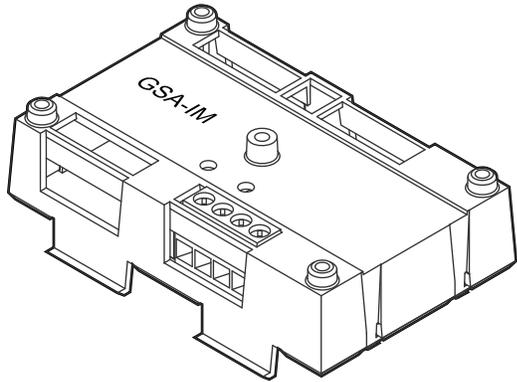


GSA-IM Isolator Module Installation Sheet



Description

The GSA-IM Isolator Module is an addressable device that protects a signaling line circuit (SLC) from a wire-to-wire short. The GSA-IM module monitors line voltages and opens the SLC when a short is detected, effectively isolating the short between the two isolator modules located electrically closest to the short.

The GSA-IM module requires one detector address on the SLC. Addresses are assigned electronically. There are no address switches.

An LED provides visible indication of the status of the module:

- Normal: Green LED flashes

Installation

Install this device in accordance with applicable national and local codes, ordinances, and regulations.

- NFPA 72 2013 – A single fault on a pathway connected to the addressable devices shall not cause the loss of more than 50 addressable devices.
- NFPA 72 2016 and later – A single fault on a pathway connected to the addressable devices shall not cause the loss of the devices in more than one zone.

Notes

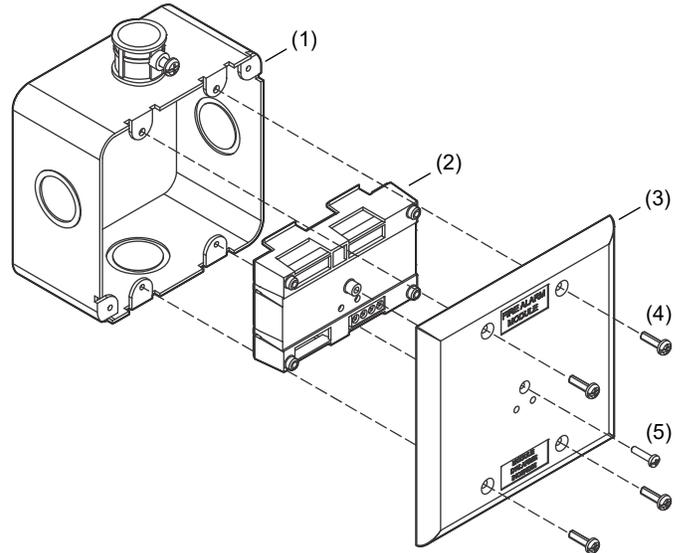
- The module is shipped from the factory as an assembled unit; it contains no user-serviceable parts and should not be disassembled.
- This module does not operate without electrical power. As fires frequently cause power interruption, discuss further safeguards with your local fire protection specialist.

To install the module:

1. Write the address assigned to the module on the label provided, and then apply the label to the module. Remove the serial number label from the module, and then attach it to the project documentation.
2. Wire the module as shown in Figure 2 on page 2.

3. Using the self-tapping screw provided, attach the wall plate to the module. See Figure 1.
4. Using the four machine screws provided, attach the wall plate and module to the electrical box.

Figure 1: Installation diagram



- | | |
|-------------------------------|-------------------------------------|
| (1) Compatible electrical box | (4) #6-32 × 5/8 machine screws (4X) |
| (2) GSA-IM module | (5) #4 × 1/2 self-tapping screw |
| (3) Wall plate | |

Wiring

Wire this device in accordance with applicable national and local codes, ordinances, and regulations.

Notes

- Refer to the Signature loop controller installation sheet for SLC wiring specifications for additional details.
- All wiring is power-limited and supervised.

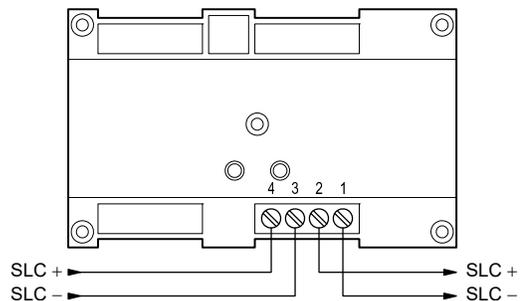
To wire the module:

1. Verify that all field wiring is free of opens, shorts, and ground faults.
2. Strip 1/4 in. (about 6 mm) from the ends of all wires that connect to the terminal block of the module.

When stripping wire ends, exposing more wire may cause a ground fault; exposing less wire may result in a faulty connection.

3. Make all wiring connections as shown in Figure 2.

Figure 2: Wiring diagram



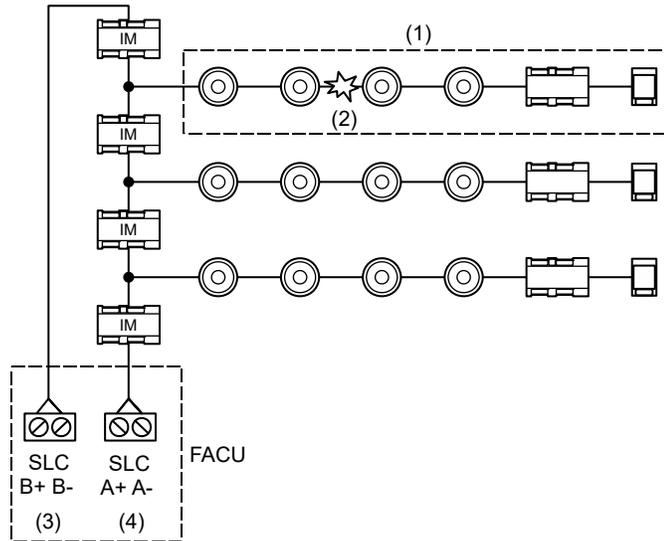
Application

For Class A pathways, install GSA-IM modules to segment the SLC as required (e.g., by zone or by number of devices) to prevent a wire-to-wire short from taking down the entire circuit. See Figure 3 and Figure 4.

For Class X pathways (see Figure 5):

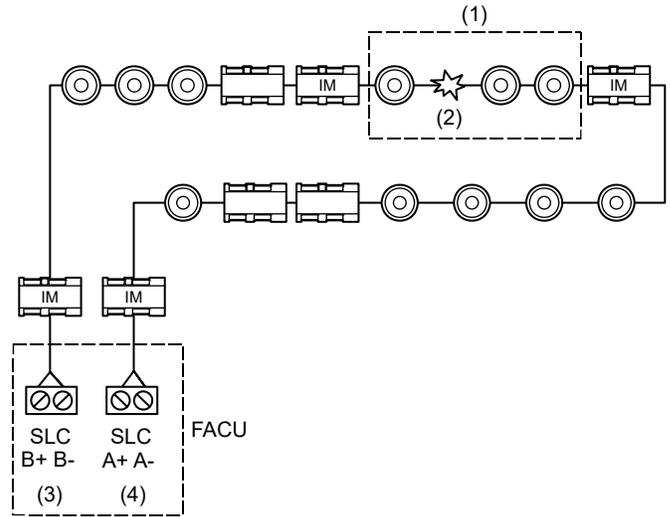
- Install a GSA-IM module on the Class B out and Class A return wiring inside the control unit, or in the same room, within 20 ft. (6.1 m), and wiring enclosed in conduit or equivalently protected against mechanical injury.
- Install a GSA-IM module on both sides of one or more standard mount modules contained in a common enclosure.
- Install a GSA-IM module on both sides of a single standard mount module, in the same room, within 20 ft. (6.1 m), and wiring enclosed in conduit or equivalently protected against mechanical injury.
- Install a GSA-IM module on both sides of a common enclosure containing one or more UIO plug-in modules, in the same room, within 20 ft. (6.1 m), and wiring enclosed in conduit or equivalently protected against mechanical injury.

Figure 3: Typical Class A with isolated Class B branches



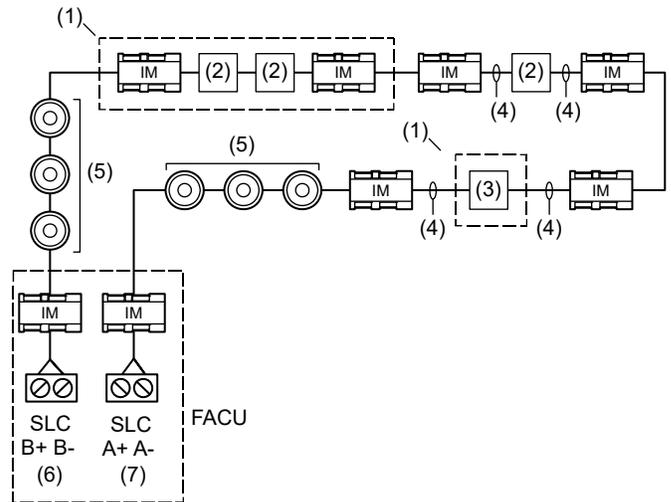
- (1) Non-isolated devices effectively removed from the circuit
- (2) Short circuit
- (3) SLC Class B out
- (4) SLC Class A return

Figure 4: Typical Class A with isolators



- (1) Non-isolated devices effectively removed from the circuit
- (2) Short circuit
- (3) SLC Class B out
- (4) SLC Class A return

Figure 5: Typical Class X



- (1) Common enclosure
- (2) Standard mount module
- (3) UIO plug-in module
- (4) Field wiring in the same room, within 20 ft. (6.1 m), and enclosed in conduit or equivalently protected against mechanical injury
- (5) Automatic fire detectors attached to isolator bases
- (6) SLC Class B out
- (7) SLC Class A return

Specifications

Operating voltage	15.20 to 19.95 VDC
Current	
Standby	170 μ A
Active	427.5 μ A
Circuit resistance between isolators	6 Ω max.
Ground fault impedance	10 k Ω
Circuit designation	
Signaling line circuit	Class A, Class X
Wire size	12 to 18 AWG (1.0 to 4.0 mm ²)
Compatible electrical boxes	2-1/2 in. (64 mm) deep double-gang box; 4 in. square box, 1-1/2 in. (38 mm) deep with double-gang cover
Operating environment	
Temperature	32 to 120°F (0 to 49°C)
Relative humidity	0 to 93% noncondensing
Storage temperature range	-4 to 140°F (-20 to 60°C)

Regulatory information

FCC compliance	This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
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Contact information

For contact information, see www.kidde-esfire.com