

INSTALLATION AND MAINTENANCE INSTRUCTIONS

MRI-4042 ANALOG INTERFACE

ABOUT THIS MANUAL

This manual is included as a quick reference for installation. For further information on the use of this device with a FACP, please refer to the panel's manual.

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

MODULE DESCRIPTION

The MRI-4042 Analog interface module is designed to operate with a listed compatible intelligent fire system control panel. It can be configured to work with conventional two wires or 4-20mA devices. An external listed power supply can be connected to several MRI-4042 to provide power to the devices while remaining electrically isolated from the FACP. Each MRI-4042 will monitor the current used by the devices and will report alarms and troubles accordingly. The operational mode of the MRI-4042 is set through the panel configuration tool. This tool will also set other parameters of the device such as reset time for conventional devices or alarm levels for the 4-20mA operation. When set for conventional devices, the module will automatically handle Class A or Class B lines. The MRI-4042 has an internal EOL resistor for Class A lines. A MP-300 end of line resistor must be used for Class B wiring. The address the MRI-4042 is set using the MIX-4090 programmer tool and up to 240 units may be installed on a single loop. The module has a panel controlled LED indicator that will blink during normal standby operation and will be steady ON when the devices has detected an off-normal condition. Conventional two wires fire-alarm devices that are compatible with the MRI-4042 are listed at the end of this document. 4-20mA devices will generate monitor events on the FACP; the MRI-4042 can be used with most two wires 4-20mA non-fire use application devices.

SPECIFICATIONS

SLC SIDE

Normal Operating Voltage: 15 to 30VDC
 Alarm Current: 3mA
 Standby Current: 1.6mA

DEVICES SIDE

EOL Resistance (conventional zone): 3900 Ohms
 Max Wiring Resistance (4-20mA): 200 Ohms
 Max Wire Resistance (conventional zone): 100 Ohms total
 External Power Supply: 24VDC nominal (18 to 30 V)
 External Supply Current: 23mA maximum at 30 VDC (E.O.L. only)
 EOL Current (conventional Only): 5mA maximum (No EOL resistor required when operated in Class A on load side)
 Conventional devices current: 3mA total or less
 Max Short Circuit Current: 70mA (55mA on devices line)

GENERAL

Temperature Range: 32°F to 120°F (0°C to 49°C)
 Humidity: 10% to 93% Non-condensing
 Dimensions: 4 5/8" H x 4 1/4" W x 1 1/8" D
 Mounting: 4" square by 2 1/8" deep box
 double-gang box
 Accessories: MIX-4090 Programmer
 BB-400 surface mounted
 backbox
 MP-300 EOL on mounting plate
 Wiring range on all terminals: 22 to 12 AWG

MOUNTING

Notice: You must disconnect power from the system before installing the module. If this unit is being installed in a system that is currently operational, it is necessary to inform the operator and the local authority that the system will be temporarily out of service.

The MRI-4042 module is intended to be mounted in a standard 4" square back-box (see figure 2A) or a double-gang electrical box. The box must have a minimum depth of 2 1/8 inches. Surface mounted electrical boxes (BB-400) are available.

WIRING

Note: This device should be installed as per applicable requirements of the authorities having jurisdiction. This device shall be connected to power limited circuits only.

1. Use the programmer tool to set the address on the module as indicated on the job drawings.
CAUTION: To set the address on this device, disconnect it from the loop, or ensure that the loop to which it is connected is both disconnected from the panel and shorted across the SLC+ and SLC- inputs at the device. Failing to take either of these steps may change the address programming of previously configured sensors on the same loop.
2. Install the module wiring as indicated by the job drawings and appropriate wiring diagrams.
3. Mount the module in the electrical box as shown in figure 2B.

Note: The external power source shall be Listed for used in fire alarm system, and that has ground fault detection capability.

FIGURE1 CONTROLS and INDICATORS:

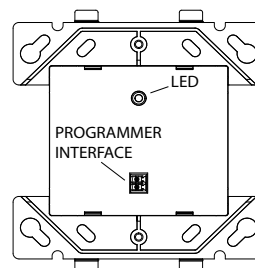


FIGURE 2B:

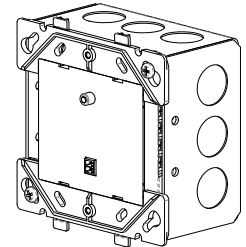


FIGURE 2A MODULE MOUNTING:

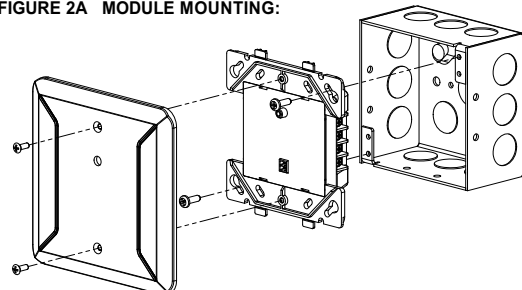


FIGURE 3: SAMPLE 4-20mA WIRING

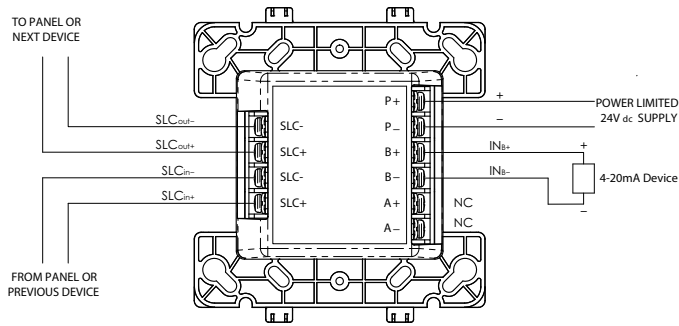


FIGURE 4: SAMPLE CLASS A ZONE WIRING

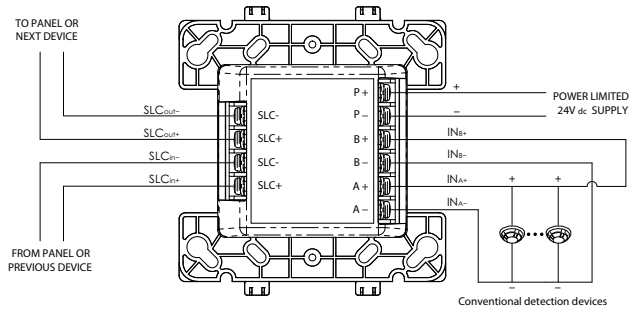
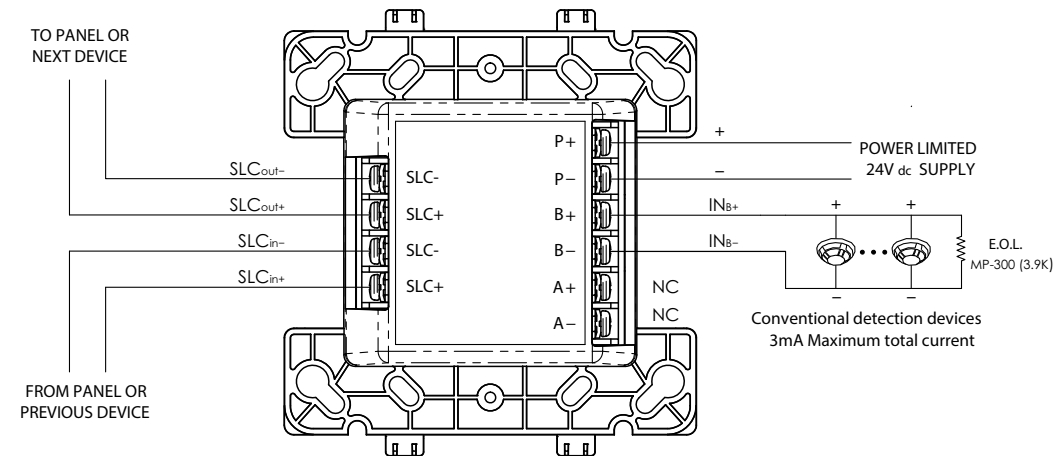


FIGURE 5: SAMPLE CLASS B ZONE



See document LT-1023SEC for compatible two wire devices.

Important note:

When using the MRI-4042 as a conventional Zone module with alarm verification, the following section of the FACP panel door label must be completed with the relevant delay information.

1) Enter Detector Data here; the delay (power-up) (start-up) time marked on the installed Smoke Detector(s), or on their installation wiring diagram(s) is to be used.

Circuit (Zone)	Control Unit Delay Seconds	Smoke Detector	
		Model	Delay, Seconds (1)
(MRI-4042 Zone #)	25	(MFG + Model)	(Device delay)

Control Unit Alarm Delay is 25 seconds for the MRI-4042. Delay for smoke detectors can be found in the installation instructions supplied with the devices.