

BLOCK 1170 LOT 16 QUALIFICATION CODE \_\_\_\_\_ ADDRESS (SITE) 980 Rt. 70 PERMIT NO. 16-1069



# CONSTRUCTION PERMIT APPLICATION

Applicant Completes: Sections I, II, III (optional), IV, VI, and VII

C16-001370

## I. IDENTIFICATION

1. Proposed Work Site at: Cuddle Lane - 970 RT 70  
2. Name of Owner in Fee: Meridian Health  
Tel. (732) 840-2200 e-mail MCcann@meridianhealth.com  
Address 425 Jack Martin Blvd. Bldg 08724  
3. Ownership in Fee: Public \_\_\_\_\_ Private \_\_\_\_\_  
4. Principal Contractor: Systems Sales Corp Tel. (732) 751-0600  
Address 1345 Campus Plenum e-mail steve@intersysnj.com  
Wall Township NJ 07753  
License No. OR, if new home, Builder Reg. No. P00525 Exp. Date 10/31/16  
Home Improvement Contractor Registration No. or Exemption Reason (if applicable):  
Federal Emp. ID No. 222359665 FAX: 732 751-0600  
5. Architect or Engineer \_\_\_\_\_ Contact \_\_\_\_\_  
Address \_\_\_\_\_ e-mail \_\_\_\_\_  
Tel. ( ) \_\_\_\_\_ FAX: ( ) \_\_\_\_\_  
6. Responsible Person in Charge once Work has Begun Steve Ginter  
Tel. 732 751-0600 FAX: 732 751-0489

## V. FEE SUMMARY (for office use only)

|                                   |    | Update       | Update |
|-----------------------------------|----|--------------|--------|
| 1. Building                       | \$ | <u>150</u> ✓ |        |
| 2. Electrical                     |    |              |        |
| 3. Plumbing                       |    | <u>175</u> ✓ |        |
| 4. Fire Protection                |    |              |        |
| 5. Elevator Devices               |    |              |        |
| 6. Subtotal                       |    |              |        |
| 7. Less 20% for State Plan Review | \$ |              |        |
| 8. Subtotal                       | \$ |              |        |
| 9. State Permit Surcharge Fee     |    | <u>14</u>    |        |
| 10. Subtotal                      | \$ |              |        |
| 11. Cert. of Occupancy            |    |              |        |
| 12. Other                         |    |              |        |
| 13. TOTAL                         | \$ | <u>339</u>   |        |

## VI. BUILDING/SITE CHARACTERISTICS

|                                               |                    |         |
|-----------------------------------------------|--------------------|---------|
| 1. Number of Stories                          |                    |         |
| 2. Height of Structure                        |                    |         |
| 3. Area — Largest Floor                       |                    |         |
| 4. New Building Area                          |                    |         |
| 5. Volume of New Structure                    |                    |         |
| 6. Max. Live Load                             |                    |         |
| 7. Max. Occupancy Load                        |                    |         |
| 8. If Industrialized Building: State Approved |                    |         |
| 9. Total Land Area Disturbed                  |                    | sq. ft. |
| 10. Flood Hazard Zone                         |                    |         |
| 11. Base Flood Elevation                      |                    | ft.     |
| 12. Wetlands                                  | yes _____ no _____ |         |

## IIa. PROPOSED WORK

- ☒ Minor Work Alarms ☐ New Building ☐ Addition ☐ Demolition  
☐ Repair ☐ Alteration ☐ Renovation ☐ Reconstruction  
☐ Asbestos Abat. -Subch. 8 ☐ Lead Hazard Abatement ☐ Radon Remediation ☐ Annual Permit

## IIb. SUBCODES

(Check all that apply)

- ☐ Building  
☒ Electrical  
☐ Plumbing  
☒ Fire Protection  
☐ Elevator

### FOR OFFICE USE ONLY (Optional)

| Est. Cost | Plans Rec'd by | Date Rec'd | Rejection Date | Approval Date  | Re-viewer  | Resubmission Dates Approval | Rejection | Re-viewer |
|-----------|----------------|------------|----------------|----------------|------------|-----------------------------|-----------|-----------|
|           | <u>3/22/16</u> |            |                | <u>4/4/16</u>  | <u>PJE</u> |                             |           |           |
|           |                |            |                | <u>3/21/16</u> | <u>RA</u>  |                             |           |           |

TOTAL COST

## VII. DESCRIPTION OF BUILDING USE

### A. RESIDENTIAL (primary use)

1. State Specific Use: \_\_\_\_\_  
2. Use Group, Proposed: \_\_\_\_\_  
3. Change in Use Group, Indicate Present: \_\_\_\_\_  
4. No. of dwelling units: Total Units Income-restricted  
Gained, Sale \_\_\_\_\_  
Gained, Rental \_\_\_\_\_  
Lost, Sale \_\_\_\_\_  
Lost, Rental \_\_\_\_\_

### B. NON-RESIDENTIAL (primary use)

1. State Specific Use: E  
2. Use Group, Proposed: \_\_\_\_\_  
3. Change in Use Group, Indicate Present: \_\_\_\_\_

### C. MIXED USE -List secondary use(s):

- D. Construct. Classification: Present \_\_\_\_\_  
Proposed \_\_\_\_\_

## III. PLAN REVIEW (optional)

### DO YOU WANT:

1. ☐ Partial Releases  
2. ☐ Prototype Processing

## IV. DOES OR WILL YOUR BUILDING CONTAIN ANY OF THE FOLLOWING?

1. ☐ Elevators/Escalators/Lifts/  
Dumbwaiters/Moving Walks  
2. ☐ High Pressure Boilers  
3. ☐ Pressure Vessels  
4. ☐ Refrigeration Systems  
5. ☐ Cross-Connections/Backflow Preventers  
6. ☐ Hazardous Uses/Places of Assembly  
7. ☐ Sprinklers/Standpipes  
8. ☐ Smoke Control Systems in Open Wells  
9. ☐ Underground Storage Tanks  
10. ☐ Swimming Pools, Spas and Hot Tubs  
11. ☐ LPGas Tanks  
12. ☐ Fire Alarm

**CERTIFICATION IN LIEU OF OATH**

**I. OWNER SECTION (to be completed if the applicant is the owner in fee)**

I hereby certify that I am the owner in fee of the property listed on Page 1.

Mark the following applicable boxes:

- A. ☐ I further certify that a new home (private residence) will be constructed on this property for my own use and occupancy. This dwelling is to be occupied by myself and is not to be used for any purpose other than single family residential use. I attest that all construction, plumbing, or electrical work will be done, in whole or in part, by me or by subcontractors under my supervision, in accordance with all applicable laws; and, I further acknowledge that said new home is not covered under the New Home Warranty and Builders Registration Act (N.J.S.A. 46:3B-1 et seq.) and that such fact shall be disclosed to any person purchasing this property within ten years of the date of issuance of a certificate of occupancy.

I UNDERSTAND THAT IN MARKING BOX A, I ACKNOWLEDGE THAT I AM ASSUMING RESPONSIBILITY FOR THE WORK DONE ON SAID PROPERTY, THE CONDITION OF THE PROPERTY PRIOR TO, DURING, AND AFTER ANY WORK PERFORMED, AND FOR THE PERFORMANCE OF THE SUBCONTRACTORS I HIRE, EMPLOY, OR OTHERWISE CONTRACT OR WITH WHOM I MAKE AGREEMENTS TO PERFORM WORK. I AM VOLUNTARILY AND KNOWINGLY ASSUMING THIS RESPONSIBILITY.

- B. ☐ I further certify the following as required by the New Jersey Uniform Construction Code, N.J.A.C. 5:23-2.15(f)1.ix:

I personally prepared the plans submitted for: 1) the new home referred to in A.; or, 2) an addition, alteration, renovation, or repair to an existing single family residence owned and occupied by myself and located on the property listed on Page 1; or, 3) a new structure that will be physically separate from, but that will be deemed part of, an existing single family residence that is owned and occupied by myself and located on the property listed on Page 1.

- C. ☐ I further certify that I will perform or supervise the following work:

C.1. ☐ Building                      C.2. ☐ Fire Protection

I further certify that I will perform the following work:

C.3. ☐ Electrical                      C.4. ☐ Plumbing

- D. ☐ I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I understand that if any of the above statements are willfully false, I am subject to punishment.

Signature \_\_\_\_\_ Date \_\_\_\_\_

**II. AGENT SECTION (to be completed if the applicant is not the owner in fee)**

I hereby certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(d): the proposed work is authorized by the owner in fee; and I have been authorized by the owner in fee to make this application as his agent.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I understand that if any of the above statements are willfully false, I am subject to punishment.

☒ Check if contractor.

Agent Name Systems Sales Corp - Steve Ginter

Address 1345 Campus Parkway

Wall, NJ 07753

Telephone ( 732 ) 751-0600

Signature [Signature]

- III. ☐ LEAD HAZARD ABATEMENT: Include Homeowner or Building Owner Affidavit as per N.J.A.C. 5:17.



Brick Township  
401 Chambersbridge Rd  
Brick, NJ 08723

Date Issued 10/25/2016  
Control Number C-16-001370  
Permit Number 16-1067  
Permit Issue Date 4/6/2016  
Certificate Number 16-1067

## Certificate

Construction Code Division

(Certificate of Approval)

### Identification

Work Site Location: 980 ROUTE 70 Brick Township, NJ Block: 1170 Lot: 16 Qual: \_\_\_\_\_  
Owner in Fee: MEDICAL CENTER OF OCEAN COUNTY  
Owner Address: %JACO 2816 WEST 11TH ST. PANAMA CITY FL 32401  
Telephone: (732) 840-2200  
Contractor SYSTEMS SALES CORP  
Address 1345 CAMPUS PARKWAY WALL NJ 07753  
Telephone: (732) 751-0600 Fax: \_\_\_\_\_  
License Number or Builders Registration Number: P00525 34BF00015900 Federal Emp. Number: 22-2359665

Home Warranty Number: \_\_\_\_\_

Type of Warranty Plan: ☐ State ☐ Private

Use Group: E Construction Classification: \_\_\_\_\_

Maximum Live Load: 0 Maximum Occupancy Load: 0

Description of Work/Use: ALARM SYSTEM (BURGLAR OR FIRE)

Certificate Comments:

☐ **Certificate of Occupancy**

This serves notice that said building or structure has been constructed in accordance with the New Jersey Uniform Construction Code and is approved for occupancy.

☒ **Certificate of Approval**

This serves notice that the work completed has been constructed or installed in accordance with the New Jersey Uniform Construction Code and is approved. If the permit was issued for minor work, this certificate was based upon what was visible at the time of inspection.

☐ **Certificate of Continued Occupancy**

This serves notice that based on a general inspection of the visible parts of the building there are no imminent hazards and the building is approved for continued occupancy.

☐ **Temporary Certificate of Compliance**

The following conditions must be met no later than or the owner will be subject to fine or order to vacate:

This certificate has an expiration date of:

**Conditions to be met:**

☐ **Certificate of Clearance - Lead Abatement 5:17**

This serves notice that based on written certification, lead abatement was performed as per NJAC5:17 to the following extent.

- ☐ Total removal of lead-based paint hazards in scope of work  
☐ Partial or limited time period (     years); see file

☐ **Certificate of Clearance - Asbestos Abatement**

This serves notice that based on written certification, asbestos abatement was performed to the following extent.

- ☐ Total removal of asbestos hazards in scope of work  
☐ Partial or limited time period (     years); see file

☐ **Certificate of Compliance**

This serves notice that said potentially hazardous equipment has been installed and/or maintained in accordance with the New Jersey Uniform Construction Code and is approved for use until

☐ **Temporary Certificate of Occupancy**

The following conditions must be met no later than: or the owner will be subject to fine or order to vacate: This certificate has an expiration date of:

**Conditions to be met:**

\_\_\_\_\_  
Construction Official

Fee: \$0.00

Check Number: \_\_\_\_\_

Collected By: \_\_\_\_\_





  
Certification

☐ Licensed Elec. Contractor ☐ Certifd Landscape Irrigation Contr ☒ Exempt Applicant

16-1067

**Emerg FA Replacement - One For One**

## 28 Alarm Devices/E A C Panel

TOTAL NUMBERS

## TOTAL NUMBERS

### Pool Permit/with UW Lights

## Storable Pool/Spa/Hot Tub

KW Elec. Range Racer

KW Oven/Surface Unit

KW Elec. Water Heater

KW Elec. Diver/Receptacle

KW Dishwasher

## HP Garbage Disposal

KW Central A/C Unit

HP/KW Space Heater/Air Handler

### IBM Baseboard Host

HD 14090 4/11/11

11 Motors 175 11F

## AV Transmitter/Generator

## AIMP Service

## AIMP Subpanels

**AMP Motor Control Center**

KW Elec. Sign/Outline Light

Administrative Surcharge \$

**Minimum Fee \$**

**ate Permit Surcharge Fee \$**

TOTAL FEE \$

FEE (Office Use Only)

**TOTAL NUMBERS**

Pool Permit with UW Lights

Storable Pool/Spa/Light

**Specials**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

5/6/14 Support work in Deep Learning

@tech

1507 BLOCK 1170 LOT 16

-----OWNER INFORMATION-----

MEDICAL CENTER OF OCEAN COUNTY  
%JACO 2816 WEST 11TH ST.  
PANAMA CITY, FL 32401

DED AMT #OWN 01  
BANK# MORT# SS#

-----SALES INFORMATION-----

DATE BOOK PAGE PRICE PCD NU 4TYPE

CUR:  
-1:  
-2:

-----EXEMPT PROPERTY DATA-----

EPL CD STAT.  
FACILITY  
INIT FILE FUR FILE  
ASMT CODE

NEXT ACCESS: BLK LOT QUAL  
EN=CHANGE F1=NO ACTION F3=ASSMT HISTORY F5=RECORD CARD F7=MORE

QUAL.

UPDATED ON 041015

-----PROPERTY INFORMATION-----

PROP LOC: 970 ROUTE 70  
PROPERTY CLASS 4A ACCOUNT# 00520438  
BLDG DESC 1SB 4020  
LAND/ACRE 2.95AC / 2.95  
ADDITIONL LOTS

VA CLINIC

ZONE HS MAP 61 USER#1 S14 #2 S15  
BULT 0000 UNITS 01 BCLASS 10  
VCS C1 SFLA 00000

-----TENANT REBATE-----

BASE YR TAXES FLAG  
15 100415.37 N

---VALUES---

LAND 1161300  
IMPR 3544200  
EXM1  
EXM2  
EXM3  
EXM4  
NET 4705500

-----TAXES-----

15 TOTAL 100415.37  
16 HALF1 50207.69  
16 TOTAL .00  
17 HALF1 .00

SPTAX CDS: F02

OLDID:







# FIRE PROTECTION SUBCODE TECHNICAL SECTION



A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 1170 Lot 170 Qualification Code Cuddell Care

Work Site Location Cuddell Care - Meridian Health

~~300~~ RT 70, Brick, NJ 08724

Owner/Officer: Ocean Medical Center - Rich McCann

Tel. (732) 840-2200 e-mail rmccann@meridianhealth.com

Address 25 Jack Martin Blvd, Brick 08724

Contractor Systems Sales Corporation municipality Brick Tel. (732) 751-0800

Address 1345 Campus Parkway e-mail steve.ginter@sscnj.com

Wall Township, NJ 07753

Fire Protection Equipment, NJ Div of Fire Safety Permit No. \_\_\_\_\_

Fire Protection Equipment, NJ Div of Fire Safety Installer No. \_\_\_\_\_

Fire Alarm Contractor No. P00525 Exp. Date 10/31/2015

Home Improvement Contractor Registration No. or Exemption Reason \_\_\_\_\_

Federal Emp. ID No. 222359665 FAX: (732) 751-0489

## B. FIRE PROTECTION CHARACTERISTICS

Use Group: Present \_\_\_\_\_ Proposed \_\_\_\_\_ Fuel Storage Tank: \_\_\_\_\_

Constr. Class: Present \_\_\_\_\_ Proposed \_\_\_\_\_ Fuel Type: [ ] Flammable or [ ] Combustible

Heating System: [ ] New or [ ] Modification to Existing Fire Alarm System: [ ] New or [X] Existing

OR [ ] Conversion OR [ ] Replacement Location of Panel: \_\_\_\_\_

Fuel Type: [ ] Gas [ ] Oil [ ] Electric [ ] Solar Fire Suppression/Standpipe System: \_\_\_\_\_

[ ] Other \_\_\_\_\_ Location of Main Control Valve: \_\_\_\_\_

Location: \_\_\_\_\_

Total Cost of Fire Protection Work \$ 7,500

## JOB SUMMARY (Office Use Only)

### PLAN REVIEW

[ ] No Plans Required

[ ] Partial - Underlab Utilities Approved

Date: \_\_\_\_\_ Approved by: \_\_\_\_\_

[X] Fire Protection Plans Approved

Date: 3/29/18 Approved by: ST

Joint Plan Review Required: \_\_\_\_\_

[ ] Bldg. [ ] Elec. [ ] Plumb. [ ] Elev.

SUBCODE APPROVAL for PERMIT

Date: 3/29/18

SUBCODE APPROVAL for CERTIFICATE

[ ] CO [ ] GCS [ ] CA

Approved by: \_\_\_\_\_

### INSPECTIONS

Type: \_\_\_\_\_

Alarm System \_\_\_\_\_

Suppression Sys. \_\_\_\_\_

Standpipe \_\_\_\_\_

Fire Pump \_\_\_\_\_

Pre-Eng. System \_\_\_\_\_

Mechanical \_\_\_\_\_

Smoke Control \_\_\_\_\_

TCO \_\_\_\_\_

Flam/Combust Tanks \_\_\_\_\_

Fireplace Venting \_\_\_\_\_

Final \_\_\_\_\_

Other \_\_\_\_\_

Dates (Month/Day)

Failure \_\_\_\_\_

Failure \_\_\_\_\_

Approval \_\_\_\_\_

Initial \_\_\_\_\_

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\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application.

Applicant/Contractor

sign here: \_\_\_\_\_

Print name here: Steven Ginter

## D. TECHNICAL SITE DATA

[X] Certified Contractor [ ] Exempt Applicant

DESCRIPTION OF WORK: Water Supply Source Emerg FA Replace

Method of Alarm/Suppression System Supervision \_\_\_\_\_

Flammable/Combustible Tanks

Alarm Systems

[X] System

[ ] 110v Interconnected

[ ] CO Detectors/110v

Alarm Devices (i.e., smoke, heat, pulls, water/flow)

Supervisory Devices (i.e., tamper, low/high air)

Signaling Devices (i.e., horn/strobes, bells)

Other Devices panel

TOTAL

Suppression Systems

Fire Pump \_\_\_\_\_ GPM \_\_\_\_\_

Dry Pipe/Alarm Valves

Pre-action Valves

Sprinkler Heads (Dry and Wet)

Standpipes

Pre-engineered Systems

Wet Chemical

Dry Chemical

CO<sub>2</sub> Suppression

Foam Suppression

FM200 Suppression

Other \_\_\_\_\_

Other Systems

Kitchen Hood Exhaust System

Smoke Control System

Fuel-Fired Appliances [ ] Gas [ ] Oil [ ] Solid

Fireplace Venting/Metal Chimney

Other \_\_\_\_\_

Date Received

Control #

Date Issued

Permit #

16-1069

Steven Ginter

NUMBER \$ FEE (Office Use Only)

Call for alarm lead.

COMMERCIAL

Administrative Surcharge \$

Minimum Fee \$

State Permit Surcharge Fee \$

TOTAL FEE \$





# CONSTRUCTION PERMIT

Date Issued 4/6/16  
Control # C-16-001370  
Permit # 16-1067

IDENTIFICATION Block: 1170 Lot: 16 Qualifier \_\_\_\_\_  
Work Site Location: 980 ROUTE 70 Brick Township, NJ Contractor: SYSTEMS SALES CORP  
Owner in Fee: MEDICAL CENTER OF OCEAN COUNTY Address: 1345 CAMPUS PARKWAY WALL NJ 07753  
%JACO 2816 WEST 11TH ST. PANAMA CITY FL Telephone: (732) 751-0600  
32401 Lic. No. or Bldrs. Reg. No. P00525 34BF00015900 P00525  
Telephone: (732) 840-2200 Federal Employee No. 22530665

Is hereby granted permission to perform the following work:

- |                                                |                                                                    |                                                |
|------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------|
| <input type="checkbox"/> BUILDING              | <input type="checkbox"/> PLUMBING                                  | <input type="checkbox"/> LEAD HAZARD ABATEMENT |
| <input checked="" type="checkbox"/> ELECTRICAL | <input checked="" type="checkbox"/> FIRE PROTECTION                | <input type="checkbox"/> DEMOLITION            |
| <input type="checkbox"/> ELEVATOR DEVICES      | <input type="checkbox"/> ASBESTOS ABATEMENT<br>(Subchapter 8 only) | <input type="checkbox"/> OTHER                 |

## DESCRIPTION OF WORK:

ALARM SYSTEM (BURGLAR OR FIRE)

Note: If construction does not commence within one (1) year of date of issuance, or if construction ceases for a period of six (6) months, this permit is void.

Estimated Cost of Work \$7,700

D. Youman Jr.  
Construction Official

4/6/16  
Date

U.C.C. F170  
equiv (rev 1/04)

1 WHITE - INSPECTOR

2 CANARY - OFFICE

3 PINK - TAX ASSESSOR

4 GOLD - APPLICANT

## PAYMENTS (Office Use Only)

|                  |             |
|------------------|-------------|
| Building         | \$0         |
| Electrical       | \$150       |
| Plumbing         | \$0         |
| Fire Protection  | \$175       |
| Elevator Devices | \$0         |
| Other            | \$0.00      |
| DCA Training Fee | \$14        |
| CO Fee           |             |
| Other            | \$0         |
| Total            | \$339       |
| Check No.        | <u>5989</u> |
| Cash             | \$0         |
| Credit           | \$0         |
| Collected By     |             |

## REQUIRED INSPECTIONS

Construction work must be inspected in accordance with the State Uniform Construction Code Regulations N.J.A.C. 5:23-2.18. This agency will carry out such periodic inspections during the progress of work as are necessary to insure that the work installed conforms with the requirements of the Uniform Construction Code.

The owner or other responsible person in charge of work must notify this agency when work is ready for any required inspections specified below. Requests for inspections must be made at least 24 hours prior to the time the inspection is desired. Inspections will be performed within three business days of the time for which they are requested. The work must not proceed in a manner which will preclude the inspection until it has been made and approval granted.

- ☒ Required inspections for all subcodes for one- and two-family dwellings are as follows:

1. The bottom of footing trenches before placement of footings, except that in cases of pile foundations, inspections shall be made in accordance with the requirements of the building subcode.
2. Foundations and all walls up to grade level prior to back filling.
3. All structural framing, connections, wall and roof sheathing and insulation; electrical rough wiring, panel and service installation; rough plumbing. The framing inspection shall take place after the rough electrical and plumbing inspections and after the installation of the heating, ventilation and /or air conditioning duct system. The insulation inspection shall be performed after all other subcode rough inspections and prior to the installation of any interior finish material.
4. Installation of all finished materials, sealings of exterior joints, plumbing piping, trim and fixtures; electrical wiring, devices and fixtures; mechanical systems equipment.

Additional required inspections for all subcodes of construction, for other than one- and two-family dwellings, are fire suppression systems, heat producing devices and Barrier Free subcode accessibility, if applicable.

- ☐ Required special inspections. The applicant by accepting the permit will be deemed to have consented to these requirements:

- ☒ A final inspection is required for each applicable subcode area before a final Certificate of Occupancy or Approval may be issued. The final inspections include the installation of all interior and exterior finish materials, sealing of exterior joints, mechanical system and other required equipment; electrical wiring, devices and fixtures; plumbing pipes, trim and fixtures; tests required by any provision of the adopted subcodes, Barrier Free accessibility, if applicable; and verification of compliance with NJAC 5:23-3.5, "Posting structures".

- ☐ A complete copy of released plans must be kept on the job site.

If you do not understand any of this information, please ask.



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BACKGROUND AND MULTIPLE SECURITY FEATURES. PLEASE VERIFY AUTHENTICITY.

**State Of New Jersey  
New Jersey Office of the Attorney General  
Division of Consumer Affairs**

THIS IS TO CERTIFY THAT THE  
**Fire Alarm, Burglar Alarm & Locksmith Adv Comm**

**HAS REGISTERED**

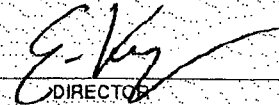
**Systems Sales Corporation  
Frederick Lock, Jr.  
1345 Campus Parkway  
Neptune NJ 07753**

**FOR PRACTICE IN NEW JERSEY AS A(N): BA and FA Business**

**02/10/2014 TO 01/31/2017**  
VALID

**34BF00015900**  
LICENSE/REGISTRATION/CERTIFICATION #

Signature of Licensee/Registrant/Certificate Holder

  
DIRECTOR



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State of New Jersey  
Department of Community Affairs  
Division of Fire Safety



Hereby Issues To

SYSTEMS SALES CORP

Fire Protection Equipment Contractor Business Permit

In The Following Fire Protection Areas:

Fire Alarm System

P00525

Permit ID

10/31/2015 to 10/31/2018

Date Issued

Lapse Date

A handwritten signature in black ink, appearing to read 'Charles A. Richman'.

Charles A. Richman

Commissioner





***OCEAN MEDICAL CENTER  
CUDDLE CARE  
BRICK, NJ***

***FIRE ALARM REPLACEMENT  
EQUIPMENT SUBMITTAL***



***SUBMITTAL PREPARED BY  
SYSTEMS SALES CORPORATION  
1345 CAMPUS PARKWAY  
MONMOUTH SHORES CORPORATE PARK  
WALL, NJ 07753-6815***

***(732) 751-0600  
[www.sscnj.com](http://www.sscnj.com)***

***NEW JERSEY STATE FIRE ALARM PERMIT NO. P00525***

***SSC Project No. 48679***

***4/23/16***



## **FIRE ALARM REPLACEMENT EQUIPMENT**

| <b><u>QUAN</u></b> | <b><u>ITEM</u></b> | <b><u>DESCRIPTION</u></b>                                                           | <b><u>PAGE</u></b> |
|--------------------|--------------------|-------------------------------------------------------------------------------------|--------------------|
| 1                  | iO500              | Addressable Fire Alarm Control Panel consisting of:                                 |                    |
| 1                  | iO500RD            | 1 Loop Panel with central station connection - Red                                  | 3-12               |
| 1                  | RLCD-C             | Remote LCD Annunciator with Controls                                                | 13-16              |
| 2                  | BAT1212            | Rechargeable Battery Back-up 12V – 12AH                                             | 17-18              |
| 1                  | OH-IPGSM4G         | Cellular Dialer                                                                     | 19-20              |
| 2                  | BAT127             | Rechargeable Battery Back-up 12V – 7AH                                              | 21-22              |
| 2                  | SIGA-278           | Intelligent Manual Pull Station – Dual Action                                       | 23-26              |
| 11                 | SIGA2-PS           | Intelligent Second Generation Photoelectric Smoke Detector                          | 27-30              |
| 11                 | SIGA-SB4           | Standard Base with TS4 Trim Skirt                                                   | 27-30              |
| 3                  | SIGA2-HRS          | Intelligent Heat Detector – Rate of Rise - 135°F                                    | 31-34              |
| 3                  | SIGA-SB4           | Standard Base with TS4 Trim Skirt                                                   | 31-34              |
| 1                  | SIGA-CT2           | Intelligent Dual Input Monitor Module<br>to Monitor Waterflow & Tamper Switch - FBO | 35-38              |

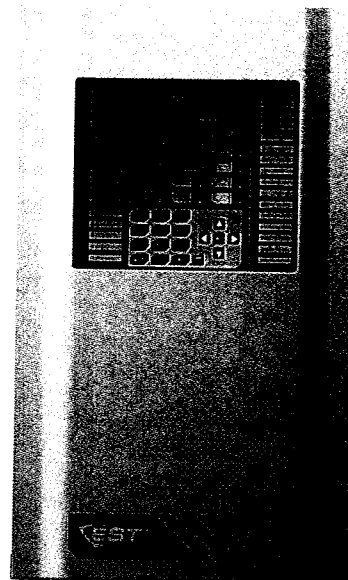
Also included in this submittal are:

- 1) A one (1) year warranty on all new equipment commencing upon the date of system on-line usability.
- 2) System testing and certification by a factory trained and authorized service technician, NFPA Record of Completion and Test & Inspection Report provided with closeout documents.
- 3) Demonstration of system operation to the owner and/or their designated representatives. Operation & Maintenance manuals provided with closeout documents.

**\*QUANTITIES ARE FOR REVIEW BY THE ELECTRICAL CONTRACTOR AND ARE NOT INTENDED FOR ARCHITECT/ENGINEER APPROVAL.**



# iO500 Intelligent Life Safety System



**FDNY**  
COA 6020



7165-1657-0244



S3000

## Overview

The EST iO500 intelligent life safety system offers the power of high-end intelligent processing in a configuration that delivers an uncomplicated solution for small to mid-sized applications. With intelligent detection, electronic addressing, automatic device mapping, optional Ethernet® connectivity, and a full line of easily-configured option cards and modules, this flexible system offers versatility that benefits building owners and contractors alike.

The iO500 provides one Class A or Class B analog device loop that supports up to 250 device addresses. A second 250-point loop may be added to the iO500 to expand total system capacity to up to 500 device addresses. The panel includes four NACs that may be wired for either Class A or Class B operation.

The iO500 supports a wide range of accessories and related equipment, including:

- Signature Series intelligent modules, detectors, and bases
- R-Series remote annunciators
- option cards that expand system capacity and extend system capabilities
- Listed for releasing applications using SIGA-REL
- Fully integrated CO detection using Signature Series 2 detectors with or w/o audible signaling

## Features

- Comes standard with one loop (expandable to two) that supports up to 250 (expandable to 500) intelligent devices: each iO500 loop supports up to 125 detectors and up to 125 modules.
- Supports Signature Series intelligent modules and detectors
- Combines the Signature intelligent releasing module with Signature multisensor detectors for reliable suppression
- Four Class B NACs or two Class A NACs.
- Form C contacts for alarm and trouble, Form A for supervisory
- Electronic addressing with automatic device mapping
- Optional Ethernet port for diagnostics, programming and a variety of system reports
- Two programmable switches with LEDs and custom labeling
- Supports Genesis horn silence over two wires and UL 1971-compliant strobe synchronization
- Supports up to eight serial annunciators, (LCD, LED-only, and graphic interface).
- 1,000 event panel history log
- Can use existing wiring for most retrofit applications
- Upload/download remotely or locally
- Two-level maintenance alert reporting
- Pre-alarm and alarm verification by point
- Adjustable detector sensitivity
- 4 x 20 character backlit LCD display
- Optional earthquake hardening: OSHPD seismic pre-approval for component Importance Factor 1.5

## Application

The iO500 life safety system is a powerful intelligent solution for small to mid-sized buildings. Advanced analog technology delivers the benefits of flexible system installation, while a clean and easy-to-operate user interface makes panel operation and system maintenance quick and intuitive.

### The smart choice

Signature Series electronic addressing eliminates the tedium of setting dipswitches, and automatic device mapping ensures that each device resides on the system at its correct location. Meanwhile, innovative programming allows the designer to customize the system to precisely suit the needs of the building owner.

### Flexibility built right in

Two fully-programmable front panel switch/LED combinations provide an added measure of flexibility. Their slide-in labels take the mystery out of custom applications, and present a clean finished appearance.

### Perfect for retrofits

The iO500 is particularly well-suited to retrofit applications. All connections are made over standard wiring – no shielded cable required. This means that in most situations existing wiring can be used to upgrade a legacy control panel to iO500 technology without the expense or disruption of rewiring the entire building.

### Signals with a difference

iO500 NACs are configurable to fully support the advanced signaling technology of Edwards Genesis and Enhanced Integrity notification appliances. These devices offer precision synchronization of strobes to UL 1971 standards. For Genesis devices, enabling this feature allows connected horns to be silenced while strobes on the same two-wire circuit continue to flash until the panel is reset.

### Clear-cut remote annunciation

Remote annunciation is a strong suit of the iO500. Up to eight annunciators can be installed on a single system. Compatible annunciators include a range of LED and LCD models that provide zone or point annunciation, as well as common control capabilities.

The iO500 also supports graphic annunciation with optional graphic annunciator interface modules. Each interface provides common control, indicators, and LED drivers. Consult the Ordering Information section for details.

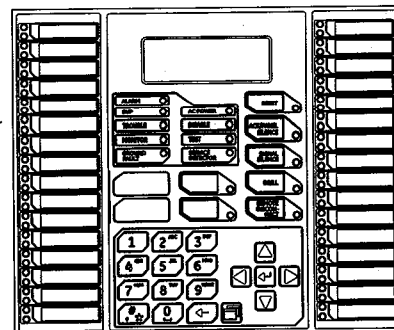
### A complete line of accessories

The iO500 life safety system is supported by a complete line of intelligent detectors, modules and related equipment. Consult the Ordering Information section for details.

## Operation

The front panel provides an easy-to-use operator's interface, as well as all the necessary controls for front panel programming.

A large back-lit 80-character LCD displays system status, event details, and programming prompts. Large tactile control buttons are easy to see in low light conditions, and bright multi-color LEDs offer at-a-glance status indication.



### Control buttons

| Button               | Description                                                                                                                                                                                                                     |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reset                | Initiates a system reset.                                                                                                                                                                                                       |
| ACK/Panel Silence    | Silences the panel and remote annunciators during an active trouble, supervisory, or alarm event and acknowledges new event activations.                                                                                        |
| Signal Silence       | <i>Alarm mode:</i> Silences active notification appliances. Pressing Signal Silence a second time turns NACs back on.                                                                                                           |
| Drill                | Initiates a drill confirmation. Pressing drill a second time turns off the drill function.                                                                                                                                      |
| Remote Disconnect    | <i>Dialer:</i> Disables or enables dialer.<br><i>Dialer set to modem only:</i> Disables or enables the common alarm relay.                                                                                                      |
| Left arrow           | <i>Display mode:</i> Moves the cursor to the left.<br><i>Menu mode:</i> Toggles between programming selections.                                                                                                                 |
| Right arrow          | <i>Display mode:</i> Moves the cursor to the right.<br><i>Menu mode:</i> Retrieves a programming option's sub menu and toggles between a programming option's selections.                                                       |
| Up arrow             | <i>Display mode:</i> Advances to the previous event.<br><i>Menu mode:</i> Moves the cursor up.                                                                                                                                  |
| Down arrow           | <i>Display mode:</i> Advances to the next event.<br><i>Menu mode:</i> Moves the cursor down.                                                                                                                                    |
| Enter                | <i>Display mode:</i> Displays selected event details.<br><i>Menu mode:</i> Retrieves a programming option's sub menu or jumps to the Save function in the menu.<br><i>Entry mode:</i> Enters the selected data into the system. |
| Cancel               | <i>Display mode:</i> Exits the detailed information display.<br><i>Menu mode:</i> Exits the current menu level.<br><i>Entry mode:</i> Clears the current entry.                                                                 |
| Menu                 | <i>Display mode:</i> Enters the menu mode<br><i>Menu mode:</i> Exits menu mode                                                                                                                                                  |
| Space                | Enters a space, such as a space between words.                                                                                                                                                                                  |
| Alphanumeric keypad  | <i>Entry mode:</i> Pressing a button once enters the number on the button. Pressing the button twice enters the secondary value.                                                                                                |
| Programmable buttons | These buttons can be programmed to control outputs, disable devices or unlatch system outputs. The buttons can be labeled with a slip-in insert.                                                                                |

## System LEDs

| LED               | Description                                                                                                                                                                   |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Alarm             | Red LED. On steady when there is an active alarm.                                                                                                                             |
| Trouble           | Yellow LED. Flashes when there is a fault on a monitored circuit or system component, or when a circuit is disabled.                                                          |
| Sup               | Yellow LED. On steady when there is an active supervisory event.                                                                                                              |
| AC Power          | Green LED. On when the panel has AC power.                                                                                                                                    |
| Disable           | Yellow LED. Double-flashes when there is a disabled circuit, alarm relay, or remote annunciator.                                                                              |
| Ground Fault      | Yellow LED. On steady during an active ground fault.                                                                                                                          |
| Test              | Yellow LED. Flashes when performing an audible walk test. Steady indicates a silent test.                                                                                     |
| Monitor           | Yellow LED. On steady when there is an active monitor event.                                                                                                                  |
| Service Detector  | Yellow LED. Indicates that detector needs servicing.                                                                                                                          |
| Signal Silence    | Yellow LED. On steady indicates that NAC circuits are turned off but the panel is still in alarm.                                                                             |
| Remote Disconnect | Yellow LED. On steady indicates that the dialer is disabled or that the alarm relay is enabled or disabled when the dialer is set to modem only.                              |
| Drill             | Yellow LED. Indicates that the panel is in drill.                                                                                                                             |
| Reset             | Yellow LED. Indicates that the panel is resetting.                                                                                                                            |
| Panel Silence     | Yellow LED. Indicates that the panel has been silenced during an active trouble, supervisory, or alarm event and indicates that new event activations have been acknowledged. |
| User Keys         | Yellow LED. Programmable.                                                                                                                                                     |

## Panel Operation Options

|                                  |                                                                                                                                                                                                                                                                                                                              |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Language                         | English or French                                                                                                                                                                                                                                                                                                            |
| Marketplace                      | U.S. or Canada                                                                                                                                                                                                                                                                                                               |
| AC fail delay                    | <i>Off:</i> Off-premise notification of an AC power failure is immediate.<br><i>1 to 15 hours:</i> Delays the off-premise notification of an AC power failure by the time period selected.                                                                                                                                   |
| Zone resound                     | <i>On:</i> NACs resound each time a device in the zone goes into alarm even if they were silenced<br><i>Off:</i> Inhibits the NACs from turning on again (after they were silenced) when a second device in the zone goes into alarm.                                                                                        |
| Reset inhibit after NACs turn on | <i>Off:</i> Panel reset is operational immediately.<br><i>1 minute:</i> Panel reset is inhibited for one minute.                                                                                                                                                                                                             |
| Auto signal silence              | <i>Off:</i> Allows immediate silencing of signals from an off-normal condition using the Signal Silence button<br><i>5 to 30 minutes:</i> Delays the silencing of signals from an off-normal condition by disabling the Signal Silence button for the time period selected.                                                  |
| Day start                        | Start time for daytime sensitivity                                                                                                                                                                                                                                                                                           |
| Night start                      | Start time for nighttime sensitivity                                                                                                                                                                                                                                                                                         |
| Date                             | U.S.: MM/DD/YYYY, Canada: DD/MM/YYYY                                                                                                                                                                                                                                                                                         |
| Sounder Base                     | Six configuration settings                                                                                                                                                                                                                                                                                                   |
| Mapping                          | <i>Disabled:</i> Device mapping is not available<br><i>Enabled:</i> Device mapping is available                                                                                                                                                                                                                              |
| LCD banner                       | Banner text for line one and line two. Each line is capable of up to 20 characters.                                                                                                                                                                                                                                          |
| Event notification               | <i>Zone:</i> When a device is a member of a zone, only the zone information is sent to the LCD display, LEDs, printer, and dialer.<br><i>Zone/device:</i> Zone information is sent to the LCD display and LEDs. Device information is sent to the printer and dialer.<br><i>Device:</i> Only device information is reported. |

## Programming

iO500 life safety systems are simple to set up, yet also offer advanced programming features that put these small building panels into a class of their own. The auto programming feature quickly gets the panel operational using factory default settings. Basic zone and point settings can be programmed easily through the front panel interface, so the system is up and running in no time.

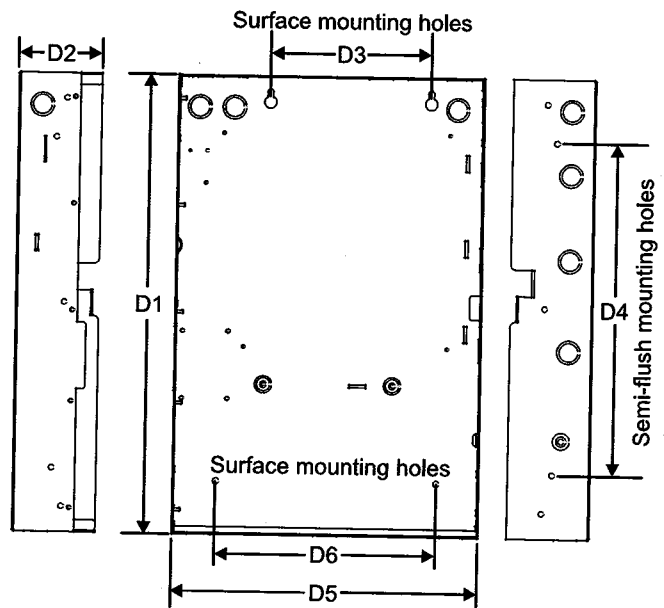
For more advanced system configuration and correlation groups programming, iO500 systems interface to a PC running compatible iO-CU software. This option offers full system configuration in the familiar Windows® operating environment. Connection is typically made to a laptop through the panel's optional RS-232 communications port, which can also be used to connect a system printer.

Among the many innovative features of iO500 control panels is the optional network card. This module provides a standard 10/100 Base T Ethernet® network connection that permits access to the control panel from any remote location with the correct communications protocols. The connection can be used to download to the panel from the iO-CU, or upload and view system reports using the iO-CU.

Available system reports include:

- Correlation groups
- Device details
- Device maintenance
- History
- Internal status
- System configuration
- System status
- Walk test
- Dialer
- CO runtime

## Dimensions



Panel dimensions, in (cm)

| Model | D1*            | D2            | D3            | D4             | D5*             | D6              |
|-------|----------------|---------------|---------------|----------------|-----------------|-----------------|
| iO500 | 28.0<br>(71.1) | 3.85<br>(9.8) | 9.0<br>(22.8) | 22.0<br>(55.8) | 15.75<br>(40.0) | 10.25<br>(26.0) |

\* Add 1-1/2 in. (3.81 cm) to D1 and D5 dimensions for trim kit.

## Wiring & Configuration

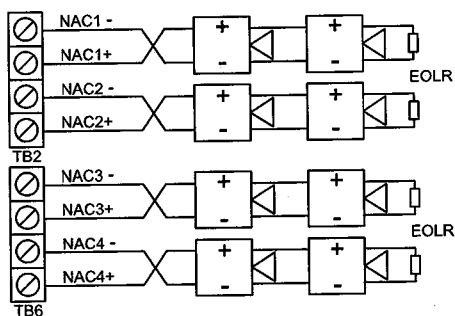
### Notification appliance circuits (TB2)

iO500 control panels come equipped with four notification appliance circuits. Each circuit can be individually configured for continuous, temporal, synchronized, latching, and coded output.

#### Circuit specifications

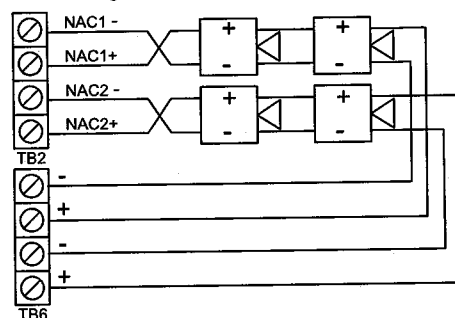
|              |                                                                                                                 |
|--------------|-----------------------------------------------------------------------------------------------------------------|
| Circuit Type | 4 Class B or 2 Class A, 2.5 amps each                                                                           |
| Voltage      | 24 VFWR                                                                                                         |
| Current      | 6.0 A total, 2.5 A max. per circuit at 120/230 VAC 60 Hz<br>5.0 A total at 230VAC 50 Hz, 2.5 A max. per circuit |
| Impedance    | 26 $\Omega$ total, 0.35 $\mu$ F max                                                                             |
| EOLR         | 15 K $\Omega$ , 1/2 W                                                                                           |

Class B wiring



Marking indicates output signal polarity when the circuit is active. Polarity reverses when the circuit is not active. Wire notification appliances accordingly. Notification appliance polarity shown in active state.

Class A wiring



### Auxiliary & Smoke power outputs (TB3)

The control panel provides two auxiliary power outputs which can be used for powering ancillary equipment such as remote annunciators and two wire smoke detectors. Aux 2 can be software selected to operate continuous. The circuit is supervised for shorts and grounds.

Note: For a complete list of devices that can be connected to this circuit, refer to the iO Series compatibility list (p/n 3101064).

#### Circuit specifications

|                                  |                                                                                   |
|----------------------------------|-----------------------------------------------------------------------------------|
| Circuit voltage range            | 21.9 to 28.3 V                                                                    |
| Resettable circuit (Aux power 2) | 24 VDC nominal at 500 mA                                                          |
| Continuous circuit (Aux power 1) | 24 VDC nominal at 500 mA. Use this circuit for powering two-wire smoke detectors. |

Note: Any current above 0.5 amp connected to both Aux 1 and 2 will reduce the total available NAC power by that amount.

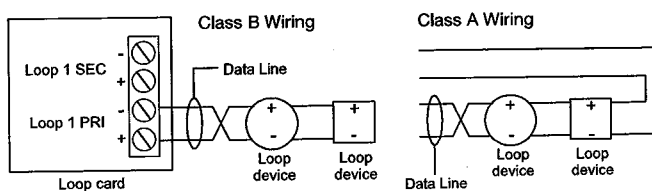
### Signature Device loop

The system provides one device loop circuit that can be used with any mix of Signature Series detectors and modules. The loop circuit is supervised for opens, shorts, and grounds.

The Signature Loop Controller uses broadcast polling and advanced communications formats to regularly check the entire device circuit for anomalies. If a change of state is detected at the circuit level, the Loop Controller then uses a direct address search to find the reporting device. This two-staged technique ensures that only new information is transmitted, thus allowing for a reduced baud rate while still achieving nearly instant device reporting.

#### Circuit specifications

|                            |                                                                                        |
|----------------------------|----------------------------------------------------------------------------------------|
| Device loops               | 1 loop, expandable to 2, Class A or B, each loop supporting up to 250 device addresses |
| Communication line voltage | Maximum 20 V peak-to-peak                                                              |
| Circuit current            | 0.5 A max                                                                              |
| Circuit impedance          | 66 $\Omega$ total, 0.5 $\mu$ F, max                                                    |
| Isolators                  | 64 maximum                                                                             |



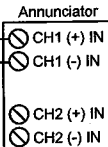
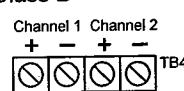
### Annunciator loop (TB4)

The control panel provides a connection for up to eight serially driven and supervised remote annunciators.

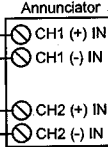
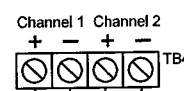
#### Circuit specifications

|                   |                                        |
|-------------------|----------------------------------------|
| Device loops      | Class B (Style Y) or Class A (Style Z) |
| Circuit voltage   | 2.55 V                                 |
| Circuit current   | 30 mA max                              |
| Circuit impedance | Up to 8 annunciators or 4000 feet      |

#### Class B



#### Class A



### Alarm, trouble, and supervisory relay (TB3)

The trouble relay is normally-open, held closed, and opens on any trouble event or when the panel is de-energized. The supervisory relay is normally-open, and closes on any supervisory event. The alarm relay changes over on any alarm event.

#### Relay specifications

|         | Alarm                   | Trouble                 | Supervisory             |
|---------|-------------------------|-------------------------|-------------------------|
| Type    | Form C                  | Form A                  | Form A                  |
| Voltage | 24 VDC at 1 A resistive | 24 VDC at 1 A resistive | 24 VDC at 1 A resistive |

Relay circuits can only be connected to power-limited sources.

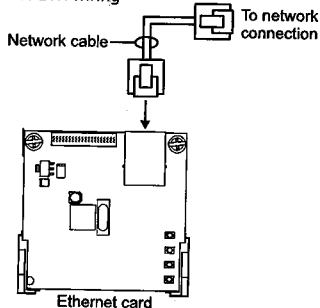


## Option Cards

iO500 panels are supported by a complete line of modules and related equipment that enhance performance and extend system capabilities. Option cards plug directly into the control panel main circuit board or are connected to it with a ribbon cable. After installation, terminals remain accessible. The cabinet provides ample room for wire routing, keeping wiring neat at all times.

### SA-ETH Ethernet Interface Card

SA-ETH wiring



The SA-ETH card provides a standard 10/100 Base T Ethernet network connection for connecting to an intranet, a local network, or the Internet. The card can be used to download configuration programming from the iO-CU to the panel over the network.

The Ethernet card is installed on the plastic assembly and connects to the main circuit board via a ribbon cable.

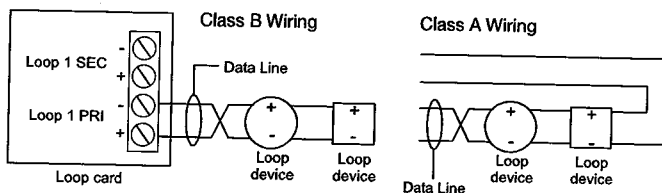
#### SA-ETH specifications

|                       |                                           |
|-----------------------|-------------------------------------------|
| Ethernet              | 10/100 Base T                             |
| Operating environment |                                           |
| Temperature           | 32 to 120°F (0 to 49°C)                   |
| Humidity              | 0 to 93% RH, noncondensing at 90°F (32°C) |

### XAL250 Loop Expander Card

The XAL250 Loop Expander Card provides an additional Signature Series device loop on the control panel. The card expands the control panel's device capacity to 500 total device addresses, 250 per loop. The card is compatible with Class B or Class A wiring. It is compatible with iO500 control panels only.

The loop expander card connects to connector J7 on the main circuit board.

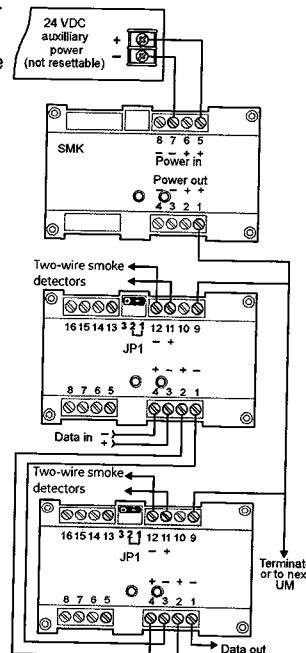


#### XAL250 specifications

|                          |                                           |
|--------------------------|-------------------------------------------|
| Device addresses on loop | 125 detectors and 125 modules             |
| Wiring                   | Class B (Style Y) or Class A (Style Z)    |
| Operating voltage        | 20 V peak-to-peak                         |
| Operating current        | 0.5 A total                               |
| Circuit impedance        | 66 Ω, 0.5 μF, max                         |
| Terminal rating          | 12 to 18 AWG (0.75 to 2.5 sq mm)          |
| Operating environment    |                                           |
| Temperature              | 32 to 120°F (0 to 49°C)                   |
| Humidity                 | 0 to 93% RH, noncondensing at 90°F (32°C) |

### SMK Smoke Power Converter

The SMK Smoke Power Converter Module provides a regulated power source for two-wire smoke circuits connected to a Signature data circuit. The SMK monitors the operating power from the power supply. When power begins to degrade, the SMK provides the necessary operating voltage to the two-wire smoke detection circuits.



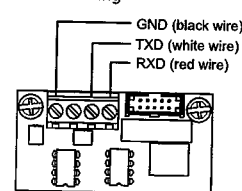
#### SMK specifications

|                             |                                                                                                                      |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------|
| Input voltage               | 21.9 to 28.3 VDC (not resettable)                                                                                    |
| Output voltage              | 24 VDC nom. at 200 mA, max., special applications                                                                    |
| Ground fault impedance      | 10 k ohm                                                                                                             |
| Operating environment       |                                                                                                                      |
| Temperature                 | 32 to 120°F (0 to 49°C)                                                                                              |
| Humidity                    | 0 to 93% RH, noncondensing at 90°F (32°C)                                                                            |
| Storage temperature         | -4 to 140°F (-20 to 60°C)                                                                                            |
| Compatible electrical boxes | North American 4 inch square x 2-1/2 in. (64 mm) deep 2 gang box or Standard 4 in. square box 1-1/2 in. (38 mm) deep |
| Wire size                   | 14, 16, or 18 AWG wire (1.5, 1.0, or 0.75 sq. mm) (Sizes 16 and 18 AWG are preferred)                                |

### SA-232 RS-232 interface

The SA-232 card provides an RS-232 interface with iO500 panels. It can be used for connecting a printer to the control panel to print system events. The card also can be used for connecting a computer to download a configuration program from the iO-CU to the control panel.

SA-232 wiring



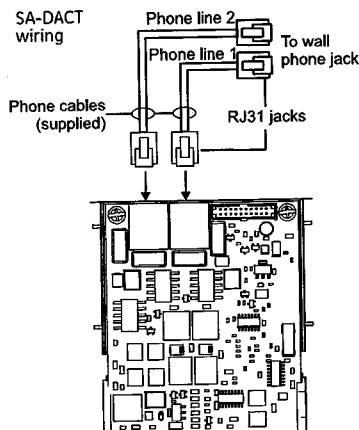
The RS-232 card is installed on the plastic assembly and connects to the main circuit board via a ribbon cable.

#### SA-232 specifications

|                       |                                           |
|-----------------------|-------------------------------------------|
| Operating voltage     | Standard EIA-232                          |
| Terminal rating       | 12 to 18 AWG (0.75 to 2.5 sq mm)          |
| Operating environment |                                           |
| Temperature           | 32 to 120°F (0 to 49°C)                   |
| Humidity              | 0 to 93% RH, noncondensing at 90°F (32°C) |

## SA-DACT Dialer

The SA-DACT provides communications between the control panel and the central station over a telephone line system. It transmits system status changes (events) to a compatible digital alarm communicator receiver over the public switched telephone network. The dialer is capable of single, dual, or split reporting of events to two different account and telephone numbers. The modem feature of the SA-DACT can also be used for uploading and downloading panel configuration, history, and current status to a PC running the iO-CU.



The dialer phone lines connect to connectors on the dialer's main circuit board. Phone line 1 connects to connector J4 and phone line 2 connects to connector J1.

The SA-DACT queues messages and transmits them based on priority (alarm, supervisory, trouble, and monitor). Activations are transmitted before restorations.

The SA-DACT is installed on the plastic assembly and connects to the main circuit board via a ribbon cable.

### SA-DACT specifications

|                       |                                                           |
|-----------------------|-----------------------------------------------------------|
| Phone line type       | One or two loop-start lines on a public, switched network |
| Phone line connector  | RJ-31/38X (C31/38X)                                       |
| Communication formats | Contact ID (SIA DC-05)                                    |
| Operating environment |                                                           |
| Temperature           | 32 to 120°F (0 to 49°C)                                   |
| Humidity              | 0 to 93% RH, noncondensing at 90°F (32°C)                 |

### Compatible DACRs

| Receiver        | Models        | Formats    |
|-----------------|---------------|------------|
| Ademco          | 685           | Contact ID |
| FBII            | CP220         | Contact ID |
| Osborne-Hoffman | OH 2000       | Contact ID |
| Radionics       | D6600         | Contact ID |
| Silent Knight   | 9800          | Contact ID |
| Sur-Gard        | SG-MLR1, MLR2 | Contact ID |

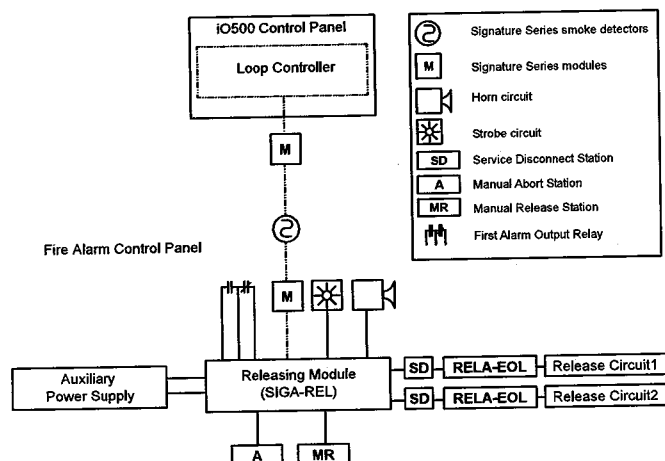
## SIGA-REL Releasing Module

The SIGA-REL is an analog addressable module that communicates directly with the fire alarm panel Signature loop controller. The SIGA-REL controls sprinkler, pre-action and deluge systems, and may also be used to release extinguishing agents such as CO<sub>2</sub>, Halon, or foam. The module is easily configured in the field and offers a wide range of options that ensure dependable service, while preventing the unnecessary release of extinguishing agent.

### SIGA-REL specifications

|                                     |                             |                                        |
|-------------------------------------|-----------------------------|----------------------------------------|
| <b>Power riser</b>                  | Input voltage               | 24 Vdc (power limited)                 |
|                                     | Supervisory current         | 25 mA, max.                            |
|                                     | Riser input current         | 4 amps maximum                         |
| <b>Release circuits</b>             | Alarm                       | 170 mA min.; 4 A max.                  |
|                                     | Output rating               | 2 A @ 24 Vdc (per circuit)             |
|                                     | Valves per circuit          | 4 valves, max.                         |
|                                     | Max. supervisory current    | 0.4 mA (short circuit)                 |
|                                     | Nominal supervisory current | 0.18 mA                                |
| <b>Pre-release alarm circuits</b>   | Supervisory voltage         | 26 Vdc, max. (open circuit)            |
|                                     | End of line device          | 47k Ohm EOL                            |
|                                     | Output rating               | 2 A @ 24 Vdc (for each circuit)        |
|                                     | Max. supervisory current    | 0.4 mA (short circuit)                 |
|                                     | Nominal supervisory current | 0.18 mA                                |
| <b>Manual release input circuit</b> | Supervisory voltage         | 26 Vdc, max. (open circuit)            |
|                                     | End of line device          | 47k Ohm resistor                       |
|                                     | Circuit type                | Class B N.O. latching                  |
|                                     | Circuit capacitance         | 0.1 µF, max                            |
| <b>Abort circuit</b>                | Max. supervisory current    | 0.4 mA (short circuit)                 |
|                                     | Nominal supervisory current | 0.18 mA                                |
|                                     | Supervisory voltage         | 26 Vdc, max. (open circuit)            |
|                                     | End of line device          | 47k Ohm resistor                       |
|                                     | Circuit type                | Class B N.O. non-latching              |
| <b>First alarm output relay</b>     | Circuit capacitance         | 0.1 µF, max                            |
|                                     | Contact rating              | 3 A @ 24 Vdc (0.6 power factor) Form C |
|                                     | Operating voltage           | 5.2 to 19.95 Vdc                       |
|                                     | Supervisory current         | 1000 µA                                |
|                                     | Alarm current               | 1000 µA                                |

**Note:** Output circuits are power-limited when the riser circuit is power-limited.



For detailed specification and ordering information on the SIGA-REL, refer to Data Sheet 85001-0531 -- Releasing Module.

## Specifications

|                                  |                                                                                                                                       |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Device loops                     | 1 loop, expandable to 2, Class A or B, each loop supporting up to 250 device addresses                                                |
| NAC circuits                     | 4 Class B or 2 Class A, 2.5 amps each                                                                                                 |
| Power supply                     | 6.0 A total, 2.5 A max. per circuit at 120/230 VAC 60 Hz<br>5.0 A total at 230VAC 50 Hz, 2.5 A max. per circuit<br>0.5 amps aux power |
| NAC Operating voltage            | 24 VDC. NAC minimum voltage: 19.5 VDC @ 20.4 V battery voltage                                                                        |
| Loop circuit operating voltage   | 20 V peak-to-peak                                                                                                                     |
| SLC Primary power                | 120 VAC, 60 Hz, 230 VAC 50-60 Hz                                                                                                      |
| Aux Power 1 (Continuous circuit) | 24 VDC nominal at 500 mA. A SMK module is required when using the SIGA-UM module to support two-wire smoke detectors.                 |
| Aux Power 2 (Resettable circuit) | 24 VDC nominal at 500 mA                                                                                                              |
| Auxiliary output                 | 19 to 25.7 VDC                                                                                                                        |
| Base panel current draw          | Standby: 172 mA<br>Alarm: 267 mA                                                                                                      |
| Panel History Log                | 1,000 events                                                                                                                          |

|                       |                                                                                                                               |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Battery placement     | iO500 cabinets accommodate up to 18 A/H batteries. Use a external cabinet for larger battery sizes.                           |
| Batteries             | Batteries must be sealed lead acid type only. Maximum charging capacity = 26 Ah.                                              |
| Loop circuit          | Maximum loop resistance: 66 $\Omega$ . Maximum loop capacitance: 0.5 $\mu$ F. Style 4, 6, and 7 wiring. 64 isolators maximum. |
| SIGA-UM/SIGA-MAB      | 1.5 mA (see the UL and ULC compatibility list for the maximum quantity of detectors per circuit)                              |
| Compatibility ID      | 100                                                                                                                           |
| Alarm contact         | Form C 24 VDC @ 1 A (resistive load)                                                                                          |
| Trouble contact       | Form C 24 VDC @ 1 A (resistive load)                                                                                          |
| Supervisory contact   | Form A 24 VDC @ 1 A (resistive load)                                                                                          |
| Environmental         | Temperature: 0 to 49°C (32 to 120°F).<br>Humidity: 0 to 93% RH, noncondensing                                                 |
| Terminal rating       | All terminals rated for 12 to 18 AWG (0.75 to 2.5 mm <sup>2</sup> )                                                           |
| Serial communications | Voltage: 2.55 V. Current: 30 mA max                                                                                           |
| Remote annunciator    | 8 drops max, RS-485 Class A or B                                                                                              |
| Input zones           | 32 max.                                                                                                                       |
| Agency Listing        | UL864, UL2017, CSFM, ULC and NYFD #6020, FM approved                                                                          |

## Ordering Information

### Part Description

#### iO500 Intelligent Multi-Loop Analog Systems

|             |                                                                                                                                 |
|-------------|---------------------------------------------------------------------------------------------------------------------------------|
| iO500G      | 1 Loop system, 500 point capacity, 4 NACs, gray door, surface mount enclosure, 115 Vac, English.                                |
| iO500G-2    | 1 Loop system, 500 point capacity, 4 NACs, gray door, surface mount enclosure, 230 Vac, English.                                |
| iO500GC     | <b>Canada only:</b> 1 Loop system, 500 point capacity, 4 NACs, 16-zone LED display, grey door, surface mount, 115 Vac, English. |
| iO500G-F    | <b>Canada only:</b> 1 Loop system, 500 point capacity, 4 NACs, 16-zone LED display, grey door, surface mount, 115VAC, French.   |
| iO500GD     | 1 Loop system, 500 point capacity, two-line dialer, 4 NACs, Gray door, surface mount enclosure, 115VAC transformer, English.    |
| iO500R      | 1 Loop system, 500 point capacity, 4 NACs, red Door, surface mount enclosure, 115VAC transformer, English.                      |
| iO500R-2    | 1 Loop system, 500 point capacity, 4 NACs, red door, surface mount enclosure, 230VAC transformer, English.                      |
| iO500RD     | 1 Loop system, 500 point capacity, two-line dialer, 4 NACs, Red Door, surface mount enclosure, 115VAC transformer, English.     |
| iO500G-SP   | 1 Loop system, 500 point capacity, 4 NACs, gray door, surface mount enclosure, 115vac, Spanish.                                 |
| iO500G-2-SP | 1 Loop system, 500 point capacity, 4 NACs, gray door, surface mount enclosure, 230vac, Spanish.                                 |
| iO500G-PG   | 1 Loop system, 500 point capacity, 4 NACs, gray door, surface mount enclosure, 115vac, Portuguese.                              |
| iO500G-2-PG | 1 Loop system, 500 point capacity, 4 NACs, gray door, surface mount enclosure,, 230vac, Portuguese.                             |
| SA-TRIM2    | Flush mount trim, black                                                                                                         |

#### Replacement Electronics

|               |                                                                                       |
|---------------|---------------------------------------------------------------------------------------|
| 500elec-iO    | Replacement electronics kit, complete motherboard and user interface, English         |
| 500elec-iO-SP | Replacement electronics kit, complete motherboard and user interface, Spanish         |
| 500elec-iO-PG | Replacement electronics kit, complete motherboard and user interface, Portuguese      |
| 500elec-iO-FR | Replacement electronics kit, complete motherboard and user interface, Canadian French |

#### Option Cards

|           |                                                                                                                                                                                                |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SA-DACT   | Dual Line Dialer/Modem, supports Contact ID, mounts in cabinet on base plate.                                                                                                                  |
| SA-232    | Serial Port (RS-232), for connection to printers & computers, mounts in cabinet to base plate                                                                                                  |
| SA-ETH    | Ethernet Port, Slave, mounts in cabinet on base plate.                                                                                                                                         |
| XAL250    | Signature Loop Expansion Module. Adds second loop to iO500 systems, 250 point capacity. Mounts in cabinet on main board.                                                                       |
| D16L-iO-2 | LED Annunciator module, 16 X 2-LED zones (4 programmable for sup). Mounts in cabinet to right of LCD display for zones 17-32.                                                                  |
| D16L-iO-1 | LED Annunciator module, 16 X 2-LED zones (4 programmable for sup). Mounts in cabinet to left of LCD display for zones 1-16.                                                                    |
| D8RY-iO-2 | <b>Canada only:</b> LED Annunciator module, two LEDs per zone, 16 zones (4 alarm only, 8 supervisory only, 4 alarm or supervisory). Mounts in cabinet to right of LCD display for zones 17-32. |
| D8RY-iO-1 | <b>Canada only:</b> LED Annunciator module, two LEDs per zone, 16 zones (4 alarm only, 8 supervisory only, 4 alarm or supervisory). Mounts in cabinet to left of LCD display for zones 1-16.   |

**Remote Annunciators (refer to Data Sheet 85005-0128)****LCD Remote Annunciators (mount to standard 4" square electrical box)**

|           |                                                                                                                                   |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------|
| RLCD      | Remote Annunciator, 4X20 LCD & Common Indicators for displaying system status. Gray housing.                                      |
| RLCD-R    | Remote Annunciator, 4X20 LCD & Common Indicators for displaying system status. Red housing.                                       |
| RLCD-C    | Remote Annunciator, 4X20 LCD. Common controls and status indicators. Gray housing.                                                |
| RLCD-CR   | Remote Annunciator, 4X20 LCD. Common controls and status indicators. Red housing.                                                 |
| RLCD-SP   | Remote Annunciator, 4X20 LCD. Common system status indicators. White housing. Spanish.                                            |
| RLCD-PG   | Remote Annunciator, 4X20 LCD. Common system status indicators. White housing. Portuguese.                                         |
| RLCD-C-SP | Remote Annunciator, 4X20 LCD. Common controls and status indicators. White housing. Spanish.                                      |
| RLCD-C-PG | Remote Annunciator, 4X20 LCD. Common controls and status indicators. White housing. Portuguese.                                   |
| RLED-C-SP | Remote Annunciator, common controls and status indicators. 16 groups w/2 LEDs each for zone display. White housing. Spanish.      |
| RLED-C-PG | Remote Annunciator, common controls and status indicators. 16 groups w/2 LEDs each for zone display. White housing. Portuguese.   |
| GCI       | Graphic Annunciator Driver Master for R-Series annunciators. Outputs for 32 LEDs, connection to common control switches and LEDs. |
| GCIX      | Graphic Annunciator Driver Expander for use with GCI Masters. Outputs for 48 LEDs, 24 switch inputs for R-Series annunciators.    |

For French common control, add suffix F to model number.

**LED Remote Annunciators & Expander (mount to standard 4" square electrical box)**

|         |                                                                                                                             |
|---------|-----------------------------------------------------------------------------------------------------------------------------|
| RLED-C  | Remote Annunciator. Common controls and status indicators with 16 X 2-LED groups for zone display. Gray housing.            |
| RLED-CF | Remote Annunciator. Common controls and status indicators with 16 X 2-LED groups for zone display. Gray housing, French.    |
| RLED-CR | Remote Annunciator. Common controls and status indicators with 16 X 2-LED groups for zone display. Red housing.             |
| RLED24  | Remote Annunciator Zone expander. 24 X 2-LED groups with custom label areas for display of alarm and trouble. Gray housing. |
| RLED24R | Remote Annunciator Zone expander. 24 X 2-LED groups with custom label areas for display of alarm and trouble. Red housing.  |

**Remote Annunciator Cabinets & Accessories**

|         |                                                                                                                    |
|---------|--------------------------------------------------------------------------------------------------------------------|
| RA-ENC1 | Remote Annunciator Enclosure, key locked with plexiglass window for one RLCD(C) or RLED(C).                        |
| RA-ENC2 | Remote Annunciator Enclosure, key locked with plexiglass window with space for 2 of either RLCDx, RLEDx or RLED24. |
| RA-ENC3 | Remote Annunciator Enclosure, key locked with plexiglass window with space for 3 of either RLCDx, RLEDx or RLED25. |
| RKEY    | Keyswitch, single gang, provides key operated enable or disable of common controls on RLCD or RLED units.          |
| LSRA-SB | Surface Mount Box - for R Series single units.                                                                     |

**Programming Tools**

|        |                                                   |
|--------|---------------------------------------------------|
| IO-CU  | EST Series configuration and diagnostics utility. |
| 260097 | RS232 cable, 4 conductor, DB9 PC interface        |

**Intelligent Analog Addressable Devices & Accessories**

| Part #                                   | Description                                                                     | Ship wt.   |
|------------------------------------------|---------------------------------------------------------------------------------|------------|
| <b>Intelligent Detectors &amp; Bases</b> |                                                                                 |            |
| SIGA2-PHCOS                              | Intelligent Multisensor Photoelectric/Heat Detector with carbon monoxide sensor | 0.4 (0.16) |
| SIGA2-PHS                                | Intelligent Multisensor Photoelectric/Heat Detector                             |            |
| SIGA2-PHSB                               | Intelligent 4D Multisensor Detector (Black) - UL/ULC Listed                     |            |
| SIGA2-PCOS                               | Intelligent Photoelectric Detector with carbon monoxide sensor                  |            |
| SIGA2-PS                                 | Intelligent Photoelectric Detector                                              |            |
| SIGA2-HRS                                | Intelligent combination fixed temperature/rate-of-rise heat detector            | 0.5 (0.23) |
| SIGA2-HFS                                | Intelligent fixed temperature heat detector                                     |            |
| SIGA2-HCOS                               | Intelligent fixed temperature heat detector with CO sensor                      |            |
| SIGA2-COS                                | Intelligent Carbon Monoxide Detector                                            |            |
| SIGA-HFS                                 | Intelligent Fixed Temperature Heat Detector                                     |            |
| SIGA-HRS                                 | Intelligent Fixed Temperature/Rate-of-Rise Heat Detector                        | 0.2 (0.09) |
| SIGA-IPHS                                | Intelligent 4D Multisensor Detector                                             |            |
| SIGA-IPHSB                               | Intelligent 4D Multisensor Detector (Black)                                     |            |
| SIGA-PHS                                 | Intelligent 3D Multisensor Detector                                             |            |
| SIGA-PS                                  | Intelligent Photoelectric Detector                                              |            |
| SIGA-SD                                  | Intelligent Duct Detector                                                       | 0.3 (0.15) |
| SIGA-SB                                  | Detector Mounting Base                                                          |            |
| SIGA-SB4                                 | 4-inch Detector Mounting Base c/w SIGA-TS Trim Skirt                            |            |
| SIGA-RB                                  | Detector Mounting Base w/Relay                                                  |            |
| SIGA-RB4                                 | 4-inch Detector Mounting Base /w Relay c/w SIGA-TS Trim Skirt                   |            |
| SIGA-IB                                  | Detector Mounting Base w/Fault Isolator                                         | 0.2 (0.09) |
| SIGA-IB4                                 | 4-inch Detector Mounting Base w/ Fault Isolator c/w SIGA-TS Trim Skirt          |            |
| SIGA-LED                                 | Remote Alarm LED                                                                |            |
| SIGA-AB4G                                | Audible (Sounder) Base                                                          | 0.3 (0.15) |

|            |                                                  |            |
|------------|--------------------------------------------------|------------|
| SIGA-TS4   | Trim Skirt (supplied with 4-inch bases)          | 0.1 (.04)  |
| SIGA-AB4GT | Audible (Sounder) Base for CO and Fire Detectors | 0.3 (0.15) |
| SIGA-TCDR  | Temporal Pattern Generator                       | 0.3 (0.15) |

#### Modules

|            |                                                                                                                          |             |
|------------|--------------------------------------------------------------------------------------------------------------------------|-------------|
| SIGA-CC1   | Single Input Signal Module (Standard Mount)                                                                              | 0.5 (0.23)  |
| SIGA-MCC1  | Single Input Signal Module (UIO Mount)                                                                                   | 0.18 (0.08) |
| SIGA-CC1S  | Synchronization Output Module (Standard Mount)                                                                           | 0.5 (0.23)  |
| SIGA-MCC1S | Synchronization Output Module (UIO Mount)                                                                                | 0.18 (0.08) |
| SIGA-CC2   | Dual Input Signal Module (Standard Mount)                                                                                | 0.5 (0.23)  |
| SIGA-MCC2  | Dual Input Signal Module (UIO Mount)                                                                                     | 0.18 (0.08) |
| SIGA-CR    | Control Relay Module (Standard Mount)                                                                                    | 0.4 (0.15)  |
| SIGA-MCR   | Control Relay Module (UIO Mount)                                                                                         | 0.18 (0.08) |
| SIGA-CRR   | Polarity Reversal Relay Module (Standard Mount)                                                                          | 0.4 (0.15)  |
| SIGA-MCRR  | Polarity Reversal Relay Module (UIO Mount)                                                                               | 0.18 (0.08) |
| SIGA-RM1   | Riser Monitor Module (Standard Mount)                                                                                    | 0.5 (0.23)  |
| SIGA-MRM1  | Riser Monitor Module (Plug-in)                                                                                           | 0.18 (0.08) |
| SIGA-IO    | Input/Output Module (Standard Mount)                                                                                     | 0.34 (0.15) |
| SIGA-MIO   | Input/Output Module (Plug-in)                                                                                            | 0.22 (0.10) |
| SIGA-MAB   | Universal Class A/B Module (Plug-in)                                                                                     | 0.18 (0.08) |
| SIGA-CT1   | Single Input Module                                                                                                      | 0.4 (0.15)  |
| SIGA-CT2   | Dual Input Module                                                                                                        | 0.4 (0.15)  |
| SIGA-MCT2  | Dual Input Plug-in (UIO) Module                                                                                          | 0.1 (0.05)  |
| SIGA-IM    | Fault Isolator Module                                                                                                    | 0.5 (0.23)  |
| SIGA-MM1   | Monitor Module                                                                                                           | 0.4 (.15)   |
| SIGA-WTM   | Waterflow/Tamper Module                                                                                                  | 0.4 (.15)   |
| SMK        | Smoke Power Converter Module                                                                                             | 0.4 (0.15)  |
| SIGA-UIO2R | Universal Module Board w/Riser Inputs - Two Module Positions                                                             | 0.32 (0.15) |
| SIGA-UIO6R | Universal Module Board w/Riser Inputs - Six Module Positions                                                             | 0.62 (0.28) |
| SIGA-UIO6  | Universal Module Board - Six Module Positions                                                                            | 0.56 (0.25) |
| SIGA-REL   | Analog addressable releasing module                                                                                      | 0.5 (0.23)  |
| 276A-REL   | Manual releasing station (single-action). English markings, black text on yellow polycarbonate body.                     | 1.0 (0.45)  |
| 278A-REL   | Manual releasing station (double-action). English markings, black text on yellow polycarbonate body.                     | 1.0 (0.45)  |
| RELA-ABT   | Manual Abort Station. English markings, black text on yellow polycarbonate body.                                         | 1.0 (0.45)  |
| RELA-SRV-1 | Service Disconnect Switch. One n/c contact and one n/o contact. English markings, white text on blue polycarbonate body. | 1.0 (0.45)  |
| RELA-EOL   | Polarized end-of-line relay. English markings on stainless steel cover.                                                  | 0.2 (0.1)   |

#### Accessories

|        |                                                                                                                                                                                                         |             |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| GCI    | Graphic Annunciator Driver, provides outputs for common indicators and 32 alarm/supv zones as well as inputs for common switches. Provided with a snap track for mounting in custom graphic enclosures. |             |
| CTM    | City Tie Module. Provides connection to a local energy fire alarm box.                                                                                                                                  | 0.6 (0.3)   |
| RPM    | Reverse Polarity Module                                                                                                                                                                                 | 3.0 (1.36)  |
| BC-1   | Battery Cabinet. 14.0" x 18.25" x 7.25". Holds 2 12V24A batteries.                                                                                                                                      | 50.0 (22.7) |
| BC-1R  | Battery Cabinet - Red. 14.0" x 18.25" x 7.25". Holds 2 12V24A batteries.                                                                                                                                | 50.0 (22.7) |
| BC-1EQ | Seismic hardening Kit for iO series panels. Includes battery hardening for BC-1 enclosure and components to harden panel internal components. See note below.                                           |             |
| MFC-A  | Multifunction Fire Cabinet, 8" x 14" x 3.5" - RED.                                                                                                                                                      | 20.6 (9.4)  |
| PT-1S  | System Printer - Desktop style.                                                                                                                                                                         | 36.6 (16.6) |

#### Note:

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

Standby batteries must be mounted externally from fire panel in separately mounted BC-1 enclosure. Order BC-1 and BC-1EQ separately.



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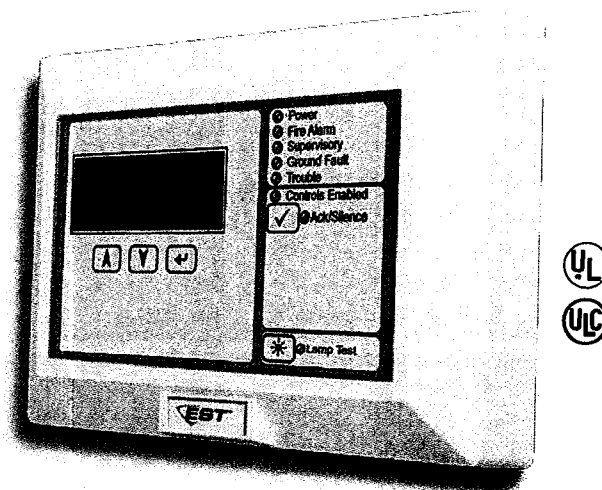
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# R-Series Remote Annunciators

RLCD, RLCD-C, RLED, RLED-C, RLED24, GCI



## Overview

Edwards R-Series Annunciators are high-performance remote annunciators that provide status indication and common controls for compatible fire alarm control panels, including iO-Series small analog fire alarm systems. This family of annunciators offers LCD or LED annunciation. Models are available with and without common controls.

There are three R-Series annunciator models, plus an LED-based expander. Up to two expanders can be connected to any annunciator. The expander includes 24 pairs of LEDs that extend the capabilities of any of the annunciators.

All annunciator models include status LEDs and an internal buzzer. Two models have an LCD text display, and one has 16 pairs of LEDs for zone annunciation. LCD models feature a large back-lit, four by twenty character per line, super-twist liquid crystal display.

R-Series annunciators and expanders are mounted on a standard 4-inch square electrical box, using the included mounting ring. They can also be surface mounted in locking steel enclosures. Three different enclosures are available.

A keyswitch and graphic annunciator interface is available for R-Series annunciator applications. The keyswitch enables or disables common controls. The graphic annunciator interface cards supports 32 LEDs and 16 switches on the graphic panel display.

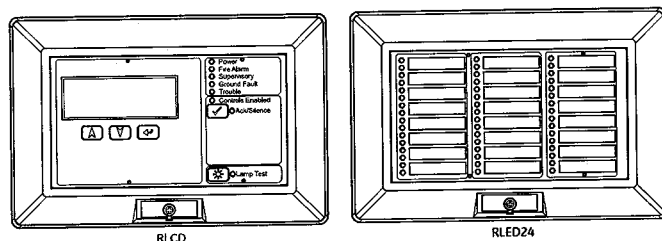
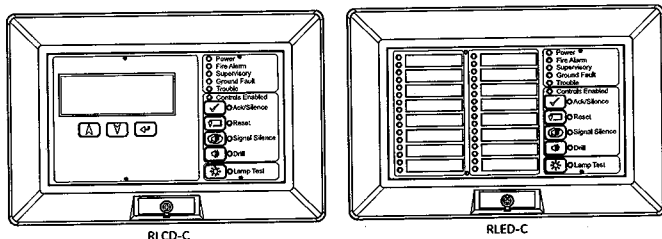
## Features

- LCD models feature large 4 x 20 character backlit LCD display
- LED models provide 16 pairs of LEDs for zone annunciation
- Available expander extends capability with 24 pairs of LEDs
- Up to two expanders may be wired to each annunciator
- Status LEDs and internal buzzer standard on all models
- Common controls available for LED and LCD display models
- Available keyswitch for disabling common controls
- Standard 4-inch square electrical box mounting
- Class B or Class A RS485 wiring standard
- One-, two-, and three-position enclosures available
- Graphic Annunciator interface, includes common control, indicators and 32 LEDs
- No programming required, set the address and unit receives all information from panel

## Application

R-Series annunciators communicate with the FACP on the RS-485 data riser. This can be configured for Class A or Class B communication. Annunciators do not provide ground fault isolation.

These annunciators are stand-alone units that can be powered by the FACP or by an approved power supply.



| Features by model | RLCD | RLCD-C | RLED-C | RLED24 |
|-------------------|------|--------|--------|--------|
| Reset             | ✓    | ✓      | ✓      | -      |
| Ack/Silence       | ✓    | ✓      | ✓      | -      |
| Fire Alarm        | ✓    | ✓      | ✓      | -      |
| Supervisory       | ✓    | ✓      | ✓      | -      |
| Ground Fault      | ✓    | ✓      | ✓      | -      |
| Trouble           | ✓    | ✓      | ✓      | -      |
| Controls Enabled  | ✓    | ✓      | ✓      | -      |
| Ack/Silence       | ✓    | ✓      | ✓      | -      |
| Reset             |      | ✓      | ✓      | -      |
| Signal Silence    |      | ✓      | ✓      | -      |
| Drill             |      | ✓      | ✓      | -      |
| Lamp Test         | ✓    | ✓      | ✓      | -      |
| LCD Display       | ✓    | ✓      | -      | -      |
| Zone Active LEDs  | -    | -      | 16 *   | 24 **  |
| Zone Trouble LEDs | -    | -      | 16     | 24     |

\* zones 13-16 may be selected as Supervisory on IO64

\*\* zones 13-16 and 29-32 may be selected as Supervisory on IO500

## Graphic Annunciator Interface

The GCI Graphic Annunciator Driver is an interface card that connects the fire alarm control panel to the display panel of an LED-based graphic annunciator.

The annunciator card supports 32 LEDs and 16 switches on the graphic panel display. It includes status LEDs and an internal buzzer.

The graphic interface is supplied with snap track mounting. It is attached to a plastic mounting rail that requires two EIA panels.

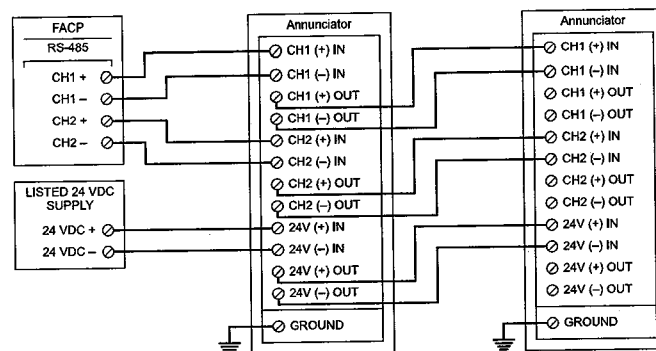
The annunciator communicates with the FACP on the RS-485 data riser. This can be configured for Class A or Class B communication. The annunciator does not provide ground fault isolation. It is a stand-alone unit that can be powered by the FACP or by an approved power supply.

### Graphic Annunciator Interface Specifications

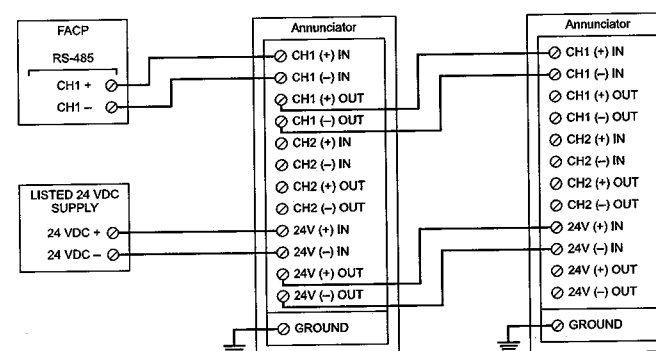
|                 |                                    |
|-----------------|------------------------------------|
| Alarm current   | 146 mA at 24 Vdc (with 36 LEDs ON) |
| Standby current | 36 mA at 24 Vdc (with no LEDs ON)  |
| Maximum current | 10 mA per LED                      |

## Annunciator Wiring

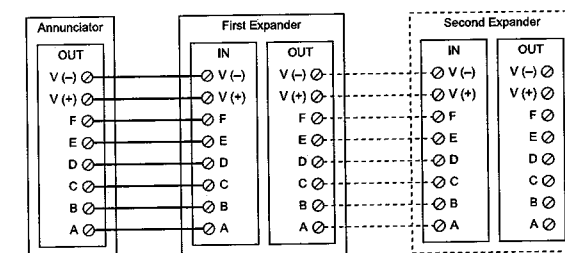
### Annunciator, Class A



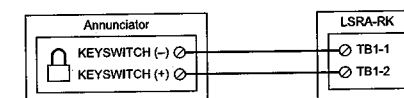
### Annunciator, Class B



### Expander

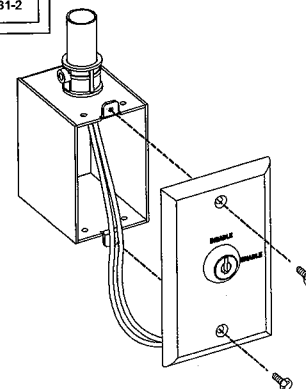


## Remote Keyswitch



### Keyswitch Specifications

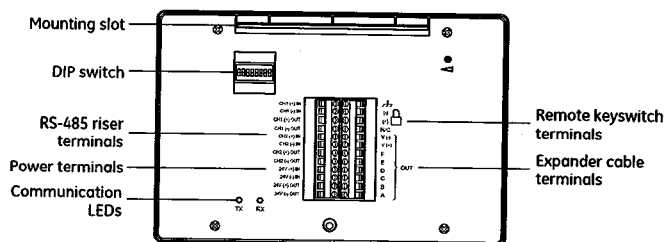
|                       |                                  |
|-----------------------|----------------------------------|
| Maximum voltage       | 5 Vdc                            |
| Maximum current       | 200 mA                           |
| Mounting              | 2-1/2 in (64 mm) deep 1-gang box |
| Termination           | Screw terminals                  |
| Maximum wire size     | 12 AWG (2.5 mm sq)               |
| Contact configuration | Normally open                    |



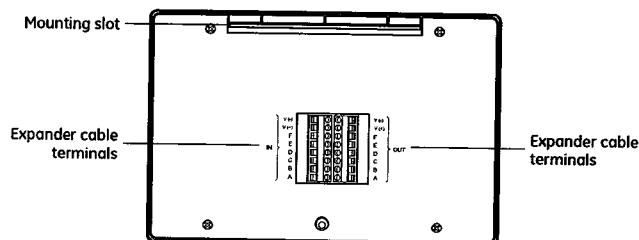


## Annunciator Connections

### Annunciator



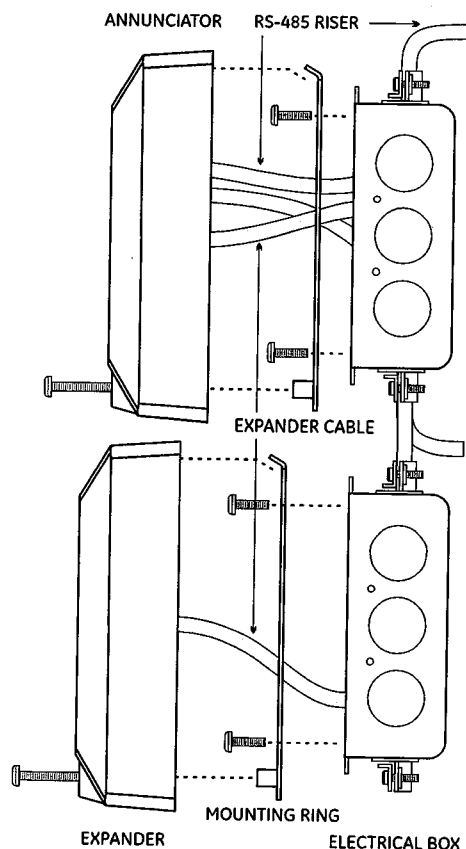
### Expander



### DIP switch settings

| Switch               | Description and values                                                                                                                     |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| S1 to S5             | The annunciator network address (in binary).<br>The factory setting is for address 2.<br>Examples: 10000 = 1 01000 = 2 11000 = 3 00100 = 4 |
| S6 Network baud rate | OFF = 9600 baud (factory default setting)<br>ON = 38,400 baud                                                                              |
| S7 to S8             | Not used                                                                                                                                   |

## Annunciator Mounting

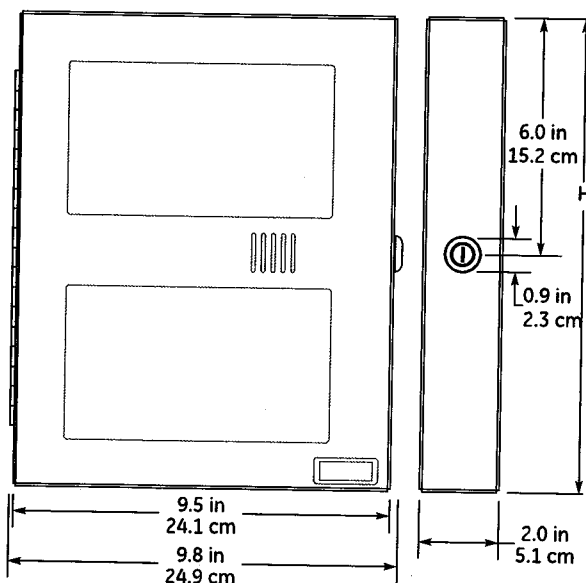
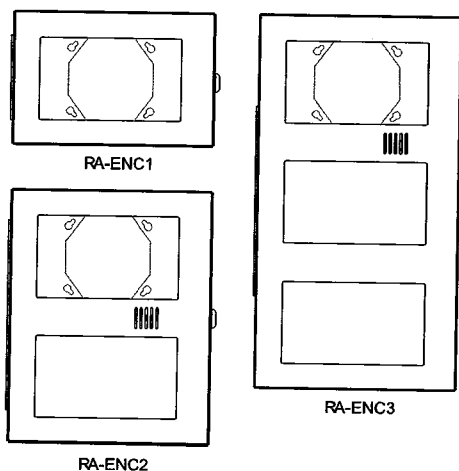


## Annunciator Enclosures

The RA Remote Annunciator Enclosures provide secure, surface mounted protection for annunciators and extenders. Each consists of a back plate, hinged cover, and key lock.

The enclosures are 16-gauge welded steel with a white, painted finish. Each enclosure includes a security lock and two keys. The two- and three-position enclosures have wiring channels for correct routing of interconnections.

The enclosures attach to a standard electrical box, and provide a mounting lip that takes the place of the integral mounting ring supplied with the annunciators and expanders.



### Dimensions (H x W x D)

|         |                                            |
|---------|--------------------------------------------|
| RA-ENC1 | 6.3 x 9.8 x 2.0 in (16.0 x 24.9 x 5.1 cm)  |
| RA-ENC2 | 12.0 x 9.8 x 2.0 in (30.5 x 24.9 x 5.1 cm) |
| RA-ENC3 | 17.7 x 9.8 x 2.0 in (45.0 x 24.9 x 5.1 cm) |

Note: Allow approximately 2 inches (50 cm) clearance on both sides of the enclosure, to permit inserting and removing the key, and opening the door through 90 degrees.



### Detection & alarm since 1872

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F +61 3 9239 1299

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F +32 2 721 86 13

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T 305 593 4301  
F 305 593 4300

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## Specifications

|                           | RLCD-C                                                                                                            | RLCD   | RLED-C | RLED24 |
|---------------------------|-------------------------------------------------------------------------------------------------------------------|--------|--------|--------|
| Operating voltage         | 24 VDC, continuous.                                                                                               |        |        |        |
| Standby current           | 99 mA                                                                                                             | 98 mA  | 28 mA  | 6 mA   |
| Alarm current             | 115 mA                                                                                                            | 113 mA | 62 mA  | 34 mA  |
| RS-485 communications     | Class A or Class B, 9600 baud                                                                                     |        |        |        |
| Data wiring               | 18 to 14 AWG (1.0 to 2.5 sq mm) twisted pair (6 twists per foot minimum). Maximum wire run is 4,000 ft. (1,219 m) |        |        |        |
| Remote key switch circuit | 5 VDC at 1 mA, power-limited, unsupervised                                                                        |        |        |        |
| Ground fault impedance    | 0                                                                                                                 |        |        |        |
| Power wiring              | 18 to 14 AWG (1.0 to 2.5 sq. mm)                                                                                  |        |        |        |
| Display area              | 4 lines of 20 characters each                                                                                     |        |        |        |
| Dimensions (H x W x D)    | 5-5/8 x 8-1/2 x 1-1/2 in. (14.3 x 21.4 x 3.8 cm)                                                                  |        |        |        |
| Mounting                  | North American 4-inch square electrical box or listed enclosure                                                   |        |        |        |
| Agency Listing            | UL, ULC                                                                                                           |        |        |        |
| Operating environment     | Temperature: 32 to 120°F (0 to 49°C) Humidity: 0 to 93% RH, noncondensing at 90°F (32°C)                          |        |        |        |

## Ordering Information

| Part                               | Description                                                                                                                                                                                             |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Remote Annunciators</b>         |                                                                                                                                                                                                         |
| RLCD                               | LCD text annunciator without common controls. English.                                                                                                                                                  |
| RLCD-R                             | LCD text annunciator without common controls. English. Red.                                                                                                                                             |
| RLCDF                              | LCD text annunciator without common controls. French.                                                                                                                                                   |
| RLCD-C                             | LCD text annunciator with common controls. English.                                                                                                                                                     |
| RLCD-CR                            | LCD text annunciator with common controls. English. Red.                                                                                                                                                |
| RLCD-CF                            | LCD text annunciator with common controls. French.                                                                                                                                                      |
| RLED-C                             | 16-pair LED zone annunciator with common controls. English.                                                                                                                                             |
| RLED-CR                            | 16-pair LED zone annunciator with common controls. English. Red.                                                                                                                                        |
| RLED-CF                            | 16-pair LED zone annunciator with common controls. French.                                                                                                                                              |
| <b>Remote Expanders</b>            |                                                                                                                                                                                                         |
| RLED24                             | 24-pair LED zone expander with expander cable and zone card insert.                                                                                                                                     |
| RLED24R                            | 24-pair LED zone expander with expander cable and zone card insert. Red.                                                                                                                                |
| <b>Enclosures</b>                  |                                                                                                                                                                                                         |
| RA-ENC1                            | One-position enclosure for Remote Annunciator.                                                                                                                                                          |
| RA-ENC2                            | Two-position enclosure for Remote Annunciator and one Remote Expander, including one interconnection cable.                                                                                             |
| RA-ENC3                            | Three-position enclosure for Remote Annunciator and two Remote Expanders, including two interconnection cables.                                                                                         |
| LSRA-SB                            | Surface Mount Box - for single R Series annunciator.                                                                                                                                                    |
| <b>Graphic Annunciator Drivers</b> |                                                                                                                                                                                                         |
| GCI                                | Graphic Annunciator Driver, provides outputs for common indicators and 32 alarm/supv zones as well as inputs for common switches. Provided with a snap track for mounting in custom graphic enclosures. |
| <b>Accessories</b>                 |                                                                                                                                                                                                         |
| RKEY                               | Remote key switch on plate for enabling or disabling common controls (Lock/Unlock).                                                                                                                     |
| 27193-16                           | Electrical box, surface mount, white, single-gang, for RKEY.                                                                                                                                            |

# POWER SONIC®

## PS-12120 12 Volt 12.0 AH

Rechargeable Sealed Lead Acid Battery

We've Got The Power.™



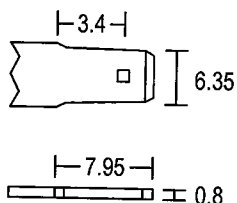
### Features

- Absorbent Glass Mat (AGM) technology for superior performance
- Valve regulated, spill proof construction allows safe operation in any position
- Power/volume ratio yielding unrivaled energy density
- Rugged impact resistant ABS case and cover (UL94-HB)
- Approved for transport by air. D.O.T., I.A.T.A., F.A.A. and C.A.B. certified
- U.L. recognized under file number MH 20845

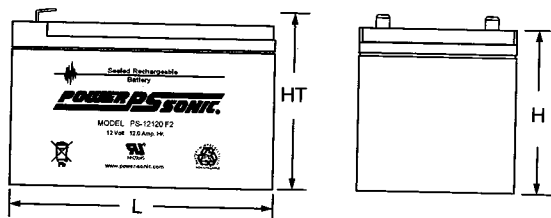
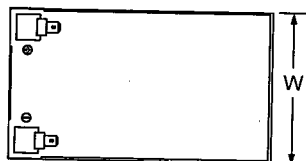
### Terminals

(mm)

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



### Physical Dimensions: in (mm)



L: 5.95 (151) W: 3.86 (98) H: 3.70 (94) HT: 3.94 (100)

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. (600mA to 10.50 volts) ..... | 12.0 AH |
| 10-hr. (1.1A to 10.50 volts) .....  | 11.0 AH |
| 5-hr. (2.1A to 10.20 volts) .....   | 10.5 AH |
| 1-hr. (7.25A to 9.00 volts) .....   | 7.25 AH |
| 15-min. (21.5A to 9.00 volts) ..... | 5.38 AH |

**Approximate Weight** ..... 7.92 lbs. (3.59 kg)

**Energy Density** (20-hr. rate) ..... 1.69 W-h/in<sup>3</sup> (103.41 W-h/l)

**Specific Energy** (20-hr. rate) ..... 18.18 W-h/lb (40.08 W-h/kg)

**Internal Resistance** (approx.) ..... 20 milliohms

**Max Discharge Current** (7 Min.) ..... 36.0 amperes

**Max Short-Duration Discharge Current** (10 Sec.) ..... 120.0 amperes

**Shelf Life** (% of nominal capacity at 68°F (20°C))

|                |     |
|----------------|-----|
| 1 Month .....  | 97% |
| 3 Months.....  | 91% |
| 6 Months ..... | 83% |

#### Operating Temperature Range

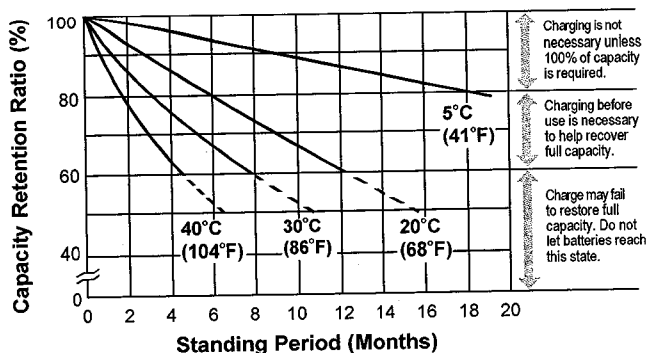
Charge..... -4°F (-20°C) to 122°F (50°C)

Discharge..... -40°F (-40°C) to 140°F (60°C)

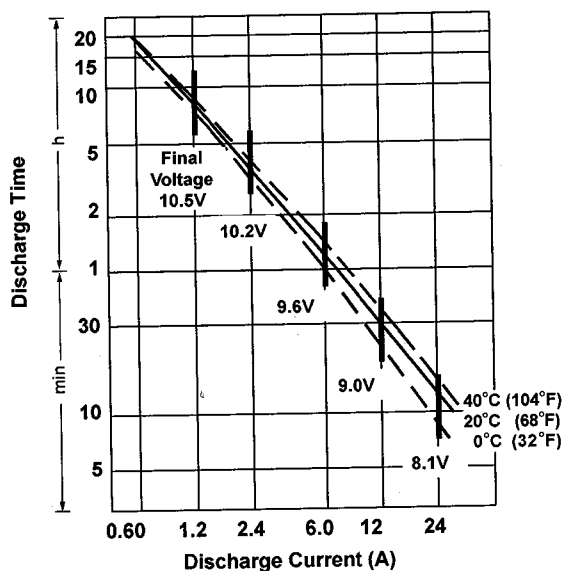
**Case** ..... ABS Plastic

**Power-Sonic Chargers** ..... PSC-122000A, 122000A-C

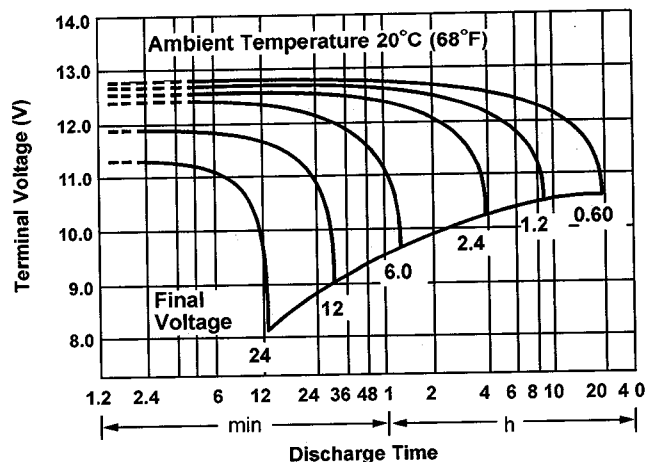
### Shelf Life & Storage



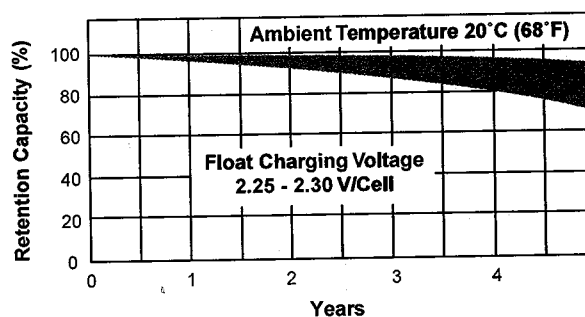
### Discharge Time vs. Discharge Current



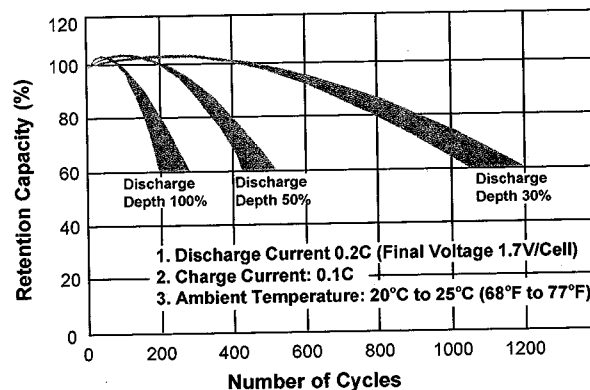
### Discharge Characteristics



### Life Characteristics in Stand-By Use



### Life Characteristics in Cyclic Use



### Charging

**Cycle Applications:** Limit initial current to 3.6A. Charge until battery voltage (under charge) reaches 14.4 to 14.7 volts at 68°F (20°C). Hold at 14.4 to 14.7 volts until current drops to under 120mA. Battery is fully charged under these conditions, and charger should be disconnected or switched to "float" voltage.

**"Float" or "Stand-By" Service:** Hold battery across constant voltage source of 13.5 to 13.8 volts continuously. When held at this voltage, the battery will seek its own current level and maintain itself in a fully charged condition.

**Note:** Due to the self-discharge characteristics of this type of battery, it is imperative that they be charged within 6 months of storage, otherwise permanent loss of capacity might occur as a result of sulfation.

### Chargers

Power-Sonic offers a wide range of chargers suitable for batteries up to 100AH. Please refer to the Charger Selection Guide in our specification sheets for "C-Series Switch Mode Chargers" and "Transformer Type A and F Series". Please contact our Technical department for advice if you have difficulty in locating suitable models.

### Further Information

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

### Contact Information

|                                                                                                                                                             |                                                                                                                                                                   |                                                                                                                                                  |                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DOMESTIC SALES</b><br>Tel: +1-619-661-2020<br>Fax: +1-619-661-3650<br><a href="mailto:national-sales@power-sonic.com">national-sales@power-sonic.com</a> | <b>CUSTOMER SERVICE</b><br>Tel: +1-619-661-2030<br>Fax: +1-619-661-3648<br><a href="mailto:customer-service@power-sonic.com">customer-service@power-sonic.com</a> | <b>TECHNICAL SUPPORT</b><br>Tel: +1-619-661-2020<br>Fax: +1-619-661-3648<br><a href="mailto:support@power-sonic.com">support@power-sonic.com</a> | <b>INTERNATIONAL SALES</b><br>Tel: +1-650-364-5001<br>Fax: +1-650-366-3662<br><a href="mailto:international-sales@power-sonic.com">international-sales@power-sonic.com</a> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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## → IPGSM-4G

### IP Internet & GSM (4G/3G/2G) Dual Path Communicator

#### General

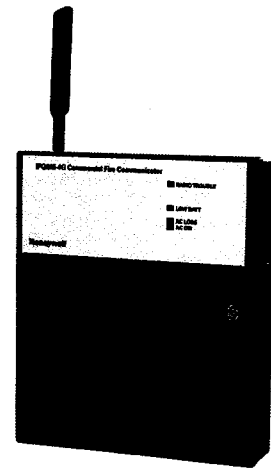
The IPGSM-4G is a 4G fire alarm communicator that offers contact ID reporting with any Fire Alarm Control Panel (FACP) that has a built-in dialer. This easy to install, dual path communicator connects directly to the primary and secondary communication ports of a Fire panel's Digital Alarm Communicator Transmitter (DACT). It offers three selectable reporting paths which include: (Cellular only), (IP only), or (IP primary/cellular backup). In the event of an off-normal condition, the fire panel sends contact ID formatted information to the IPGSM-4G communicator panel. The IPGSM-4G then reformats the data into highly encrypted Ethernet packets for transmission to the AlarmNet receiver via customer-provided Internet/Intranet connection or the GSM network.

Alternative communication methods are critical in the marketplace due to VoIP (Voice over IP), migration from POTS (Plain Old Telephone Service) and growth of digital radio networks. The IPGSM-4G's exclusive dual-path communications solution combines Internet service with GSM for added reliability and an extra level of security. All signals from the IPGSM-4G communicator panel are delivered to Honeywell's AlarmNet Network Control Center, which routes the information to the appropriate central station. The state of the art AlarmNet network control center is fully redundant and monitored 24/7. AlarmNet has the ability to route messages using AlarmNet-i and 800 PLUS services, providing true redundancy and multi-path message delivery.

The IPGSM-4G is designed to operate over the most common GSM networks including 2G, 3G and 4G. Its multi-GSM platform technology automatically chooses the best available cellular signal in the area based on signal strength and seamlessly self-adjusts to maintain critical life safety communication.

#### Features

- Saves the cost of two dedicated phone lines.
- Dual path communications. Can communicate to central station using Internet or cellular technology.
- Requires no change to the existing Fire Alarm Control Panel configuration. The IPGSM-4G connects directly to the primary and secondary telephone ports.
- Multi-GSM platform compatibility for 2G, 3G and 4G.
- Operates over the following communication protocols: HSPA+ (4G) HSPA (HSDPA & HSUPA) (3G) EDGE (2G) GPRS (2G).
- Works over any type of customer provided Ethernet 10/100
- Base network connection (LAN or WAN), DSL modem or cable modem.
- Data transmits over standard contact-ID protocol but is secured with the industry's advanced encryption standard (AES 256 bit).
- Supports both dynamic (DHCP) or Public and Private Static IP addressing.
- Built-In Power Supply module: On board charging circuit design accommodates back-up battery. Includes primary power and battery supervision.
- Diagnostic LEDs: Signal strength and status indicators.



- Reliable connection: IP and GSM connection tested every day.
- QOS: Quality of Service diagnostics via AlarmNet conveys vital communicator information including when message was received, signal strength, and message path used.
- 7720P Hand-held programmer for easy setup.

#### Operation

When an event occurs, the Fire Alarm Control Panel goes off hook to dial the central station. The IPGSM-4G Dialer Capture Module detects the off-hook condition and provides the fire panel with a dial tone. When the fire panel detects the dial tone, it begins dialing the central station. After the dialing is completed, the Dialer Capture Module returns a handshake to the fire panel. The fire panel then sends the contact ID reports to the Dialer Capture Module, which in turn sends a kiss-off after the report is successfully received from the fire panel. The Dialer Capture Module sends the contact ID reports to the IPGSM communications module. When all the reports are sent, the fire panel goes on-hook. The IPGSM communications module then transmits the messages to the central station either over the GSM network or the Internet (dependent on configuration).

#### Easy to Program

The IPGSM-4G communicator can be pre-programmed using the 7720P programmer to enter all central-station information. This is saved to the IPGSM-4G communicator panel memory. When the IPGSM-4G communicator is installed at the site and connected to the Internet/Intranet, it registers itself with the AlarmNet receiver.

For most installations, the only required parameters are:

- Primary City ID (two digits) obtained from your monitoring station.
- Primary Central Station ID (two digits) obtained from your monitoring station.
- Primary Subscriber ID (four digits) obtained from your monitoring station.
- Communication Module's MAC ID, and MAC CRC number located on outside of box, and inside of the module.

All of these parameters are assigned by the monitoring station.

**NOTE:** Some assembly is required. See *Installation and Setup Guide #800-12454* for full details.

## Panel Capabilities

The IPGSM-4G is compatible with fire panels that use the Contact ID communications format as described in the SIA DC-05 standard.

## AlarmNet

Honeywell's AlarmNet has been the nationwide leader in alarm communications technology since 1986. A reliable alternative for the transmission of alarm signals, our radio network provides extensive coverage in the United States and Canada. AlarmNet Network Control center processes signals from powerful servers in multiple locations equipped with 24/7 infrastructure support. The AlarmNet network consist of redundant hardware servers, hot back-up databases and generators with battery back-up at all locations to ensure continuity of service. Signals from Alarm-Net are transmitted to the central station's receivers using multiple communications paths consisting of the Internet, radio network or toll-free POTS service.

## Installation Requirements

### UL COMPLIANCE

To meet UL864/NFPA, ensure the following:

- IPGSM-4G must be installed in accordance with NFPA (National Fire Protection Association) standards 70 and 72.
- IPGSM-4G must be mounted in the same room and within 20 feet of the fire panel.
- IPGSM-4G, and all equipment used for the IP connection (such as the router, hub, modem, etc.) shall be listed, must be powered from an un-switched branch circuit, and be provided with appropriate standby power.
- IPGSM-4G must use the 7AH battery (not supplied) to provide 24-hour backup capability.

## Electrical Specifications

Transformer:

- Primary 120VAC, 60Hz, 0.5A.
- Secondary: 18VDC, 50VA.

Battery:

- One 12 V 7.0 AH lead-acid battery (not supplied).
- Battery charging current: 1 Amp maximum.
- Battery discharge current: Standby 230mA, Active 950mA.

## Cabinet Specifications

**Dimensions:** 14.875" H x 12.75" W x 3.0" D (37.8 cm H x 32.4 cm W x 7.6 cm D).

**Color:** Red.

## Shipping Specifications

**Weight:** 5.3 lbs. (6.94 kg).

**Dimensions:** 15.625" H x 13.79" W x 9.25" D (39.7 cm H x 34.9 cm W x 23.9 cm D)

## Temperature and Humidity Ranges

This system meets NFPA requirements for operation at 0 - 49°C/32 - 120°F and at a relative humidity 93% ± 2% RH (non condensing at 32°C ± 2°C (90°F ± 3°F)). However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and its peripherals be installed in an environment with a normal room temperature of 15 - 27°C/60 - 80°F.

## Product Line Information

**IPGSM-4G:** Internet and Digital Cellular Fire Alarm Communicator Panel. Includes red cabinet with Ademco key and lock, wall outlet box, Dialer Capture Module, iGSM Communications Module, antenna & mounting adapter, PowerBoost1 power supply, LED display board, transformer, manual, & required screws, cables, etc.

**GSM-ANT3DB:** 3db gain external/remote antenna.

**7626-50HC:** 50 ft. antenna cable, low loss.

**7626-25HC:** 25 ft. antenna cable, low loss.

**WA7626-CA:** SNA to N Adapter.

**7720P:** IPGSM-4G hand held programmer.

**HPTCOVER:** Plug in transformer box for IPGSM communicator.

**BAT-1270:** Battery 12 Volts, 7 AH, sealed.

## Agency Listings and Approvals

The listings and approvals below apply to the basic IPGSM-4G communicator panel. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process.

*Consult factory for latest listing status.*

**UL Listed:** S789.

**CSFM:** 7300-1645:0199.

**FDNY:** COA #6150.

This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice.  
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## Automation and Control Solutions

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Page 2 of 2



# Honeywell

# POWER SONIC®

## PS-1270 12 Volt 7.0 AH

### Rechargeable Sealed Lead Acid Battery

**We've Got The Power.™**



#### Features

- Absorbent Glass Mat (AGM) technology for superior performance
- Valve regulated, spill proof construction allows safe operation in any position
- Power/volume ratio yielding unrivaled energy density
- Rugged impact resistant ABS case and cover (UL94-HB)
- Approved for transport by air. D.O.T., I.A.T.A., F.A.A. and C.A.B. certified
- U.L. recognized under file number MH 20845

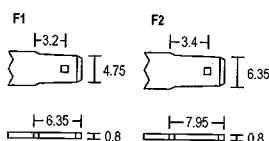
#### Terminals

(mm)

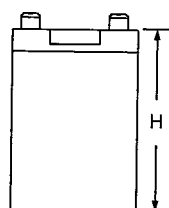
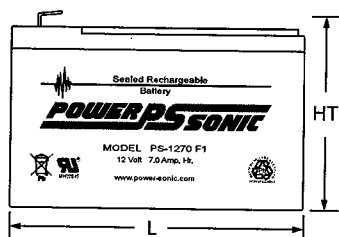
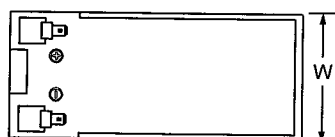
F1 - Quick disconnect tabs, 0.187" x 0.032" - Mate with AMP. INC. FASTON "187" series

— OR —

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



#### Physical Dimensions: in (mm)



L: 5.95 (151) W: 2.56 (65) H: 3.70 (94) HT: 3.86 (98)

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. (350mA to 10.50 volts) ..... | 7.00 AH |
| 10-hr. (650mA to 10.50 volts) ..... | 6.50 AH |
| 5-hr. (1.2A to 10.20 volts) .....   | 6.00 AH |
| 1-hr. (4.5A to 9.00 volts) .....    | 4.50 AH |
| 15-min. (14A to 9.00 volts) .....   | 3.50 AH |

**Approximate Weight** ..... 4.80 lbs. (2.18 kg)

**Energy Density** (20-hr. rate) ..... 1.49 W-h/in<sup>3</sup> (90.95 W-h/l)

**Specific Energy** (20-hr. rate) ..... 17.50 W-h/lb (38.58 W-h/kg)

**Internal Resistance** (approx.) ..... 23 milliohms

**Max Discharge Current** (7 Min.) ..... 21.0 amperes

**Max Short-Duration Discharge Current** (10 Sec.) ..... 70.0 amperes

**Shelf Life** (% of nominal capacity at 68° F (20° C))

|                |     |
|----------------|-----|
| 1 Month .....  | 97% |
| 3 Months ..... | 91% |
| 6 Months ..... | 83% |

#### Operating Temperature Range

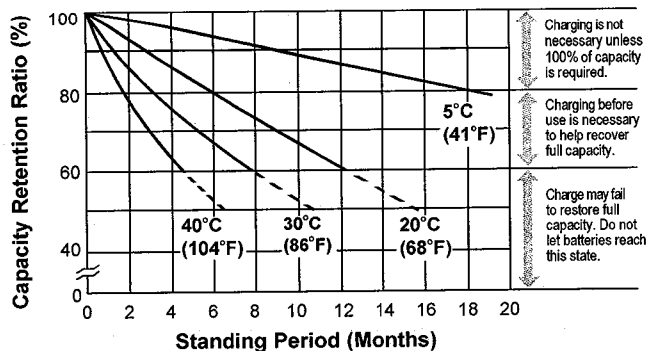
Charge .. -4° F (-20° C) to 122° F (50° C)

Discharge ..... -40° F (-40° C) to 140° F (60° C)

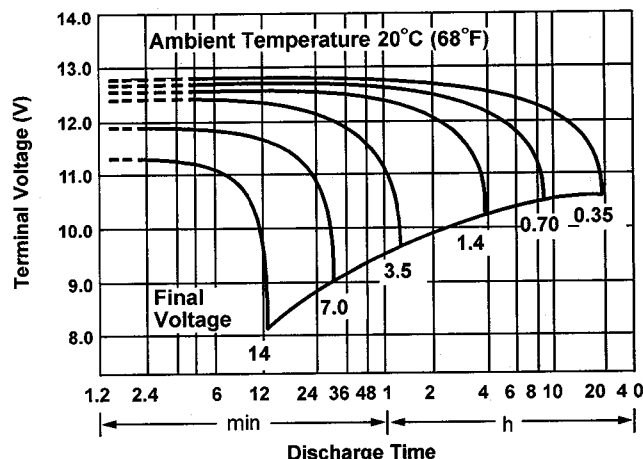
**Case** ..... ABS Plastic

**Power-Sonic Chargers** ..... PSC-12800A, 12800A-C

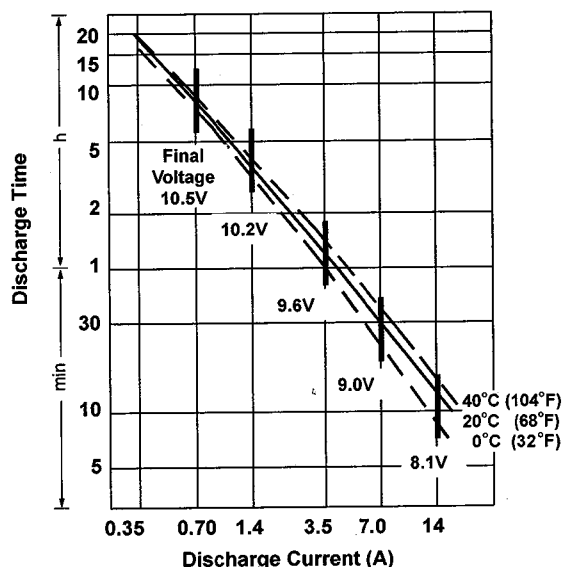
### Shelf Life & Storage



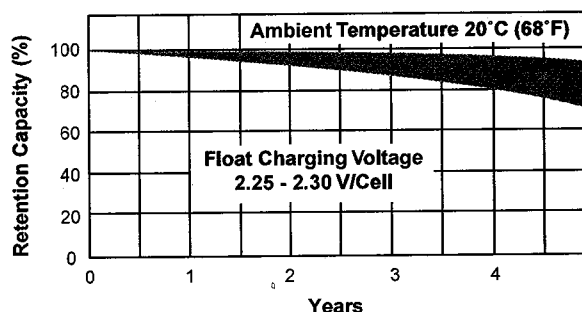
### Discharge Characteristics



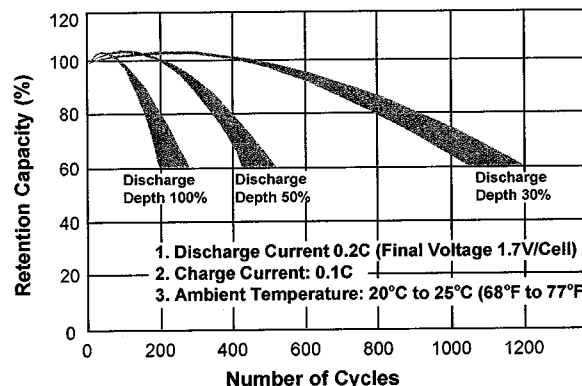
### Discharge Time vs. Discharge Current



### Life Characteristics in Stand-By Use



### Life Characteristics in Cyclic Use



### Charging

**Cycle Applications:** Limit initial current to 2.1A. Charge until battery voltage (under charge) reaches 14.4 to 14.7 volts at 68°F (20°C). Hold at 14.4 to 14.7 volts until current drops to under 70mA. Battery is fully charged under these conditions, and charger should be disconnected or switched to "float" voltage.

**"Float" or "Stand-By" Service:** Hold battery across constant voltage source of 13.5 to 13.8 volts continuously. When held at this voltage, the battery will seek its own current level and maintain itself in a fully charged condition.

**Note:** Due to the self-discharge characteristics of this type of battery, it is imperative that they be charged within 6 months of storage, otherwise permanent loss of capacity might occur as a result of sulfation.

### Chargers

Power-Sonic offers a wide range of chargers suitable for batteries up to 100AH. Please refer to the Charger Selection Guide in our specification sheets for "C-Series Switch Mode Chargers" and "Transformer Type A and F Series". Please contact our Technical department for advice if you have difficulty in locating suitable models.

### Further Information

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

### Contact Information

#### DOMESTIC SALES

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Fax: +1-619-661-3648  
support@power-sonic.com

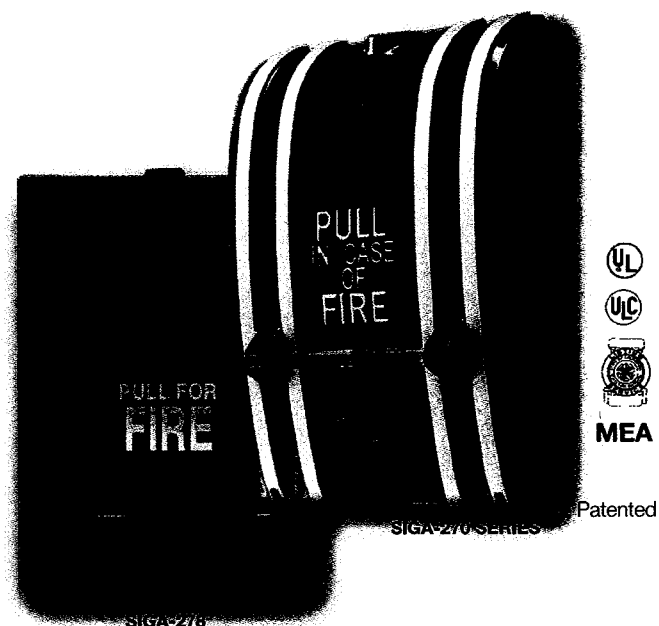
#### INTERNATIONAL SALES

Tel: +1-650-364-5001  
Fax: +1-650-366-3662  
international-sales@power-sonic.com



# Manual Pull Stations

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



## Overview

The SIGA-270 and SIGA-278 series Manual Pull Stations are part of EST's Signature Series system. The SIGA-270 Fire Alarm Manual Pull Stations feature our very familiar teardrop shape. They are made from die-cast zinc and finished with red epoxy powder-coat paint complemented by aluminum colored stripes and markings. With positive pull-lever operation, one pull on the station handle breaks the glass rod and turns in a positive alarm, ensuring protection plus fool-proof operation. Presignal models (SIGA-270P) are equipped with a general alarm (GA) keyswitch for applications where two stage operation is required. The up-front highly visible glass rod discourages tampering, but is not required for proper operation.

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

## 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.

- **Traditional familiar appearance**  
SIGA-270 models feature our familiar teardrop design with simple positive pull action and sturdy die-cast metal body.
- **One stage (GA), two stage (pre-signal), and double action models**  
SIGA-270 models are available for one or two stage alarm systems. The single stage double action SIGA-278 features a rugged Lexan housing with keyed reset mechanism.

- **Break glass operation**  
An up-front visible glass rod on the SIGA-270 discourages tampering.
- **Intelligent device with integral microprocessor**  
All decisions are made at the station allowing lower communication speed while substantially improving control panel response time. Less sensitive to line noise and loop wiring properties; twisted or shielded wire is not required.
- **ADA Compliant**  
Meets ADA requirements for manual pull stations.
- **Electronic Addressing with Non-volatile memory**  
Permanently stores programmable address, serial number, type of device, and job number. Automatically updates historic information including hours of operation, last maintenance date, number of alarms and troubles, and time and date of last alarm.
- **Automatic device mapping**  
Each station transmits wiring information to the loop controller regarding its location with respect to other devices on the circuit.
- **Stand-alone operation**  
The station inputs an alarm even if the loop controller's polling interrogation stops.
- **Diagnostic LEDs**  
Status LEDs; flashing GREEN shows normal polling; flashing RED shows alarm state.
- **Designed for high ambient temperature operation**  
Install in ambient temperatures up to 120 °F (49 °C).

## Application

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

## Compatibility

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

## Warnings & Cautions

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

## Testing & Maintenance

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

The station's automatic self-diagnosis identifies when it is defective and causes a trouble message. The user-friendly maintenance program shows the current state of each Signature series device and other pertinent messages. Single devices may be deactivated temporarily, from the control panel. Availability of maintenance features is dependent on the fire alarm system used.

Scheduled maintenance (Regular or Selected) for proper system operation should be planned to meet the requirements of the Authority Having Jurisdiction (AHJ). Refer to current NFPA 72 and ULC CAN/ULC 536 standards.

## Typical Wiring

The fire alarm station's terminal block accepts #18 AWG (0.75mm<sup>2</sup>) to #12 AWG (2.5mm<sup>2</sup>) wire sizes. See Signature Loop Controller catalog sheet for detailed wiring requirement specifications.

### Wiring Notes

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

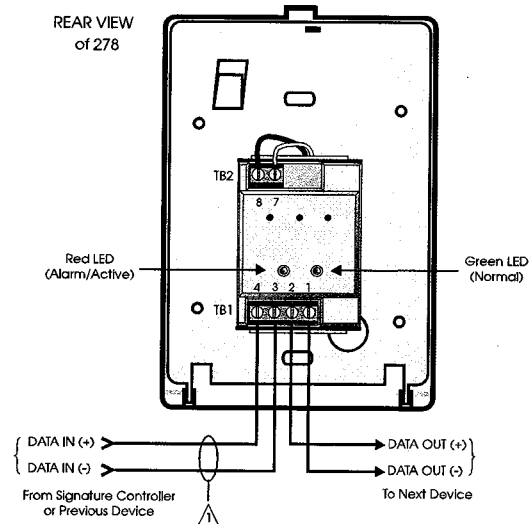


Figure 4. Single Stage Systems

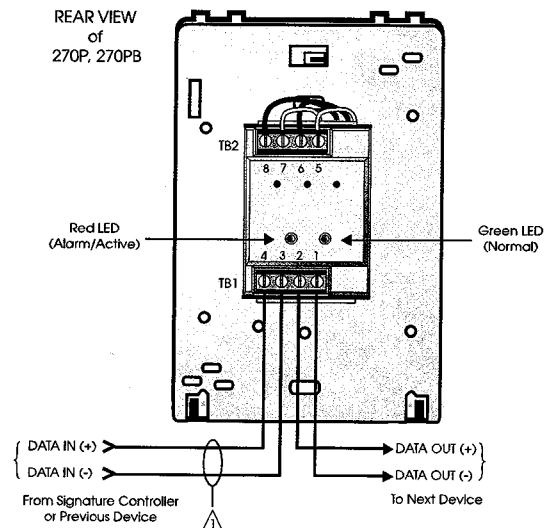


Figure 5. Two Stage Systems

## Installation

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

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

**All models** include terminals are suited for #12 to #18 AWG (2.5 mm<sup>2</sup> to 0.75 mm<sup>2</sup>) wire size. Edwards recommends that these fire alarm stations be installed according to latest recognized edition of national and local fire alarm codes.

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

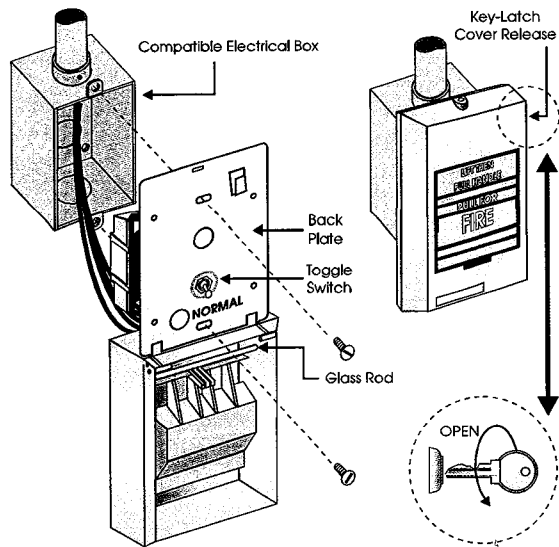


Figure 1. SIGA-278 installation

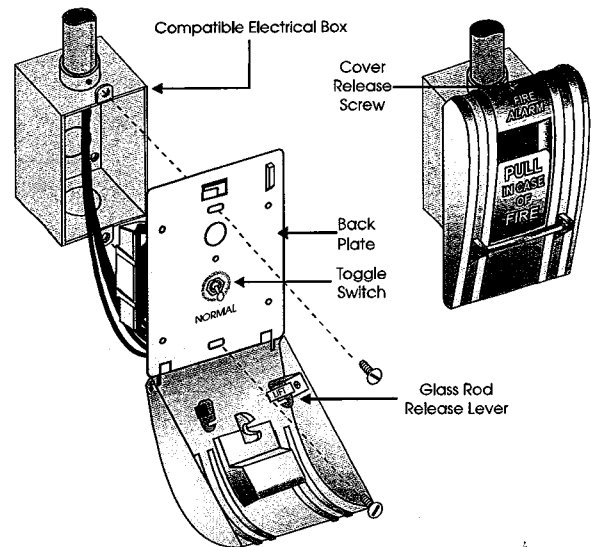


Figure 2. SIGA-270, SIGC-270F, SIGC-270B installation

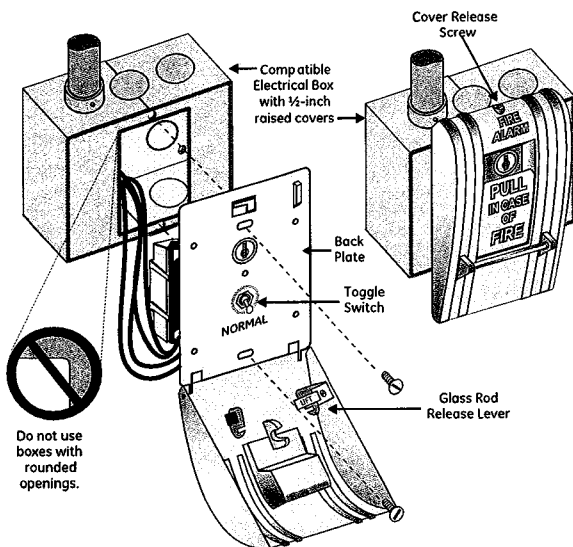


Figure 3. SIGA-270P, SIGC-270PB installation



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## Specifications

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

**Note:** SIGC-270F, SIGC-270B and SIGC-270PB are ULC listed only. Suffix "F" indicates French markings. Suffix "B" indicates English/French bilingual markings.

## Ordering Information

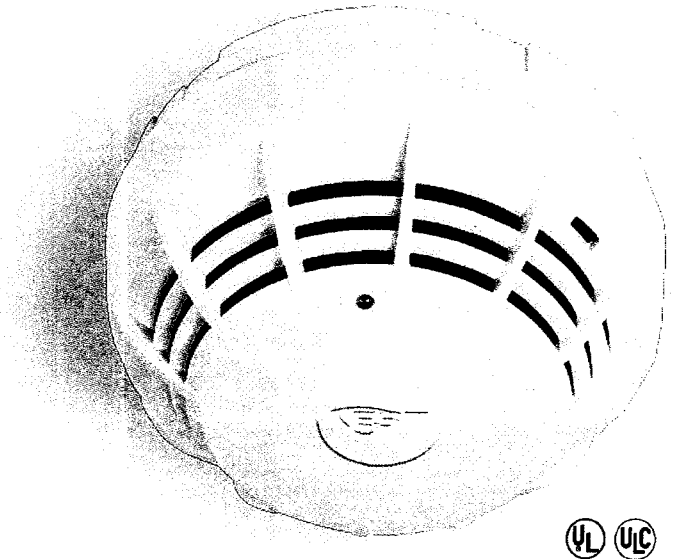
| Catalog Number | Description                                                                    | Ship Wt. lbs (kg) |
|----------------|--------------------------------------------------------------------------------|-------------------|
| SIGA-270       | One Stage Fire Alarm Station, English Markings - UL/ULC Listed                 |                   |
| SIGC-270F      | One Stage Fire Alarm Station, French Markings - ULC Listed                     |                   |
| SIGC-270B      | One Stage Fire Alarm Station, French/English Markings - ULC Listed             |                   |
| SIGA-270P      | Two Stage (Presignal) Fire Alarm Station, English Markings - UL/ULC Listed     | 1 (0.5)           |
| SIGC-270PB     | Two Stage (Presignal) Fire Alarm Station, French/English Markings - ULC Listed |                   |
| SIGA-278       | Double Action (One Stage) Fire Alarm Station, English Markings - UL/ULC Listed |                   |

### Accessories

|          |                                                         |           |
|----------|---------------------------------------------------------|-----------|
| 32997    | GA Key w/Tag - for pre-signal station (CANADA ONLY)     |           |
| 276-K2   | GA Key - for pre-signal station (USA ONLY)              |           |
| 276-K1   | Station Reset Key, Supplied with all Key Reset Stations |           |
| 27165    | 12 Glass Rods - for SIGA-270 series (CANADA ONLY)       | 0.1 (.05) |
| 270-GLR  | 20 Glass Rods - for SIGA-270 series (USA ONLY)          |           |
| 276-GLR  | 20 Glass Rods - for SIGA-278 series                     |           |
| 276B-RSB | Surface Mount Box, Red - for SIGA pull stations         | 1 (0.6)   |

# Intelligent Smoke Detector with Optional CO Sensor

SIGA2-PS, SIGA2-PCOS



## Overview

Signature Series SIGA2-P(CO)S photoelectric detectors bring 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 innovative field-replaceable smoke chambers make detector maintenance literally a snap. With its modular CO sensor, this detector pulls double-duty — continually monitoring the environment for signs of smoke, as well as its invisible yet deadly companion, carbon monoxide.

Like all Signature Series detectors, the SIGA2-P(CO)S is an intelligent device that gathers analog information from its smoke and CO sensor (if present), 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.

The SIGA2-PCOS includes an advanced carbon monoxide sensor and daughterboard. When the electrochemical cell reaches its end of life after approximately six years, the detector signals a trouble condition to the control panel. The sensor/daughterboard module is field-replaceable.

## Standard Features

- Optical smoke sensing technology with optional carbon monoxide sensor
- Field-replaceable smoke chamber
- Field-replaceable carbon monoxide sensor/daughterboard module
- Uses existing wiring
- Automatic device mapping
- Ground fault detection by module
- Up to 250 devices 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
- Environmental compensation
- Identification of dirty or defective detectors
- Automatic day/night sensitivity adjustment
- Bicolor (green/red) status LED
- Standard, relay, fault isolator, and audible mounting bases

## Application

### Smoke detection

The SIGA2-PS 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.

### Carbon monoxide detection

CO detection has rapidly become a standard part of life safety strategies everywhere. Monitored CO detection is becoming mandated with increasing frequency in all types of commercial applications, but particularly in occupancies such as hotels, rooming houses, dormitories, day care facilities, schools, hospitals, assisted living facilities, and nursing homes. In fact, more than half of the U.S. population already lives in states requiring the installation of CO detectors in some commercial occupancies. This is because carbon monoxide is the leading cause of accidental poisoning deaths in America. Known as the "Silent Killer," CO is odorless, tasteless, and colorless. It claims nearly 500 lives, and results in more than 15,000 hospital visits annually.

## 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.

## 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 can 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. When the CO sensor's electrochemical cell reaches its end of life, the detector signals a trouble condition to the control panel. The sensor/daughterboard module is field-replaceable. Scheduled maintenance (Regular or Selected) for proper detector operation should be planned to meet the requirements of the Authority Having Jurisdiction (AHJ). Refer to current NFPA 72, NFPA 720, and ULC CAN/ULC 536 standards.

This detector will NOT sense fires that start 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 to alarm it.

## Sensing and reporting technology

The microprocessor in each detector provides four additional benefits - Self-diagnostics and History Log, Automatic Device Mapping, Stand-alone Operation 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

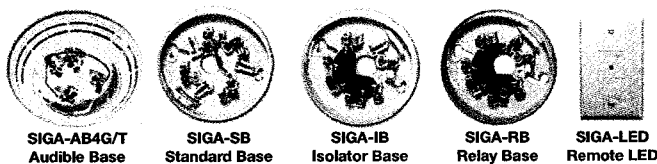
**Automatic Device Mapping** - The loop controller learns where each device's serial number address is installed relative to other devices on the circuit. The mapping feature provides supervision of each device's installed location to prevent a detector from being reinstalled (after cleaning etc.) in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

**Stand-alone Operation** - A decentralized alarm decision by the detector is guaranteed. On-board intelligence permits the detector to operate in stand-alone mode. If loop controller CPU communications fail for more than four seconds, all devices on that circuit go into stand-alone mode. The circuit acts like a conventional alarm receiving circuit.

**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 3 1/2 inch or 4 inch octagon boxes, 1 1/2 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" square box only.



**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.

**SIGA-AB4G and SIGA-AB4GT** - These sounder bases are designed for use where localized or group alarm signaling is required. The SIGA-AB4G is compatible with Signature Series smoke and heat detectors. The SIGA-AB4GT sounder base, when used with the SIGA-TCDR Temporal Pattern Generator module, adds an audible output function to any Signature Series detector, including fire and CO detectors.

## Typical Wiring

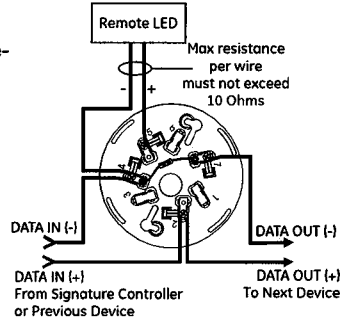
The detector mounting bases accept #18 AWG (0.75mm<sup>2</sup>), #16 (1.0mm<sup>2</sup>), #14 AWG (1.5mm<sup>2</sup>), and #12 AWG (2.5mm<sup>2</sup>) wire sizes.

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

### 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 the Standard Base.

| Term | Description     |
|------|-----------------|
| 1    | Not Used        |
| 2    | DATA IN/OUT (+) |
| 3    | Not Used        |
| 4    | DATA IN (-)     |
| 5    | Remote LED (-)  |
| 6    | Remote LED (+)  |
| 7    | Not Used        |
| 8    | DATA OUT (-)    |



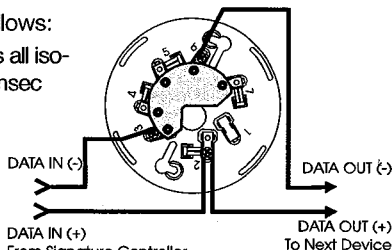
### Isolator Detector Base, SIGA-IB, SIGA-IB4

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, reopens within 10 msec.

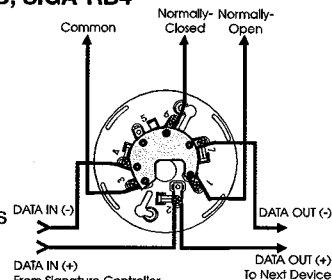
The process repeats beginning on the other side of the loop controller.



| 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

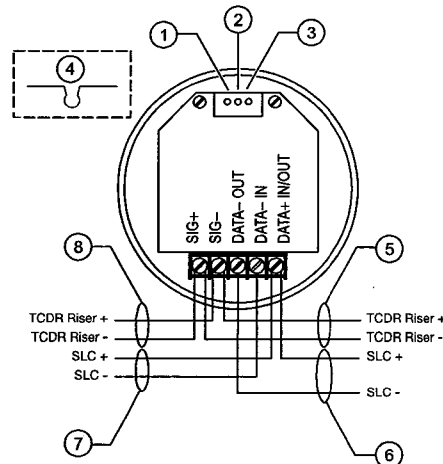
This base includes a relay. Normally open or closed operation is selected during installation. The dry contact is rated for 1 amp (pilot duty) @ 30 Vdc. The relay's position is supervised to avoid accidentally jarring it out of position. The SIGA-RB can be operated as a control relay if programmed to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



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

### Audible Detector Base for CO and Fire Detectors, SIGA-AB4GT

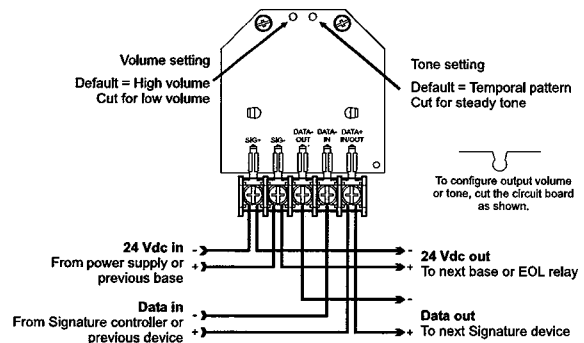
The Signature Series AB4GT sounder base, when used with the SIGA-TCDR Temporal Pattern Generator, adds an audible output function to any Signature Series detector. For more information on this device, refer to *Data Sheet 85001-0623 -- Sounder Base for CO and Fire Detectors*.



1. Volume setting. Default is high volume. For low volume, cut trace per item 4.
2. Reserved for future use. Do not cut.
3. Reserved for future use. Do not cut.
4. To configure output volume, cut trace as shown.
5. To next SIGA-AB4GT sounder base or EOL relay.
6. SLC\_OUT to next intelligent addressable device.
7. SLC\_IN from intelligent addressable controller or previous device.
8. From SIGA-TCDR Temporal Pattern Generator or previous SIGA-AB4GT sounder base.

### Audible Detector Base, SIGA-AB4G

This base is designed for use where localized or group alarm signaling is required. When the detector senses an alarm condition, the audible base emits a local alarm signal. The optional SIGA-CRR Polarity Reversal Relay can be used for sounding to other audible bases on the same 24 Vdc circuit.



Relay and Audible Bases operate as follows:

- at system power-up or reset, the relay is de-energized
- when a detector is installed in the base with the power on, the relay energizes for four seconds, then de-energizes
- when a detector is removed from a base with the power on, the relay is de-energized
- when the detector enters the alarm state, the relay is energized.



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## Compatibility

SIGA2-P(CO)S detectors are compatible only with the Signature Loop Controller.

## Warnings & Cautions

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

This detector will NOT sense fires that start 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 to alarm it.

## Specifications

|                            | SIGA2-PS                                            | SIGA2-PCOS |
|----------------------------|-----------------------------------------------------|------------|
| Normal operating current   | 45 µA                                               | 70 µA      |
| Alarm current              | 18 mA                                               | 18 mA      |
| Standalone alarm current   | 45 µA                                               | 70 µA      |
| Operating voltage          | 15.20 to 19.95 VDC                                  |            |
| Air velocity               | 0 to 4,000 ft./min (0 to 20 m/s).                   |            |
| Construction               | High impact engineering polymer                     |            |
| Wall mounting              | Maximum 12 in (305 mm) from ceiling                 |            |
| Mounting                   | Plug-in                                             |            |
| Shipping weight            | 0.44 lb. (164 g)                                    |            |
| Compatible bases           | See Ordering Information                            |            |
| Operating environment      | 32 to 120°F (0 to 49°C), 0 to 93% RH, noncondensing |            |
| Storage temperature        | -4 to 140°F (-20 to 60°C)                           |            |
| Environmental compensation | Automatic                                           |            |

## Ordering Information

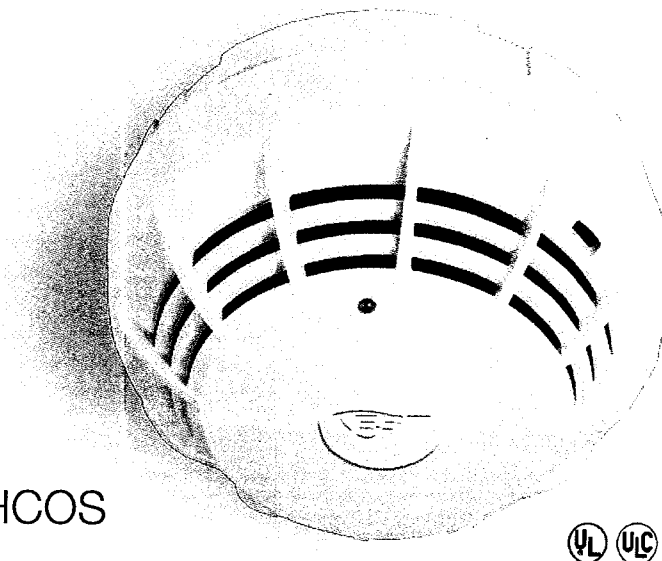
| Catalog Number | Description                                                                                        | Ship Wt. lbs (kg) |
|----------------|----------------------------------------------------------------------------------------------------|-------------------|
| → SIGA2-PS     | Intelligent Photoelectric Detector                                                                 | 0.4 (0.16)        |
| SIGA2-PCOS     | Intelligent Photoelectric Detector with carbon monoxide sensor                                     | 0.4 (0.16)        |
| SIGA2-PCOS-CA  | Intelligent Photoelectric Detector with carbon monoxide sensor (for use in Canadian markets only). | 0.4 (0.16)        |
|                |                                                                                                    |                   |
| → SIGA-SB      | Detector Mounting Base - Standard                                                                  |                   |
| 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                                              | 0.2 (.09)         |
| 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 (Sunder) Base for Fire Detectors                                                           | 0.3 (0.15)        |
| SIGA-AB4GT     | Audible (Sunder) Base for CO and Fire Detectors                                                    | 0.3 (0.15)        |
| SIGA-TCDR      | Temporal Pattern Generator                                                                         | 0.3 (0.15)        |
| SIGA-TS4       | Trim Skirt (supplied with 4-inch bases)                                                            | 0.1 (.04)         |
| 2-SPRC1*       | Replacement Smoke Chamber (for SIGA2-PS detectors)                                                 | 0.1 (.04)         |
| 2-SPRC2*       | Replacement Smoke Chamber (for SIGA2-PCOS detectors)                                               | 0.1 (.04)         |
| 2-CORPL*       | Replacement CO Sensor                                                                              | 0.1 (.04)         |

\*Release pending.



# Intelligent Heat Detectors with Optional CO Sensors

SIGA2-HFS, SIGA2-HRS, SIGA2-HCOS



## Overview

Signature Series fixed temperature and rate-of-rise heat 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 ensure reliability over the long-haul, while the latest thermister technology makes these detectors ideal wherever dependable heat detection is required. With their modular CO sensor, these devices pull double-duty — continually monitoring the environment for heat from combustion, as well as its invisible yet deadly companion, carbon monoxide.

Like all Signature Series detectors, these are intelligent devices that gather analog information from their heat and CO sensor (if present), 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.

The SIGA2-HCOS is a fixed temperature heat detector that includes an advanced carbon monoxide sensor and daughterboard. When the electrochemical cell reaches its end of life after approximately six years, the detector signals a trouble condition to the control panel. The sensor/daughterboard module is field-replaceable.

## 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.

- Fixed temperature or rate-of-rise heat detection with optional carbon monoxide sensor
- Field-replaceable carbon monoxide sensor/daughterboard module
- Uses existing wiring
- Automatic device mapping
- Ground fault detection by module
- Up to 250 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
- 15 °F (8 °C) per minute rate-of-rise alarm point (HRS)
- 135 °F (57 °C) fixed temperature alarm point (HFS/HCOS)

## Application

### Heat detection

SIGA2-HRS rate-of-rise heat detectors provide a 15 °F (9 °C) per minute rate-of-rise heat sensor for the detection of heat due to fire. The heat sensor monitors the temperature of the air and determines whether an alarm should be initiated.

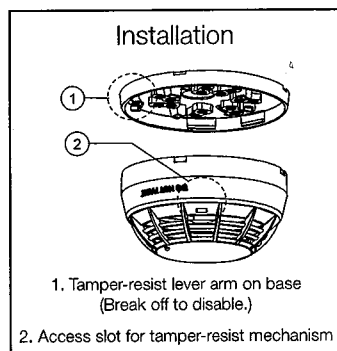
SIGA2-HFS and SIGA2-HCOS fixed temperature heat detectors provide a 135°F (57°C) fixed-temperature heat sensor for the detection of heat due to fire. The heat sensor monitors the temperature of the air and determines whether an alarm should be initiated.

### Carbon monoxide detection

The SIGA2-HCOS includes a replaceable chemical cell for the detection of carbon monoxide (CO). CO detection has rapidly become a standard part of life safety strategies everywhere. Monitored CO detection is becoming mandated with increasing frequency in all types of commercial applications, but particularly in occupancies such as hotels, rooming houses, dormitories, day care facilities, schools, hospitals, assisted living facilities, and nursing homes. In fact, more than half of the U.S. population already lives in states requiring the installation of CO detectors in some commercial occupancies. This is because carbon monoxide is the leading cause of accidental poisoning deaths in America. Known as the "Silent Killer," CO is odorless, tasteless, and colorless. It claims nearly 500 lives, and results in more than 15,000 hospital visits annually.

## 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.



## Testing & Maintenance

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. When the CO sensor's electrochemical cell reaches its end of life, the detector signals a trouble condition to the control panel. The sensor/daughterboard module is field-replaceable. Scheduled maintenance (Regular or Selected) for proper detector operation should be planned to meet the requirements of the Authority Having Jurisdiction (AHJ). Refer to current NFPA 72, NFPA 720, and ULC CAN/ULC 536 standards.

## Compatibility

SIGA2-PS detectors are compatible only with the Signature Loop Controller.

## Sensing and reporting technology

The microprocessor in each detector provides four additional benefits - Self-diagnostics and History Log, Automatic Device Mapping, Stand-alone Operation 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.

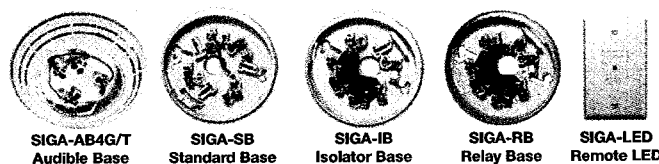
**Automatic Device Mapping** - The loop controller learns where each device's serial number address is installed relative to other devices on the circuit. The mapping feature provides supervision of each device's installed location to prevent a detector from being reinstalled (after cleaning etc.) in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

**Stand-alone Operation** - A decentralized alarm decision by the detector is guaranteed. On-board intelligence permits the detector to operate in stand-alone mode. If loop controller CPU communications fail for more than four seconds, all devices on that circuit go into stand-alone mode. The circuit acts like a conventional alarm receiving circuit.

**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 3 1/2 inch or 4 inch octagon boxes, 1 1/2 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" square box only.



**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.

**SIGA-AB4G and SIGA-AB4GT** - These sounder bases are designed for use where localized or group alarm signaling is required. The SIGA-AB4G is compatible with Signature Series smoke and heat detectors. The SIGA-AB4GT sounder base, when used with the SIGA-TCDR Temporal Pattern Generator module, adds an audible output function to any Signature Series detector, including fire and CO detectors.

## Typical Wiring

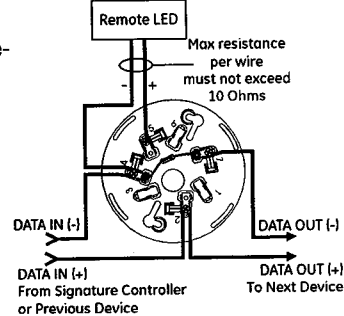
The detector mounting bases accept #18 AWG (0.75mm<sup>2</sup>), #16 (1.0mm<sup>2</sup>), #14 AWG (1.5mm<sup>2</sup>), and #12 AWG (2.5mm<sup>2</sup>) wire sizes.

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

### 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 the Standard Base.

| Term | Description     |
|------|-----------------|
| 1    | Not Used        |
| 2    | DATA IN/OUT (+) |
| 3    | Not Used        |
| 4    | DATA IN (-)     |
| 5    | Remote LED (-)  |
| 6    | Remote LED (+)  |
| 7    | Not Used        |
| 8    | DATA OUT (-)    |



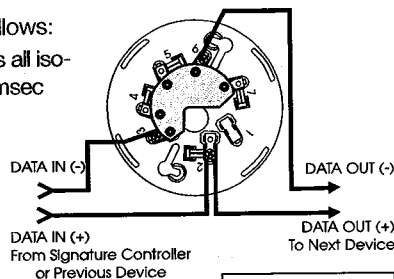
### Isolator Detector Base, SIGA-IB, SIGA-IB4

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, reopens within 10 msec.

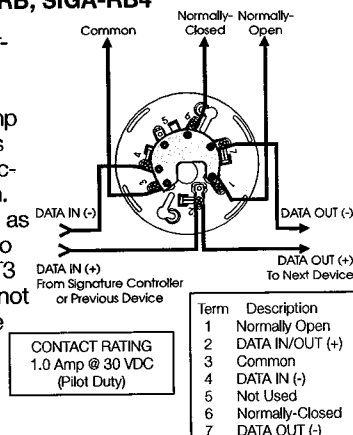
The process repeats beginning on the other side of the loop controller.



| 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

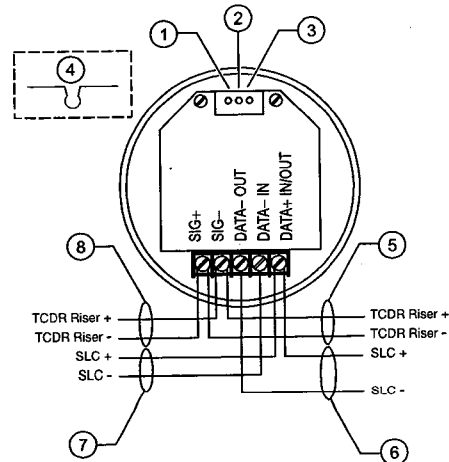
This base includes a relay. Normally open or closed operation is selected during installation. The dry contact is rated for 1 amp (pilot duty) @ 30 Vdc. The relay's position is supervised to avoid accidentally jarring it out of position. The SIGA-RB can be operated as a control relay if programmed to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



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

### Audible Detector Base for CO and Fire Detectors, SIGA-AB4GT

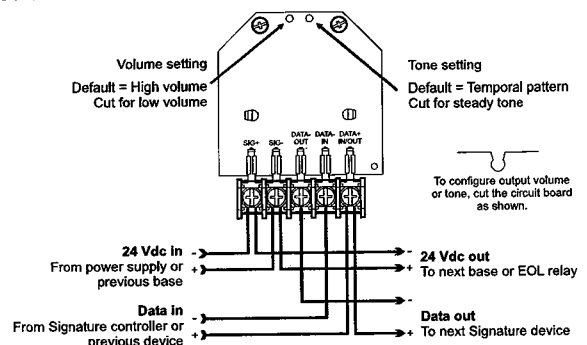
The Signature Series AB4GT sounder base, when used with the SIGA-TCDR Temporal Pattern Generator, adds an audible output function to any Signature Series detector. For more information on this device, refer to *Data Sheet 85001-0623 -- Sounder Base for CO and Fire Detectors*.



1. Volume setting. Default is high volume. For low volume, cut trace per item 4.
2. Reserved for future use. Do not cut.
3. Reserved for future use. Do not cut.
4. To configure output volume, cut trace as shown.
5. To next SIGA-AB4GT sounder base or EOL relay.
6. SLC\_OUT to next intelligent addressable device.
7. SLC\_IN from intelligent addressable controller or previous device.
8. From SIGA-TCDR Temporal Pattern Generator or previous SIGA-AB4GT sounder base.

### Audible Detector Base, SIGA-AB4G

This base is designed for use where localized or group alarm signaling is required. When the detector senses an alarm condition, the audible base emits a local alarm signal. The optional SIGA-CRR Polarity Reversal Relay can be used for sounding to other audible bases on the same 24 Vdc circuit.



Relay and Audible Bases operate as follows:

- at system power-up or reset, the relay is de-energized
- when a detector is installed in the base with the power on, the relay energizes for four seconds, then de-energizes
- when a detector is removed from a base with the power on, the relay is de-energized
- when the detector enters the alarm state, the relay is energized.



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## 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.

## Specifications

|                          | SIGA2-HRS                                                   | SIGA2-HFS                 | SIGA2-HCOS |
|--------------------------|-------------------------------------------------------------|---------------------------|------------|
| Normal operating current | 45 µA                                                       | 45 µA                     | 45 µA      |
| Standalone alarm current | 18 mA                                                       | 18 mA                     | 18 mA      |
| Alarm Current            | 45 µA                                                       | 45 µA                     | 45 µA      |
| Actual alarm point       | 15°F (8°C)/min.                                             | 130 to 140°F (54 to 60°C) |            |
| Operating voltage        | 15.20 to 19.95 VDC                                          |                           |            |
| Maximum spacing          | 50 ft. (15.2 m) centers*                                    |                           |            |
| Construction             | High impact engineering polymer                             |                           |            |
| Mounting                 | Plug-in                                                     |                           |            |
| Shipping weight          | 0.44 lb. (164 g)                                            |                           |            |
| Compatible bases         | See Ordering Information                                    |                           |            |
| Operating environment    | 32 °F to 100 °F (0 °C to 38 °C), 0 to 93% RH, noncondensing |                           |            |
| Storage temperature      | – 4 °F to 140 °F (– 20 °C to 60 °C)                         |                           |            |

\*When replacing SIGA-HRS/HFS ensure spacing is 50ft or less.

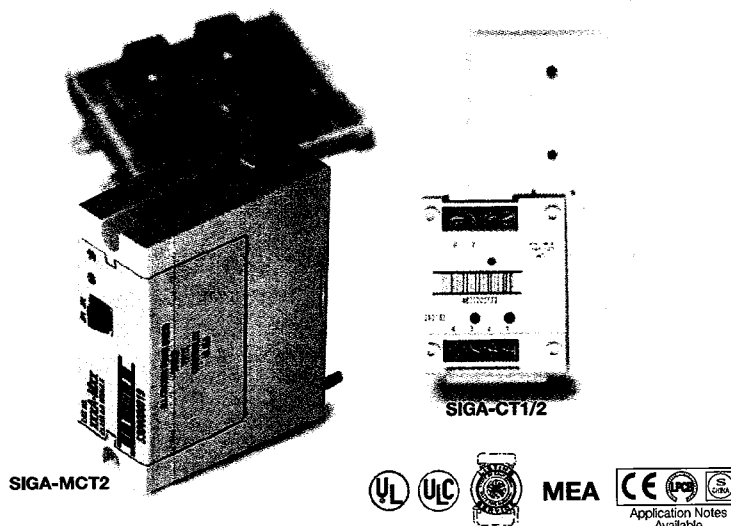
## Ordering Information

| Catalog Number | Description                                                                                   | Ship Wt. lbs (kg) |
|----------------|-----------------------------------------------------------------------------------------------|-------------------|
| → SIGA2-HRS    | Intelligent rate-of-rise heat detector                                                        | 0.4 (0.16)        |
| SIGA2-HFS      | Intelligent fixed temperature heat detector                                                   | 0.4 (0.16)        |
| SIGA2-HCOS     | Intelligent fixed temperature heat detector with CO sensor                                    | 0.4 (0.16)        |
| SIGA2-HCOS-CA  | Intelligent fixed temperature heat detector with CO sensor (for use in Canadian markets only) | 0.4 (0.16)        |
|                |                                                                                               |                   |
| → SIGA-SB      | Detector Mounting Base - Standard                                                             |                   |
| 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                                         | 0.2 (.09)         |
| 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-AB4GT     | Audible (Sounder) Base for CO and Fire Detectors                                              | 0.3 (0.15)        |
| SIGA-TCDR      | Temporal Pattern Generator                                                                    | 0.3 (0.15)        |
| SIGA-TS4       | Trim Skirt (supplied with 4-inch bases)                                                       | 0.1 (.04)         |
| 2-CORPL*       | Replacement CO Sensor                                                                         | 0.1 (.04)         |

\*Release pending.

# Input Modules

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



## 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 °F to 158 °F (0 °C to 70 °C) 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 water-flow 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.
- **Stand-alone operation**  
The module makes decisions and inputs an alarm from initiating devices connected to it even if the loop controller's polling interrogation stops. (Function availability dependent upon control panel.)
- **Ground fault detection by address**  
Detects ground faults right down to the device level.

## Signature Series Overview

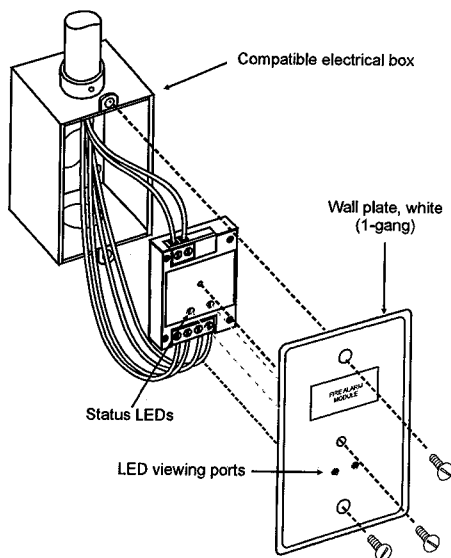
The Signature Series intelligent analog-addressable system from Edwards Security is an entire family of multi-sensor detectors and mounting bases, multiple-function input and output modules, network and non-network control panels, and user-friendly maintenance and service tools. Analog information from 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, Stand-alone Operation 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.

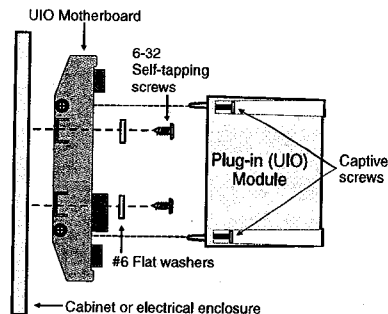
**Automatic Device Mapping** – The Signature Data Controller (SDC) learns where each device's serial number address is installed relative to other devices on the circuit. The SDC keeps a map of all Signature Series devices connected to it. The Signature Series Data Entry Program also uses the mapping 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<sup>2</sup> to 0.75 mm<sup>2</sup>) 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<sup>2</sup> to 0.75 mm<sup>2</sup>) 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.

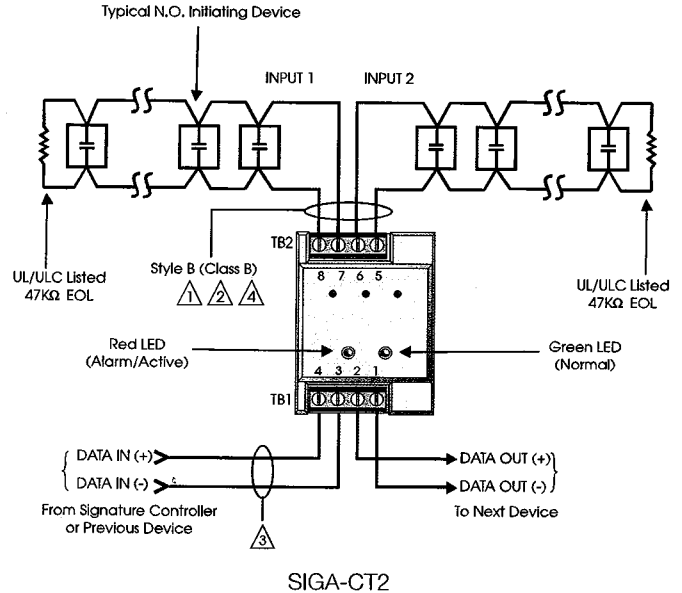
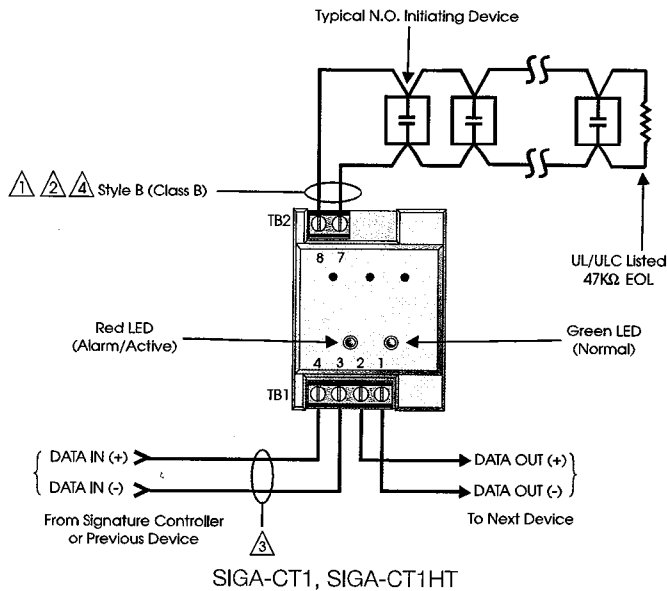
## Typical Wiring

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

Note: Sizes #16 AWG (1.0mm<sup>2</sup>) and #18 AWG (0.75mm<sup>2</sup>) 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:              | <b>Wire Size</b>                       | <b>Maximum Distance to EOLR</b> |
|                                    | #18 AWG (0.75 mm <sup>2</sup> )        | 4,000 ft (1,219 m)              |
|                                    | #16 AWG (1.00 mm <sup>2</sup> )        |                                 |
|                                    | #14 AWG (1.50 mm <sup>2</sup> )        |                                 |
|                                    | #12 AWG (1.50 mm <sup>2</sup> )        |                                 |



### NOTES

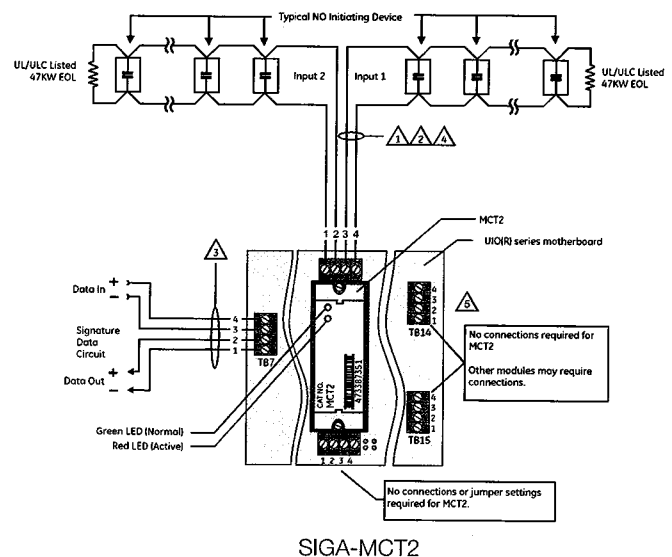
- 1 Maximum 25 Ohm resistance per wire.
- 2 Maximum #12 AWG (2.5 mm<sup>2</sup>) wire; Minimum #18 AWG (0.75 mm<sup>2</sup>).
- 3 Refer to Signature controller installation sheet for wiring specifications.
- 4 Maximum 10 Vdc @ 350 µA
- 5 The SIGA-UIO6R and the SIGA-UIO2R do not come with TB14.
- 6 All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

## 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

The Signature Series modules are compatible only with EST's Signature Loop Controller.





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## 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;<br>Activated = 400µA                                                                                                             |                             | Standby = 396µA;<br>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.<br>Both LEDs - Glow steady when in alarm (stand-alone) |                             |                                                                   |                        |
| 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) |