Fire Alarm - Technical Submission

1 - Technical Submission Introduction

Supplier:	EA-RS Fire Engineering Ltd	**CHt Technical Submittal No:**	WHIT-6650-XX-XX-TE-X-0003
Supplier Technical Submittal No:	TS0003	**Issue Date:**	13th October 2021
Revision:	P01	**Approval of the Equipment is required by the following date:**	**Date Approval Required by:** 8th November 2021
Equipment:	Fire Alarm	**Make:**	EST
Equipment References:	(Panels to Follow on WHIT-6650-XX-XX-TE-X-0017)	**Areas Used:**	All Areas
Equipment Description:	Edwards Fire Alarm Accessories		
The equipment that is offered is FULLY Compliant with the requirements of the specification.		***Yes** / ~~***No**~~ (* Delete as necessary) If NO refer to Section 7 for list of Noncompliance Items	
Assessed by: **CHt Engineer** …… (Print Name) …… (Signed)		**Approved & Submitted by:** **CHt Project Leader** …… (Print Name) …… (Signed)	

Attached detail documents:

(Tick if included and Insert references within boxes identifying supporting documentation that is included within this submission)

Description	Tick	Doc Ref
1. Technical submission front sheet	✓	
2. Sections from Specifications	✓	
3. Schedules	N/A	
4. Certified Performance Levels	N/A	
5. Manufacturers Information	✓	
6. Certified Drawings	N/A	
7. Non-Compliance Schedule	N/A	
8. Design Calculations Check	N/A	

Approval Status ☐ Status A – Approved ☐ Status B – Approved Subject to comments ☐ Status C – Rejected	If using an electronic document management system (ASite or BIW etc…) Please upload scanned comments or log in and submit comments made electronically.

Company	Sign	Date	Status	Comments

2 - Sections from Specifications

3 – Manufacturers Schedules

N/A

4 - Certified Performance Levels:

N/A

5 - Manufacturers Information

For manufacturers information refer to the attached technical equipment data sheets.

6 - Certified Drawings

N/A

7 - Non-Compliance Schedule

N/A

8 – Design Calculations Check

N/A

EDWARDS
United Technologies
LIFE SAFETY & INCIDENT MANAGEMENT

Intelligent Heat Detectors

SIGA-HRD, SIGA-HFD

S853

Overview

The Signature Series smoke detectors bring advanced sensing technology to a practical design that increases efficiency, saves installation time, cuts costs, and extends property protection capabilities. Continuous self-diagnostics ensures reliability over the long-haul, while the latest thermister technology makes these detectors ideal wherever dependable heat detection is required.

The SIGA-HRD is an intelligent fixed temperature/rate-of-rise fire detector. It monitors the temperature of the surrounding air and analyzes the data from the sensor to determine whether to initiate an alarm. The rate-of-rise heat function quickly detects a fast, flaming fire. The fixed-temperature heat function detects fire when the air temperature near the detector exceeds the alarm point.

The SIGA-HFD is an intelligent fixed-temperature heat detector that contains a fixed-temperature heat sensor rated at 135 °F (57.2 °C). It does not have a rate-of-rise function. The heat sensor monitors the temperature of the air in its surroundings and the detector analyzes the data to determine when the air temperature near the detector exceeds the device's alarm point.

Standard 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.*

- Next Generation Heat Sensing Technology
- 135 °F (57 °C) fixed temperature alarm point (HRD and HFD)
- 15 °F (9 °C) per minute rate-of-rise alarm point (HRD)
- Uses existing wiring
- Automatic device mapping
- Sensor Markings Provide Easy Testing Identification
- Up To 250 Total Signature Devices Per Loop
- Non-volatile memory
- Electronic addressing
- Bicolor (green/red) status LED
- Standard, relay, fault isolator, and audible mounting bases
- 50 foot (15.2 meter) spacing

DATA SHEET E85001-0647
Not to be used for installation purposes. Issue 2.1

Application

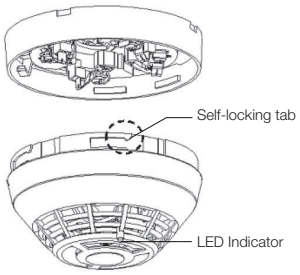
The SIGA-HRD combination fixed temperature/rate-of-rise heat detector provides a 15 °F (9 °C) per minute rate-of-rise heat sensor for the detection of fast-developing fires, as well as a 135°F (57°C) fixed temperature sensor for slow building-fires. The SIGA-HFD fixed temperature detector provides a 135°F (57°C) fixed temperature sensor for slow building-fires.

Compatibility

Signature Series heat detectors are compatible only with the Signature Loop Controller.

Installation

Signature Series detectors mount to North American 1-gang boxes, 3-1/2 inch or 4 inch octagon boxes, and to 4 inch square electrical boxes 1-1/2 inches (38 mm) deep. They mount to European BESA and 1-gang boxes with 60.3 mm fixing centers. See mounting base installation and wiring for more information.



Sensing and reporting technology

The microprocessor in each detector provides additional benefits – Self-diagnostics and History Log, Automatic Device Mapping, and Fast, Stable Communication.

Self-diagnostics and History Log - Each Signature Series detector constantly runs self-checks to provide important maintenance information. The results of the self-check are automatically updated and permanently stored in the detector's non-volatile memory.

Automatic Device Mapping - The loop controller learns where each device's serial number address is installed relative to other devices on the circuit. The mapping feature provides supervision of each device's installed location to prevent a detector from being reinstalled (after cleaning etc.) in a different location from where it was originally.

Fast Stable Communication - On-board intelligence means less information needs to be sent between the detector and the loop controller. Other than regular supervisory polling response, the detector only needs to communicate with the loop controller when it has something new to report.

Accessories

Detector mounting bases have wiring terminals that are accessible from the "room-side" after mounting the base to the electrical box. The bases mount to North American 1-gang boxes and to 3½ inch or 4 inch octagon boxes, 1½ inches (38 mm) deep. They also mount to European BESA and 1-gang boxes with 60.3 mm fixing centers. The SIGA-SB4, SIGA-RB4, and SIGA-IB4 mount to North American 4 inch sq. electrical boxes in addition to the above boxes. They include the SIGA-TS4 Trim Skirt, which is used to cover the "mounting ears" on the base. The SIGA-AB4G mounts to a 4 inch square box only.

SIGA-AB4G/T/LF Audible Base | **SIGA-SB** Standard Base | **SIGA-IB** Isolator Base | **SIGA-RB** Relay Base | **SIGA-LED** Remote LED

Remote LED SIGA-LED - The remote LED connects to the SIGA-SB or SIGA-SB4 Standard Base only. It features a North American size 1-gang plastic faceplate with a white finish and red alarm LED.

SIGA-TS4 Trim Skirt - Supplied with 4 inch bases, it can also be ordered separately to use with the other bases to help hide surface imperfections not covered by the smaller bases.

Sounder Bases - Signature Series sounder bases are designed for use where localized or group alarm signaling is required.

- **SIGA-AB4G** bases provide sounder capability to Signature Series to heat and smoke detectors. They are not intended for use with combination carbon monoxide detectors in Fire-plus-CO mode.
- **SIGA-AB4GT** bases provide sounder capability to Signature Series smoke and heat detectors, as well as carbon monoxide detectors when used with a SIGA-TCDR Temporal Pattern Generator.
- **SIGA-AB4G-LF** bases provide 520 Hz low frequency sounder capability to Signature Series smoke and heat detectors, as well as carbon monoxide detectors when used with a SIGA-TCDR Temporal Pattern Generator. The SIGA-AB4G-LF is suitable for applications requiring low frequency audible tones.

Warnings & Cautions

- This detector does not operate without electrical power. As fires frequently cause power interruption, discuss further safeguards with the local fire protection specialist.
- This detector does not sense fires in areas where heat cannot reach the detector. Heat from fires in walls, roofs, or on the opposite side of closed doors may not reach the detector.
- This heat detector by itself does not provide life safety protection Use this detector with ionization and/or photoelectric smoke detectors.
- This detector does not detect oxygen levels, smoke, toxic gases, or flames. Use this device as part of a broad-based life safety program which includes a variety of information sources pertaining to heat and smoke levels, extinguishment systems, visual and audible devices, and other safety measures.
- Independent studies indicate that heat detectors should only be used when property protection alone is involved. Never rely on heat detectors as the sole means of fire protection.

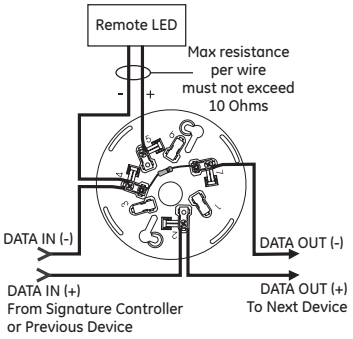
Typical Wiring

The detector mounting bases accept #18 AWG (0.75mm^2), #16 (1.0mm^2), #14 AWG (1.5mm^2), and #12 AWG (2.5mm^2) wire sizes. Sizes #16 AWG (1.0mm^2) and #18 AWG (0.75mm^2) are preferred for ease of installation.

Standard Detector Base, SIGA-SB, SIGA-SB4

This is the basic mounting base for EDWARDS Signature Series detectors. The SIGA-LED Remote LED is supported by this Base.

Term	Description
1	Not Used
2	DATA IN/OUT (+)
3	Not Used
4	DATA IN (-)
4	Remote LED (-)
5	Remote LED (+)
6	Not Used
7	DATA OUT (-)



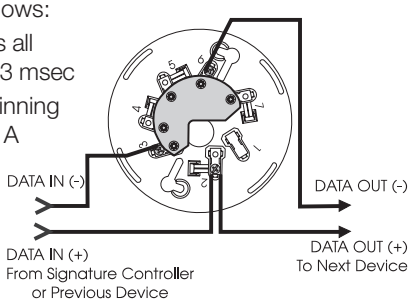
Isolator Detector Base, SIGA-IB, SIGA-IB4

This base includes a built-in line fault isolator for use on Class A circuits. A detector must be installed for it to operate. The isolator base does not support the SIGA-LED Remote LED.

The isolator operates 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.

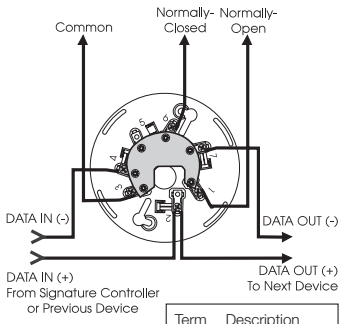
The process repeats beginning on the other side of the loop controller.



Term	Description
1	Not Used
2	DATA IN/OUT (+)
3	DATA IN (-)
4	Not Used
5	Not Used
6	DATA OUT (-)
7	Not Used

Relay Detector Base, SIGA-RB, SIGA-RB4

This base includes a relay. Normally Open or Normally Closed operation is selected during installation. The dry contact is rated for 1 amp (pilot duty) @ 30 Vdc. The relay's position is supervised to avoid accidentally jarring it out of position. The SIGA-RB can be operated as a control relay if programmed to do so at the control panel. The relay base does not support the SIGA-LED Remote LED.

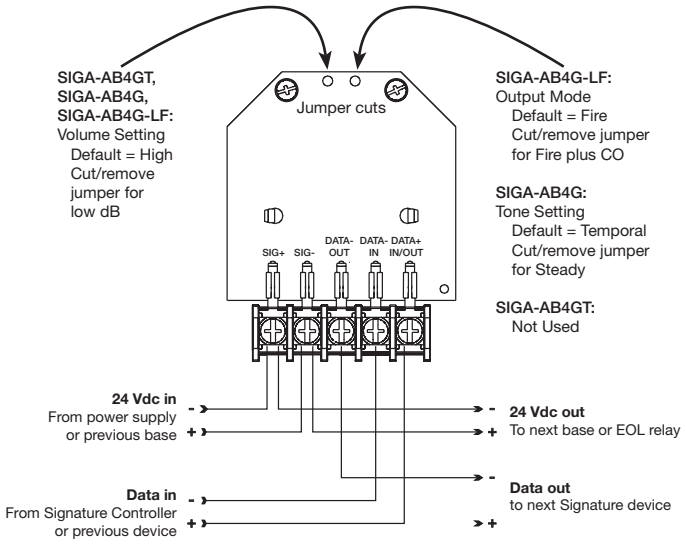


CONTACT RATING
1.0 Amp @ 30 VDC
(Pilot Duty)

Term	Description
1	Normally Open
2	DATA IN/OUT (+)
3	Common
4	DATA IN (-)
5	Not Used
6	Normally-Closed
7	DATA OUT (-)

Audible Sounder Bases, Fire Mode

AB4GT, AB4G, AB4G-LF sounder bases



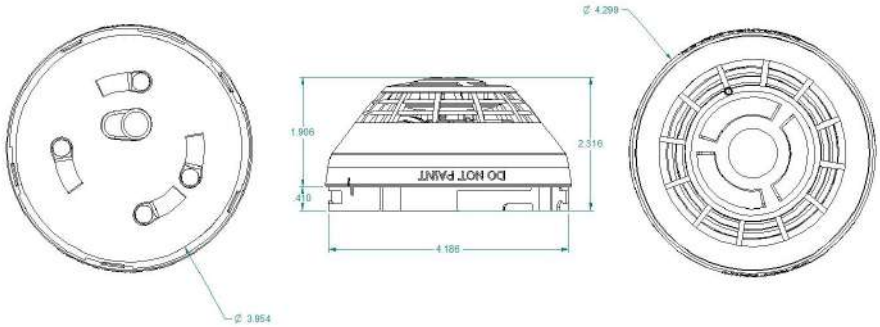
LIFE SAFETY & INCIDENT MANAGEMENT

Contact us...

Email: *edwards.fire@fs.utc.com*
Web: *edwards-fire.com*

1016 Corporate Park Drive
Mebane, NC 27302

Dimensions



Specifications

	SIGA- HRD	SIGA-HFD
Operating voltage	15.20 to 19.95 VDC	
Normal operating current	51 µA	
Alarm current	68 µA	
Vibration level	10 to 35 Hz, with an amplitude of 0.01 in.	
Rate-of-rise rating	15°F/min (8°C/min)	NA
Fixed temperature rating	135°F (57.2°C). Actual alarm point 129 to 141°F (53.9 to 60.6°C).	
Maximum spacing	50 ft. (15.2 m) centers	
Factory Mutual rating	Ultra-fast	Special
Compatible bases	See Ordering Information	
Compatible detector testers	Testifire 1000, Testifire 2000	Testifire 2000
Operating environment	32 to 100°F (0 to 38°C), 0 to 93% RH, noncondensing	
Construction	High Impact Engineering Polymer, White	
Storage temperature	-4 to 140°F (-20 to 60°C)	
Agency Listings	UL521, CAN/UL-S530, CSFM, FM approved	

Ordering Information

Catalog Number	Description	Ship Wt. lbs (kg)
SIGA-HRD	Intelligent fixed temperature/Rate-of-rise heat detector	0.4 (0.16)
SIGA-HFD	Intelligent fixed temperature heat detector	

Compatible Bases		
SIGA-SB	Detector Mounting Base - Standard	0.2 (.09)
SIGA-SB4	4-inch Detector Mounting Base c/w Trim Skirt	
SIGA-RB	Detector Mounting Base w/Relay	
SIGA-RB4	4-inch Detector Mounting Base w/Relay, c/w Trim Skirt	
SIGA-IB	Detector Mounting Base w/Fault Isolator	
SIGA-IB4	4-inch Detector Mounting Base w/ Fault Isolator, c/w Trim Skirt	
SIGA-AB4G	Audible (Sounder) Base for Fire Detectors	0.3 (0.15)
SIGA-AB4G-LF	Low Frequency Audible (Sounder) Base for CO and Fire Detectors	
SIGA-AB4GT	Audible (Sounder) Base for CO and Fire Detectors	
SIGA-LED	Remote Alarm LED (not for EN54 applications)	0.1 (0.04)
SIGA-TS4	Trim Skirt (supplied with 4-inch bases)	
SIGA-TS	Trim Skirt (optional for non 4-inch bases)	
SIGA-RTA	Detector Removal Tool	

Product Data Sheet

DMN700E-IS

Manual Callpoint, I.S.,Red, 560 ohm, Free Contact, Outdoor, Surface Mount, Glass

General

The DMN700E-IS is an Intrinsically safe MCP, designed for applications where an ingress protection rating up to IP67, is required. It comes with snap on connections, which ensure ease of installation and maintenance. Assembly of the unit is also made easy with a simple snap on fit, and 4 screws to secure the unit.

Installation

Installation time and ultimately cost, are of paramount importance. The MCP range directly reflects this need by providing a unique 'plug and play' concept designed specifically to reduce installation time. All new MCP products utilise a special terminal block, where all initial installation cabling is terminated. This terminal block is then simply connected to the back of the MCP. Simple,but effective, with no re-termination required and no time wasted.

Options and Approvals

Through new standards and legislation, both glass and re-settable operating elements may be used. To provide the greatest 'flex-ability', the new MCP range can be configured as either break glass or re-settable unit by simply changing from one element to another. No other additional parts or alternative products are required. Full compliance with the latest standards is essential and the new MCP outdoor call point range is approved to the latest EN54-11 standard

Standard Features

- **Easy to install**
- **With break glass or resettable element**
- **Easy to replace glass**
- **High quality micro switch**
- **IP67 rated**
- **EN54-11 & CPD approved**

www.acornfiresecurity.com

DMN700E-IS

Manual Callpoint, I.S.,Red, 560 ohm, Free Contact, Outdoor, Surface Mount, Glass

Specifications

Cable Termination	0.5 - 2.5 mm²
Max. contact rating (resistive load)	2 A @ 30VDC
Series resistor	560
Mechanical	
Material	PC/ABS
Weight	270 g
Dimensions (W x H x D)	98 x 94 x 70 mm
Color	Red (Ral 3001)
Operating temperature	-30ºC to + 70º C
Relative humidity (non-condensing)	0-95% RV
IP Rating	IP67
IEC marking	EEx ia IIC T4

Ordering Information

Part No.	Description
DMN700E-IS	Manual Callpoint, Intrinsically safe, Red, 560 ohm and Free Contact, Outdoor, Surface Mount with Glass
DM715	EN54 Universal MCP Glass (without branding)
DMN782	Hinged transparent MCP protection cover
DMN784	Call Point Test Key
DMN798	Breakable Seal for DM2010, DMN700, DMN900 and KAL455 Series Manual Call Points
DMN800	Resettable Element for DM2010, DMN700, DMN900 and KAL450 Series MCPs

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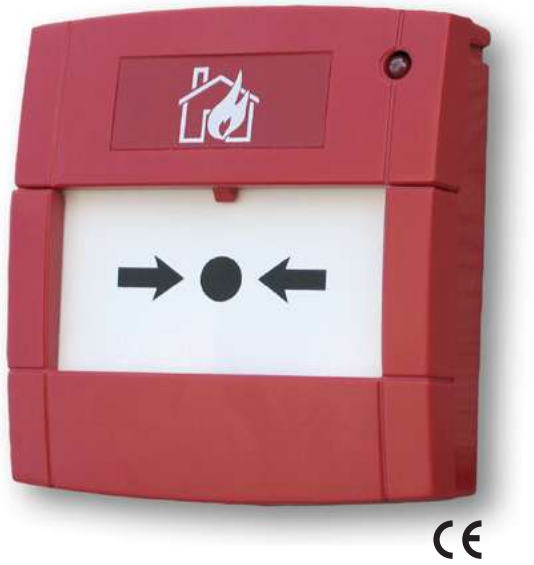
EST
Life Safety & Communications

Intelligent Break Glass Call Point

SIGI-271



Overview

SIGI-271 Fire Alarm Call Points are part of Edwards's Signature Series system. These integrated assemblies feature the familiar KAC Installers' Series Call Point packaged with Signature Series intelligent addressable/analogue interface electronics.

In all 271 Series Call Points, the switch is held off by the edge of the glass. When the glass is broken by pressing directly on it, the switch is released and an alarm sent to the Signature loop controller. A protective plastic coating on the glass prevents operator injury and inhibits the release of glass fragments.

Each Signature Series Call Point constantly runs self-checks to provide important maintenance information. The results of the self-check are automatically updated and permanently stored in the Call Point'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.

The information stored in the Call Point's memory includes:

- Call Point serial number, address, type code.
- Manufacture date, hours of operation, last maintenance date.
- Number of recorded troubles, alarms, time and date of last alarm.
- Up to 24 possible trouble codes that may be used to specifically diagnose faults.

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

Standard Features

- **Intelligent Device with Integral Microprocessor**
  All decisions are made at the Call Point to allow lower communication speed. Lower communication speeds are less sensitive to line noise; twisted or shielded wire is not required.
- **Automatic Device Mapping**
  Each Call Point transmits wiring information regarding its location with respect to other Signature devices on the circuit.
- **Electronic Addressing**
  Addresses are downloaded from a PC, or the SIGA-PRO Signature Program/Service Tool. There are no switches or dials to set.
- **Non-volatile Memory**
  Permanently stores serial number, type of device, and job number. Automatically updated with historic information.
- **Stand-alone Operation**
  Call Point can input an alarm even if the loop controller's polling interrogation stops.
- **Alarm LED**
  Red led flashes to show "alarm" state.
- **Designed For High Ambient Temperature Operation**
  Install in ambient temperatures up to 120 °F (49 °C).
- **Flush or Surface Mount**
- **Optional Markings Available**
  Glass inserts with multiple languages are available.
- **Designed To ISO 9001 Standard**
  Manufactured to strict international quality standards.

Application

The operating characteristics of the fire alarm Call Point is determined by its 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 switch is closed (i.e. when the glass is broken). The alarm condition is latched at the station.

Compatibility

Signature Series Call Points are compatible only with Signature Loop Controller.

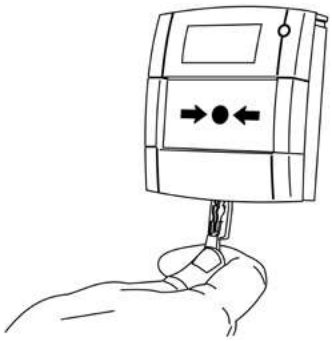
Testing & Maintenance

To test the Call Point simply insert the special test key (provided with every unit); the glass drops and the switch closes. Removing the key restores the Call Point to normal.

The Call Point’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 some 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).

Testing & Maintenance



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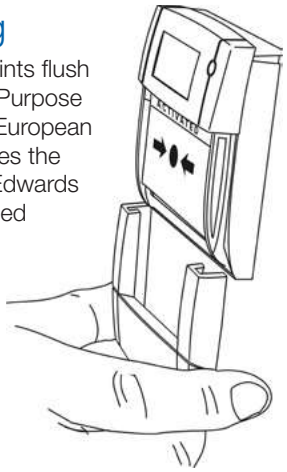
Installation and Mounting



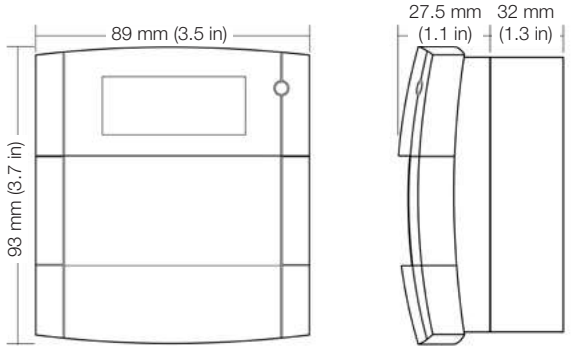
The Signature Series fire alarm Call Points flush mount to standard European General Purpose Outlet Boxes using the KAC ETT/1-P European Terminal Tray. Surface mounting requires the KAC SR3T-P Surface Mounting Box. Edwards recommends that Call Points be installed according to latest recognized edition of national and local fire alarm codes.

Electronic Addressing - The Signature loop controller electronically addresses each Call Point, saving valuable time during system commissioning. Setting complicated switches or dials is not required. Each Call Point 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 Call Points can be addressed using the SIGA-PRO Signature Program/Service Tool.

Warnings & Cautions

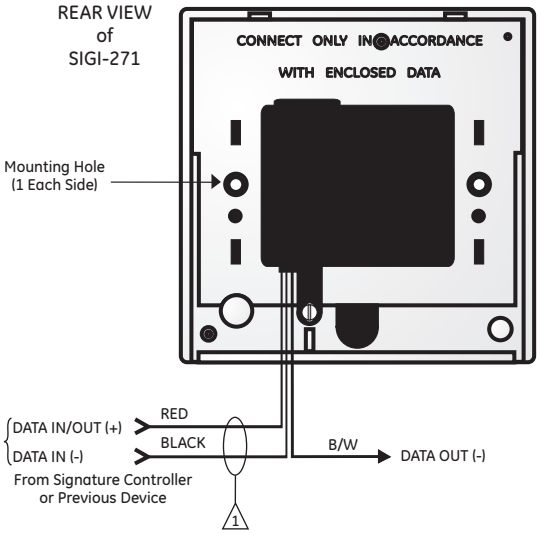
This device will not operate without electrical power. As fires frequently cause power interruption, we suggest you discuss further safeguards with your fire protection specialist.

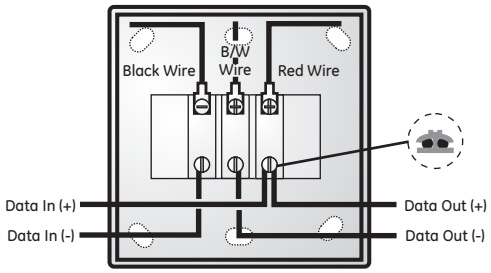
Dimensions



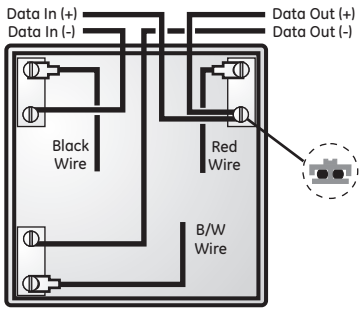
Typical Wiring

Connecting to the Call Point is made easy, and virtually 'Plug-in'. The Call Point is supplied with flying leads and grip forks that connect to large terminals in the ETT/1 or SR3T mounting accessory. Installer cables are accommodated in robust 'clamp type' terminals that will each take two conductors in the manner required by BS5839: Part 2. See Signature Loop Controller catalogue sheet for detailed wiring requirement specifications.





KAC ETT1-P Tray Wiring



KAC SR3T-P Box Wiring

Specifications

Addressing Requirements	Uses 1 module address
Operating Current	Standby = 250 µA Activated = 400 µA
Type Code	Factory Set
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)
Operating Temp.	32 °F to 120 °F (0 °C to 49 °C)
Storage Temp.	-4 °F to 140 °F (-20 °C to 60 °C)
Humidity	0 to 93% RH
LED Operation	On-board RED led: Flashes when in alarm; Glows steady when in alarm-stand-alone mode
Compatibility	Use with Signature Loop Controller
Call Point Material	Thermoplastic (red)
Agency Listings	CE Compliant

Contact us...

Email: edwards.fire@fs.utc.com
Web: *www.est-fire.com*

EST is an **EDWARDS** brand.

1016 Corporate Park Drive
Mebane, NC 27302

In Canada, contact Chubb Edwards...
Email: inquiries@chubbedwards.com
Web: *www.chubbedwards.com*

Ordering Information

Model	Description	Carton	Ship Wt.
SIGI-271	Intelligent Call Point - English Markings	89 x 90 x 35mm	150g
Accessories			
SR3T-P	Surface Mount Box - Red	89 x 90 x 35mm	50g
ETT/1-P	European Terminal Tray (for flush mounting)	89 x 90 x 35mm	47g
271-KG1	Replacement Glass Pack (5 inserts) - English only	82 x 48 x 14mm	70g
271-KG1-F005	Replacement Glass Pack (5 inserts) - Spanish only	82 x 48 x 14mm	70g
271-KG1-F1	Replacement Glass Pack (5 inserts) - Polish/English	82 x 48 x 14mm	70g
271-KG1-F2	Replacement Glass Pack (5 inserts) - Russian only	82 x 48 x 14mm	70g
271-KG1-F200	Replacement Glass Pack (5 inserts) - Hungarian/ English	82 x 48 x 14mm	70g
271-KG1-F3	Replacement Glass Pack (5 inserts) - Arabic/English	82 x 48 x 14mm	70g

Product data sheet

ZPW766R

ZPW766R WALL MOUNT SOUNDER/VAD (RED BODY, RED FLASH)

General

The ZPW766R is a ZP7 series, Ziton protocol addressable RED sounder with a built in visual alarm device (VAD), the latter approved for wall mount applications. The VAD features a clear lens with red LED element. The ZPW766 incorporates a switch setting allowing it to be assigned a unique address on a Ziton fire panel loop.

With its durable design, high sound output and VAD designed for installation up to a height of 2.4m, the ZPW766 ensures reliability and is suitable for a variety of indoor open areas where there is higher than normal background noise, whilst the unique lens design of the VAD distributes light evenly over the selected surface area.

Sounder & VAD Combinations

Disability legislation increasingly requires visual alarm signals to be used to ensure equal response from people with hearing impairment. The ZPW766 is perfectly suited for this application, providing synchronised audible and visual warnings from a single, loop wired unit. It minimises the number of installation points required in a building, significantly lowering the investment value of equipment and loop wiring costs. Installation time costs are further reduced as the device connects directly into a first fix base.

Current Consumption & System Loads

High efficiency acoustic design and a low current VAD enables multiple ZPW766 devices to be connected to a fire panel loop. Depending on system requirements the ZPW766 may be set to use less power, both in sound as well as VAD output. When coverage areas are small (less than 7.5 m radius), reducing the required range minimises the system current load. The flash frequency may also be set to 0.5 Hz (1 flash every 2 seconds) instead of 1 Hz (1 flash every second) in instances where consumption needs to be further reduced. In systems where loop lengths or current requirements are excessive, the ZPW766 may be powered from an external, EN54:4 approved power supply that will automatically be supervised by the ZPW766.

Sound Options

Continuous, intermittent and two-tone audible outputs are available from which any combination can be chosen to provide alert and evacuate, two stage alarms. All sound types comply with BS5839 Part 1 recommendations. The ZPW766 produces a sound output of up to 97 dBA, and may be adjusted in 4 steps down to 88 dBA in instances where lower outputs are required.

Details

- Compatible with Ziton addressable fire panels
- Connection layout with easy wiring and connection on installation
- Powered directly from the ZP loop for small installations, or externally when many units are required
- Fully addressable
- LED technology for long service life and low current consumption, maximising the number of devices on a loop
- Unique optics for light management with a lens design that optimises light dispersal, minimising power wastage
- Up to 7.5m coverage diameter, reducing the number of devices required to cover an area
- Coverage switch feature - for smaller areas switch down from 7.5m to 2.5m, reducing power consumption and saving up to 50%
- Flash rate switch feature, reducing the power consumption by up to 50%
- Soft start up for reduced current peak at start up, reducing circuit loading
- Locking base to prevent easy removal of device
- 8 Selectable tones with 4 selectable output levels
- EN54-3 and EN54-23 approved and CPR certified

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ZPW766R

ZPW766R WALL MOUNT SOUNDER/VAD (RED BODY, RED FLASH)

Technical specifications

Sounder

Output level (selectable)	88 to 97 dBA
Tone options	8

VID

Flash frequency	0.5 or 1 Hz 30 or 60 flashes/min

Physical

Physical dimensions	103 x 146 x 85 mm
Net weight	300 g
Colour	Red / clear lens
Dimensions (l x w x h)	103 x 146 x 85mm
Weight	300g
Material	ABS FR / (Lens - Polycarbonate)
Body colour	Red / Clear lens

Environmental

Operating temperature	-10 to +55°C
Storage temperature	-25 to +70°C
Relative humidity	95% max. noncondensing
Environment	Indoor
IP rating	IP21C
Application	Type A
IP rating	IP21C
Operating temperature	-10°C to +55°C
Storage temperature	-25°C to +70°C
Relative humidity (noncondencing)	>95%

Standards & regulation

Certification	EN54-3, EN54-23

Mounting type

	Wall

Operating voltage

Loop powered (pulsed)	15.5 - 20.5V
Externally powered	18 - 28VDC

Current consumption (max) - From the loop

Loop powered - Quiescent - Active (LP / HP)	1Hz 750µA 38 / 74mA
Loop powered - Quiescent - Active (LP / HP)	0.5 Hz 750µA 26 / 42mA
Externally powered - Quiescent - Active (LP / HP)	 600µA 6 mA

Current consumption (max) - From AUX PSU

Flash frequency - Quiescent - Active (LP / HP)	1Hz 300µA 23 / 43mA
Flash frequency - Quiescent - Active (LP / HP)	0.5 Hz 300µA 15 / 27mA

Devices per loop (max)*

	< 25

Wiring

	2 core loop

Monitoring

	Open/short circuit, removal, device type, external power, sound output

Addressing method

	7 way CIT (1of 127 addresses)

Visual indicator

Light source	Red LED
Flash frequency (selectable)	0.5 or 1Hz

Certification

EN54:3	Yes
EN54:23	W-2.4-7.5

*

1km loop of 1.5mm² cable and depening on loop configuration, device setting and power selection

ZPW766R

ZPW766R WALL MOUNT SOUNDER/VAD (RED BODY, RED FLASH)

Overview

The SIGA-DH Duct Smoke Detector Housing is specially engineered to exploit all the capabilities of Signature Series intelligent photoelectric and multisensor smoke detectors. GE Security Signature Series detectors gather analog information from each of their one or more sensing elements and converts it into digital signals. The detector's onboard microprocessor measures and analyzes these signals. It compares them to historical readings, time patterns and known characteristics to make an alarm decision. Digital filters and complex Algorithms are applied for optimum detector accuracy. Unwanted alarms are virtually eliminated.

Each duct housing is packaged with detailed installation instructions, gaskets and a self-adhesive drilling template for locating and mounting the detector. The large access door is completely removable to allow fast detector installation and field wiring connections. The 16 gauge steel housing is finished in red baked enamel for easy identification. Five one-gang knockouts on the housing provide a convenient location for mounting intelligent Signature Series modules.

The SIGA-DH Duct Housing comes with a 6 inch (150 mm) exhaust tube. Air sampling tubes are available in lengths from 8 inches (200 mm) to 10 feet (3048 mm) and must be ordered separately. Compatible smoke detectors, mounting bases, and accessories are listed in the Ordering Information. Refer to individual device catalog literature pages for more detail.

Standard Features

- Suitable for high air velocity duct applications
  Up to 4000 ft/min. (20.3 m/sec.) with Photoelectric Detector.
- Standard Signature Series detectors
  Designed for use with standard 4D, 3D, and Photoelectric Signature Series smoke detectors. Does not require "special" duct smoke heads.
- Standard, relay, or isolator detector base
  Detector plugs-in to base then easily installs into housing.
- Install in ducts up to 10 ft. (3.05 m) wide
- Remote LED and test station accessories
- Designed and manufactured to ISO 9001 standards

Typical Wiring

The detector mounting bases and test station will accept #18 AWG (0.75mm^2), #16 (1.0mm^2), #14 AWG (1.50mm^2) and #12 AWG (2.5 mm^2) wire sizes. Note: #14 AWG (1.5 mm^2) is not recommended due to difficulty of installation. See Loop Controller and Detector catalog sheets for detailed wiring requirement specifications.

Intelligent Duct Smoke Detector Housing

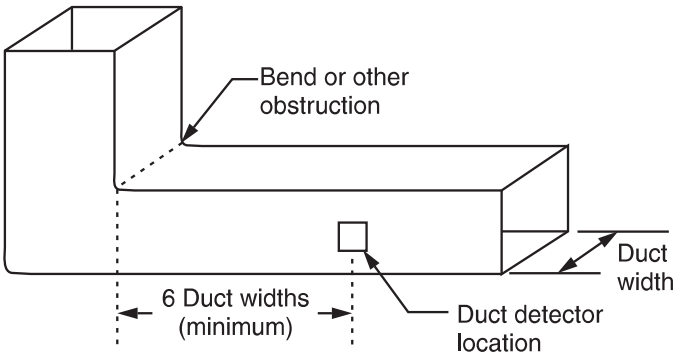
SIGA-DH

MEA

Application

The SIGA-DH Duct Smoke Detector Housing requires a clear, flat, accessible area on the duct of at least 7-3/8 inches (188mm) W x 7 inches (175mm) H. The duct housing must be installed on ducts at least 8 inches (200mm) wide. To avoid the effects of stratification, install the detector housing a minimum of six duct widths beyond any bends in the duct. Duct detectors are usually installed on the supply duct after the air filters; or in the return air stream prior to being diluted by outside air.

Sample tube length must span the entire width of the air duct and the tube can be easily cut to any length. Inlet tubes longer than 3 ft.(900mm) must be supported at both ends.



Duct detectors continually sample air flow in a HVAC duct and initiate an alarm condition whenever smoke is detected. An alarm is activated when the quantity (percent obscuration) of combustion products in that air sample exceeds the detector's sensitivity setting.

Air velocity in the duct maintains the air flow that enters the detector housing through perforations in the air sampling inlet tube and discharges through the outlet exhaust tube. The detector housing must be installed with its INLET air sampling tube upstream of the EXHAUST tube. Before installing the duct detector housing, test the duct air velocity to verify it is within the limits of the Signature smoke detector that is being installed. Also verify that duct air relative humidity is within 0% and 93%.

WARNING: Duct detectors have specific limitations. Duct detectors ARE NOT a substitute for an open area smoke detector. Duct detectors ARE NOT a substitute for early warning detection. Duct detectors ARE NOT a replacement for a building's regular fire detection system. Smoke detectors ARE NOT designed to detect toxic gases which can build up to hazardous levels in some fires. These devices WILL NOT operate without electrical power. As fires frequently cause power interruptions, GE Security suggests you discuss further safeguards with your local fire protection specialist.

Installation and Mounting

GE Security recommends duct detectors always be installed in accordance with the latest recognized editions of local and national fire alarm codes.

Typical Wiring

The detector mounting bases and test station will accept #18 AWG (0.75mm^2), #16 (1.0mm^2), #14 AWG (1.50mm^2) and #12 AWG (2.5 mm^2) wire sizes. Note: #14 AWG (1.5 mm^2) is not recommended due to difficulty of installation. See Loop Controller and Detector catalog sheets for detailed wiring requirement specifications.

Accessories

Duct Detector Air Sampling Tubes

One air sampling inlet tube must be ordered for each duct smoke detector housing. Refer to Ordering Information for available lengths.

Detector Mounting Bases

One detector mounting base must be ordered for each duct smoke housing. Removing a detector from its base (except isolator base) does not affect other devices operating on the same data loop. Available bases are:

Standard Base SIGA-SB - This is the basic mounting base. The SIGA-LED Remote LED is supported by the Standard Base.

Relay Base SIGA-RB - This base includes a relay. Normally open or closed operation is selected during installation. The dry contact is rated for 1 amp @ 30 Vdc (pilot duty). The relay's position is supervised to avoid accidentally jarring it out of position. The SIGA-RB can be operated as a control relay if programmed to do so at the control panel (EST3 V. 2 only). The Relay Base does not support the SIGA-LED Remote LED. Relay bases are not affected or activated by the SIGA-DTS Duct Test Station.

Isolator Base SIGA-IB - This base includes a built-in line fault isolator. A detector must be installed for it to operate. The integral isolator relay is controlled by the detector or the loop controller. A maximum of 96 isolator bases can be installed on one loop. The Isolator Base does not support the SIGA-LED Remote LED.

Alarm LED Indicator

The SIGA-LED Alarm Indicator is suitable for use with the SIGA-SB detector base only. A maximum of one can be operated for each detector. It features a red LED on a one-gang plastic plate and can be installed remote or directly on the SIGA-DH Duct Housing.

Duct Test Station

The SIGA-DTS Duct Test Station uses a key switch along with an integral intelligent input module mounted on a two-gang plastic plate. It is supplied with two keys and features a red alarm LED.

When the key is turned to the "TEST" position, the LED lights and the integral module remotely inputs a duct detector test alarm. The actions and sequences programmed at the control panel to activate dampers and other smoke control measures, are easily tested. Detector relay bases are not affected or activated. Resetting the control panel clears the test and returns the system to normal. The key cannot be removed when in the "TEST" position.

The Duct Test Station mounts to standard 2-inch deep North American two-gang and 4-inch square electric boxes and European 100 mm square boxes.

Air Velocity Test Kit

The 6263-SG Air Velocity Test Kit is specially designed to interface to the SIGA-DH Duct Housing. It is used to test or confirm the air velocity in HVAC ducts where the duct housing is installed.

Specifications

Compatible Smoke Detectors	SIGA-PS	SIGA-PHS	SIGA-IPHS
Smoke Sensing Element(s)	Photoelectric - Light Scattering Principle	Photoelectric - Light Scattering Principle Heat - 135° F (57° C) Fixed Temperature	Ionization - Unipolar Photoelectric - Light Scattering Principle Heat - Alarms at 65° F (35° C) change in ambient temperature
Air Velocity Range	300 to 4000 ft/min. (1.5 to 20.3 m/sec)		300 to 1000 ft/min. (1.5 to 5.0 m/sec)
Operating Environment	Temperature: 32 - 120° F (0 to 49° C) Humidity: 0 to 93% RH, non-condensing	Temperature: 32 - 100° F (0 - 38° C) Humidity: 0 to 93% RH, non-condensing	
Storage Environment	Temperature: -4 to 140° F (-20 to 60° C); Humidity: 0 to 93% RH, non-condensing		
ULI/ULC Sensitivity Range	0.67% to 3.77% obscuration/foot (305mm)		0.67% to 3.70% obscuration/foot (305mm)
Dimensions	7-3/8 inches (188mm) W x 7 inches (178mm) H x 5 inches (127mm) D		
Material and Finish	16 Gauge Cold Rolled Steel, Red - Baked Enamel		
Conduit Knockouts	Combination 1/2 inch & 3/4 inch		
Agency Approvals	UL, ULC, MEA, CSFM		
User Selected Sensitivity Settings	Least Sensitive: 3.5%; Less Sensitive: 3.0%; Normal: 2.5%; More Sensitive: 2.0%; Most Sensitive: 1.0%		
Pre-alarm Sensitivity	5 % increments, allowing up to 20 pre-alarm settings		
Electrical, Physical Characteristics	Refer to individual detector catalog sheets		
Compatible Mounting Bases	SIGA-SB Standard Base, SIGA-RB Relay Base, SIGA-IB Isolator Base		
Compatible Remote LED	SIGA-LED (LED flashes when in alarm)		
Controller Compatibility	SIGNATURE Loop Controller		
Addressing Restrictions	Uses one Input Device Address		

Note: The SIGA-DH Duct Housing is not weatherproof or dust tight.)

SIGA-DTS Duct Test Housing	
Operating Current	Standby = 250µA; Activated = 400µA
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)
Replacement Key	p/n - P-037449
Storage and Operating Temperature	32 to 120ºF (0 to 49ºC)
Onboard LED Operation	Red LED - flashes when in alarm or test state
Mounting	North American electric box: 2 inch deep 2-gang or 4 inch square ; European electric box: 100 mm square
Construction & Finish	High Impact Engineered Plastic 2-gang front plate - White
Addressing Restrictions	Uses one Module Address

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F 61 3 9259 4799

Europe
T 32 2 725 11 20
F 32 2 721 86 13

Latin America
T 305 593 4301
F 305 593 4300

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Ordering Information

Catalog Number	Description	Ship Wt lb. (kg)
SIGA-DH	Duct Detector Housing	6.5 (3.0)
Sampling Tubes		
6261-001	8 inch (200mm) Air Sampling Inlet Tube	0.25 (0.1)
6261-002	24 inch (600mm) Air Sampling Inlet Tube	0.5 (0.2)
6261-003	42 inch (1060mm) Air Sampling Inlet Tube	1.6 (0.8)
6261-006	78 inch (1980mm) Air Sampling Inlet Tube	2.2 (1.0)
6261-010	120 inch (3048mm) Air Sampling Inlet Tube	4.4 (2.0)
Compatible Detectors and Bases		
SIGA-IPHS	4D Multisensor Detector	0.5 (0.23)
SIGA-PHS	3D Multisensor Detector	0.5 (0.23)
SIGA-PS	Photoelectric Detector	0.5 (0.23)
SIGA-SB	Standard Base	0.2 (0.09)
SIGA-RB	Relay Base	0.2 (0.09)
SIGA-IB	Isolator Base	0.2 (0.09)
Annunciation and Testing		
SIGA-LED	Alarm LED Indicator	0.2 (.09)
SIGA-DTS	Duct Test Station	0.4 (.18)
6263-SG	Duct Air Velocity Test Kit	

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EDWARDS
United Technologies
LIFE SAFETY & INCIDENT MANAGEMENT

Intelligent Smoke Detector

SIGA-PD

S853

Overview

The Signature Series SIGA-PD optical smoke detector brings advanced sensing technology to a practical design that increases efficiency, saves installation time, cuts costs, and extends life safety and property protection capabilities. Continuous self-diagnostics ensure reliability over the long-haul, while environmental compensation helps reduce maintenance costs.

Like all Signature Series detectors, the SIGA-PD is an intelligent device that gathers analog information from its optical sensor, converting this data into digital signals. To make an alarm decision, the detector's on-board microprocessor measures and analyzes sensor readings and compares this information to historical data. Digital filters remove signal patterns that are not typical of fires, thus virtually eliminating unwanted alarms.

Standard 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.*

- Next Generation Optical Smoke Sensing Technology
- Wide 0.53 to 3.94 %/ft. (1.7 to 12.35 %/m) smoke obscuration
- Uses Existing Wiring
- Automatic Device Mapping
- Up To 250 Total Signature Addresses Per Loop
- Two Levels of Environmental Compensation
- Two Levels of Dirty Detector Warning
- Twenty Pre-Alarm Settings
- Five Sensitivity Settings
- Non-Volatile Memory
- Electronic Addressing
- Identification of Dirty or Defective Detectors
- Automatic Day/Night Sensitivity Adjustment
- Bicolor (Green/Red) Status Led
- Standard, Relay, Fault Isolator, and Audible Mounting Bases
- Sensor Markings Provide Easy Testing Identification

DATA SHEET E85001-0646
Not to be used for installation purposes. Issue 1.2

Application

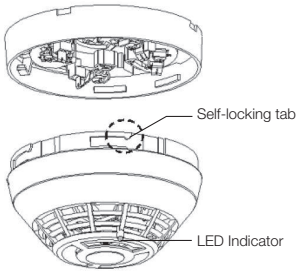
The SIGA-PD detects extremely small particles of combustion and triggers an alarm at the first sign of smoke. Thanks to its high-performance forward-scattering reflective response technology, the photoelectric smoke sensor responds quickly and reliably to a wide range of fire types, especially slow burning fires fuelled by combustibles typically found in modern multi-use buildings.

Compatibility

The SIGA-PD detector is compatible only with the Signature Loop Controller.

Installation

Signature Series detectors mount to North American 1-gang boxes, 3-1/2 inch or 4 inch octagon boxes, and to 4 inch square electrical boxes 1-1/2 inches (38 mm) deep. They mount to European BESA and 1-gang boxes with 60.3 mm fixing centers. See mounting base installation and wiring for more information.



Sensing and reporting technology

The microprocessor in each detector provides additional benefits – Self-diagnostics and History Log, Automatic Device Mapping, and Fast, Stable Communication.

Self-diagnostics and History Log - Each Signature Series detector constantly runs self-checks to provide important maintenance information. The results of the self-check are automatically updated and permanently stored in the detector's non-volatile memory

Automatic Device Mapping - The loop controller learns where each device's serial number address is installed relative to other devices on the circuit. The mapping feature provides supervision of each device's installed location to prevent a detector from being reinstalled (after cleaning etc.) in a different location from where it was originally.

Fast Stable Communication - On-board intelligence means less information needs to be sent between the detector and the loop controller. Other than regular supervisory polling response, the detector only needs to communicate with the loop controller when it has something new to report.

Testing & Maintenance

Each detector automatically identifies when it is dirty or defective and causes a "dirty detector" message. The detector's sensitivity measurement can also be transmitted to the loop controller. A sensitivity report may be printed to satisfy NFPA sensitivity measurements, which must be conducted at the end of the first year and every two years thereafter.

The user-friendly maintenance program shows the current state of each detector and other pertinent messages. Single detectors may be turned off temporarily from the control panel. Availability of maintenance features is dependent on the fire alarm system used.

Accessories

Detector mounting bases have wiring terminals that are accessible from the "room-side" after mounting the base to the electrical box. The bases mount to North American 1-gang boxes and to 3½ inch or 4 inch octagon boxes, 1½ inches (38 mm) deep. They also mount to European BESA and 1-gang boxes with 60.3 mm fixing centers. The SIGA-SB4, SIGA-RB4, and SIGA-IB4 mount to North American 4 inch sq. electrical boxes in addition to the above boxes. They include the SIGA-TS4 Trim Skirt, which is used to cover the "mounting ears" on the base. The SIGA-AB4G mounts to a 4 inch square box only.

SIGA-AB4G/T/LF Audible Base | **SIGA-SB** Standard Base | **SIGA-IB** Isolator Base | **SIGA-RB** Relay Base | **SIGA-LED** Remote LED

Remote LED SIGA-LED - The remote LED connects to the SIGA-SB or SIGA-SB4 Standard Base only. It features a North American size 1-gang plastic faceplate with a white finish and red alarm LED.

SIGA-TS4 Trim Skirt - Supplied with 4 inch bases, it can also be ordered separately to use with the other bases to help hide surface imperfections not covered by the smaller bases.

Sounder Bases - Signature Series sounder bases are designed for use where localized or group alarm signaling is required.

- **SIGA-AB4G** bases provide sounder capability to Signature Series to heat and smoke detectors. They are not intended for use with combination carbon monoxide detectors in Fire-plus-CO mode.
- **SIGA-AB4GT** bases provide sounder capability to Signature Series smoke and heat detectors, as well as carbon monoxide detectors when used with a SIGA-TCDR Temporal Pattern Generator.
- **SIGA-AB4G-LF** bases provide 520 Hz low frequency sounder capability to Signature Series smoke and heat detectors, as well as carbon monoxide detectors when used with a SIGA-TCDR Temporal Pattern Generator. The SIGA-AB4G-LF is suitable for applications requiring low frequency audible tones.

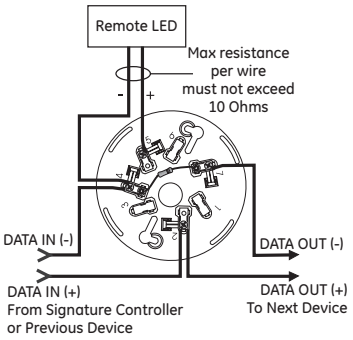
Typical Wiring

The detector mounting bases accept #18 AWG (0.75mm^2), #16 (1.0mm^2), #14 AWG (1.5mm^2), and #12 AWG (2.5mm^2) wire sizes. Sizes #16 AWG (1.0mm^2) and #18 AWG (0.75mm^2) are preferred for ease of installation.

Standard Detector Base, SIGA-SB, SIGA-SB4

This is the basic mounting base for EDWARDS Signature Series detectors. The SIGA-LED Remote LED is supported by this Base.

Term	Description
1	Not Used
2	DATA IN/OUT (+)
3	Not Used
4	DATA IN (-)
4	Remote LED (-)
5	Remote LED (+)
6	Not Used
7	DATA OUT (-)



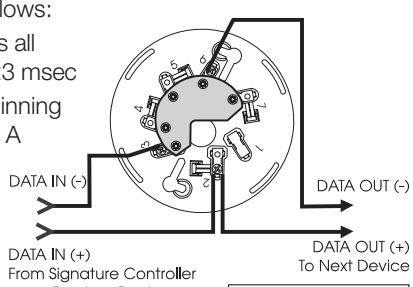
Isolator Detector Base, SIGA-IB, SIGA-IB4

This base includes a built-in line fault isolator for use on Class A circuits. A detector must be installed for it to operate. The isolator base does not support the SIGA-LED Remote LED.

The isolator operates 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.

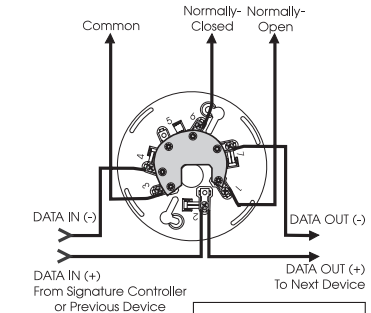
The process repeats beginning on the other side of the loop controller.



Term	Description
1	Not Used
2	DATA IN/OUT (+)
3	DATA IN (-)
4	Not Used
5	Not Used
6	DATA OUT (-)
7	Not Used

Relay Detector Base, SIGA-RB, SIGA-RB4

This base includes a relay. Normally Open or Normally Closed operation is selected during installation. The dry contact is rated for 1 amp (pilot duty) @ 30 Vdc. The relay's position is supervised to avoid accidentally jarring it out of position. The SIGA-RB can be operated as a control relay if programmed to do so at the control panel. The relay base does not support the SIGA-LED Remote LED.

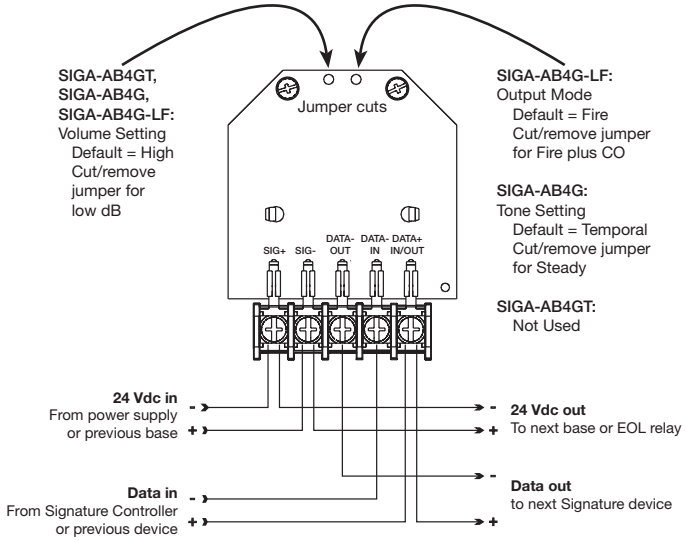


CONTACT RATING
1.0 Amp @ 30 VDC
(Pilot Duty)

Term	Description
1	Normally Open
2	DATA IN/OUT (+)
3	Common
4	DATA IN (-)
5	Not Used
6	Normally-Closed
7	DATA OUT (-)

Audible Sounder Bases, Fire Mode

AB4GT, AB4G, AB4G-LF sounder bases



Warnings & Cautions

- This detector does not operate without electrical power. As fires frequently cause power interruption, discuss further safeguards with the local fire protection specialist.
- This detector does not sense fires in areas where smoke cannot reach the detector. Smoke from fires in walls, roofs, or on the opposite side of closed doors may not reach the detector.
- Photoelectric detectors have a wide range of fire-sensing capabilities and ares best suited for detecting slow, smoldering fires.
- In Canada, install according to CAN/ULC-S524 Standard for the Installation of Fire Alarm Systems, CSA C22.1 Canadian Electrical Code, and the local authority having jurisdiction.

LIFE SAFETY & INCIDENT MANAGEMENT

Contact us...

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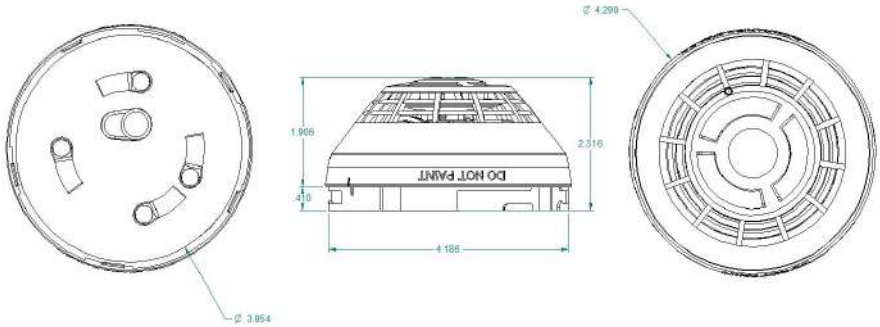
Mebane, NC 27302

Dimensions



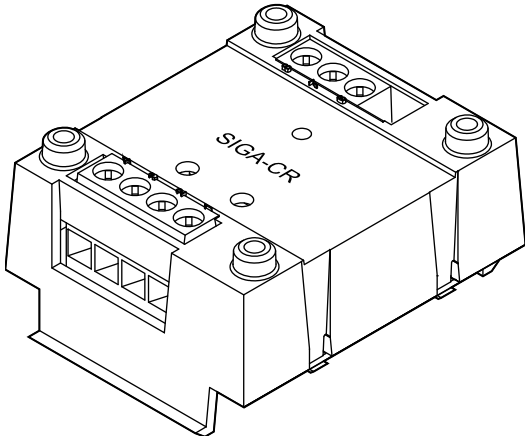
Specifications

Operating voltage	15.20 to 19.95 VDC
Normal operating current	51 µA
Alarm current	68 µA
Smoke Sensitivity Range	UL/ULC: 0.53 to 3.94 %/ft. (1.7 to 12.35 %/m) obscuration
Vibration level	10 to 35 Hz, with an amplitude of 0.01 in.
Air velocity	0 to 4,000 ft./min (0 to 20 m/s)
Wall mounting	12 in. (305 mm) max. from ceiling
Compatible bases	See Ordering Information
Compatible detector testers	Testifire 1000, Testifire 2000
Operating environment	32 to 120°F (0 to 49°C), 0 to 93% RH, noncondensing
Construction	High Impact Engineering Polymer, White
Storage temperature	-4 to 140°F (-20 to 60°C)
Environmental compensation	Automatic
Agency Listings	CAN/ULC-S529, UL 268, 268A, CSFM, FM approved

Ordering Information

Catalog Number	Description	Ship Wt. lbs (kg)
SIGA-PD	Intelligent Optical Smoke Detector	0.4 (0.16)
Accessories		
SIGA-SB	Detector Mounting Base - Standard	0.2 (.09)
SIGA-SB4	4-inch Detector Mounting Base c/w Trim Skirt	
SIGA-RB	Detector Mounting Base w/Relay	
SIGA-RB4	4-inch Detector Mounting Base w/Relay, c/w Trim Skirt	
SIGA-IB	Detector Mounting Base w/Fault Isolator	
SIGA-IB4	4-inch Detector Mounting Base w/ Fault Isolator, c/w Trim Skirt	
SIGA-LED	Remote Alarm LED (not for EN54 applications)	
SIGA-AB4G	Audible (Sounder) Base for Fire Detectors	0.3 (0.15)
SIGA-AB4G-LF	Low Frequency Audible (Sounder) Base for CO and Fire Detectors	0.3 (0.15)
SIGA-AB4GT	Audible (Sounder) Base for CO and Fire Detectors	0.3 (0.15)
SIGA-TS4	Trim Skirt (supplied with 4-inch bases)	0.1 (0.04)
SIGA-TS	Trim Skirt - (optional for non 4-inch bases)	0.1 (0.04)
SIGA-DMP	Detector Mounting Plate	3.0 (1.4)
SIGA-RTA	Detector Removal Tool	
SIGA-VA	Detector Cleaning Tool	

SIGA-CR Control Relay Module Installation Sheet



Description

The SIGA-CR Control Relay Module is an addressable device that provides one Form C dry contact output relay. The relay contacts transfer when the module is activated.

The module requires one address on the signaling line circuit (SLC). Addresses are assigned electronically. There are no address switches.

Diagnostic LEDs provide visible indication of the state of the module through the cover plate:

- Normal: Green LED flashes
- Alarm/active: Red LED flashes

Personality codes

Use the personality codes described below to configure the SIGA-CR module. See Table 1 for listing information.

Table 1: Personality code listing information

Code	Description	UL 864	CAN/ULC-S527	EN 54-18
8	Signal - dry contact output	✓	✓	✓

Personality code 8: Signal - dry contact output. Configures the module as a dry relay contact to control external appliances (door closers, fans, dampers) or equipment shutdown.

Installation

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

WARNING: Connecting a device that exceeds this module's pilot duty contact ratings may cause activation failure. This module does not support capacitive loads. See "Specifications" on page 3 for contact ratings.

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 the local fire protection specialist.
- Install the module within the same room as the device it is controlling.

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 in accordance with "Wiring" on page 2.
3. Using the self-tapping screw provided, attach the wall plate to the module. See Figure 1.
4. Using the two machine screws provided, attach the wall plate and module to the electrical box.

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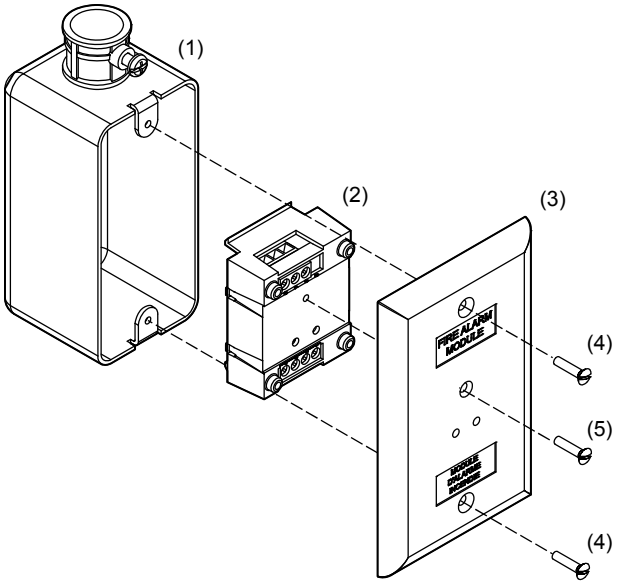
Figure 1: Installing the SIGA-CR module



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

Wiring

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

Notes

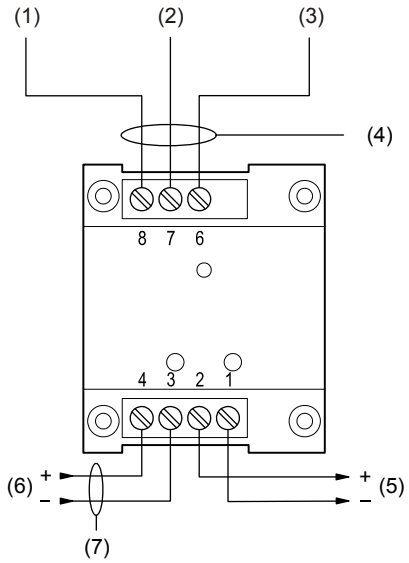
- Refer to the Signature loop controller installation sheet for SLC wiring specifications.
- Each terminal on the module is limited to a single conductor.

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



(1) Normally open contact (NO)
(2) Common contact (C)
(3) Normally closed contact (NC)
(4) Not supervised. Power-limited unless connected to a nonpower-limited source. If the source is nonpower-limited, eliminate the power-limited mark and maintain a minimum of 0.25 in. (6.4 mm) space from power-limited wiring. For other mounting methods, see enclosure and bracket installation sheets to maintain separation of power-limited and nonpower-limited wiring. The wire size must be capable of handling fault current from nonpower-limited source.
— or —
Use type FPL, FPLR, FPLP, or permitted substitute cables, provided these power-limited cable conductors extending beyond the jacket are separated by a minimum of 0.25 in. (6.4 mm) space or by a nonconductive sleeve or nonconductive barrier from all other conductors. Refer to the NFPA 70 *National Electrical Code* for more details.
(5) Signaling line circuit (SLC) to next device
(6) Signaling line circuit (SLC) from previous device
(7) Power-limited and supervised

Specifications

Operating voltage	15.20 to 19.95 VDC
Current	
Standby	85 µA
Activated	85 µA
Ground fault impedance	10 kΩ
Contact ratings (pilot duty)	24 VDC at 2 A 120 VAC at 0.5 A
Relay type	Form C, programmable
Circuit designation	
Signaling line circuits	Class A, Style 6 or Class B, Style 4
Wire size	12 to 18 AWG (1.0 to 4.0 mm²)
LPCB/CPR electrical box	
Requirements	Plastic box with cover plate, no gaps or unused holes
Minimum size W × H × D	2.4 × 3.5 × 1.5 in. (60 × 85 × 38 mm)
Compatible electrical boxes	2-1/2 in. (64 mm) deep single-gang box; Standard 4 in. square,1-1/2 in. (38 mm) deep box
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

Manufacturer	Edwards, A Division of UTC Fire & Security Americas Corporation, Inc. 8985 Town Center Parkway, Bradenton, FL 34202, USA Authorized EU manufacturing representative: UTC Fire & Security B.V. Kelvinstraat 7, 6003 DH Weert, Netherlands
Year of manufacture	The first two digits of the DATE MFG number (located on the product identification label) are the year of manufacture.
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.
North American standards	CAN/ULC-S527, UL 864
EN 54	EN 54-18:2005 Input/output devices
EU compliance	CE
CPR certificates	0832-CPR-F0330
	2002/96/EC (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information, see: www.recyclethis.info.

Contact information

For contact information, see www.est-fire.com.

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