100Z):	3.6mA
Standby Current:	294µA (LED flashing)
Temperature Range:	32°F to 100°F (0°C to 37.8°C)
Humidity:	10% to 93% Non-condensing
Dimensions:	4 1/4” (105mm) Diameter, 1 3/4” (45mm) Height
Accessories:	MIX-4090 Programmer RA100Z Remote LED
Compatible Bases:	Detector base MIX-4001/4002 Sounder base MIX-4003-S Relay base MIX-4003-R Low frequency base MIX-4003-LF

INSTALLATION

This detector must be installed on a ceiling or wall using a compatible base. SLC line and remote output connections for the most common base MIX-4001 are shown in figure 2. A twisted pair cable should be used for the SLC line. If a shielded cable is used, connect the shields to the proper terminal on the base. Do not connect shields to earth ground. If a ground continuity wire is required by the local code, it should be a separate conductor. Please note that shielded cables may reduce the SLC loop length that can be achieved due to their high capacitance.

The detector address should be programmed using the MIX-4090 handheld device before installing the detector on the base. See manual LT-6146 rev3 [10/30/26] for programming. Addresses 1 to 240 can be used for any device on a SLC loop. Each device on a loop must have a unique address.

A breakaway tab inside the base can be inserted in the outer rim of the base to visibly identify each detector with their address. See figures 2 and 4. The detector can then be placed on the base using the following steps:

1. Position the detector centrally on its adapter base ensuring it is level.
2. Rotate clockwise applying gentle pressure. The detector will drop into its keyed location.
3. Continue to rotate clockwise a few degrees until the detector has fully engaged in the adapter base.
4. When the detector is firmly engaged, check the alignment of the raised reference marks on the detector and on the base (figure 4).

IMPORTANT NOTES ON DETECTOR INSTALLATION

This detector comes with a dust cover to protect the device during shipping and when first installed. It is not intended to provide complete protection against contamination; therefore, detectors should be removed from their base before construction, major re-decoration or other dust producing work is started. Dust covers must be removed before the system becomes operational.

Smoke detectors are not to be used with detector guards unless the combination has been evaluated and found suitable for that purpose.

Note: If installed on the ceiling, place spot type detectors 100 mm (4 in.) away from the sidewall. If they are installed on the sidewall, place them 200 mm (8 in.) down from the ceiling.

MAGNET TEST

If the detector is not in fault condition, a test alarm can be triggered by bringing a magnet near a specific point on the detector's surface. The triggered alarm lasts for at least 4 seconds. Position the test magnet next to the raised mark on the detector (figure 4), then move it 45 degrees anticlockwise. The magnet test verifies the function of all electronic circuits of the detector and its communication with the control panel. The detector will trigger an alarm message to the control panel and the detector's red LED will then be activated by the control panel.

FIGURE 2: DETECTOR WIRING

The base MIX-4001 is shown; see the installation manuals for the other bases for the correct wiring.

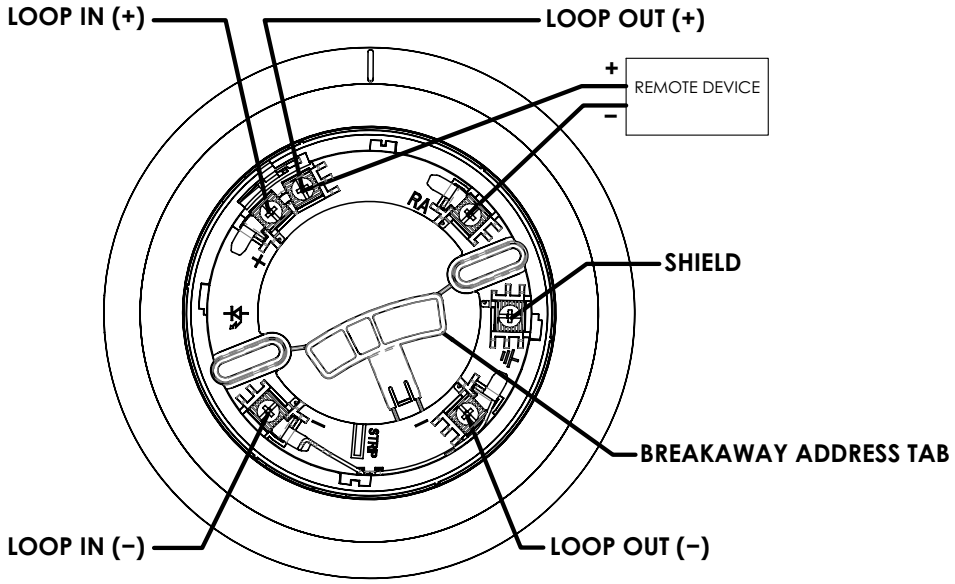


FIGURE 3: LOOP WIRING

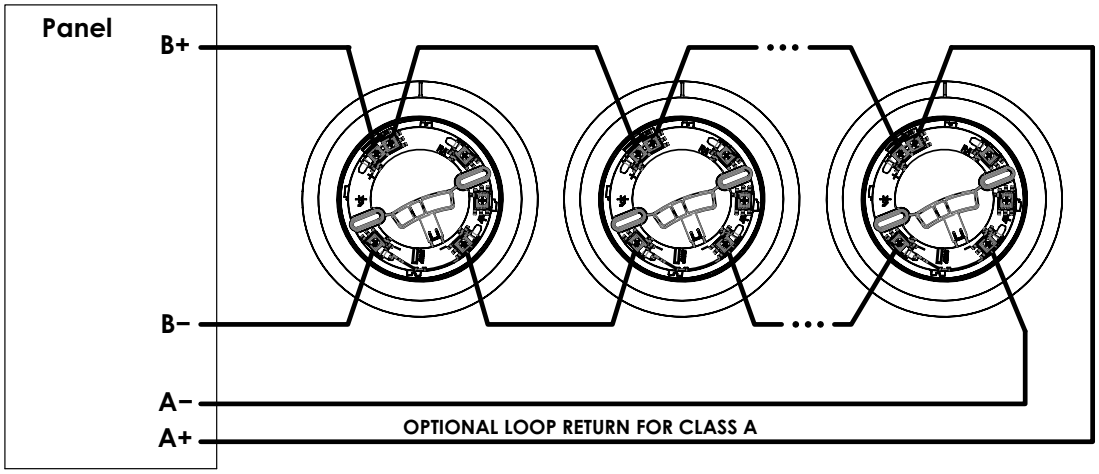
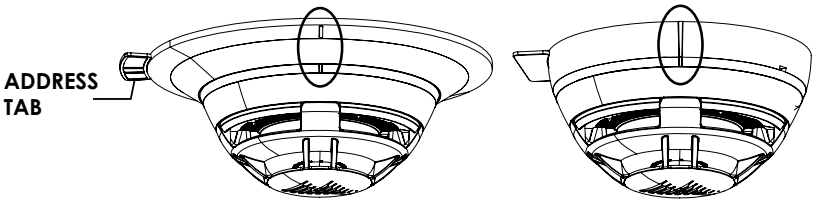


FIGURE 4: ALIGNMENT MARKS



Alarm	Red (Steady on)
Normal Operation State	Green (Flash)
Fault*	Amber (Steady on)

*For more details on specific fault codes, refer to panel manuals.

Sensitivity Range	Value %/ft obscuration
Maximum Limit	2.25
Nominal	3.08
Minimum Limit	3.92