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Fire Alarm System
Data Sheet Submittals

Convergint Project Number:

Date: 9/9/2024 (m/d/yyyy)

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Datasheet Index

Qty	Model#	Description	Spec. Section
1	BC-1	BATTERY BOX (40AH MAX)	
1	SIGA-CRH	CONTROL RELAY MODULE - HIGH VOLTAGE	
2	SIGA-CT2	DUAL INPUT MODULE	
1	VEP-A00-1P	XTRALIS AIR SAMPLING DETECTOR (VESDA) - 1 PIPE, FIXED SPEED	
2	PS-12260		

EDWARDS
United Technologies
LIFE SAFETY & INCIDENT MANAGEMENT

EST3 Cabinets and Chassis

3-CAB series, 3-RCC series, 3-CHAS7 series, BC-1

3-CAB Series


3-RCC Series

S3000
7165-1657: 0186
FDNY APPROVED
FM APPROVED

EN 54-2: 1997 + A1: 2006
EN 54-4: 1997 + A1: 2002 + A2: 2006
EN 54-16: 2008

Overview

EST3 has a wide selection of cabinet arrangements allowing the greatest use of EST3's flexible modular design. Lobby enclosure wallboxes are manufactured from #14 AWG cold rolled steel with a gray baked enamel finish. Lobby enclosure doors are manufactured from #14 AWG cold rolled steel and have a modern contoured door design with integral viewing window. The exception is the small lobby enclosure 3-CAB5. The 3-CAB5 wallbox and non-contoured door are #16 AWG cold rolled steel. Lobby enclosure doors come with gray baked enamel or optional red baked enamel finishes. The EST3 lobby enclosures back boxes, doors and chassis units are ordered and shipped separately. The 3-CAB5 lobby enclosure comes complete with door and back box providing space to mount five local rail modules.

The EST3 remote closet cabinet design allows the installation of control panel electronics in electrical closets. The remote closet cabinets have left hand hinged doors and are available with red finish only. Optional display modules used for system diagnostics display, mount behind the closet cabinet door and are not visible with the door closed.

Standard Features

- Right or left hand hinging of doors
- Lag and Keyway holes for quick mounting
- Attack rated door for security applications
- Knockouts for 3/4 inch conduit
- Attractive contour door design on lobby enclosures
- Combination flush or surface mounting lobby enclosure design
- Remote closet cabinets for electrical closet mounting support up to 65 AMP hour batteries
- Optional earthquake hardening: OSHPD seismic pre-approval for component Importance Factor 1.5

DATA SHEET E85010-0067
Not to be used for installation purposes. Issue 1

Application

Lobby Enclosures

EST3 lobby enclosures provide space for control, monitoring and display modules where they remain visible even with the door closed and secure. Ideal for mounting in lobby's where appearance is important, maximum mounting flexibility is provided with doors that will mount for right or left hand opening. Lobby enclosures come in several sizes to match individual project requirements.

The **3-CAB5 series** semi-flush or surface mounts. A built in rail assembly provides space for up to five local rail modules, no chassis assembly needed. Back space for 1-1/2 footprints gives room for a power supply and a 1/2 footprint module and 10 AH batteries. The local rail module spaces provide room for amplifiers, common control and annunciation modules.

The **3-CAB7** semi-flush or surface mounts and has a contoured front door with viewing window. Space is provided for two 17 AH batteries and one chassis assembly providing seven local rail module spaces.

The **3-CAB14** semi-flush or surface mounting and has a contoured front door with viewing window. Space is provided for two 17AH batteries and two chassis assemblies each providing seven local rail module spaces.

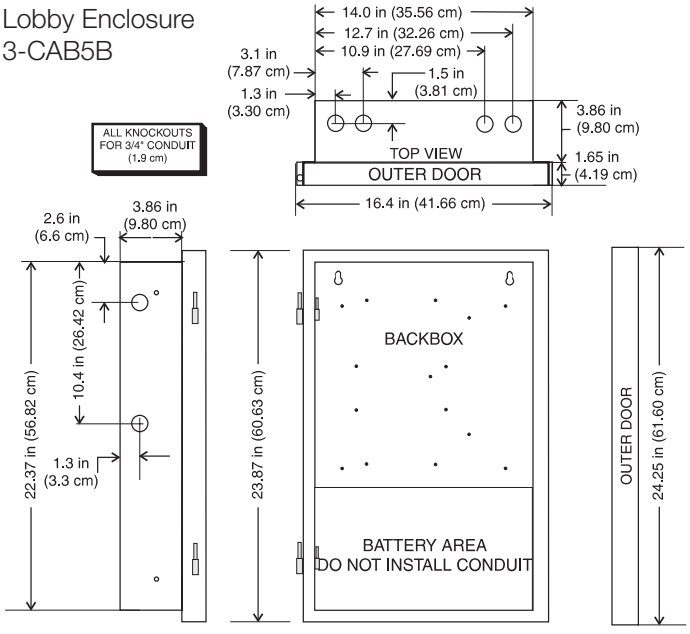
The **3-CAB21** semi-flush or surface mounts and has a contoured front door with viewing window. Space is provided for two 17AH batteries and three chassis assemblies each providing seven local rail module spaces.

Remote Closet Cabinets

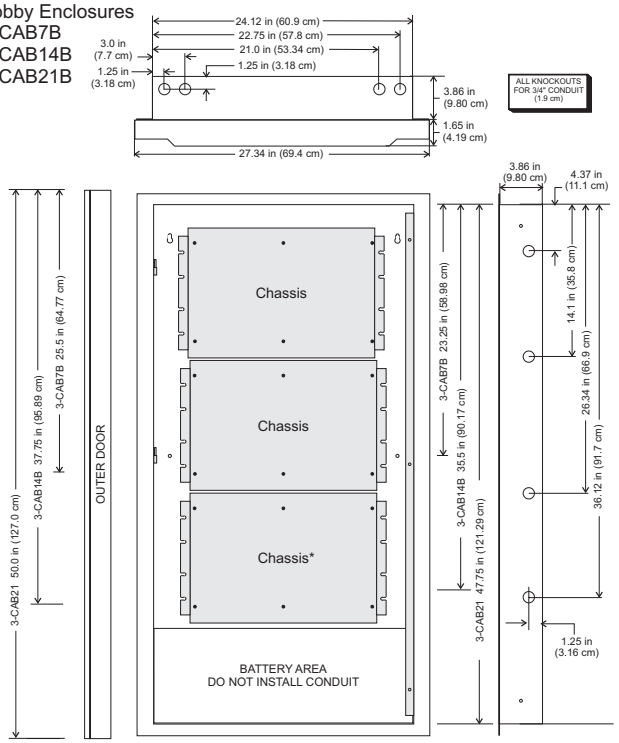
Remote closet cabinets provide an economical way of installing equipment in locations where esthetics are not paramount, like electrical closets. You can have optional display modules used for system diagnostics display mounted behind the front door. These display modules will not be visible with the door closed. Remote closet cabinets are surface mounting and come in sizes providing space for one to three chassis with room for standby batteries. A UL Listed attack rated door having a 2-minute rating is available for the 3-RCC7R cabinet. This door is required for security applications.

Installation and Mounting

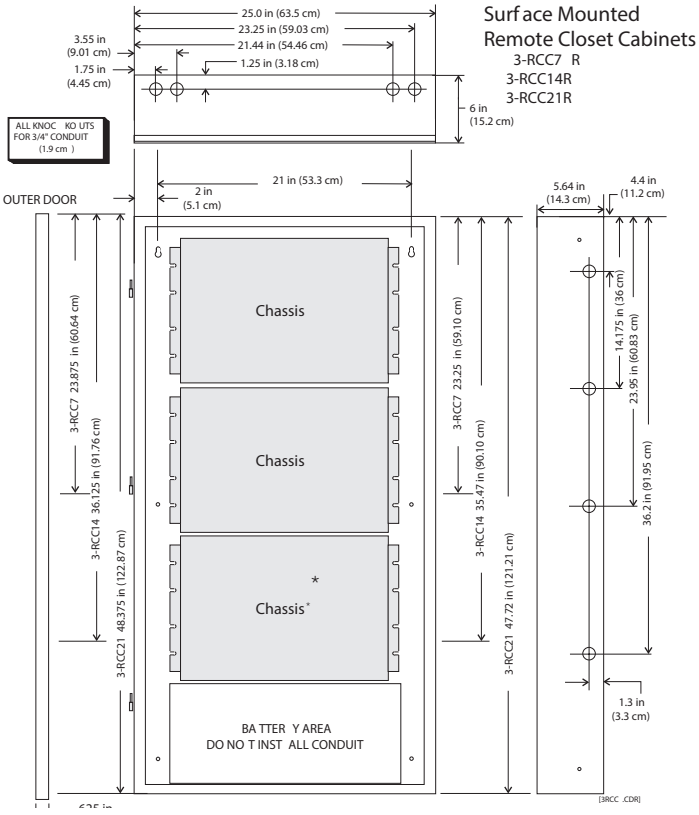
Lobby Enclosure
3-CAB5B



Lobby Enclosures
3-CAB7B
3-CAB14B
3-CAB21B

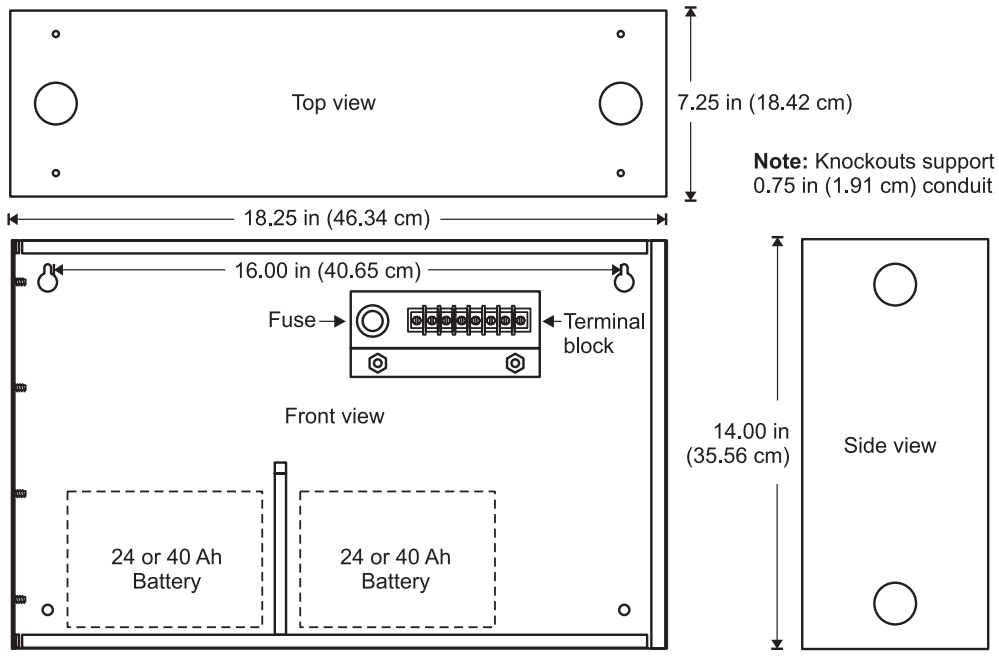


Surface Mounted
Remote Closet Cabinets
3-RCC7 R
3-RCC14R
3-RCC21R



* The lower mounting space can be used for an MN-BRKT1 bracket, which holds MNEC interface equipment including an MN-NETSW1 Ethernet network switch, an MN-ABPM Audio bridge, an MN-FVPN VoIP module, and an MN-COM1S Communications module.

BC-1 Dimensions



Ordering Information

Catalog Number	Description	Equipment Mounting Space	Battery Space	Ship Wt. lb. (Kg)
Lobby Enclosures — Outer doors with viewing window				
3-CAB5	Cabinet w/Wallbox, door and chassis	Five local rail modules One footprint and ½ footprint module	Two - 12V10A	30 (13.6)
3-CAB7B	Wallbox only	One Chassis	Four - 6V8A Two - 12V10A Two - 12V17A	30 (13.6)
3-CAB7B-E	Wallbox only, EN54* certified CE	1 Chassis		30 (13.6)
3-CAB7D(R)	Inner and outer doors for 3-CAB7B	N/A		10 (4.5)
3-CAB7D(R)-E	Inner & outer doors for 3-CAB7B, EN54*, CE			10 (4.5)
3-CAB14B	Wallbox only	Two Chassis	Four - 6V8A Two - 12V10A Two - 12V17A	42 (19.1)
3-CAB14B-E	Wallbox only, EN54* certified CE	2 Chassis		42 (19.1)
3-CAB14D(R)	Inner and outer doors for 3-CAB14B	N/A		15 (6.8)
3-CAB14D(R)-E	Inner & outer doors for 3-CAB14B, EN54*, CE			15 (6.8)
3-CAB21B	Wallbox only	Three Chassis	Four - 6V8A Two - 12V10A Two - 12V17A	55 (25)
3-CAB21B-E	Wallbox only, EN54* certified CE	3 Chassis		55 (25)
3-CAB21D(R)	Inner and outer doors for 3-CAB21B	N/A		20 (9.1)
3-CAB21D(R)-E	Inner & outer doors for 3-CAB21B, EN54*, CE			20 (9.1)
Remote Closet Enclosure — No viewing window				
3-RCC7R	Red wallbox and door	One Chassis	Four - 6V8A, Two - 12V10A Two - 12V17A, Two - 12V50A	37.5 (17)
3-RCC7R-E	Red wallbox and door, EN54* certified CE			37.5 (17)
ATCK	Attack rated door for 3-RCC7R	N/A		26 (11.8)
3-RCC14R	Red wallbox and door	Two Chassis	Four - 6V8A Two - 12V10A, Two - 12V17A Two - 12V50A, Two - 12V65[2]	53 (24)
3-RCC14R-E	Red wallbox and door, EN54* certified CE			53(24)
3-RCC21R	Red wallbox and door	Three Chassis		70 (31.8)
3-RCC21R-E	Red wallbox and door, EN54* certified CE			70 (31.8)

more...

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1016 Corporate Park Drive
Mebane, NC 27302

Chassis Assemblies

3-CHAS7	Takes one chassis space in wallbox, provides space for 7 local rail modules, up to two power supplies, and a ½ footprint module. Add suffix "-E" for EN54 compliant versions.	8.4 (3.8)
3-ASU**	Takes one chassis space in wallbox, provides an audio source unit /w microphone and an inner door filler plate. Add suffix "-E" for EN54 compliant versions.	15 (6.8)
3-ASU/4**	Takes one chassis space in wallbox, provides an audio source unit /w microphone and four local rail module spaces. Add suffix "-E" for EN54 compliant versions.	15 (6.8)
3-ASU/FT**	Takes one chassis space in wallbox, provides an audio source unit /w microphone and Firefighters Telephone. Add suffix "-EN" for EN54 compliant versions	20 (9.1)
3-FTCU**	Takes one chassis space in wallbox, provides Firefighters Telephone Control unit and inner door filler plate. Add suffix "-E" for EN54 compliant versions.	15 (6.8)
MN-BRKT1	Takes one chassis space in wallbox, provides mounting for MNEC interface equipment	4.0 (1.8)
FSB-BRKT2	Mounting bracket for FSB-PC2 communications bridge. Allows FSB-PC2 to mount on the side of a Chass7	1.0 (0.45)

Notes:

1. All lobby enclosures, wallboxes and doors have a textured gray enamel finish; outer doors are available in red by adding the suffix "R" to the catalog number, i.e. 3-CAB7DR.
2. Remote closet cabinets will support 65 AH batteries with the use of the 3-BATS Battery Shelf, which reduces the enclosure's chassis capacity by one chassis.
3. The EST3 is modularly listed under the following standards:
   UL 864 categories: UOJZ, UOXX, UUKL and SYZV, UL 2572, UL 294 category ALVY, UL 609 category AOTX, UL 636 category ANET, UL 1076 category APOU, UL 365 category APAW, UL 1610 category AMCX, UL 1635 category AMCX
   ULC-S527, ULC-S301, ULC-S302, ULC-S303, ULC-S306, ULC/ORD-C1076, ULC/ORD-C693
   Please refer to EST3 Installation and Service Manual for complete system requirements.

** EN 54-2: 1997 + A1: 2006 and EN 54-4: 1997 + A1: 2002 + A2: 2006 EN 54-16: 2008.*

*** Add "-CC" for City of Chicago, add "-E" for EN54 compliant chassis assemblies. For EN54 compliant 3-ASU/FT chassis order 3-ASU/FT-EN, for GOST R compliant order 3-ASU/FT-E.*

Accessories

3-BATS	Battery Shelf for RCC Enclosures. Takes one chassis space. Room for up to one 65 AH or two 50 AH batteries.	3 (1.36)
BC-1	Battery Cabinet - supports up to two 40 amp hour batteries.	
3-BTSEN	Battery sensor/distribution module. Add suffix "-E" for EN54 compliant version.	0.5 (.2)
3-BTSEN-E	Distribution and Temperature Sensor Module. Required in EN54* Markets when battery installed in a remote cabinet.	
BC-1EQ	BC-1 - Seismic Battery hold down for BC-1. Supports up to two 40 Ahr batteries. Order BC-1 Separately.	
3-CABEQ	3-CAB - Seismic Battery hold-down for 3-CAB 7, 14 or 21. Supports two 1 2V batteries from 10 Ah up to 18 Ah. Comes with EST3 Chassis hardening hardware and instructions. Order 3-CAB7, 3-CAB14 or 3-CAB21 separately. See note 1.	
3-RCCEQ50	3-RCC series - Seismic Battery hold-down. Supports one set of two 50 Ah batteries. Comes with EST3 Chassis hardening hardware and instructions. Order 3-RCCxxR separately. See note 1.	
3-RCCEQ65	3-RCC series cabinet - Seismic Battery hold-down. Supports one set of two 65 Ah batteries (one battery in bottom of cabinet, one battery mounted on 3-BATS). Order 3-RCCxxR cabinet and 3-BATS separately. See note 1.	
3-TAMP	Tamper switch for 3-CAB7, 3-CAB14 and 3-CAB21 cabinets. Mounts to side of cabinet.	0.5 (.2)
3-TAMP5	Tamper switch for 3-CAB5. Mounts to side of cabinet.	0.5 (.2)
3-TAMPRCC	3-TAMPRCC Tamper Switch for RCC series cabinets. Mounts to side of cabinet.	0.5 (.2)

1. For earthquake anchorage, including detailed mounting weights and center of gravity detail, please refer to *Seismic Application Guide 3101676*. Approval of panel anchorage to site structure may require local AHJ, structural, or civil engineer review.

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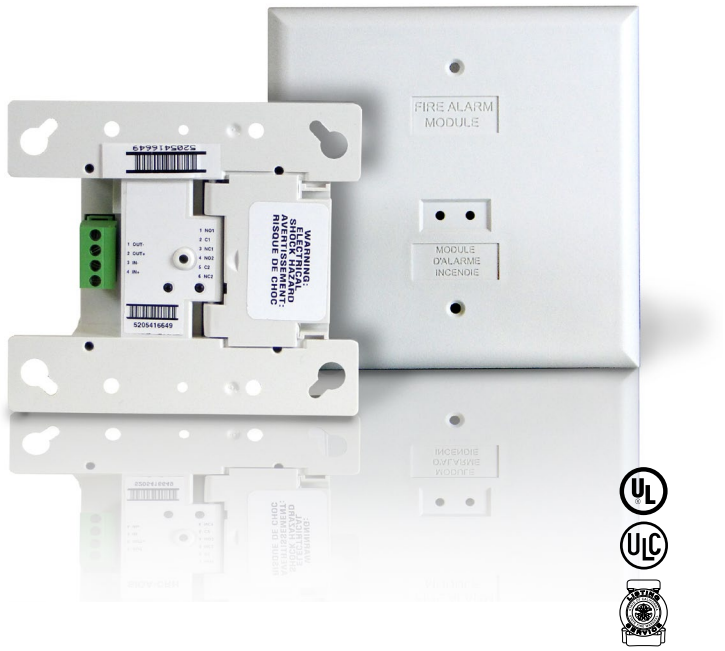
High Power Control Relay Module

SIGA-CRH



Description

The SIGA-CRH High Power Control Relay Module is an addressable device designed for interface applications that require a high voltage, high current relay. Two identical sets of relay terminals are provided. Both sets of relay contacts transfer when the module is activated or restored. The state of the output terminals is not supervised.

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

Standard Features

- **High Power Rating**
  120/240 VAC or 24 VDC rated contact can be used to control external appliances such as door closers, fans, dampers etc.
- **Provides one relay with two Form C contacts**
  Relay accepts 12 to 18 AWG (1.0 to 4.0 mm²) wiring from two sources
- **Automatic device mapping**
  Signature modules transmit information to the loop controller regarding their circuit locations with respect to other Signature devices on the wire loop.
- **Removable terminal blocks**
  Easy wiring and module replacement.
- **Electronic addressing**
  Programmable addresses are downloaded from the loop controller or PC; there are no switches or dials to set.
- **Intelligent device**
  Distributed intelligence allows lower communication speed with substantially improved control panel response time and less sensitivity to line noise and loop wiring properties; twisted or shielded wire is not required.

Application

Personality code

Use *Personality Code 8* to configure the SIGA-CRH module:

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

Indication

The status LED shows the state of the module through the cover plate:

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

Compatibility

The SIGA-CRH is part of the Signature Series intelligent processing and control platform. It is compatible with EST3, EST3X, and iO Series control panels.

Warnings & Cautions

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

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

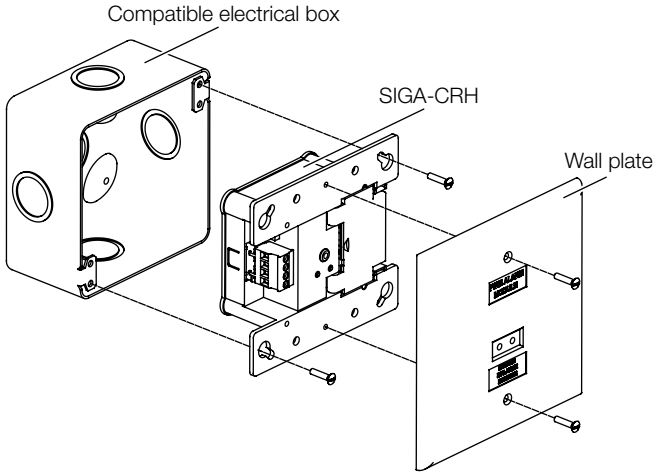
Testing & Maintenance

SIGA-CRH 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.

Electronic Addressing

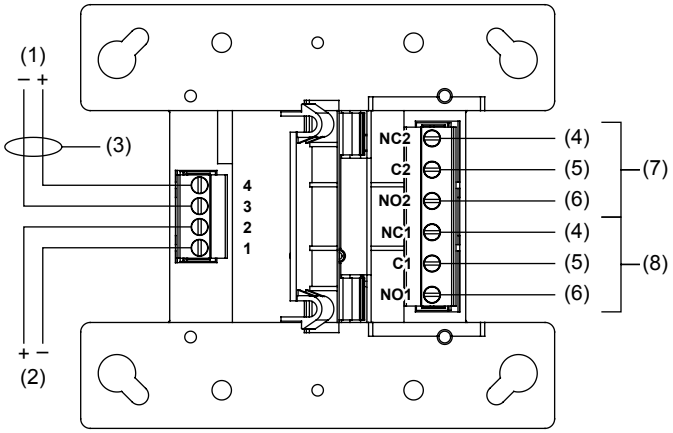
The loop controller electronically addresses the SIGA-CRH, saving valuable time during system commissioning. Setting complicated switches or dials is not required. The module has its own unique serial number stored in its on-board memory.

Installation



Consult the SIGA-CRH High Power Control Relay Module Installation Sheet for details.

Wiring



(1) Signaling line circuit (SLC) from previous device

(2) Signaling line circuit (SLC) to next device

(3) Power-limited and supervised

(4) Normally closed contact (NC)

(5) Common contact (C)

(6) Normally open contact (NO)

(7) Relay terminal set 2.
Not supervised. Power-limited unless connected to a nonpowerlimited 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 a 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.

(8) Relay terminal set 1. Identical to (7).

Specifications

SLC operating voltage	15.20 to 19.95 VDC
SLC current	
Standby	75 µA max.
Activated	75 µA max.
Contact ratings [1][2]	
240 V 50/60 Hz	7 A (PF 0.75), 1.5 A (PF 0.35)
120 V 50/60 Hz	7 A (PF 0.75), 3.0 A (PF 0.35)
24 VDC	6 A resistive
Audio switching	0 to 20 kHz [3]
Relay type	2 Form C, programmable
Relay ready delay	
From power up	30 s max. (includes initial state set)
From previous activation	5 s max. (one activation) 8 s max. (two activations, 1 s apart)
Circuit designation	
Signaling line circuits	Class A, Style 6 or Class B, Style 4. Refer to the control panel technical publications for SLC wiring details.
Relay circuits	Class E
Number of SIGA-CRH per SLC	60 max.
Wire size	12 to 18 AWG (1.0 to 4.0 mm^2)
Compatible electrical boxes	North American double-gang × 2-1/8 in. (54 mm) deep box North American standard 4 in. square × 2-1/8 in. (54 mm) deep box
Agency Listings	CAN/ULC-S527, UL 864
Operating environment	
Temperature	32 to 120°F (0 to 49°C)
Relative humidity	0 to 93%, noncondensing
Storage temperature	–4 to 140°F (–20 to 60°C)

[1] Provide external fusing and back-EMF mitigation as required by your application. Do not use the SIGA-CRH in a mixed application, where one set of relay terminals has high-power requirements and the other set carries a low-power signal, as this may result in physical contamination of the low-power signal contacts.

[2] The minimum load required in order to avoid long-term contact oxidation is 100 mA and 12 V.

[3] Power must not exceed the contact ratings shown for a given PF (power factor).

Ordering Information

Catalog Number	Description	Ship Weight lbs (kg)
SIGA-CRH	High Power Control Relay Module	0.4 (0.15)

LIFE SAFETY & INCIDENT MANAGEMENT

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Bradenton, FL 34202

EDWARDS
United Technologies
LIFE SAFETY & INCIDENT MANAGEMENT

Input Modules

SIGA-CT1, SIGA-CT1HT, SIGA-CT2, SIGA-MCT2


SIGA-MCT2


SIGA-CT1/2

FM APPROVED MEA

7300-1657: 0121

S3424

Overview

The SIGA-CT1 Single Input Module, SIGA-CT1HT High Temperature Single Input Module and SIGA-CT2/SIGA-MCT2 Dual Input Modules are intelligent analog addressable devices used to connect one or two Class B normally-open Alarm, Supervisory, or Monitor type dry contact Initiating Device Circuits (IDC).

The actual function of these modules is determined by the "personality code" selected by the installer. This code is downloaded to the module from the Signature loop controller during system configuration.

The input modules gather analog information from the initiating devices connected to them and convert it into digital signals. The module's on-board microprocessor analyzes the signal and decides whether or not to input an alarm.

The SIGA-CT1, SIGA-CT1HT and SIGA-CT2 mount to standard North American 1-gang electrical boxes, making them ideal for locations where only one module is required. Separate I/O and data loop connections are made to each module.

The SIGA-CT1HT module operates at an expanded temperature range of 32 ºF to 158 ºF (0 ºC to 70 ºC) for those applications requiring more extreme environmental temperature variation.

The SIGA-MCT2 is part of the UIO family of plug-in Signature Series modules. It functions identically to the SIGA-CT2, but takes advantage of the modular flexibility and easy installation that characterizes all UIO modules. Two- and six-module UIO motherboards are available. All wiring connections are made to terminal blocks on the motherboard. UIO assemblies may be mounted in EDWARDS enclosures.

Standard Features

- **Multiple applications**
  Including Alarm, Alarm with delayed latching (retard) for waterflow applications, Supervisory, and Monitor. The installer selects one of four "personality codes" to be downloaded to the module through the loop controller.
- **SIGA-CT1HT rated for high temperature environments**
  Suitable for attic installation and monitoring high temperature heat detectors.
- **Plug-in (UIO) or standard 1-gang mount**
  UIO versions allow quick installation where multiple modules are required. The 1-gang mount version is ideal for remote locations that require a single module.
- **Automatic device mapping**
  Signature modules transmit information to the loop controller regarding their circuit locations with respect to other Signature devices on the wire loop.
- **Electronic addressing**
  Programmable addresses are downloaded from the loop controller, 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.

Signature Series Overview

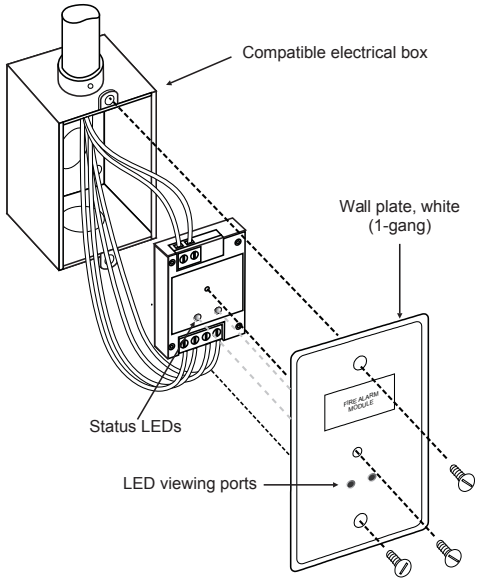
The Signature Series intelligent analog-addressable system from EDWARDS Security is an entire family of multi-sensor detectors and mounting bases, multiple-function input and output modules, network and non-network control panels, and user-friendly maintenance and service tools. Analog information from equipment connected to Signature devices is gathered and converted into digital signals. An onboard microprocessor in each Signature device measures and analyzes the signal and decides whether or not to input an alarm. The microprocessor in each Signature device provides four additional benefits – Self-diagnostics and History Log, Automatic Device Mapping, and Fast, Stable Communication.

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

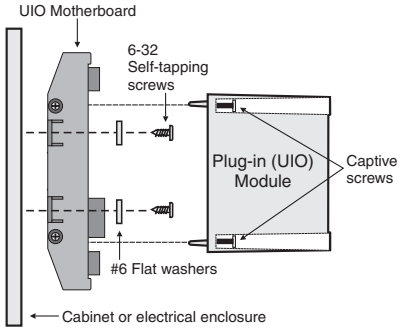
Automatic Device Mapping –The Signature Data Controller (SDC) learns where each device's serial number address is installed relative to other devices on the circuit. The SDC keeps a map of all Signature Series devices connected to it. The Signature Series Data Entry Program also uses the mapping feature. With interactive menus and graphic support, the wired circuits between each device can be examined. Layout or "as-built" drawing information showing branch wiring (T-taps), device types and their address are stored on disk for printing hard copy.

Installation

SIGA-CT1, SIGA-CT1HT and SIGA-CT2: modules mount to North American 2½ inch(64 mm) deep 1-gang boxes and 1½ inch (38 mm) deep 4 inch square boxes with 1-gang covers and SIGA-MP mounting plates. The terminals are suited for #12 to #18 AWG (2.5 mm^2 to 0.75 mm^2) wire size.



SIGA-MCT2: mount the UIO motherboard inside a suitable EDWARDS enclosure with screws and washers provided. Plug the SIGA-MCT2 into any available position on the motherboard and secure the module to the motherboard with the captive screws. Wiring connections are made to the terminals on the motherboard (see wiring diagram). UIO motherboard terminals are suited for #12 to #18 AWG (2.5 mm^2 to 0.75 mm^2) wire size.



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

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

Application

The duty performed by the SIGA-CT1 and SIGA-CT2/MCT2 is determined by their sub-type code or "Personality Code". The code is selected by the installer depending upon the desired application and is downloaded from the loop controller.

One personality code can be assigned to the SIGA-CT1. Two personality codes can be assigned to the SIGA-CT2/MCT2. Codes 1, 2, 3 and 4 can be mixed on SIGA-CT2/MCT2 modules only. For example, personality code 1 can be assigned to the first address (circuit A) and code 4 can be assigned to the second address (circuit B).

NORMALLY-OPEN ALARM - LATCHING (Personality Code 1) - Assign to one or both circuits. Configures either circuit A or B or both for Class B normally open dry contact initiating devices such as Pull Stations, Heat Detectors, etc. An ALARM signal is sent to the loop controller when the input contact is closed. The alarm condition is latched at the module.

NORMALLY-OPEN ALARM - DELAYED LATCHING (Personality Code 2) - Assign to one or both circuits. Configures either circuit A or B or both for Class B normally-open dry contact initiating devices such as Waterflow Alarm Switches. An ALARM signal is sent to the loop controller when the input contact is closed for approximately 16 seconds. The alarm condition is latched at the module.

NORMALLY-OPEN ACTIVE - NON-LATCHING (Personality Code 3) - Assign to one or both circuits. Configures either circuit A or B or both for Class B normally-open dry contact monitoring input such as from Fans, Dampers, Doors, etc. An ACTIVE signal is sent to the loop controller when the input contact is closed. The active condition is not latched at the module.

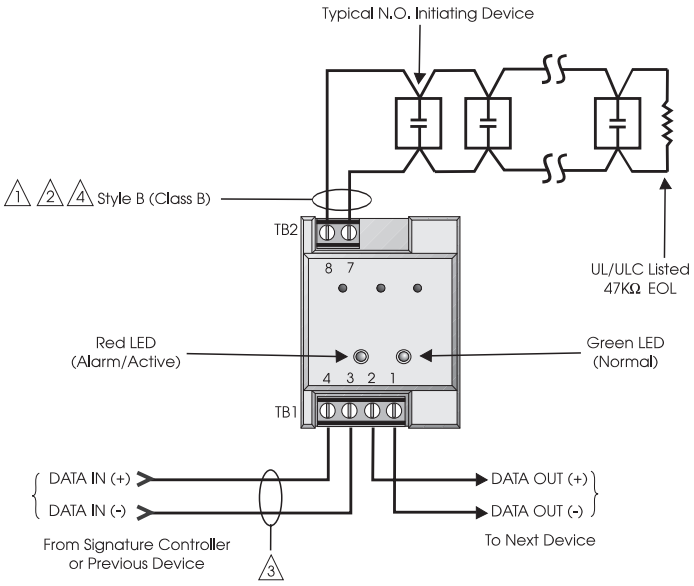
NORMALLY-OPEN ACTIVE - LATCHING (Personality Code 4) - Assign to one or both circuits. Configures either circuit A or B or both for Class B normally open dry contact monitoring input such as from Supervisory and Tamper Switches. An ACTIVE signal is sent to the loop controller when the input contact is closed. The active condition is latched at the module.

Typical Wiring

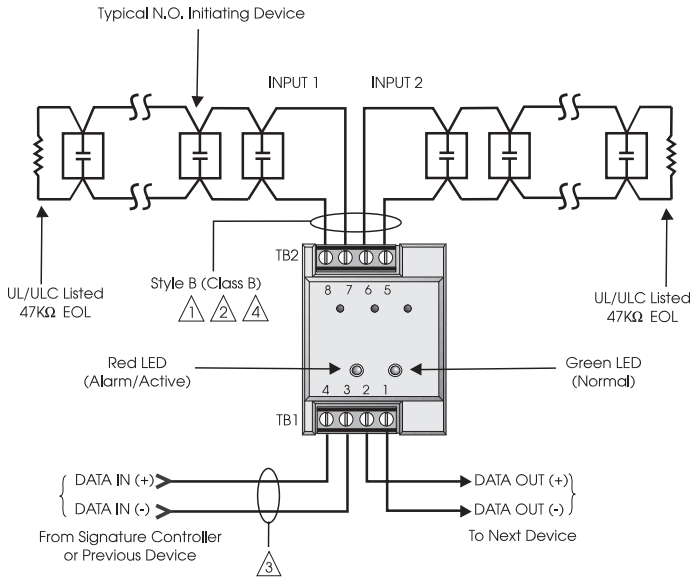
Modules will accept #18 AWG (0.75mm^2), #16 (1.0mm^2), and #14AWG (1.50mm^2), and #12 AWG (2.50mm^2) wire sizes.

Note: Sizes #16 AWG (1.0mm^2) and #18 AWG (0.75mm^2) are preferred for ease of installation. See Signature Loop Controller catalog sheet for detailed wiring requirement specifications.

Initiating (Slave) Device Circuit Wire Specifications		
Maximum Allowable Wire Resistance	50 ohms (25 ohms per wire) per Circuit	
Maximum Allowable Wire Capacitance	0.1µF per Circuit	
For Design Reference:	**Wire Size**	**Maximum Distance to EOLR**
	#18 AWG (0.75 mm^2)	4,000 ft (1,219 m)
	#16 AWG (1.00 mm^2)	
	#14 AWG (1.50 mm^2)	
	#12 AWG (1.50 mm^2)	



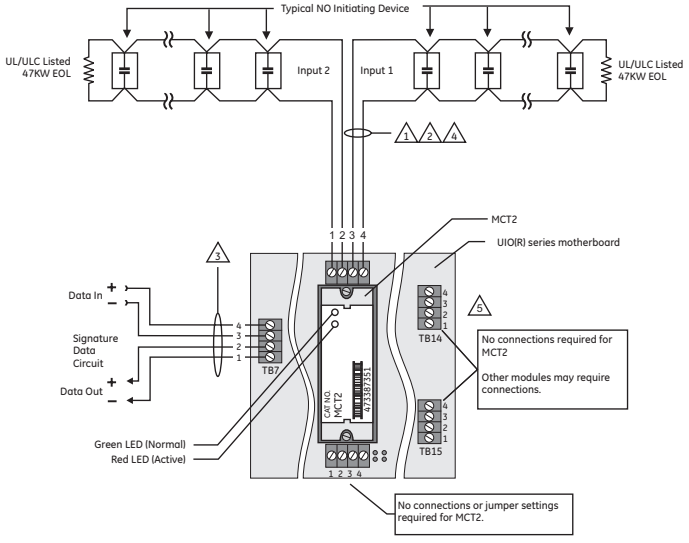
SIGA-CT1, SIGA-CT1HT



SIGA-CT2

NOTES

1. Maximum 25 Ohm resistance per wire.
2. Maximum #12 AWG (2.5 mm^2) wire; Minimum #18 AWG (0.75 mm2).
3. Refer to Signature controller installation sheet for wiring specifications.
4. Maximum 10 Vdc @ 350 µA
5. The SIGA-UIO6R and the SIGA-UIO2R do not come with TB14.
6. All wiring is supervised and power-limited.
7. These modules will not support 2-wire smoke detectors.



SIGA-MCT2

Warnings & Cautions

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

Compatibility

These modules are part of EDWARDS's Signature Series intelligent processing and control platform. They are compatible with EST3, EST3X and iO Series control panels.

LIFE SAFETY & INCIDENT MANAGEMENT

Contact us...

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

1016 Corporate Park Drive
Mebane, NC 27302

Specifications

Catalog Number	SIGA-CT1HT	SIGA-CT1	SIGA-CT2	SIGA-MCT2
Description	Single Input Module		Dual Input Module	
Type Code	48 (factory set) Four sub-types (personality codes) are available		49 (factory set) Four sub-types (personality codes) are available	
Address Requirements	Uses One Module Address		Uses Two Module Addresses	
Operating Current	Standby = 250µA; Activated = 400µA		Standby = 396µA; Activated = 680µA	
Operating Voltage	15.2 to 19.95 Vdc (19 Vdc nominal)			
Construction	High Impact Engineering Polymer			
Mounting	North American 2½ inch (64 mm) deep one-gang boxes and 1½ inch (38 mm) deep 4 inch square boxes with one-gang covers and SIGA-MP mounting plates			UIO2R/6R/6 Motherboard
Operating Environment	32°F to 158°F (0°C to 70°C)	32°F to 120°F (0°C to 49°C)		
Storage Environment	-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/active.			
Compatibility	Use with Signature Loop Controller			
Agency Listings	UL, ULC, MEA, CSFM			

Ordering Information

Catalog Number	Description	Ship Wt. lbs (kg)
SIGA-CT1	Single Input Module — UL/ULC Listed	0.4 (0.15)
SIGA-CT1HT	Single Input Module High Temperature Operation UL/ULC Listed	0.4 (0.15)
SIGA-CT2	Dual Input Module — UL/ULC Listed	0.4 (0.15)
SIGA-MCT2	Dual Input Plug-in (UIO) Module — UL, ULC Listed	0.1 (0.05)

Related Equipment		
27193-11	Surface Mount Box - Red, 1-gang	1.0 (0.6)
27193-16	Surface Mount Box - White, 1-gang	1.0 (0.6)
SIGA-UIO2R	Universal Input-Output Module Board w/Riser Inputs — Two Module Positions	0.32 (0.15)
SIGA-UIO6R	Universal Input-Output Module Board w/Riser Inputs — Six Module Positions	0.62 (0.28)
SIGA-UIO6	Universal Input-Output Module Board — Six Module Positions	0.56 (0.25)
MFC-A	Multifunction Fire Cabinet — Red, supports Signature Module Mounting Plates	7.0 (3.1)
SIGA-MB4	Transponder Mounting Bracket (allows for mounting two 1-gang modules in a 2-gang box)	0.4 (0.15)
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)

VESDA-E VEP (UL 268 7th Ed.)

VEP-A00-1P-UL, VEP-A00-P-UL, VEP-A10-P-UL

The VESDA-E VEP series of smoke detectors bring the latest and most advanced detection technology to provide very early warning and the best nuisance alarm rejection to a wide range of applications. Built on the Flair detection technology and years of application experience, VEP detectors achieve consistent performance over their lifetime via absolute calibration.

Flair Detection Technology

Flair is the revolutionary detection chamber that forms the core of the VESDA-E VEP, providing higher stability and increased longevity. Direct imaging of the sampled particles using a CMOS imager combined with multiple photo-diodes allows better detection and fewer nuisance alarms.

Installation, Commissioning and Operation

VESDA-E VEP is equipped with a powerful aspirator that enables use of a total of 427 ft (130 m) of sampling pipe in the one pipe model and 1,542 ft (470 m) in the four pipe model. Out of box operation is made possible with AutoConfig which allows airflow normalisation and AutoLearn Smoke and Flow to be initiated from within the detector. VEP is fully supported by the ASPIRE and Xtralis VSC software applications which facilitate ease of pipe network design, system commissioning and maintenance.

VESDAnet™

VESDA devices communicate on VESDAnet which provides a robust bi-directional communication network allowing continued redundant operation even during single point wiring failures. VESDAnet enables primary reporting, centralized configuration, control, maintenance and monitoring.

Ethernet Connectivity

VESDA-E detectors offer connectivity to corporate networks via Ethernet, allowing for devices installed with Xtralis monitoring and configuration software to connect to the detector.

Backward Compatibility

VESDA-E VEP is compatible with existing VESDA installations. The detector occupies the same mounting footprint, pipe, conduit and electrical connector positioning as VESDA VLP. VEP is also compatible with existing VESDAnet installations allowing monitoring of both VESDA-E and legacy detectors via the latest VSC and VSM4 applications.

Features

- One and four pipe models for different applications
- Flair detection technology delivers reliable very early warning in a wide range of environments with minimal nuisance alarms
- Multi stage filtration and optical protection with clean air barriers ensures lifetime detection performance
- Four alarm levels and a wide sensitivity range deliver optimum protection for the widest range of applications
- Intuitive LCD icon display provides instant status information for immediate response
- Flow fault thresholds per port accommodate varying airflow conditions
- Smart on-board filter retains dust count and remaining filter life for predictable maintenance
- Extensive event log (20,000 events) for event analysis and system diagnostics
- AutoLearn™ smoke and flow for reliable and rapid commissioning
- Referencing to accommodate external environmental conditions to minimise nuisance alarms
- Backward compatible with VLP and VESDAnet
- Ethernet for connectivity with Xtralis software for configuration, secondary monitoring and maintenance
- USB for PC configuration, and firmware upgrade using a memory stick
- Two programmable GPIs (1 monitored) for flexible remote control
- Field replaceable sub-assemblies enable faster service and maximum uptime

Listings / Approvals

- UL 268 7th edition
- ULC
- CSFM
- FDA
- FCC
- RCM

Regional approvals listings and regulatory compliance vary between product models. Refer to www.xtralis.com for the latest product approvals matrix.

VESDA-E VEP (UL 268 7th Ed.)

TECHNICAL SPECIFICATIONS

Specifications

Supply Voltage Range	18-30VDC (Nominal 24VDC)			
Maximum Power Consumption*	**Quiescent**		**Alarm**	
VEP-A00-P-UL + IAQ STAX	0.95A		1.00A	
VEP-A00-P-UL **VEP-A00-1P-UL** **VEP-A10-P-UL**	0.57A		0.59A	
Nominal Power Consumption @ 24VDC	**Quiescent**		**Alarm**	
	Aspirator Setting			
	1	5	1	5
VEP-A00-P-UL + IAQ STAX	0.70A	0.78A	0.74A	0.82A
VEP-A00-P-UL	0.29A	0.38A	0.32A	0.41A
VEP-A00-1P-UL	0.34A		0.37A	
VEP-A10-P-UL	0.33A	0.41A	0.36A	0.44A
	One Pipe VEP	**Four Pipe VEP**		
	VEP-A00-1P-UL	**VEP-A00-P-UL**	**VEP-A10-P-UL**	
Dimensions (WHD)	13.8 in x 8.9 in x 5.3 in (350 mm x 225 mm x 135 mm)			
Weight	9.7 lbs (4.4 kg)	9.7 lbs (4.4 kg)	10.0 lbs (4.5 kg)	
Operating Conditions	Ambient: 32°F to 100°F (0°C to 38°C) Sampled Air: -4°F to 140°F (-20°C to 60°C)** Humidity: 5% to 95% RH, non-condensing			
Area Coverage	10,760 sq. ft (1.000 m^2)	21,520 sq. ft (2.000 m^2)		
Min. Airflow per Pipe	15 l/m			
Pipe Length (Linear)	312 ft (95 m)	919 ft (280 m)		
Pipe Length (Branched)	427 ft (130 m)	1,542 ft (470 m)		
Pipe Lengths Depending on No. of Pipes in Use	1 Pipe	1 Pipe	2 Pipe	3 Pipe	4 Pipe
	312 ft (95 m)	361 ft (110 m)	328 ft (100 m)	262 ft (80 m)	230 ft (70 m)
StaX	PSU	PSU, Auto Pipe Clean			
Maximum No. of Holes	22	80			
Computer Design Tool	ASPIRE				
Pipe Size	Inlet: External diameter 1.05 in (3/4 in IPS) 25 mm Exhaust: External diameter 1.05 in (3/4 in IPS) or 25 mm via adaptor				
Relays	7 programmable relays (latching or non-latching states) Contacts rated 2 A @ 30 VDC (Resistive)				
IP Rating	IP40 (not evaluated by UL)				
Cable Access	1 in (4 x 26 mm) ports				
Cable Termination	Screw Terminal blocks 0.2–2.5 sq mm (24–14 AWG)				
Measurement Range	0.0000% to 11.09% obs/ft (0.000 to 32% obs/m)				
Sensitivity Range	0.0015% to 6.575% obs/ft (0.005 to 20% obs/m)				
Threshold Setting Range	Alert: 0.0015% to 0.614% obs/ft (0.005% to 2.0% obs/m) Action: 0.0015% to 0.614% obs/ft (0.005% to 2.0% obs/m) Fire1: 0.0030% to 0.614% obs/ft (0.010% to 2.0% obs/m) Fire2: 0.0061% to 6.575% obs/ft (0.020% to 20.0% obs/m)				
Software Features	Event log: Up to 20,000 events Smoke level, user actions, alarms and faults with time and date stamp AutoLearn: Detector learns Alarm Thresholds and Flow Fault thresholds by monitoring the environment.				

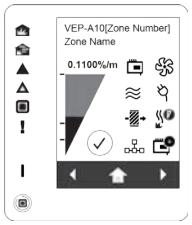
** Maximum current measured is from the supply voltage that generates the highest current.*

*** Sampled Air temperature shall reach Ambient Detector temperature upon entry into Detector. Refer to Xtralis Design Guides & Application Notes for sampled air pre-conditioning.*

Approvals Compliance

Please refer to the Product Guide for details regarding compliant design, installation and commissioning.

3.5" Display



LED	Description
	Fire 2
	Fire 1
	Action
	Alert
	Disabled
	Fault
	Power

Home Page

Icon on Display	Description
	Smoke and Alarm Threshold Levels
	Detector OK
	Detector Fault
	Aspirator Fault
	Airflow Fault
	Power Fault
	Filter Fault
	Smoke Chamber Fault
	VESDAnet Fault
	StaX Module Fault

Ordering Information

Ordering Code	Description
VEP-A00-P-UL	VESDA VEP with LEDs, Plastic Enclosure, UL
VEP-A10-P-UL	VESDA VEP with 3.5" Display, Plastic Enclosure, UL
VEP-A00-1P-UL	VESDA VEP 1 Pipe with LEDs, Plastic Enclosure, UL

Spare Parts

VSP-956-04	VESDA-E VEP Flow Sensor Manifold	**VSP-963**	VESDA-E Aspirator
VSP-960	VESDA-E Mounting Bracket	**VSP-968**	VESDA-E VEP-A00-P/1P Front Cover Plastic (LEDs)
VSP-961	VESDA-E Exhaust adaptor US	**VSP-969-04**	VESDA-E VEP-A10-P Front Cover Plastic (3.5" Display)
VSP-962	VESDA-E Filter	**VSP-965**	VESDA-E Sampling Module
VSP-962-20	VESDA-E Filter - 20 Pieces	**VSP-964-04**	VESDA-E Smoke Detection Chamber - MK4

www.xtralis.com

Doc. No. 36106_04
Part No. AD36106-004
September 2023

POWER PS SONIC
TRUSTED BATTERY SOLUTIONS

PS SERIES

General Purpose | Emergency Lighting | Medical | Fire & Security

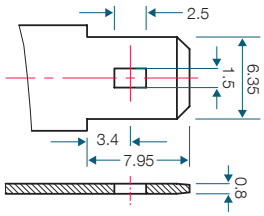
PS-12260

12V 26.0 AH @ 20-hr.
12V 24.7 AH @ 10-hr.

Rechargeable Sealed Lead Acid Battery
PS – General Purpose Series

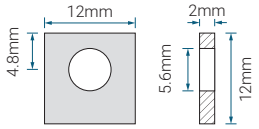
TERMINALS: (mm)

F2: Quick disconnect tabs, 0.250" x 0.032" – Mate with AMP. INC FASTON "250" series



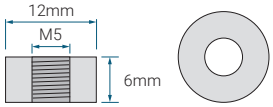
Torque – Not Applicable

NB1: Tin plated brass post with 'Nut & Bolt' fasteners



Torque: 2.0~3.0 Nxm

T12: Threaded insert with 5mm stud fastener



Torque: 2.0~3.0 Nxm

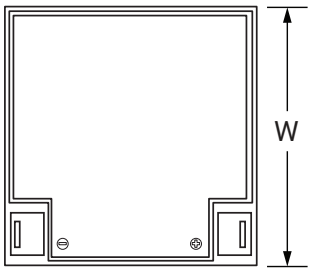
FEATURES

- 5 year design life
- Absorbent Glass Mat (AGM) technology for superior performance
- Valve regulated, maintenance free spill proof construction
- Power/volume ratio yielding excellent energy density
- Rugged vibration and impact resistant ABS case and cover
- Gas recombination technology

APPROVALS

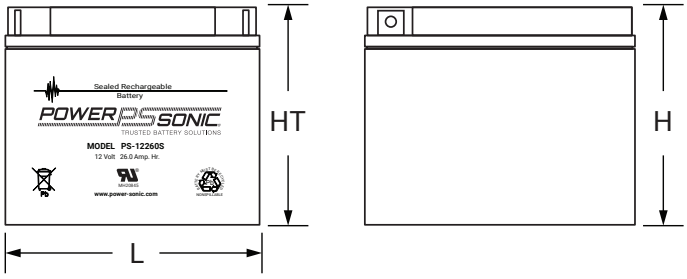
- Approved for transport by air. D.O.T., I.A.T.A., F.A.A. and C.A.B. certified
- U.L. recognized
- ISO9001:2015 – Quality management systems

DIMENSIONS: inch (mm)



L: 6.56 (167)
W: 6.97 (177)
H: 4.92 (125)
HT: 4.92 (125)

Tolerances are +/- 0.04 in. (+/- 1mm) and +/- 0.08 in. (+/- 2mm) for height dimensions. All data subject to change without notice.



PERFORMANCE SPECIFICATIONS

Nominal Voltage	12 volts (6 cells)
Nominal Capacity	
20-hr. (1.3A to 10.50 volts)	26.0 AH
10-hr. (2.47A to 10.50 volts)	24.7 AH
5-hr. (4.42A to 10.20 volts)	22.1 AH
1-hr. (15.8A to 9.60 volts)	15.8AH
Approximate Weight	17.60 lbs. (8.0 kg)
Internal Resistance (approx.)	11.0 milliohms
Max Short-Duration Discharge Current (5 Sec.)	390.0 amperes
Shelf Life (% of nominal capacity at 68°F (20°C)	
1 Month	92%
3 Month	90%
6 Month	80%
Operating Temperature Range	
Charge	5°F (-15°C) to 104°F (40°C)
Discharge	5°F (-15°C) to 122°F (50°C)
Case	ABS Plastic
Power Sonic Chargers	PSC-124000-PC PSC-124000A-C

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POWER PS SONIC
TRUSTED BATTERY SOLUTIONS

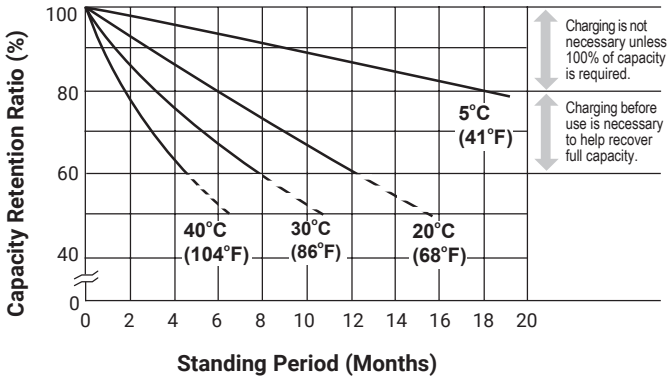
PS SERIES

PS-12260

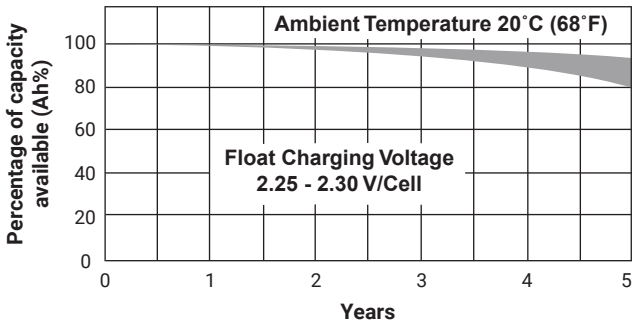
12V 26.0 AH @ 20-hr.
12V 24.7 AH @ 10-hr.

Rechargeable Sealed Lead Acid Battery
PS – General Purpose Series

SHELF LIFE & STORAGE



LIFE CHARACTERISTICS IN STAND-BY USE



CHARGING

Cycle Applications: Apply constant voltage charge at 2.35v/c – 2.45v/c (14.1 – 14.7v for 12v Monobloc) at 20°C. Initial charging current should be set at less than 0.25C Amps. Switch to float charge to avoid overcharging.

"Float" or "Stand-By" Service: Apply constant voltage charge of 2.25v/c – 2.30v/c (13.5 to 13.8 volts for 12v Monobloc at 20°C. When held at this voltage, the battery will seek its own current level and maintain itself in a fully charged condition.

Temperature Compensation: Charging Voltage for both Cyclic and Standby applications should be regulated in relation to ambient temperature. As temperature rises charging voltage should be reduced to prevent overcharge and increased as temperature falls to avoid undercharge.

For further charging information including temperature compensation factors, see Power Sonic Technical Manual/ Power Sonic Charger specifications.

APPLICATIONS

- General purpose
- Emergency lighting
- Medical
- Fire and security

CHARGERS

Power Sonic offers a wide range of chargers suitable for batteries with a variety of capacities.

Please refer to our website for more information on our switch mode and transformer type chargers.

Please contact our technical department for advice if you have difficulty in locating a suitable charger.

FURTHER INFORMATION

Please refer to our website **www.power-sonic.com** for a complete range of useful downloads, such as product catalogs, material safety data sheets (MSDS), ISO certification, etc.

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