

Features

MX Technology addressable input/output module features

- **Mini-IAMs** (Individual Addressable Module) provide remote monitoring of a single input and have a small size suitable for convenient mounting
- **Dual Input IAMs** provide remote monitoring of two Class B inputs or one Class A input
- **Relay IAMs** provide remote relay contact control
- **Signal IAMs** combine with 24 VDC to provide a 2 A local Class B or Class A operation Notification Appliance Circuit (NAC)
- **Monitor ZAMs** (Zone Adapter Module) provide local Initiating Device Circuit (IDC) operation, either dual Class B IDCs or single Class A IDC
- **Line Isolator Modules** monitor line condition and separates input from output to isolate short circuits
- Address is easily programmed with the MX Service Tool
- Modules (except A4090-5201 Mini-IAM) are mounted in a cover assembly that provides access to the address setting port and allows viewing of the LED status indicator
- Modules with covers mount in a standard dual gang MK box
- UL listed to Standard 864

Compatibility

- For use with Autocall 4100ES, 4010ES, and 4100U Series fire alarm control panels equipped with an MX Loop Module
- Refer to data sheet *AC4100-0059 MX Loop Interface Modules for 4100ES and 4010ES Fire Alarm Control Panels* for MX Loop Module details

Description

These MX Technology addressable I/O (input/output) modules provide flexible monitoring and control to satisfy a variety of applications. Each is individually addressable and communicates with an MX Loop Module located in the host fire alarm control panel.

Table 1: Typical MX Technology I/O Module Assemblies

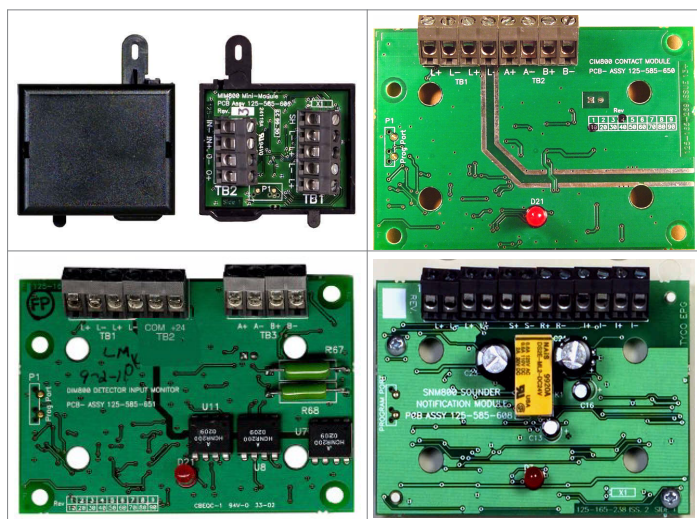


Figure 1: A4090-5201 Mini-IAM

- Small size for single input circuit monitoring of normally open or normally closed contacts
- Provides open and short circuit monitoring of the line
- Fits in small devices such as flow switches, special detection devices, and explosion proof callpoints
- A variation of this module is used in addressable callpoints and pull stations
- Dimensions are 1 7/8" W x 2 5/16" H x 1/2" D (48 mm x 58 mm x 13 mm)
- If mounted separately from the device being monitored, select electrical box with cover plate per dimensions above

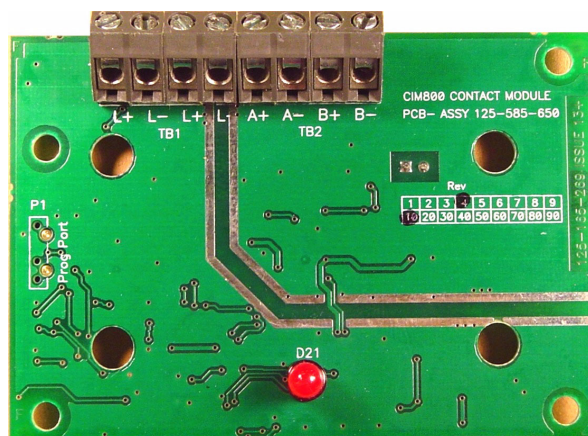


Figure 2: A4090-5202 Dual Input IAM

A4090-5202, Dual Input IAM Features:

- Two separately wired Class B spur inputs providing open and short circuit line monitoring that can be combined for one Class A input
- Each can be configured to monitor normally open or normally closed inputs
- Both inputs can be configured to initiate an alarm or short circuit fault message in the event of a short circuit on normally open monitoring circuits

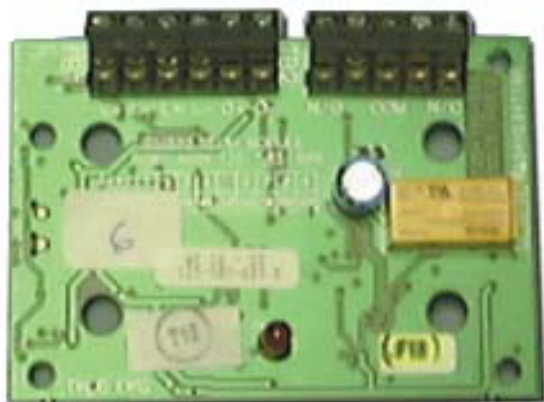


Figure 3: A4090-5203 Relay IAM

A4090-5203 Relay IAM Features:

- A single relay output programmable from the MX Loop
- Applications include signaling fire conditions to plant, machinery, fire doors, dampers, and security systems
- Relay coil is monitored
- Relay contact is rated for 2A @ 24V DC

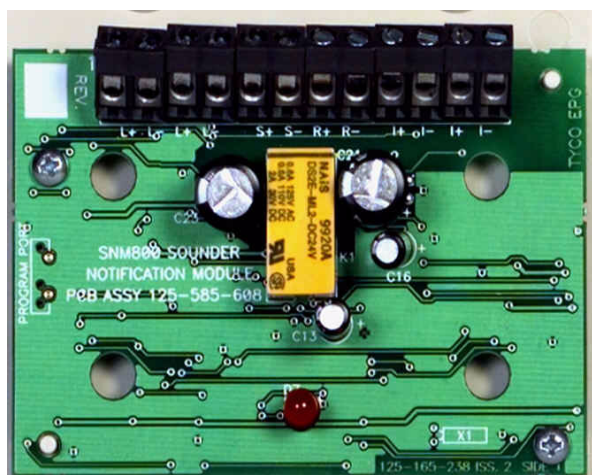


Figure 4: A4090-5204 Signal IAM

A4090-5204 Signal IAM Features:

- Remote addressable NAC spur can be wired Class B or Class A and is rated 2A @ 24V DC for up to 62 appliances; requires a separately wired 24 VDC nominal input
- Can also be used to provide a supervised output for other control applications

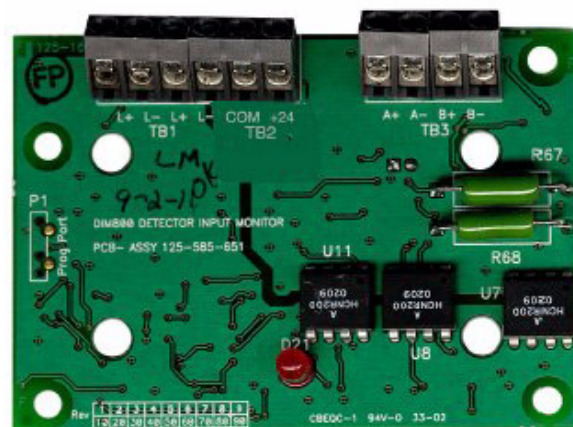


Figure 5: A4090-5205 Monitor ZAM

A4090-5205 Monitor ZAM (Zone Adapter Module) Features:

- Provides monitoring and zone power for two Class B circuits or one Class A circuit of low voltage conventional detectors and callpoints
- External 24 VDC power is supplied from a A100-5130 Voltage Regulator Module in the controlling host fire alarm panel
- 24 VDC status is monitored and a fault signal is provided if lost
- Power reset is controlled from the MX Loop module in the host fire control panel
- Input detection circuit can be wired as one or two spur circuits (Class B), or one 4-wire detection circuit

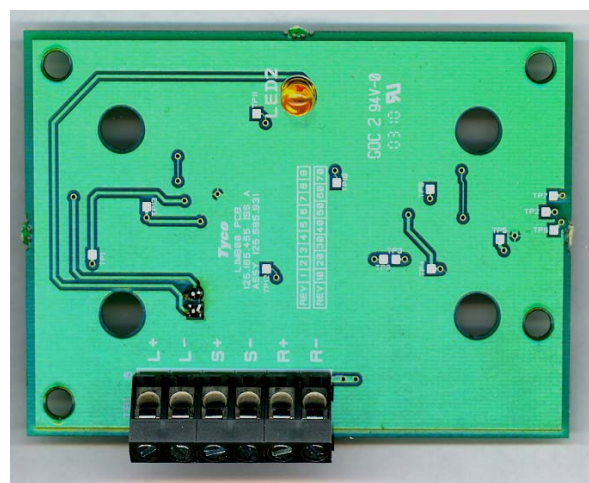


Figure 6: A4090-5206 Line Isolator Module

A4090-5206 Line Isolator Module Features:

- Monitors the MX Loop line condition for short circuits and provides connection/isolation using solid state switches
- A spur circuit is connected between the input and output switches for connection convenience
- A fault on either the input (Left side) wiring or the output (Right side) wiring opens that switch allowing the spur to continue to operate for loop circuits wired Class A, and also isolates the shorted wiring section from the functioning section
- A fault on the spur circuit opens both switches separating the spur from the rest of the communications loop

Dimension and Installation

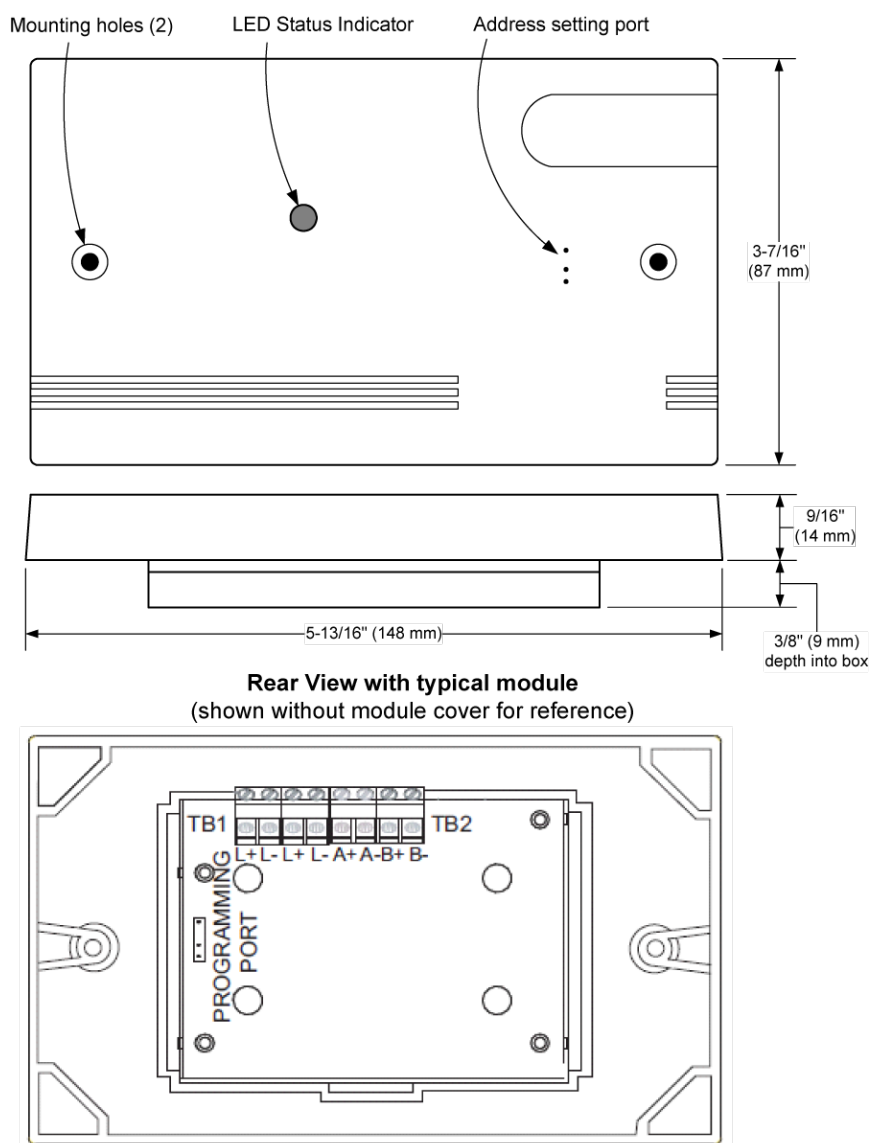


Figure 7: Front and bottom view reference (modules A4090-5202, A4090-5203, A4090-5204, A4090-5205, A4090-5206)

Product Selection

Table 2: Addressable Input/Output Modules

SKU	Description
A4090-5201	Mini-IAM, supervised contact monitoring module
A4090-5202	Dual Input IAM, dual Class B or single Class A supervised contact monitoring module; Class A monitoring requires EOL resistor assembly
A4090-5203	Relay IAM, contact rated 2 A @ 24 VDC
A4090-5204	Signal IAM, two Class B NACs, or one Class A NAC, rated 2 A @ 24 VDC, up to 62 appliances; Class A output requires EOL resistor assembly A4081-9022 Note: Refer to the Installation Instructions for compatible notification appliances.
A4090-5205	Monitor ZAM, two Class B inputs or one Class A input; Class A input requires EOL resistor assembly; Regulated power is required, use the A100-5130 Voltage Regulator Module in the host panel Note: Refer to the Installation Instructions for two-wire detector compatibility information
A4090-5206	Line Isolator Module

Table 3: Accessories

SKU	Description	
A4081-9022	27 k Ω , 1%, ½ W resistor	UL listed, Four Wire End-of-Line Resistor Harness Assemblies; provides two input and two output, color-coded wire leads (red/ black) for in/out wiring with an across-the-line resistor; leads are 6" long (152 mm) with resistor and terminations insulated
A2098-9808	Remote LED on single gang stainless steel plate, optional for use with A4090-5201 Mini-IAM	
517.035.007	Replacement Module Front Cover	
516.800.918	MX Service Tool, ref. MX Model 801AP	
516.800.922	MX Ancillary Program Lead (Spare)	
516.800.923	MX Service Tool Accessory Kit	

Specifications

Table 4: Specifications

Specification		Rating
A4090-5205 Monitor ZAM	Input Voltage	Nominal voltage = 24 VDC (from A100-5130 Voltage Regulator Module in the host fire alarm control panel) Minimum voltage = 21.9 VDC Maximum voltage = 26.4 VDC
	Current from MX Loop	Class B standby = 0.28 mA; Class A standby = 0.53 mA
	Current from External 24 VDC Supply	Class B standby = 14 mA; Class A standby = 8.25 mA Class B or Class A alarm = 50 mA per detector (spur) circuit Minimum detector voltage = 18 VDC; maximum detector voltage = 25 V Maximum standby detector load per A4090-5205 = 2.8 mA End-of-Line Resistor for Class B spur circuits = 4.7 k Ω Maximum circuit resistance = 50 Ω
	Note: Does not include detector current	
	A4090-5201, Mini-IAM	0.46 mA in standby, or in alarm without remote LED 4.5 mA in alarm with remote LED
	A4090-5202, Dual Input IAM and A4090-5203, Relay IAM	0.5 mA in standby 4.5 mA in alarm
	A4090-5204, Signal IAM	1.1 mA in standby 4.5 mA in alarm
MX Loop Current	A4090-5206, Isolator Module	0.08 mA in standby 6 mA with single trip; 10 mA with double trip (fault on spur circuit)
	Mounting box for each full size module; not applicable to the A4090-5201 Mini-IAM	Standard 2-gang MK box
Wiring resistance to monitored circuits		10 Ω maximum
Wiring Connections		Terminal blocks, for wire size 20 to 14 AWG (0.5 to 2.5 mm ²)
Operating Temperature		32 °F to 120 °F (0 °C to 49 °C)
Humidity		up to 93% RH at 90 °F (32 °C)