

Manual Pull Stations

Models SIGA-270, SIGA-270P, SIGA-278

Features

Note: Some features described here may not be supported by all control systems. Check your control panel's Installation and Operation Guide for details.

- **Traditional familiar appearance**
SIGA-270 models feature our familiar teardrop design with simple positive pull action and sturdy die-cast metal body.
- **One stage (GA), two stage (pre-signal), and double action models**
SIGA-270 models are available for one or two stage alarm systems. The single stage double action SIGA-278 features a rugged Lexan housing with keyed reset mechanism.
- **Break glass operation**
An up-front visible glass rod on the SIGA-270 discourages tampering.
- **Intelligent device c/w integral microprocessor**
All decisions are made at the station allowing lower communication speed while substantially improving control panel response time. Less sensitive to line noise and loop wiring properties; twisted or shielded wire is not required.
- **Non-volatile memory**
Permanently stores serial number, type of device, and job number. Automatically updates historic information including hours of operation, last maintenance date, number of alarms and troubles, and time and date of last alarm.
- **Automatic device mapping**
Each station transmits wiring information to the loop controller regarding its location with respect to other devices on the circuit.
- **Electronic addressing**
Permanently stores programmable address; there are no switches or dials to set. Addresses are downloaded from a PC, or the SIGA-PRO Signature Program/Service Tool.
- **Stand-alone operation**
The station inputs an alarm even if the loop controller's polling interrogation stops.
- **Diagnostic LEDs**
Status LEDs; flashing GREEN shows normal polling; flashing RED shows alarm state.
- **Designed for high ambient temperature operation**
Install in ambient temperatures up to 120°F (49°C).
- **Designed to ISO 9001 standards**
Manufactured to strict international quality standards for highest reliability.



SIGA-278



SIGA-270 SERIES



MEI UL ULC Patented

Description

The SIGA-270 and SIGA-278 series Manual Pull Stations are part of EST's Signature Series system. The SIGA-270 Fire Alarm Manual Pull Stations feature our very familiar teardrop shape. They are made from die-cast zinc and finished with red epoxy powder-coat paint complemented by aluminum colored stripes and markings. With positive pull-lever operation, one pull on the station handle breaks the glass rod and turns in a positive alarm, ensuring protection plus fool-proof operation. Presignal models (SIGA-270P) are equipped with a general alarm (GA) keyswitch for applications where two stage operation is required. The up-front highly visible glass rod discourages tampering.

EST's double action single stage SIGA-278 station is a contemporary style manual station made from durable red colored lexan. To initiate an alarm, first lift the upper door marked "LIFT THEN PULL HANDLE", then pull the alarm handle.

The integral microprocessor built into each Signature Series station provides four important benefits - **Self-diagnostics and History Log, Automatic Device Mapping, Stand-alone Operation and Fast, Stable Communication.**

Self-diagnostics and History Log - Each Signature Series manual station constantly runs self-checks to provide important maintenance information. The results of the self-check are automatically updated and permanently stored in the station's non-volatile memory. This information is accessible for review any time at the control panel, PC, or by using the SIGA-PRO Signature Program/Service Tool.

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The information stored in the station's memory includes:

- station serial number, address, and type
- date of manufacture, hours of operation, and last maintenance date²
- number of recorded alarms and troubles²
- time and date of last alarm¹
- most recent trouble code logged by the detector — 24 possible trouble codes may be used to diagnose faults.

Automatic Device Mapping - The loop controller learns where each device's serial number address is installed relative to other devices on the circuit. The loop controller keeps a map of the Signature Series devices connected to it.

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.

Device mapping allows the Signature loop controller to discover:

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

Stand-alone Operation - A decentralized alarm decision by the manual station is guaranteed. On-board intelligence permits the station to operate in stand-alone mode. If loop controller CPU communications fail for more than four seconds, all devices on that circuit go into stand-alone mode. The circuit acts like a conventional alarm receiving circuit. Each station will still transmit an alarm if its operating lever is pulled.

Fast Stable Communication - Built-in intelligence means less information needs to be sent between the station and the loop controller. Other than regular supervisory polling response, the station 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 circuit. 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.

Diagnostic LEDs - Twin LEDs provide visual indication of normal and alarm conditions. They are visible only when the station is removed from the mounting box. A flashing GREEN LED shows normal system polling from the loop controller. A flashing RED LED means the station is in alarm state. Both LEDs on steady shows alarm state - stand-alone mode.

Quality and Reliability - EST modules are manufactured in North America to strict international ISO 9001 standards. All electronics utilize surface mount technology (SMT) for smaller size and greater immunity to RF noise. A conformal coating is used for humidity and corrosion resistance.

¹ EST3 V.2 only.

² Retrievable with SIGA-PRO programming tool.

Typical Wiring

The fire alarm station's terminal block accepts #18 AWG (0.75mm²) to #12 AWG (2.5mm²) wire sizes. See Signature Loop Controller catalog sheet for detailed wiring requirement specifications.

Wiring Notes

1. Refer to Signature Loop Controller manual for maximum wire distance.
2. All wiring is power limited and supervised.

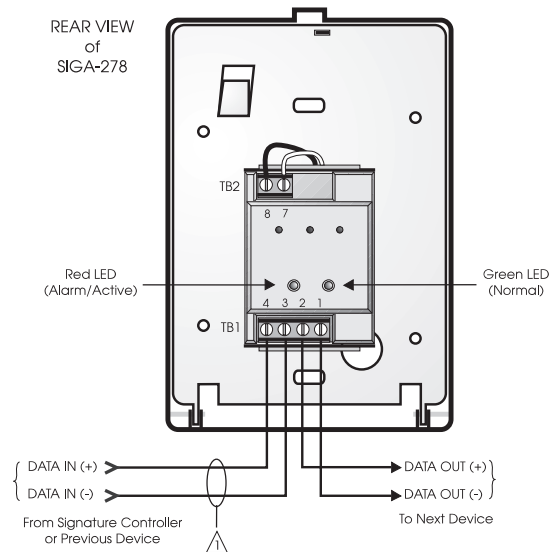


Figure 4. Single Stage Systems

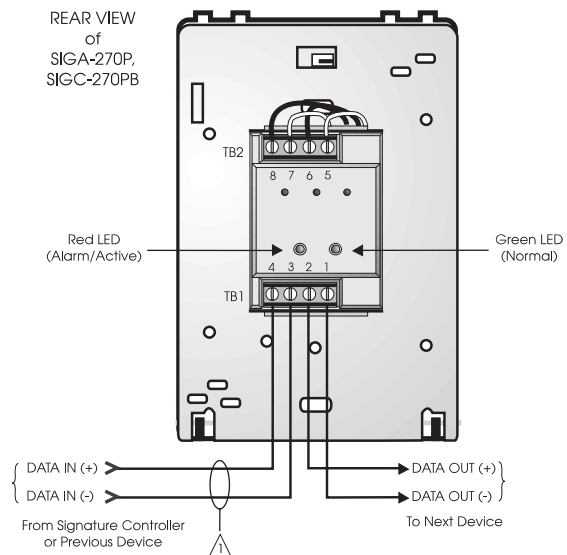


Figure 5. Two Stage Systems

Installation

Single-stage Signature Series fire alarm manual pull stations mount to North American 2½ inch (64 mm) deep 1-gang boxes.

Two stage presignal (270P) models require 1½ inch (38 mm) deep 4-inch square boxes with 1-gang, ½-inch raised covers. Openings must be angular. *Rounded openings are not acceptable.* Recommended box: Steel City Model 52-C-13; in Canada, use Iberville Model CI-52-C-49-1/2.

All models include terminals are suited for #12 to #18 AWG (2.5 mm² to 0.75 mm²) wire size. EST recommends that these fire alarm stations be installed according to latest recognized edition of national and local fire alarm codes.

Electronic Addressing: The loop controller electronically addresses each manual station, saving valuable time during system commissioning. Setting complicated switches or dials is not required. Each station has its own unique serial number stored in its on-board memory. The loop controller identifies each device on the loop and assigns a “soft” address to each serial number. If desired, the stations can be addressed using the SIGA-PRO Signature Program/Service Tool.

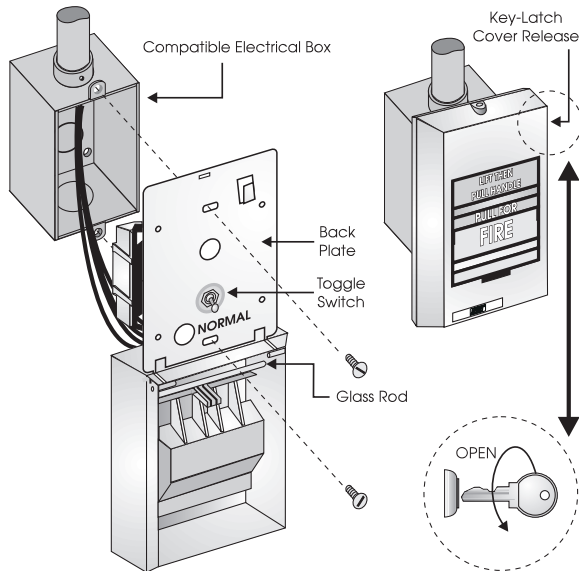


Figure 1. SIGA-278 installation

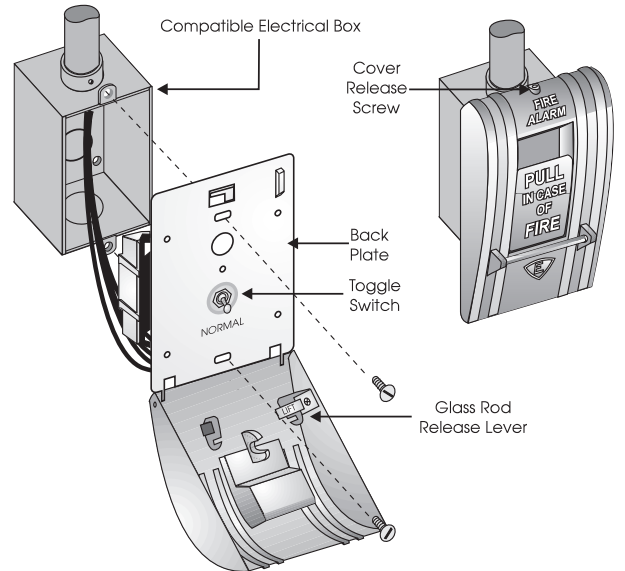


Figure 2. SIGA-270, SIGC-270F, SIGC-270B installation

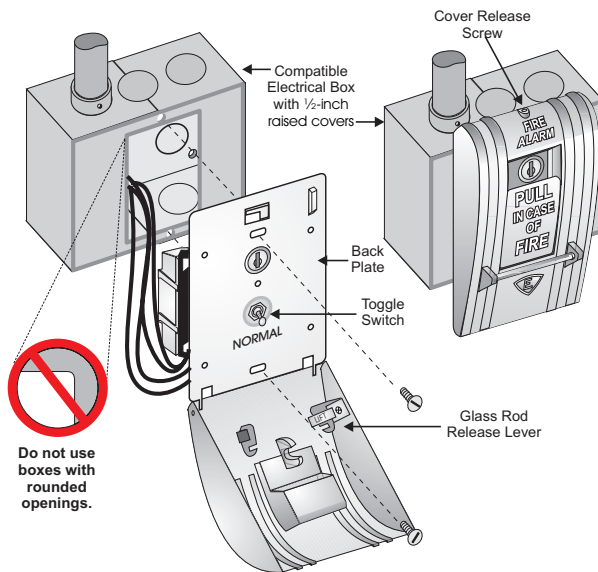


Figure 3. SIGA-270P, SIGC-270PB installation

Compatibility

Signature Series manual stations are compatible only with EST’s Signature Loop Controller.

Warnings & Cautions

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

Application

The operating characteristics of the fire alarm stations are determined by their sub-type code or “Personality Code”. NORMALLY-OPEN ALARM - LATCHING (Personality Code 1) is assigned by the factory; no user configuration is required. The device is configured for Class B IDC operation. An ALARM signal is sent to the loop controller when the station’s pull lever is operated. The alarm condition is latched at the station.

Specifications Table

Catalog Number	SIGA-270 SIGC-270F SIGC-270B	SIGA-270P SIGC-270PB	SIGA-278
Description	Single Action - One Stage	Single Action -Two Stage (Presignal)	Double Action - One Stage
Addressing Requirements	Uses 1 Module Address	Uses 2 Module Addresses	Uses 1 Module Address
Operating Current	Standby = 250 μ A Activated = 400 μ A	Standby = 396 μ A Activated = 680 μ A	Standby = 250 μ A Activated = 400 μ A
Construction & Finish	Diecast Zinc - Red Epoxy w/Aluminum markings		Lexan - Red w/White markings
Type Code	Factory Set		
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)		
Storage and Operating Environment	Operating Temperature: 32°F to 120°F (0°C to 49°C) Storage Temperature: -4°F to 140°F (-20°C to 60°C) Humidity: 0 to 93% RH		
LED Operation	On-board Green LED - Flashes when polled On-board Red LED - Flashes when in alarm Both LEDs - Glow steady when in alarm (stand-alone)		
Compatibility	Use With: Signature Loop Controller		
Agency Listings	UL, ULC (note 1), MEA, CSFM		
Note 1: SIGC-270F, SIGC-270B and SIGC-270PB are ULC listed only. Suffix "F" indicates French markings. Suffix "B" indicates English/French bilingual markings.			

Ordering Information Table

Catalog Number	Description	Ship Wt. lbs (kg)
SIGA-270	One Stage Fire Alarm Station, English Markings - UL/ULC Listed	1 (.5)
SIGC-270F	One Stage Fire Alarm Station, French Markings - ULC Listed	
SIGC-270B	One Stage Fire Alarm Station, French/English Markings - ULC Listed	
SIGA-270P	Two Stage (Presignal) Fire Alarm Station, English Markings - UL/ULC Listed	
SIGC-270PB	Two Stage (Presignal) Fire Alarm Station, French/English Markings - ULC Listed	
SIGA-278	Double Action (One Stage) Fire Alarm Station, English Markings - UL/ULC Listed	
ACCESSORIES		
32997	GA Key w/Tag - for pre-signal station (CANADA ONLY)	.1 (.05)
276-K2	GA Key - for pre-signal station (USA ONLY)	
27165	12 Glass Rods - for SIGA-270 series (CANADA ONLY)	
270-GLR	20 Glass Rods - for SIGA-270 series (USA ONLY)	
276-GLR	20 Glass Rods - for SIGA-278 series	
276B-RSB	Surface Mount Box, Red - for SIGA pull stations	1 (.6)

Testing & Maintenance

To test (or reset) the station simply open the station and operate the exposed switch. The SIGA-270 series are opened with a tool; the SIGA-278 requires the key which is supplied with that station.

The station'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 Signature series device and other pertinent messages. Single devices may be 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.

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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.