

Isolator Module

Model SIGA-IM

Features

- **Automatic device mapping**
Each module transmits wiring information to the loop controller regarding its location with respect to other devices on the circuit.
- **Electronic addressing**
Addresses are downloaded and permanently stored from a PC, or the SIGA-PRO Signature Program / Service Tool. There are no switches or dials to set.
- **Ground fault detection by address**
Detects ground faults right down to the device level.
- **Self-restoring**
- **2-gang mounting**
- **Designed to ISO 9001 standards**

Description

The SIGA-IM Isolator Module is part of EST's Signature Series system. This intelligent device enables part of the Signature data loop to continue operating should a short circuit occur. The module can be wired into a Class A data loop at any point.

If a fault occurs, the isolator cuts power to all devices beyond the isolator on the loop as follows:

- a short on the line causes all isolators to open within 23 msec.
- at 10 msec intervals, beginning on one side of the Class A circuit nearest the loop controller, the isolators close to provide the next isolator down the line with power.
- when the isolator next to the short closes, it reopens within 10 msec.

Once activated, the line fault isolator continuously checks the faulted side of the loop to determine if the short still exists. When the fault is removed, the module automatically restores the entire data loop to the normal condition.

The microprocessor in every Signature module provides at least three important benefits — **Self-diagnostics and History Log, Automatic Device Mapping, and Fast, Stable Communication.**

Self-diagnostics and History Log - Each Signature Series module constantly runs self-checks to provide important maintenance information. This information is automatically updated and permanently stored

¹ EST3 V.2 only.

² Retrievable with SIGA-PRO programming tool.



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in the module's non-volatile memory and is accessible for review any time using the SIGA-PRO Signature Program / Service Tool.

The information stored in the module's memory includes:

- module serial number, address, and module type
- date of manufacture and hours of operation²
- number of recorded troubles²
- time and date of last activation¹
- most recent trouble code logged by the module — 24 possible troubles codes may be used to diagnose faults.

Automatic Device Mapping - The Signature loop controller learns keeps a map where each device's serial number address is installed relative to other devices on the data circuit. Device mapping allows the Signature loop controller to discover:

- unexpected additional device addresses
- missing device addresses
- changes to the wiring in the circuit.

The Signature Series Data Entry Program also uses the mapping feature. With interactive menus and graphic support, the wired circuits between each device can be examined. Layout or "as-built" drawing information showing wire branches (T-taps), device types and their address are stored on disk for printing hard copy. This takes the mystery out of the installation. The preparation of as-built drawings is fast and efficient.

Fast Stable Communication - Built-in intelligence means less information needs to be sent between the module and the loop controller. Other than regular supervisory polling response, the module only needs to communicate with the loop controller when it has something new to report. This provides very fast control panel response time and allows a lower baud rate (speed) to be used for communication on the loop. The lower baud rate offers several advantages including:

- less sensitivity to circuit wire characteristics
- less sensitivity to noise glitches on the cable
- less emitted noise from the data wiring
- twisted or shielded wiring is not required.



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Testing & Maintenance

The module's automatic self-diagnosis identifies when it is defective and causes a trouble message. The user-friendly maintenance program shows the current state of each module and other pertinent messages. Single modules may be turned off (deactivated) temporarily, from the control panel. Availability of maintenance features is dependent on the fire alarm system used. Scheduled maintenance (Regular or Selected) for proper system operation should be planned to meet the requirements of the Authority Having Jurisdiction (AHJ). Refer to current NFPA 72 and ULC CAN/ULC 536 standards.

Warnings & Cautions

This module will not operate without electrical power. As fires frequently cause power interruption, we suggest you discuss further safeguards with your fire protection specialist.

Typical Wiring and Installation

The SIGA-IM module mounts to North American 2-1/2 inch (64 mm) deep 2-gang boxes and 1-1/2 inch (38 mm) deep 4 inch square boxes with 2 gang covers and SIGA-MP mounting plates. The module will accept #18 AWG (0.75mm²), #16 (1.0mm²), #14 AWG (1.50mm²), and #12 AWG (2.50mm²) wire sizes. *Note: Sizes #16 AWG (1.0mm²) and #18 AWG (0.75mm²) are preferred for ease of installation. See Signature Loop Controller catalog sheet for detailed wiring requirement specifications.*

EST recommends that this module be installed according to latest recognized edition of national and local fire alarm codes.

Specifications

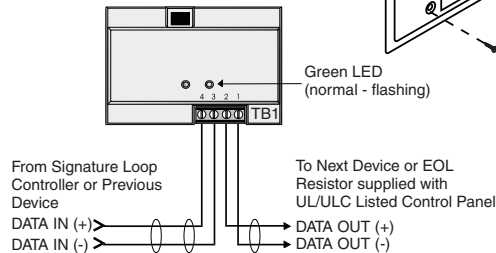
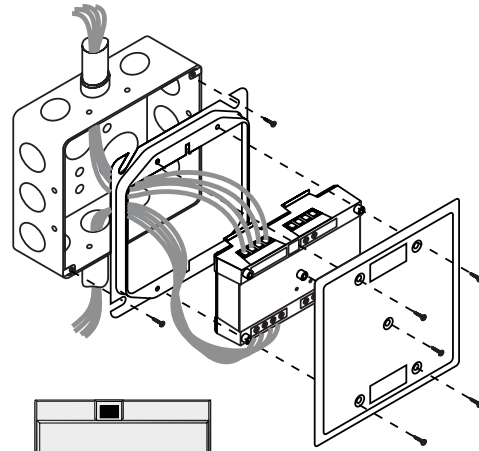
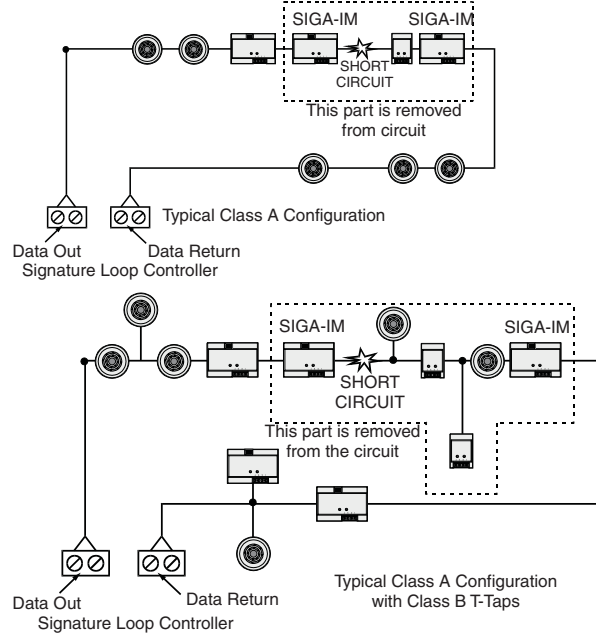
Catalog Number	SIGA-IM
Description	Isolator Module - factory set hardware type code
Address Requirements	Uses One Detector Address
Circuit Resistance	Six ohms maximum between isolators
Operating Current	Standby = 45µA; Activated = 45µA
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)
Construction & Finish	High Impact Engineering Polymer 2-gang front plate - White Finish
Storage Environment	Temperature: -4°F to 140°F (-20°C to 60°C)
Operating Environment	Temperature: 32°F to 120°F (0°C to 49°C); Humidity: 0 to 93% RH
LED Operation	On-board Green LED - Flashes when polled (normal)
Compatibility	Use with: Signature Loop Controller
Agency Listings	UL, ULC, CSFM, MEA

Ordering Information

Catalog Number	Description	Ship Wt. lb (kg)
Module		
SIGA-IM	Fault Isolator Module - UL/ULC Listed	.5 (.23)
Accessories		
27193-21	Surface Mount Box - 2-gang RED	1 (.4)
27193-26	Surface Mount Box - 2-gang WHITE	
MFC-A	Multifunction Fire Cabinet - Red, supports Signature Module Mounting Plates	7.0 (3.1)
SIGA-MP1	Signature Module Mounting Plate, 1 footprint	1.5 (0.70)
SIGA-MP2	Signature Module Mounting Plate, 1/2 footprint	0.5 (0.23)
SIGA-MP2L	Signature Module Mounting Plate, 1/2 extended footprint	1.02 (0.46)

Application & Compatibility

This module should only be used on Class A circuits. The operation of the SIGA-IM is determined by its hardware type code and is assigned at the factory. No user configuration is required. The Signature Series modules are compatible only with EST's Signature Loop Controller.



- ⚠ For maximum wire resistance, refer to the appropriate manufacturer's documentation.
- ⚠ Max. #12 AWG (2.5mm²) wire.
- ⚠ Refer to Signature Loop Controller Installation Sheet for wiring specifications.
- ⚠ This module should be used only with Class A wiring.
- ⚠ Maximum circuit resistance between isolators is 6 ohms.
- ⚠ All wiring is power-limited and supervised.

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It is our intention to keep the product information current and accurate. We can not cover specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information or questions relative to this Specification Sheet, contact EST International.