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*Certain products, such as GL8 Graphic Annunciators, require custom quoting from the factory and will not provide automatic pricing. Please contact your account manager for assistance.

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Regards,

SAE Customer Service

**NO
EXCUSES!**



Know the Facts . . .



- The system is approved for its intended purpose and follows the guidelines of the following:
- The National Electric Code (NEC)
- The Local Authority Having Jurisdiction (AHJ)
- National Fire Protection Association (NFPA) Standard 72, and NFPA 92A
- UUKL listed with proper configuration
- UL listed under standard #864 as a fire alarm

Fact: The GSC Annunciator delivers smoke control capability for critical life safety procedures.

UUKL listed with proper configuration



ADA

**ISO 9001
REGISTERED
COMPANY**



Made In U.S.A.

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Specifications:

Advanced Life Safety Plans for high-rise buildings are carried out in various ways, by either methodical evacuation or thru "defend in place".

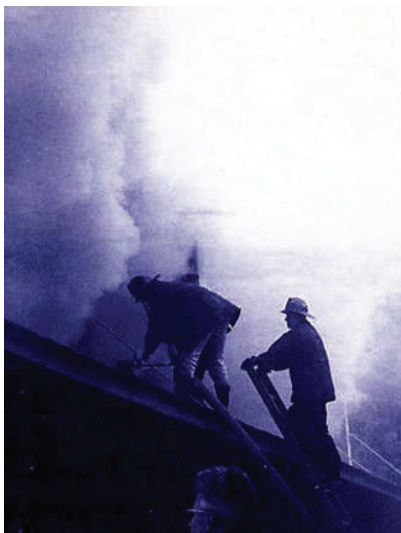
The fact is: smoke inhalation is the leading cause of death in fires, robbing a person of valuable oxygen and ultimately causing suffocation. Additionally, visibility is dramatically reduced, impairing the view of safe exits from the building and hindering firefighters entering and venturing throughout the premises. This combination is deadly, and without the control to reroute or confine fatal smoke, high fatality rate is imminent. Space Age Electronics, Inc. is at the forefront of this technology, providing the life and property saving solution to this substantial problem with the GSC Smoke Control Annunciator.



The GSC Graphic Smoke Control Annunciator panel is designed for the exclusive use by the appropriate building personnel and fire department for the manual control of all air handling and smoke control related functions during testing and in a fire emergency condition. The intent of providing a smoke control system is to enhance life safety procedures through maximizing safe refuge (defend in place) by inhibiting the flow of smoke into the means of egress, exit passageways and related areas of the building. The GSC provides the necessary control sequences to implement smoke control as described in NFPA 92A. This is more effective than system shutdown or simpler attempts to dilute smoke infiltration.

The GSC Command Center can be integrated with other building automation systems such as:

- Integrated command centers
- Override system fan damper smoke control
- Alarm point annunciator panel (pull station, detectors, etc.)
- Exit & egress static display
- Identify location of Area of Rescue call station
- Elevator recall annunciation



High-rise buildings are a common site in cities around the world. With the difficulty of evacuating these tall buildings, it is imperative that smoke control systems be incorporated along with other life saving devices to optimize their life safety systems.

Changes to the NFPA 72 for the 2002 edition extended the survivability requirements to include circuits providing smoke control. Space Age Electronics, Inc. intends to lead this new era in life safety systems in providing the highest quality reliable smoke control through it's GSC Smoke Control Annunciators.

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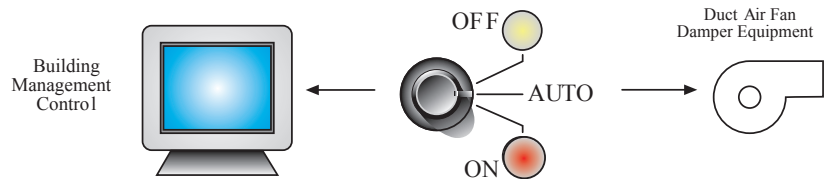
Proper system design, including smoke control capability, are a must to optimize critical life safety systems and Emergency Operation Plans.

The GSC Annunciator applies to a variety of building systems. Here are some examples of smoke control applications, as described in NFPA 92A - "Recommended Practice for Smoke Control Systems" and NFPA 92B - "Guide for Smoke Management Systems in Malls, Atria, and Large Areas". Other examples include high rise buildings, dorms, campus facilities, warehouses and large business facilities.

Non-Dedicated Systems:

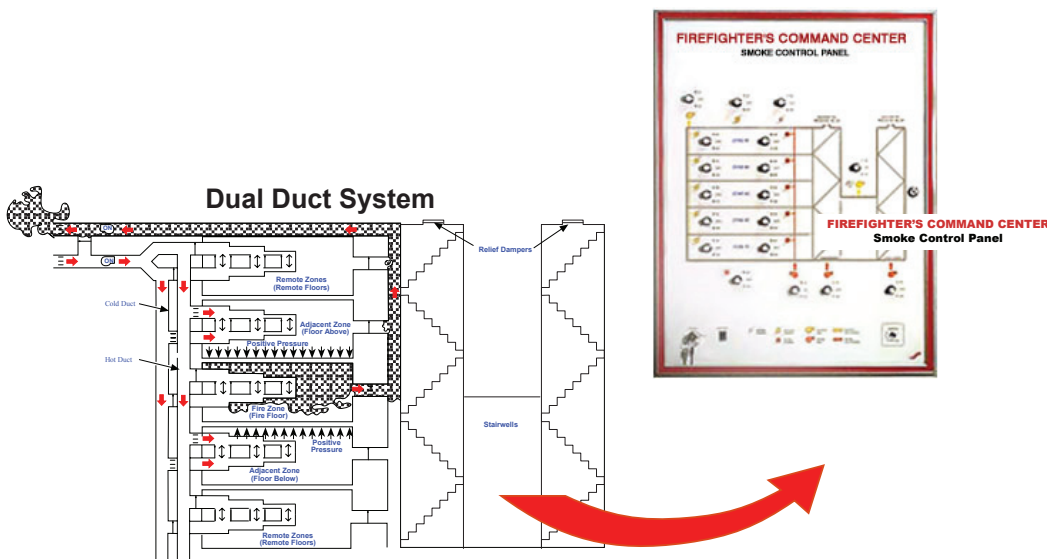
- Single Zone Systems w/Direct Outside Air And Direct Exhaust Air
- Single Zone Systems with Common Outside Air And Common Exhaust Air
- Central Systems
- Dual Duct Systems
- Multi-zone Systems
- Variable Air Volume Systems

Functional Diagram



Other alternatives available.

Once the system is identified, approved and graphically translated, the controls and graphics are conveyed onto the GSC Annunciator. Below is a sample of the Dual Duct System applied to the GSC Annunciator. Input and output circuits are coordinated with the fire alarm and building automation contractors. The system is programmed to provide the optimal operating sequence (see sample sequence below) to control smoke with outlying building equipment. The GSC Smoke Control Panel is a separate and distinct system from the life safety and building automation systems, to ensure function in the event of either dedicated or non-dedicated system's failure.



The smoke control system application is conveyed on the GSC Annunciator utilizing illumination, appropriate switch configuration and color to create a visual aid to quickly identify a building's Smoke Control System components.

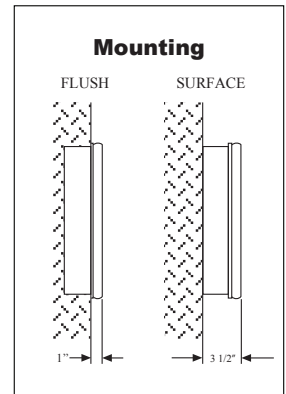
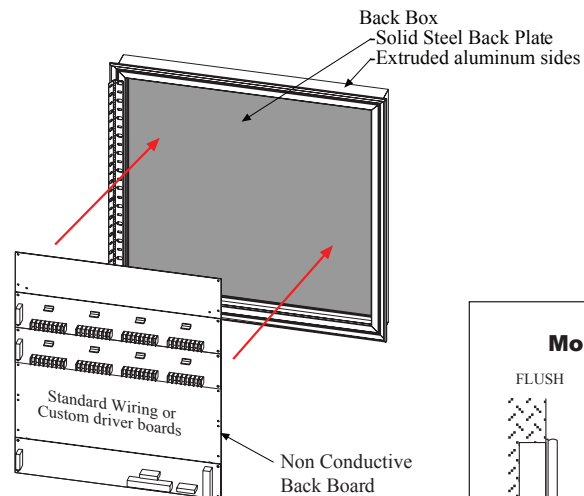
The typical **Smoke Control Sequence Commands** for this particular system as follows:

1. Fully open the central exhaust damper and outside air damper.
2. Close the central return air damper.
3. Reset the duct static pressure controls to the maximum allowable levels.
4. Close the fire zone hot duct and cold duct zone dampers.
5. Fully open the fire zone exhaust air damper.
6. Close the adjacent zones' (zones to be pressurized) exhaust air dampers and fully open their hot and cold duct dampers.
7. Configure the adjacent zone mixing boxes for maximum air discharge into the zone.
8. Close the zone dampers of all zones that are served by the dual duct system but are not involved in smoke control for the fire zone.
9. Turn on the central system supply and return fans (if not already on).

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The GSC Smoke Control Annunciator panel enclosure shall be sized appropriately for the building graphic layout. The GSC back box is constructed from aluminum extrusions (minimum 1/16" wall thickness), finished with an aesthetic durable powder coat or anodized aluminum soap matte finish. The back box can be surface or flush mounted. A 16 gauge solid steel back plate secures electronics and field termination wiring. A non-conductive back board is supplied for easy field installation into the GSC back box.

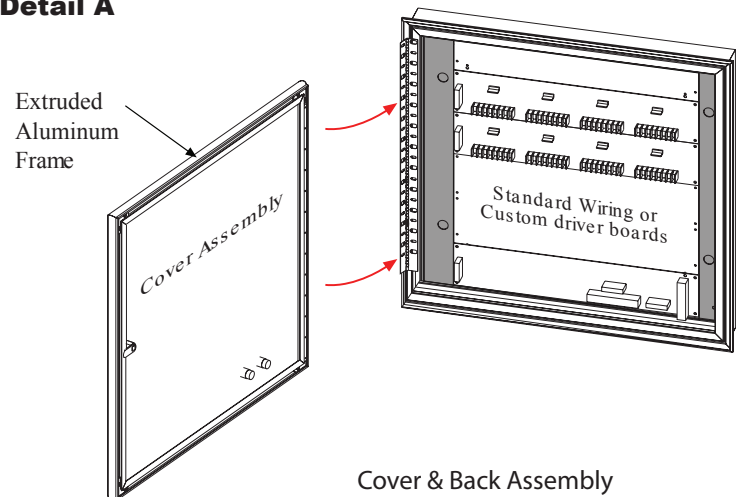


Cover Assembly

The GSC cover will be secured to the back box with a stainless steel piano hinge and a CAT-30 keyed door lock to secure and protect field terminations and electronics. When the cover is closed all hardware is concealed inside the enclosure. The cover will be a minimum .080" thick aluminum panel with an extruded aluminum frame (minimum 1/16" wall thickness). Finish will be an aesthetic durable powder coat or anodized aluminum soap matte finish with optional reflective inlay accent trim in either Black, Blue, Red or Beige. The cover is capable of being field disconnected and removed from the back box when the cover is open.

The wiring between the cover and the control circuitry in the back box are provided with multi pin connectors which allow complete separation from the back box and cover (less the Lamp Test and Engage Switches). The unit will be supplied with wiring layout documentation to identify all connectors and field assembly.

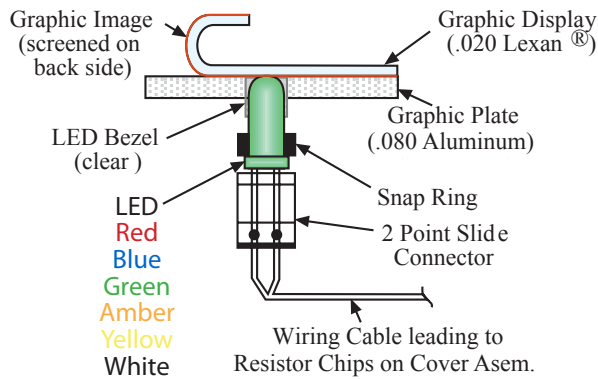
Detail A



Display:

The GSC MD graphic assembly shall utilize a .020 thick scratch resistant Lexan® material with an anti glare matte finish. The image and details are reproduced and printed on the reverse side of the Lexan® to eliminate the risk of losing vital details from wear or abuse to the graphic. Display details and layout for color scheme can be selected from a color specification guide to meet any requirement. The GSC graphic is adhered to the .080" graphic cover plate with its edges concealed within the frame to eliminate any tampering or vandalism to the graphic.

Detail B

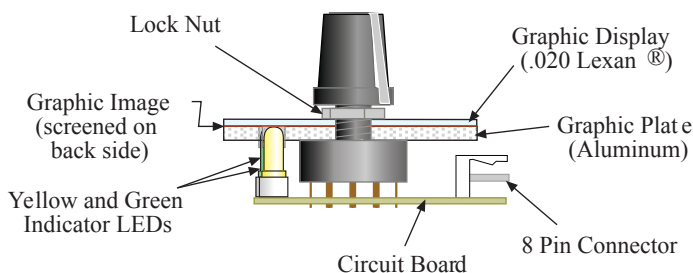


MD Graphic Assembly Method

Standard Zone Status Indicators



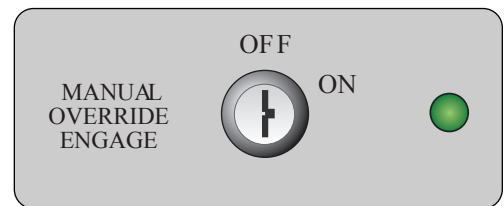
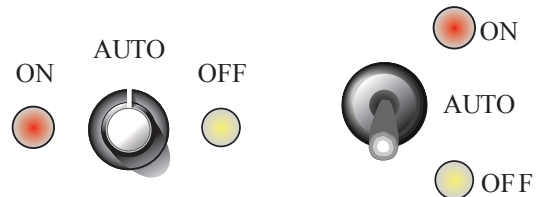
Blue and White also available



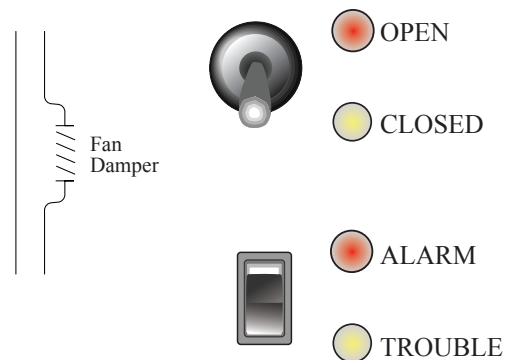
Standard 3 position ON-AUTO-OFF switch Standard PSC Circuit

The GSC control switch and other equipment will be installed and integrated into the graphic display. All hardware will be concealed in the GSC enclosure (see detail A). All point illumination will be concealed and integrated into the .080" plate and mounted behind the MD graphic to ensure there will be no tampering of the points (see detail B). Switches and indicators (LEDs) shall be socketed for individual replacement without requirement of any special tools or field soldering.

Sample Illumination/Switch Configurations and Types



Fan Damper Switch



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Electrical Specifications:

The GSC Smoke Control panel electronics will be solid state modular design with UL recognized components. The modular design allows for the control circuitry to be isolated in control groups and ease of plug in circuitry replacement during service. Components from cover and back box control electronics will be wired with a cabling and connector system. Cabling will provide unhindered access to field wiring termination points during installation or service.

Wiring description option PSC (See Detail C)
Smoke Fan Damper Control

The Engage Key switch must be activated to allow the panel HOA switch (rotary or toggle) position contact information to be transferred to the output contacts. A trouble horn and a form C (COM, N.O., N.C.) output relay is energized if a switch is moved from the AUTO "normal" position without the activation of the key switch "engage panel". Each circuit is field configurable to allow the LED indicators to be illuminated (see detail C) by remote sensing devices. A contact closure and common are provided for each switch position.

Voltage 24VDC
Current Draw base 50mA
High output LEDs 15mA

PSC Circuit option
1.5 A (24VDC resistive load)
Draw of relay 8mA

GSC, GL8, XL8 Smoke Control
approvals / listings

Agency

Reference Number

UL
Smoke Control

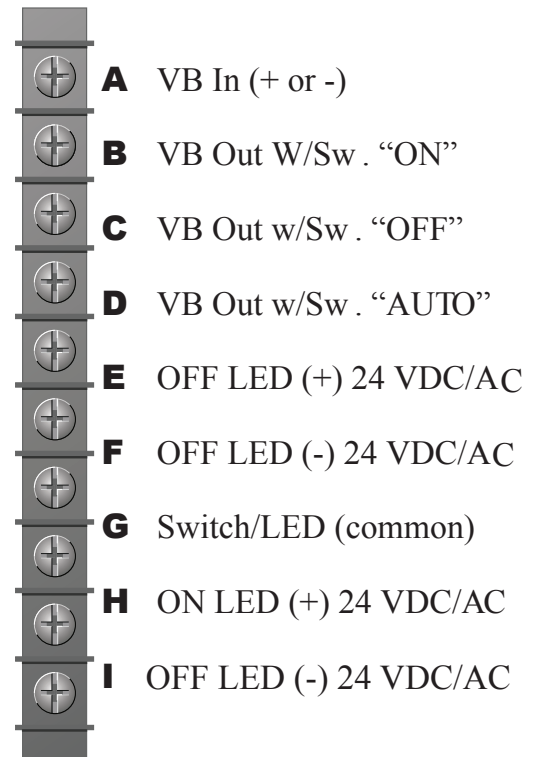
UOXX.S2580
UUKL.S2580

CSFM
California State Fire Marshal

7120-0553:102

Detail C

Typical Zone Field Connections



VB = Voltage from Host panel.

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ED0080

LT10256

Rev.E

6/8

Follow these 7 order code steps for a free GSC Smoke Control Graphic Annunciator quote, or try our free on-line Product Quote Pages at www.1SAE.com

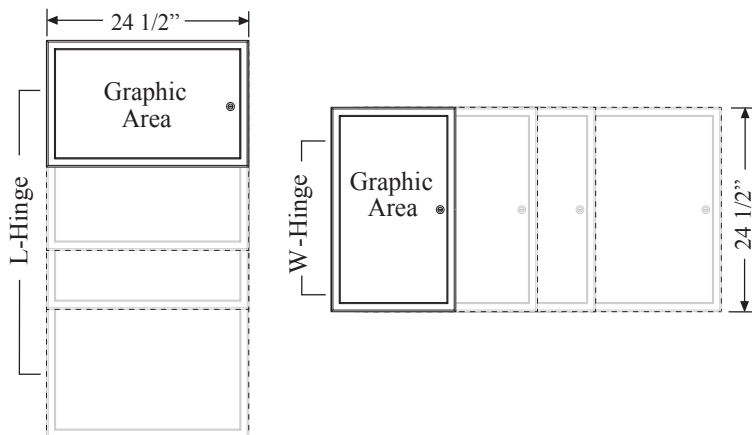
GL8 - BL 1 2 S 3 - MD 4 4 D - 5 5 5 5 5 - 6 / 7

1 Hinge Type

CODE DESCRIPTION

L Hinged on left side of cover and 24 1/2" horizontal.

W Hinged on left and 24 1/2" vertical.



2 Size (see 6 for size determination by # of switches)

CODE	Overall Width x Height	Usable Graphic Area
A	24 1/2" x 14"	22" x 11 1/2"
D	24 1/2" x 24 1/2"	22" x 22"
F	24 1/2" x 31 1/2"	22" x 29"
J	24 1/2" x 45 1/2"	22" x 43"
Z	custom size	

3 Inlay Color

CODE DESCRIPTION

R Red accent trim

B Black accent trim

Z Custom color accent trim

N No accent trim

4 Voltage

CODE DESCRIPTION

02 2Volts DC

12 12 Volts DC

24 24 Volts DC

Other options are available, contact SAE for more information.

5 Wiring options

CODE DESCRIPTION

PSC01 - Toggle switch 1 amp. relay output

PSCR1 - Rotary switch 1 amp. relay output

DRV - Fire Panel driver board

Select Type: 01 SimplexGrinnell
02 Siemens Fire Safety
03 Notifier
04 Firelite
05 Silent Knight
06 FCI
07 Secutron
08 Harrington
09 Gamewell
10 Fike
11 Edwards (EST)
12 Faraday
13 Kidde Fire Systems
14 Other: _____

6 Number of Switches

CODE DESCRIPTION

Number of switches in graphic

Size 'A' = 16 switches max

Size 'D' = 32 switches max

Size 'F' = 48 switches max

Size 'J' = 80 switches max

Size 'Z' = to be determined

7 Other LED points to be annunciated

= Number of additional LEDs

Other than ON & OFF HOA,
Open, Close LEDs

Other system requirements

Name: _____

Company: _____

Phone #: _____

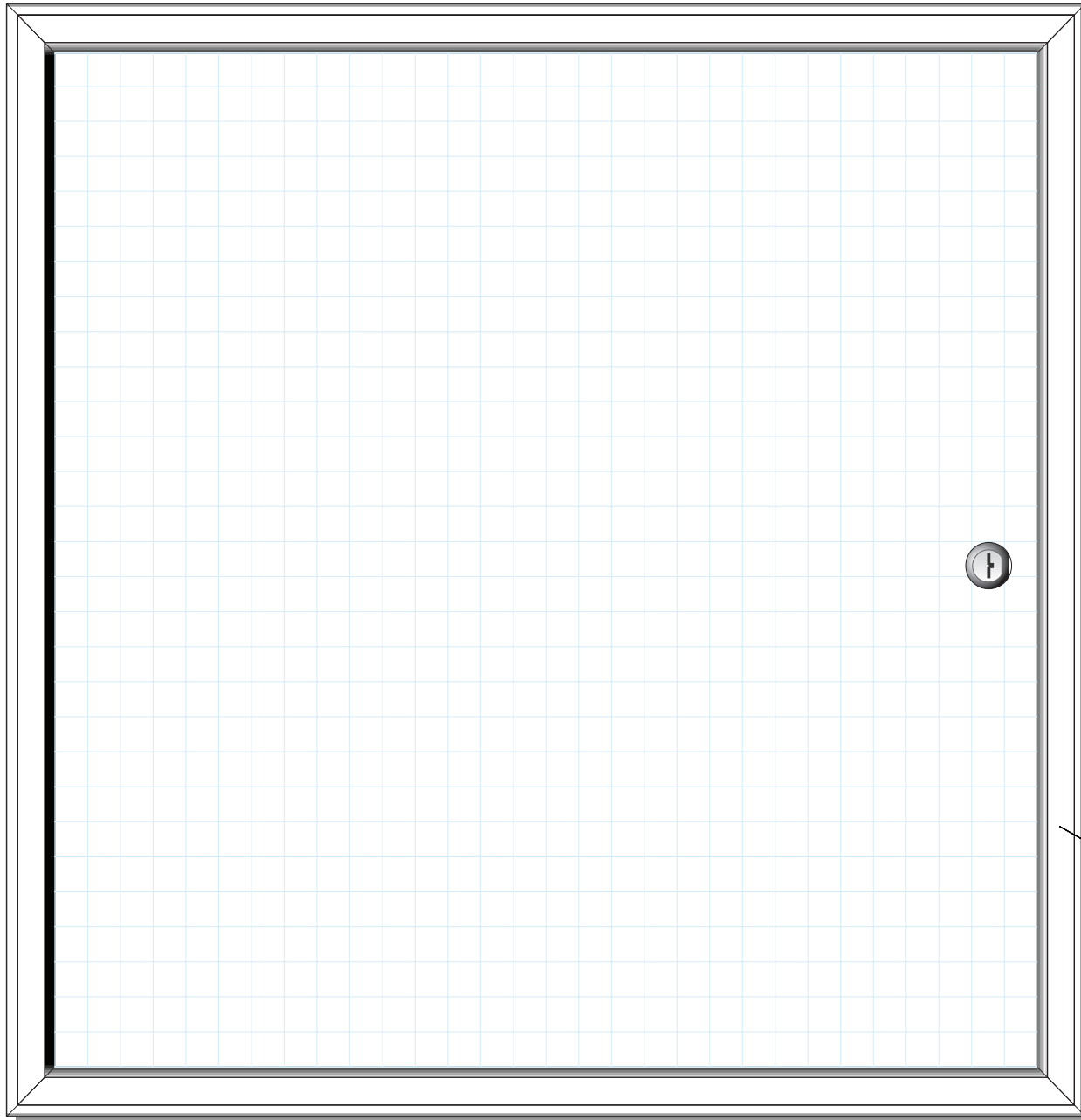
e-mail: _____

Include your contact information and fax to Space Age for a quote.

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Fax along with previous Ordering Sheet to Space Age Electronics, Inc. @ (508) 485-4740



Accent Trim	
	Black
	Red
	Blue
	Beige
	Custom
	none

Notes : _____

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**NO
EXCUSES!**

Standard Features:

- 24 VDC field operation
- Negative zone input
- Key engage switch for panel operation
- Common form C trouble output
- Polarized Input
- 3 Position double pole control switch
- For use with normally open field contacts
- 1 Amp relay outputs
- Lamp Test Function

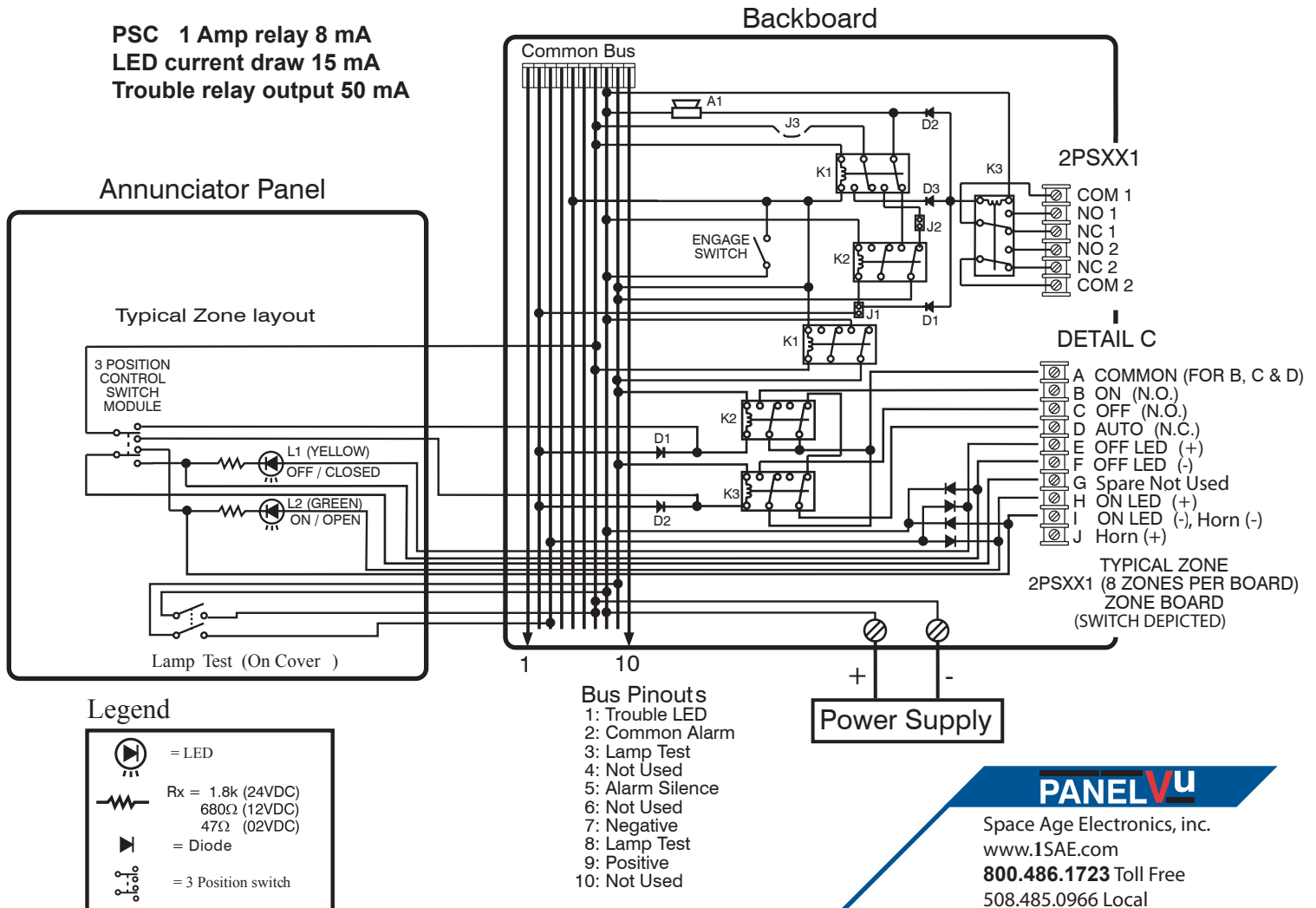
PSC01

Wiring Schematic

Operation:

The circuit provides a key engage switch to enable the panel to active relay outputs. Panel requires 24VDC input. Panel can sound and give a common trouble out if a switch is moved from normal (Auto) position prior to engaging the panel (Key switch). Horn and trouble output will extinguish if switch is returned to normal (Auto) position. Each 3 position (ON, OFF, AUTO) switch has 4 Terminals A is the power input while B (ON), C (OFF) and D (AUTO) are the outputs for the various Switch positions. each switch is supplied with 2 high intensity LEDs. Each LED can be field configured to operate with the switch position or from a field input for positive confirmation of status of fan or damper. The lamp test function illuminates all status LEDs simultaneously.

PSC 1 Amp relay 8 mA
LED current draw 15 mA
Trouble relay output 50 mA



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GL8



Graphic Annunciator

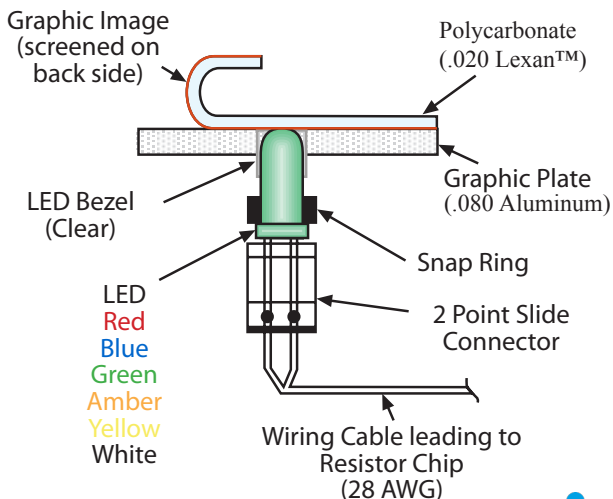
The GL8 Graphic Annunciator is designed to accommodate today's building codes with the owner's and architect's desire to maintain a high aesthetic appearance with a matte finished aluminum enclosure, a shallow box depth and a variety of electronic circuit configurations. Annunciation is accomplished through detailed graphics and the placement of high intensity LED's at the exact location of a fire alarm appliance or zone.

This "No Excuses" line of annunciators is designed to easily adapt to customer supplied lamp driver modules and many other devices including LCD displays, key pads and switches.

Standard Features:

- Quick & easy graphic upgrade and changes
- Anodized aluminum finish
- Choice of four standard cabinet sizes
- Low profile 2 1/2" shallow box
- Lexan® face panel and aluminum enclosure
- Surface or flush mounting
- Hinged cover with CAT 30 keyed door lock
- LED backlit point illumination (choice of colors)
- Choice of positive or negative zone input with multiple voltages (02, 12 & 24VDC)

DM Graphic Assembly Method



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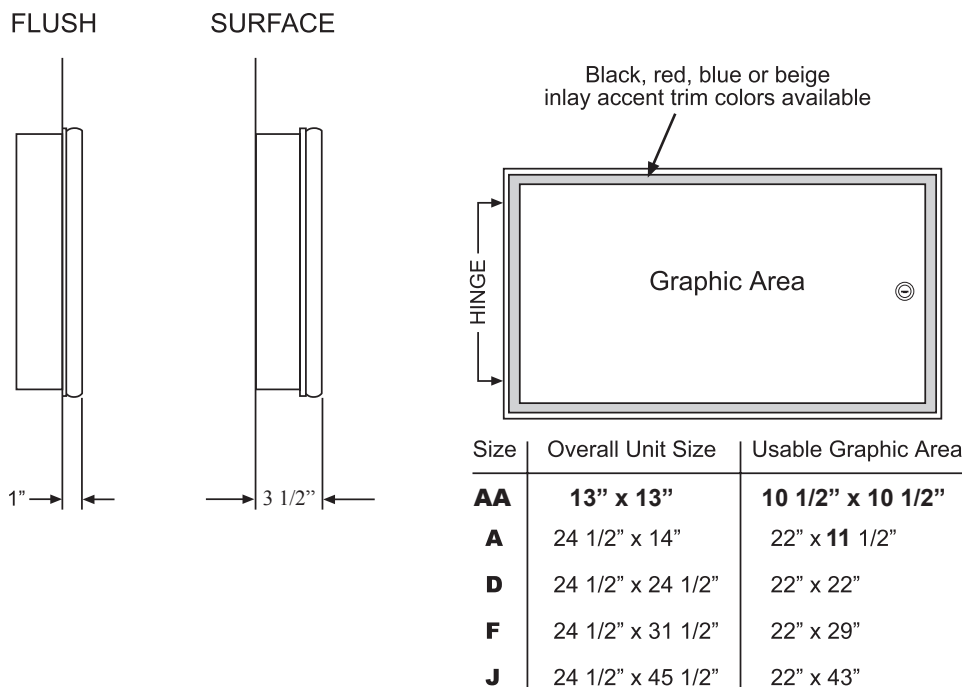
Specification:

The GL8 Cabinet Construction consists of an aluminum extrusion graphic frame for high durability and strength with a 16 gauge sheet metal mounting plate for a solid and long-lasting installation. The enclosure is designed to meet today's building codes with a low profile box to accommodate thinner walls. A solid stainless steel piano hinge and a high security CAT 30 keyed door lock accompany the door for secure easy access to the electronics.

With a slim cover frame, low profile, brushed aluminum anodized finish and a 1/2" black, red, blue, beige or custom reflective inlay accent trim, this "picture frame-like" graphic annunciator will enhance any area appearance.

All graphic displays are generated by computer aided graphic software (CAD). The image is printed on the back of a polycarbonate sheet with UV resistant ink providing for vibrant and durable images. Panel layouts are punched with CNC equipment for accurate LED hole location. The display incorporates LED point illumination behind the graphic faceplate with pluggable, high intensity LEDs, thus allowing simple field replacement.

The LEDs mount into clear bezels and are secured with snap rings. Wiring cables lead to a 2-point slide connector at the resistor chip board where it eventually leads to a Terminal Strip for field wiring connection.



Note: Cutout for flush mounting subtract 1" from overall unit size.

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Agency Listings:

UL	UOXX.S2580 Control Unit Accessories
MEA	355-91-E
CSFM	7120-0553:102

Ordering Information:

Follow the 8 steps and fill in this **GL8 Graphic Annunciator**

Order Code or try our free on-line Product Quote Pages at www.1SAE.com

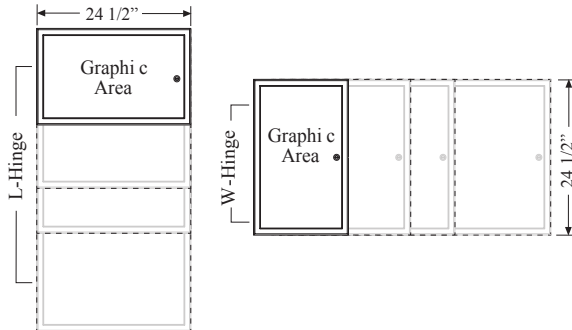
GL8 - BL 1 2 S 3 - MD 4 4 D - 1 5 5 5 6 7 - 8 8 8

1 Hinge Type

CODE DESCRIPTION

L Hinged on left side of cover and 24 1/2" horizontal.

W Hinged on left and 24 1/2" vertical.



2 Size	Overall	Usable
CODE	Width x Height	Graphic Area
A	24 1/2" x 14"	22" x 11 1/2"
D	24 1/2" x 24 1/2"	22" x 22"
F	24 1/2" x 31 1/2"	22" x 29"
J	24 1/2" x 45 1/2"	22" x 43"
Z	Custom Size	(See Page 2 for AA Size)

3 Inlay Color

CODE DESCRIPTION

R Red accent trim

B Black accent trim

Z Custom color accent trim

N No accent trim

4 Voltage

CODE DESCRIPTION

02 2 Volts DC

12 12 Volts DC

24 24 Volts DC

Notes

1: With wiring option 'SLO'(Basic Wiring) select 'X'(NO switch) for switch style

5 Wiring options

CODE DESCRIPTION

SLO - Standard wiring

SLT - Lamp test

SHM - Audible with silence and LED

SHT - SLT + SHM Combined

SHR - Trouble audible w/ silence and LED

SDA - Switch labeled "ALARM SILENCE" and "RESET", with audible alarm

SCC - Common form 'C' output

SHH - Audible wired to high barrier terminal strip

CSE - Customer supplied equipment

DRV - Fire Panel point "LED" driver board

Select Type: 01 Simplex / Grinnell

02 Siemens Cerberus

03 Notifier

04 Firelite

05 Silent Knight

06 FCI

07 Secutron

08 Harrington

09 Gamewell

10 Fike

11 Edwards (EST)

12 Faraday

13 Kidde Fire Systems

14 Other: _____

See Circuit Description Sheet on Page 4 for Details

6 Switch Style

CODE DESCRIPTION

K Key switch

O Rocker switch

X No switch

7 Zone Input

CODE DESCRIPTION

1 Negative zone input

3 Positive zone input

8 Number of Zones

CODE DESCRIPTION

Number of LEDs in graphic

Size 'AA' = 24 LED's max

Size 'A' = 64 LED's max

Size 'D' = 128 LED's max

Size 'F' = 192 LED's max

Size 'J' = 320 LED's max

Name: _____

Company: _____

Phone #: _____

e-mail: _____

Include your
contact information
and fax to Space Age
for a quote.

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Circuit Description:

- UL SLO** (EL0001) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates. Normalization of the field contact extinguishes the zone's LED/lamp.
- UL SLT** (EL0004) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates. A key or rocker switch labeled "Lamp Test" ** lights all LEDs/lamps simultaneously. Normalization of the field contact extinguishes the zone's LED/lamp.
- UL SHM** (EL0017) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates, common form 'C' output energizes, 'trouble' LED and horn activate. A maintaining key or rocker switch labeled "Alarm Silence" silences the horn. Normalization of the field contact extinguishes the zone's LED/lamp, 'trouble' LED, deactivates the Form 'C' output and rings back the horn to remind the operator to return the switch to its' normal position.
- UL SHT** (EL0018) (Combination of SLT and SHM) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates, common form 'C' output energizes, 'trouble' LED and horn activate. A maintaining key or rocker switch labeled "Alarm Silence" silences the horn. Normalization of the field contact extinguishes the zone's LED/lamp, 'trouble' LED, deactivates the Form 'C' output and rings back the horn to remind the operator to return the switch to its' normal position. A key or rocker switch labeled "Lamp Test" ** lights all LEDs/lamps simultaneously.
- UL †SHR** (EL0005) For normally open field contact (blocking diode provided). Upon a input to the 'T' terminal, the common Form 'C' output energizes, 'trouble' LED and horn activate. A maintaining key or rocker switch labeled "Trouble Silence" silences the horn. Normalization of the field contact extinguishes the 'trouble' LED, deactivates the Form 'C' output and rings back the horn to remind the operator to return the switch to its' normal position.
- UL †RTI** (EL0021) For normally open field contact (isolated 2 VDC input, no blocking diode provided). Upon activation of the RTI card, the common Form 'C' output energizes, 'trouble' LED and horn activate. A maintaining key or rocker switch labeled "Trouble Silence" silences the horn. Normalization of the field contact extinguishes the 'trouble' LED, deactivates the Form 'C' output and rings back the horn to remind the operator to return the switch to its' normal position.

†Must be combined with 'SLO' or 'SLT' per 8 circuit option.

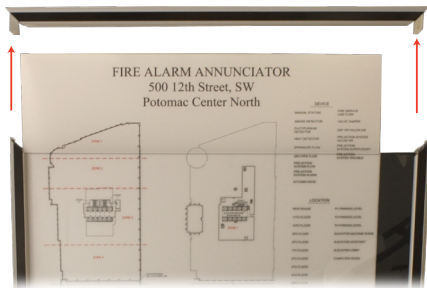
**Multiple "Lamp Test" switches are installed when current draw exceeds 2.5 amps. (One switch for each 2.5 amps.)

Most configurations are UL listed. Contact factory for details.

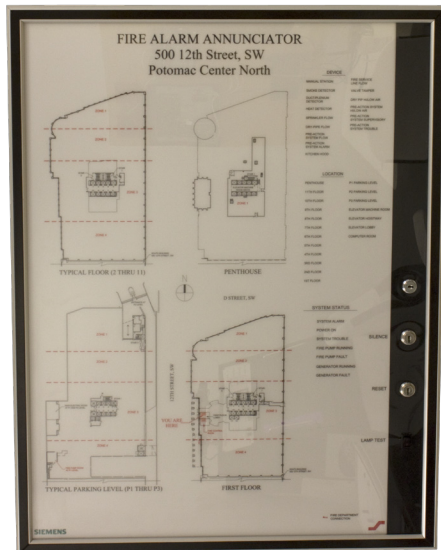
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Quick & Easy Graphic Replacements



Standard Features:

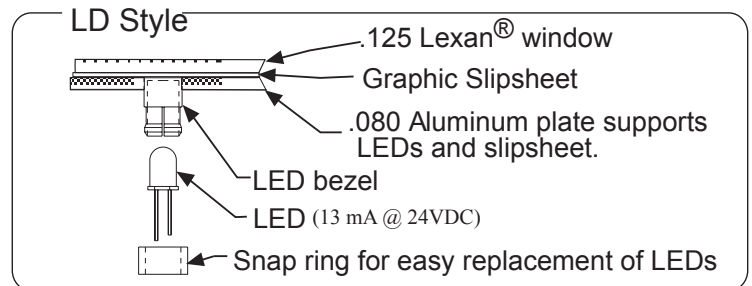
- Quick and easy replacement of graphic slip-sheet
- Graphic color selection unlimited
- Anodized aluminum finish
- Choice of cabinet sizes
- Low profile back box for surface or flush mounting
- Solid Stainless piano hinge
- Security door lock (other key lock style available)
- LED point illumination (choice of colors)
- UL listed electronic circuits

LD Graphic Annunciator

The GL8 LD slip-sheet annunciator is designed to make it easy to change or update your graphic building or message. Durable design and high aesthetic appearance will provide the ultimate information annunciator. Architecturally inspired design features a aluminum soap matt finish with a choice of reflective inlay colors. Hinged door with key lock for security of the electronics. Annunciation is accomplished through detailed graphics and the placement of high intensity LED's securely fastened behind a 1/8" thick clear lexan sheet.

Space Age Electronics offers a verity of UL listed circuits for inputs and can incorporate into the assembly other manufacturers LED driver, relay control and a variety of other system modules that are required as part of the system.

LD Graphic Assembly Method



**ISO 9001
REGISTERED
COMPANY**



Made In U.S.A.



PANELVu

Space Age Electronics, Inc.
www.1sae.com
800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

Specification:

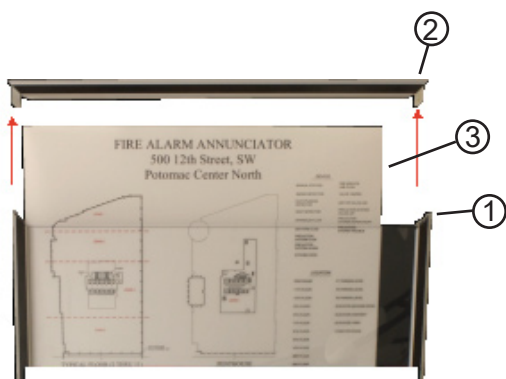
The GL8 LD Annunciator panel enclosure shall be sized appropriately for the building graphic layout. The GL8 LD back box is constructed from aluminum extrusions (minimum 1/16" wall thickness), finished with an aesthetic durable powder coat or anodized aluminum soap matte finish. The back box can be surface or flush mounted. A 16 gauge solid steel back plate secures electronics and field termination wiring. A non-conductive back board is supplied for easy field installation into the back box.

Cover Assembly

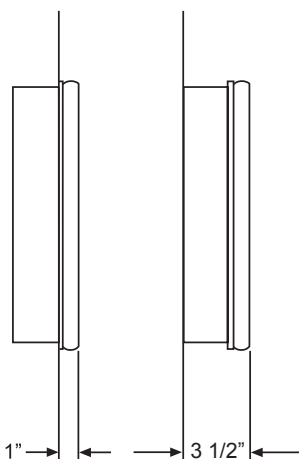
The GL8 LD cover will be secured to the back box with a stainless steel piano hinge and a keyed door lock to secure and protect field terminations and electronics. When the cover is closed all hardware is concealed inside the enclosure. The cover will be a minimum .080" thick aluminum panel with an extruded aluminum frame (minimum 1/16" wall thickness). Finish will be an aesthetic durable powder coat or anodized aluminum soap matte finish with optional reflective inlay accent trim in either Black, Blue, Red or Beige. The cover is capable of being field disconnected and removed from the back box when the cover is open. The wiring between the cover and the control circuitry in the back box are provided with multi pin connectors which allow complete separation from the back box and cover (less the Lamp Test and Engage Switches). The unit will be supplied with wiring layout documentation to identify all connectors and field assembly.

Replace graphic in 4 asy steps:

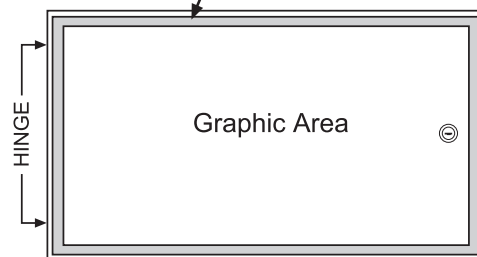
1. Loosen artwork clips.
2. Remove top rail.
3. Slide out old graphic and slide in new graphic.
4. Re-assemble top rail and clips.



FLUSH SURFACE



Black, red, blue or beige
inlay accent trim colors available



Note: Cutout for flush mounting subtract 1" from overall unit size.

Size	Overall Unit Size	Useable Graphic Area	Part Number
A	24 1/2" x 14"	22" x 11 1/2"	SSU51005
D	24 1/2" x 24 1/2"	22" x 22"	SSU51006
F	24 1/2" x 31 1/2"	22" x 29"	SSU51007
J	24 1/2" x 45 1/2"	22" x 43"	SSU51008

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Agency Listings:

UL	UOXX.S2580 Control Unit Accessories
MEA	355-91-E
CSFM	7120-0553:102

Circuit Description:

- UL SLO** (EL0001) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates. Normalization of the field contact extinguishes the zone's LED/lamp.
- UL SLT** (EL0004) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates. A key or rocker switch labeled "Lamp Test" ** lights all LEDs/lamps simultaneously. Normalization of the field contact extinguishes the zone's LED/lamp.
- UL SHM** (EL0017) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates, common form 'C' output energizes, 'trouble' LED and horn activate. A maintaining key or rocker switch labeled "Alarm Silence" silences the horn. Normalization of the field contact extinguishes the zone's LED/lamp, 'trouble' LED, deactivates the Form 'C' output and rings back the horn to remind the operator to return the switch to its' normal position.
- UL SHT** (EL0018) (Combination of SLT and SHM) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates, common form 'C' output energizes, 'trouble' LED and horn activate. A maintaining key or rocker switch labeled "Alarm Silence" silences the horn. Normalization of the field contact extinguishes the zone's LED/lamp, 'trouble' LED, deactivates the Form 'C' output and rings back the horn to remind the operator to return the switch to its' normal position. A key or rocker switch labeled "Lamp Test" ** lights all LEDs/lamps simultaneously.
- UL †SHR** (EL0005) For normally open field contact (blocking diode provided). Upon a input to the 'T' terminal, the common Form 'C' output energizes, 'trouble' LED and horn activate. A maintaining key or rocker switch labeled "Trouble Silence" silences the horn. Normalization of the field contact extinguishes the 'trouble' LED, deactivates the Form 'C' output and rings back the horn to remind the operator to return the switch to its' normal position.
- UL *DRV** Driver Boards. LED driver boards and other electronics can be installed.

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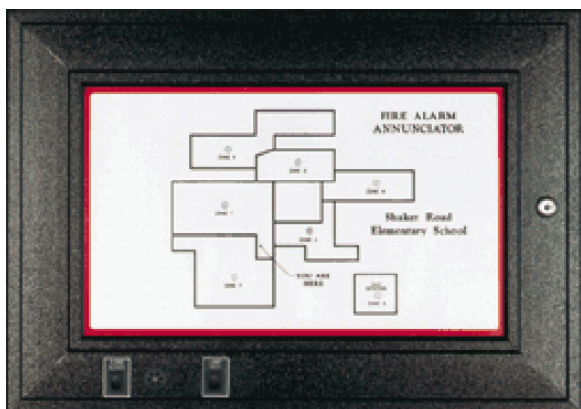
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†Must be combined with 'SLO' or 'SLT' per 8 circuit option.
**Multiple "Lamp Test" switches are installed when current draw exceeds 2.5 amps. (One switch for each 2.5 amps.)
Most configurations are UL listed. Contact factory for details.
*Many configurations are UL listed. Contact factory for details.

**NO
EXCUSES!**



XL8



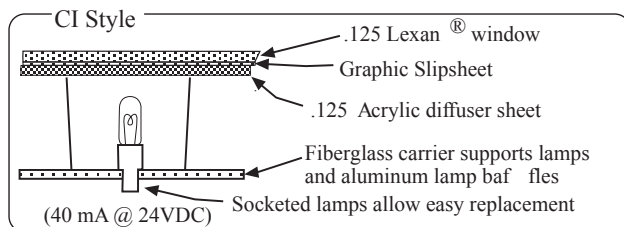
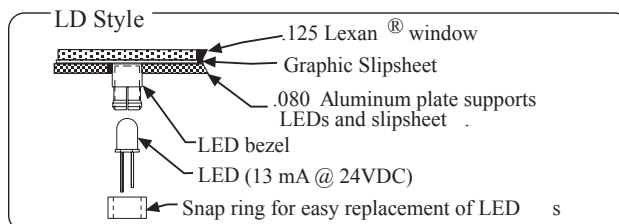
Graphic Annunciator

The XL8 Graphic Annunciator is the information station. This unit displays a pictorial description, such as building layout, to provide an accurate location of an alarm. The application of the XL8 ranges from fire alarm to "Nurse Call" stations, as well as door alarms, security, process monitoring and control.

Illumination Styles:

Standard Features:

- Choice of LED or incandescent backlit illumination for zone or point identification
- Choice of seven standard cabinet sizes (A, B, C, D, F, H and J)
- Indoor (BL) or outdoor (WA) enclosures
- 1/8" Lexan® window
- Flush (flange available) or surface mounting
- Piano hinge with CAT 30 keyed door lock
- Red or black textured enclosure finishes
- 02, 12 or 24VDC operating voltages
- Positive or negative zone input
- Interface with panel driver board's electronics for Annunciator operation
- Hard wire circuits available
- Driver boards installed by SAE



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Specifications:

The XL8 Graphic Annunciator is available in a wide range of sizes to meet your graphic's size requirements. Multiple illumination styles aid in clearly conveying your graphic information. Choice of high intensity LED's (available in a multitude of colors), socketed backlit lamps or a combination of both.

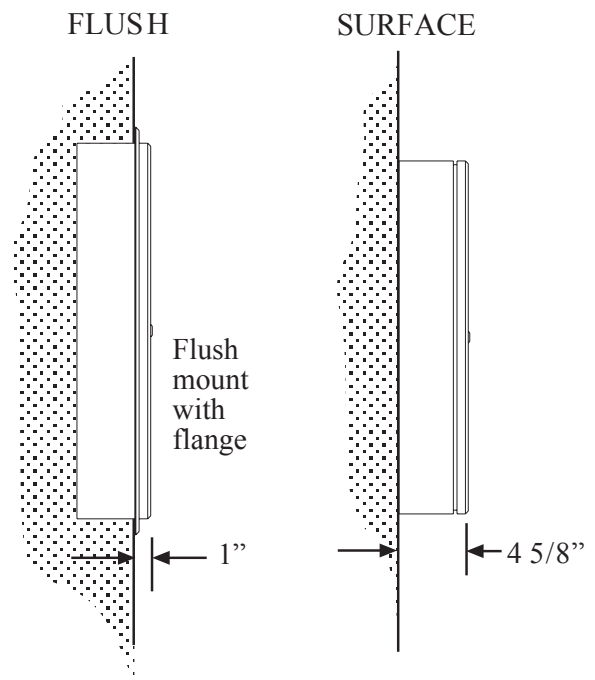
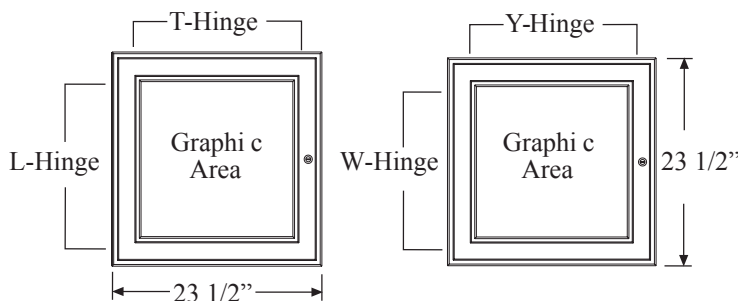
The XL8 Graphic Annunciator consists of a Lexan® face panel and an extruded aluminum cover frame with a choice of several standard back boxes proportionally sized and constructed of extruded aluminum with flush or surface mount options. A solid stainless steel piano hinge and a high security CAT 30 keyed door lock accompany the door for secure, easy access to the graphics and electronics. Choice of LED or incandescent backlit illumination for zone or point identification specific to the customer supplied graphics and requirements. Zone input either positive or negative in 12, 24 or 2VDC operating voltages. The unit also interfaces with panel driver boards for basic annunciator operation. A variety of hardwired electronic circuits are offered by SAE. Wiring cable(s) lead to a 2-point slide connector at the terminal input board.

The display incorporates LED point illumination or incandescent backlit zones behind the graphic faceplate with pluggable, high intensity LED's or incandescent bulbs, thus allowing simple field replacement. The LED's mount into clear bezels and are secured with a snap rings. Incandescent bulbs are a socketed type and are easily replaceable.

Mounting

Size	Overall Unit Size	Usable Graphic Area
A	23 1/2" x 13"	16 1/2" x 6"
B	23 1/2" x 16 1/2"	16 1/2" x 9 1/2"
C	23 1/2" x 20"	16 1/2" x 13"
D	23 1/2" x 23 1/2"	16 1/2" x 16 1/2"
F	23 1/2" x 30 1/2"	16 1/2" x 23 1/2"
H	23 1/2" x 37 1/2"	16 1/2" x 30 1/2"
J	23 1/2" x 44 1/2"	16 1/2" x 37 1/2"

Note: Cutout for flush mounting subtract 1" from overall unit size.



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Agency Listings:

UL	UOXX.S2580	Control Unit Accessories
MEA	355-91-E	
CSFM	7120-0553:102	

Ordering Information:

Follow the 10 steps and fill in this **XL8 Graphic Annunciator**

Order Code or try our free on-line Product Quote Pages at www.1SAE.com

XL8 - - - D - 1

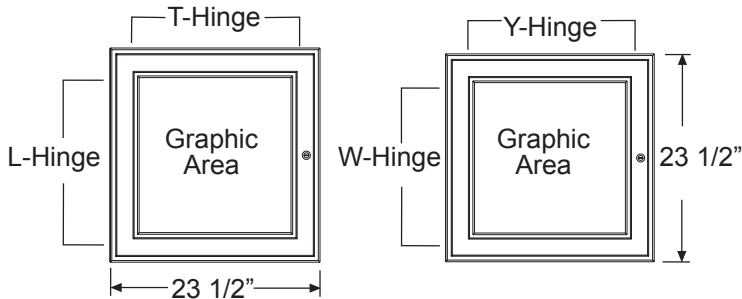
1 1 2 3 4 5 6 6 7 7 8 8 8 9 10

1 Indoor / Outdoor

CODE	DESCRIPTION
BL	Indoor enclosure
WA	Outdoor enclosure

2 Hinge Type

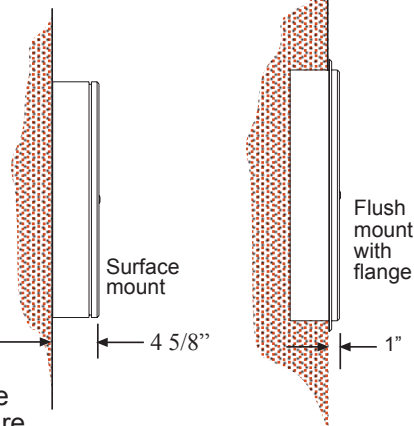
CODE	DESCRIPTION
L	Hinged on left side of cover and 23 1/2" horizontal.
T	Hinged on top and 23 1/2" horizontal.
W	Hinged on left and 23 1/2" vertical.
Y	Hinged on top and 23 1/2" vertical.



CODE	Overall Unit	Usable Graphic Area
A	23 1/2" x 13"	16 1/2" x 6"
B	23 1/2" x 16 1/2"	16 1/2" x 9 1/2"
C	23 1/2" x 20"	16 1/2" x 13"
D	23 1/2" x 23 1/2"	16 1/2" x 16 1/2"
F	23 1/2" x 30 1/2"	16 1/2" x 23 1/2"
H	23 1/2" x 37 1/2"	16 1/2" x 30 1/2"
J	23 1/2" x 44 1/2"	16 1/2" x 37 1/2"

4 Mounting

CODE	DESCRIPTION
S	Surface
F	Flush



5 Color

CODE	DESCRIPTION
R	Red enclosure
B	Black enclosure
Z	Custom finish

Notes

- 1: Standard graphic display is white background with black linework.
- 2: Standard LED's are red and incandescent lamps are clear.

6 Graphic Illumination

CODE	DESCRIPTION
LD	LED Point Lit
MD	LED Point Lit
CI	Incandescent backlit

See page 1 for illumination style clarification

7 Voltage

CODE	DESCRIPTION
02	2 Volts
12	12 Volts
24	24 Volts

8 Wiring options

CODE	DESCRIPTION
SLO	Standard wiring
SLT	Lamp test
SHM	Audible with silence and LED
SHT	SLT + SHM Combined
SHR	Trouble audible w/ silence and LED
SDA	Switch labeled "ALARM SILENCE" and "RESET", with audible alarm
SCC	Common form 'C' output
SHH	Audible wired to high barrier terminal strip
CSE	Customer supplied equipment
DRV	Fire Panel point "LED" driver board

Select Type: 01 Simplex/Grinnell
02 Siemens / Cerberus
03 Notifier
04 Firelite
05 Silent Knight
06 FCI
07 Secutron
08 Harrington
09 Gamewell
10 Fike
11 Edwards (EST)
12 Faraday
13 Kidde Fire Systems
14 Other: _____

See Circuit Description Sheet LT10140 for Details

9 Wiring Option Switch Type

CODE	DESCRIPTION
K	Key switch
O	Rocker switch
X	No switch

10 Zone Input

CODE	DESCRIPTION
1	Negative zone input
3	Positive zone input

Name: _____
 Company: _____
 Phone #: _____
 e-mail: _____

Include your
contact information
and fax to Space
Age for a quote.

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Circuit Description:

- UL SLO** (EL0001) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates. Normalization of the field contact extinguishes the zone's LED/lamp.
- UL SLT** (EL0004) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates. A key or rocker switch labeled "Lamp Test" ** lights all LEDs/lamps simultaneously. Normalization of the field contact extinguishes the zone's LED/lamp.
- UL SHM** (EL0017) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates, common form 'C' output energizes, 'trouble' LED and horn activate. A maintaining key or rocker switch labeled "Alarm Silence" silences the horn. Normalization of the field contact extinguishes the zone's LED/lamp, 'trouble' LED, deactivates the Form 'C' output and rings back the horn to remind the operator to return the switch to its' normal position.
- UL SHT** (EL0018) (Combination of SLT and SHM) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates, common form 'C' output energizes, 'trouble' LED and horn activate. A maintaining key or rocker switch labeled "Alarm Silence" silences the horn. Normalization of the field contact extinguishes the zone's LED/lamp, 'trouble' LED, deactivates the Form 'C' output and rings back the horn to remind the operator to return the switch to its' normal position. A key or rocker switch labeled "Lamp Test" ** lights all LEDs/lamps simultaneously.
- UL †SHR** (EL0005) For normally open field contact (blocking diode provided). Upon a input to the 'T' terminal, the common Form 'C' output energizes, 'trouble' LED and horn activate. A maintaining key or rocker switch labeled "Trouble Silence" silences the horn. Normalization of the field contact extinguishes the 'trouble' LED, deactivates the Form 'C' output and rings back the horn to remind the operator to return the switch to its' normal position.
- UL †RTI** (EL0021) For normally open field contact (isolated 2 VDC input, no blocking diode provided). Upon activation of the RTI card, the common Form 'C' output energizes, 'trouble' LED and horn activate. A maintaining key or rocker switch labeled "Trouble Silence" silences the horn. Normalization of the field contact extinguishes the 'trouble' LED, deactivates the Form 'C' output and rings back the horn to remind the operator to return the switch to its' normal position.

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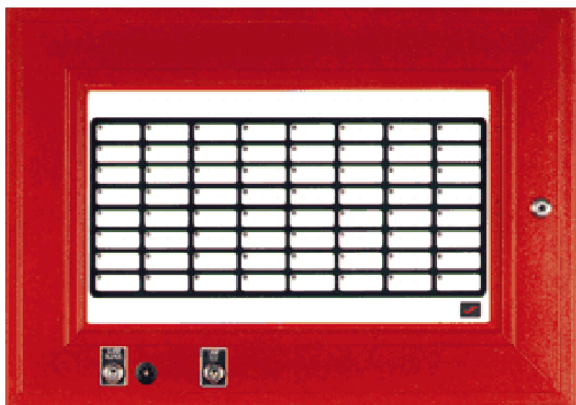
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800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

†Must be combined with 'SLO' or 'SLT' per 8 circuit option.
**Multiple "Lamp Test" switches are installed when current draw exceeds 2.5 amps. (One switch for each 2.5 amps.)
Most configurations are UL listed. Contact factory for details.

**NO
EXCUSES!**



XL8



Size B 'R' Grid' Surface Mount

Tabular Annunciator

The XL8 Tabular Annunciator displays directory style information and provides audible/visual identification of multiple monitored devices.

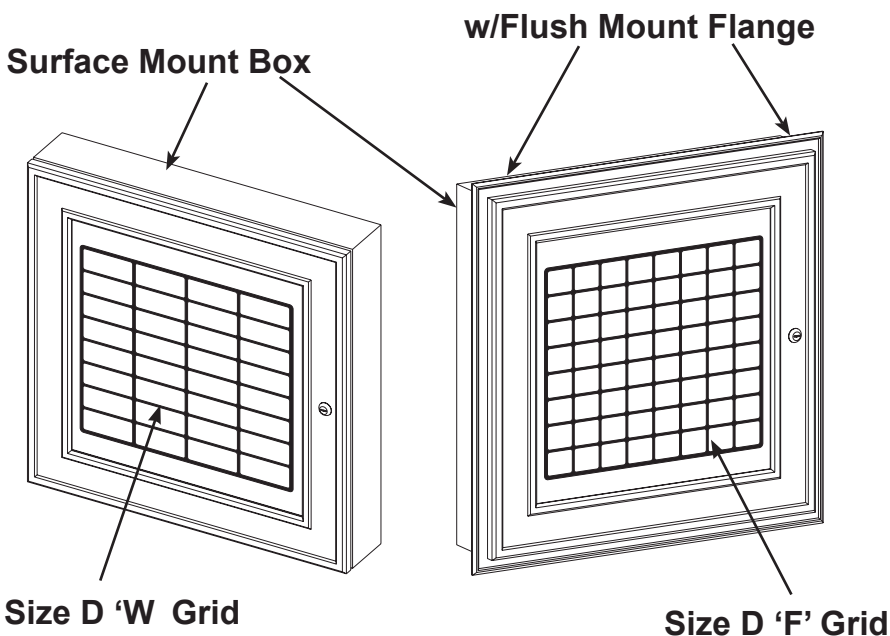
The XL8 features a red or black textured finish, indoor or outdoor style enclosure and flush or surface mounting. The display features a removable slipsheet grid and is accompanied by a variety of circuit options and switch configurations to meet your design applications.

Standard Features:

- Choice of LED or backlit incandescent illumination for zone identification
- Choice of seven standard cabinet sizes (A, B, C, D, F, H and J)
- Indoor (BL) or outdoor (WA) enclosures
- 1/8" Lexan® window with removable slipsheet
- Flush (flange available) or surface mounting • Piano hinge with CAT 30 keyed door lock
- Red or black textured enclosure finishes

Optional Features:

- Factory lettering
- Hard wire circuitry available
- Driver boards installed by SAE
- Rest, Acknowledge, Silence & Lamp Test Sw.



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Specifications:

The XL8 Tabular Annunciator consists of a 1/8" Lexan® face panel and extruded aluminum cover frame with a choice of several standard cabinet sizes also constructed of extruded aluminum with flush or surface mount preference. A solid stainless steel piano hinge and a high security CAT 30 keyed door lock accompany the door for secure, easy access to the graphics and electronics. Choice of LED or incandescent backlit illumination for zone identification. Zone input either positive or negative in 2, 12 or 24VDC operation. Interface with panel driver boards electronics for annunciator operation. A variety of electronic circuits are offered by SAE. Wiring cable(s) lead to a 2-point slide connector at the terminal input board.

Gridlines and factory lettering are printed with indelible ink onto a removable slipsheet for easy updates. The display incorporates LED point illumination or incandescent backlit behind the graphic faceplate with pluggable, high intensity LED's or incandescent bulbs, thus allowing simple field replacement. The LED's mount into clear bezels and are secured with snap rings. Incandescent bulbs are a socketed type and are easily replaceable.

Grid Size Chart

Grid Chart (number of zones)

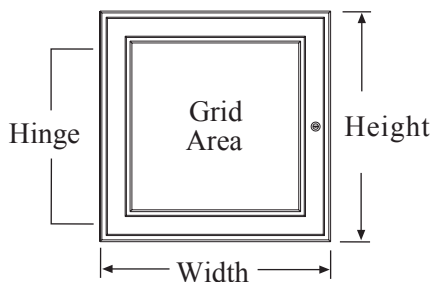
Size	W Grid	F Grid	R Grid
A	8	16	32
B	16	32	64
C	24	48	96
D	32	64	128
F	48	96	192
H	64	128	256
J	80	160	320

Lettering

14 Point FIRE
 18 Point FIRE
 24 Point FIRE
 Actual Lettering Sizes

R Grid $5/8'' \times 1 3/4''$ 30 Characters of 14 point lettering	W Grid $1 1/2'' \times 3 3/4''$ 56 Characters of 24 point lettering
F Grid $1 1/2'' \times 1 3/4''$ 30 Characters of 18 point lettering	

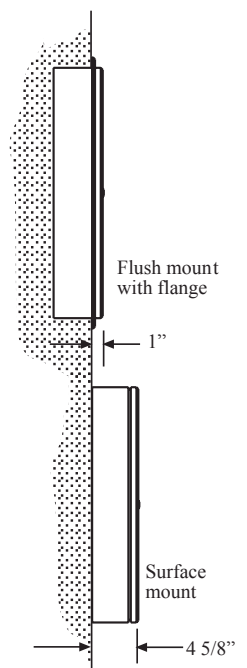
Actual Zone Window Sizes



Size	Overall Unit Size
A	23 1/2" x 13"
B	23 1/2" x 16 1/2"
C	23 1/2" x 20"
D	23 1/2" x 23 1/2"
F	23 1/2" x 30 1/2"
H	23 1/2" x 37 1/2"
J	23 1/2" x 44 1/2"

Note: Cutout for flush mounting subtract 1" from overall unit size.

Mounting



Agency Listings:

UL	UOXX.S2580 Control Unit Accessories
MEA	355-91-E
CSFM	7120-0553:102

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Optional switches rated 3A @ 24VDC
 Dry contact rated 1A @ 24VDC
 24V Power input 21-30 VDC
 12V Power input 8-18 VDC

Incandescent:
 2 lamps per 2" x 2" zone: 80mA @ 24VDC
 (90 mA @ 30VDC)
 (45mA @30 VDC for 1 Lamp)

LED:
 1 lamp per zone: 13mA @ 24VDC
 (15 mA @ 30VDC)

Ordering Information:

Follow the 9 steps and fill in this **XL8Tabular Annunciator**

Order Code or try our free on-line Product Quote Pages at www.ISAE.com

XL8 - 1 - L 2 - 3 - 4 - 5 - 5 - 6 - 6 - 7 - 7 - 7 - 8 - 9 - D - 1

1 Indoor / Outdoor

CODE	DESCRIPTION
BL	Indoor enclosure
WA	Outdoor enclosure

2 Size

CODE	DESCRIPTION
A	23 1/2" x 13"
B	23 1/2" x 16 1/2"
C	23 1/2" x 20"
D	23 1/2" x 23 1/2"
F	23 1/2" x 30 1/2"
H	23 1/2" x 37 1/2"
J	23 1/2" x 44 1/2"

3 Mounting

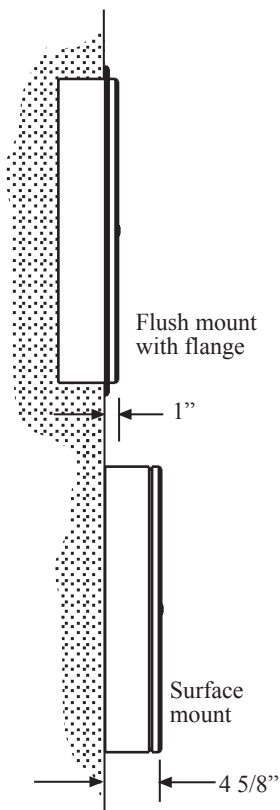
CODE	DESCRIPTION
S	Surface
F	Flush

4 Color

CODE	DESCRIPTION
R	Red enclosure
B	Black enclosure
Z	Custom finish

5 Graphic Illumination

CODE	DESCRIPTION
RD	R grid - LED points
FD	F grid - LED points
WD	W grid - LED points
RI	R grid - incandescent backlit
FI	F grid - incandescent backlit
WI	W grid - incandescent backlit



6 Voltage

CODE	DESCRIPTION
02	2 Volts DC
12	12 Volts DC
24	24 Volts DC

7 Wiring options (See page 4 for details)

CODE	DESCRIPTION
SLO	Standard wiring
SLT	Lamp test
SHM	Audible with silence and LED
SHT	SLT + SHM
SHR	Trouble audible w/ silence and LED
SDA	Switch labeled "ALARM SILENCE" and "RESET", with audible alarm
SCC	Common form 'C' output
SHH	Audible wired to high barrier terminal strip
CSE	Customer supplied equipment
DRV	Fire Panel point "LED" driver board
Select Type:	<u>01</u> Simplex / Grinnell <u>02</u> Siemens Cerberus <u>03</u> Notifier <u>04</u> Firelite <u>05</u> Silent Knight <u>06</u> FCI <u>07</u> Secutron <u>08</u> Harrington <u>09</u> Gamewell <u>10</u> Fike <u>11</u> Edwards(EST) <u>12</u> Faraday <u>13</u> Kidde Fire Systems <u>14</u> Other: _____

8 Wiring Option Switch Type

CODE	DESCRIPTION
K	Key switch
O	Rocker switch
X	No switch

9 Zone Input

CODE	DESCRIPTION
1	Negative zone input
3	Positive zone input

Notes

- Grid is black with black lettering, white background
- Standard LED's are red and incandescent lamps are clear.

Gridlines are black with optional Factory Lettering.

Actual Zone Window Sizes

R Grid
5/8" x 1 3/4"
30 Characters of
14 point lettering

F Grid
1 1/2" x 1 3/4"
30 Characters of
18 point lettering

W Grid
1 1/2" x 3 3/4"

56 Characters of
24 point lettering

Grid Chart (number of zones)

Size	W Grid	F Grid	R Grid
A	8	16	32
B	16	32	64
C	24	48	96
D	32	64	128
F	48	96	192
H	64	128	256
J	80	160	320

14 Point FIRE







18 Point FIRE

24 Point FIRE

Name: _____
 Company: _____
 Phone #: _____
 e-mail: _____

Include your
contact information
and fax to Space
Age for a quote.

Circuit Description:

-  **SLO** (EL0001) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates. Normalization of the field contact extinguishes the zone's LED/lamp.
-  **SLT** (EL0004) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates. A key or rocker switch labeled "Lamp Test" ** lights all LEDs/lamps simultaneously. Normalization of the field contact extinguishes the zone's LED/lamp.
-  **SHM** (EL0017) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates, common form 'C' output energizes, 'trouble' LED and horn activate. A maintaining key or rocker switch labeled "Alarm Silence" silences the horn. Normalization of the field contact extinguishes the zone's LED/lamp, 'trouble' LED, deactivates the Form 'C' output and rings back the horn to remind the operator to return the switch to its' normal position.
-  **SHT** (EL0018) (Combination of SLT and SHM) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates, common form 'C' output energizes, 'trouble' LED and horn activate. A maintaining key or rocker switch labeled "Alarm Silence" silences the horn. Normalization of the field contact extinguishes the zone's LED/lamp, 'trouble' LED, deactivates the Form 'C' output and rings back the horn to remind the operator to return the switch to its' normal position. A key or rocker switch labeled "Lamp Test" ** lights all LEDs/lamps simultaneously.
-  **†SHR** (EL0005) For normally open field contact (blocking diode provided). Upon a input to the 'T' terminal, the common Form 'C' output energizes, 'trouble' LED and horn activate. A maintaining key or rocker switch labeled "Trouble Silence" silences the horn. Normalization of the field contact extinguishes the 'trouble' LED, deactivates the Form 'C' output and rings back the horn to remind the operator to return the switch to its' normal position.
-  **†RTI** (EL0021) For normally open field contact (isolated 2 VDC input, no blocking diode provided). Upon activation of the RTI card, the common Form 'C' output energizes, 'trouble' LED and horn activate. A maintaining key or rocker switch labeled "Trouble Silence" silences the horn. Normalization of the field contact extinguishes the 'trouble' LED, deactivates the Form 'C' output and rings back the horn to remind the operator to return the switch to its' normal position.

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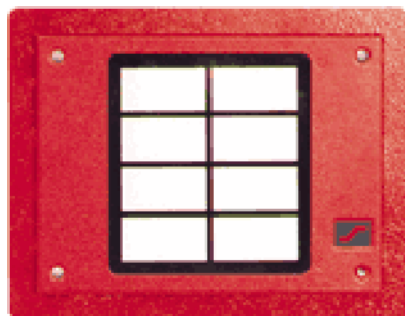
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508.485.0966 Local
508.485.4740 Fax

†Must be combined with 'SLO' or 'SLT' per 8 circuit option.
**Multiple "Lamp Test" switches are installed when current draw exceeds 2.5 amps. (One switch for each 2.5 amps.)
Most configurations are UL listed. Contact factory for details.

**NO
EXCUSES!**



M08/16



Mini Annunciators

The M08/M16 Mini Annunciators are designed for a variety of fire and security applications and offers versatility with a compact design for displaying the condition of a monitored device.

These Mini Annunciators feature a red or black textured finish, indoor or outdoor style enclosure and flush or surface mounting. The display features a removable legend and is accompanied by a variety of circuit options and switch configurations to meet your design applications. Zone nomenclature is easily changed on the removable legend sheet before or after installation.

Standard Features:

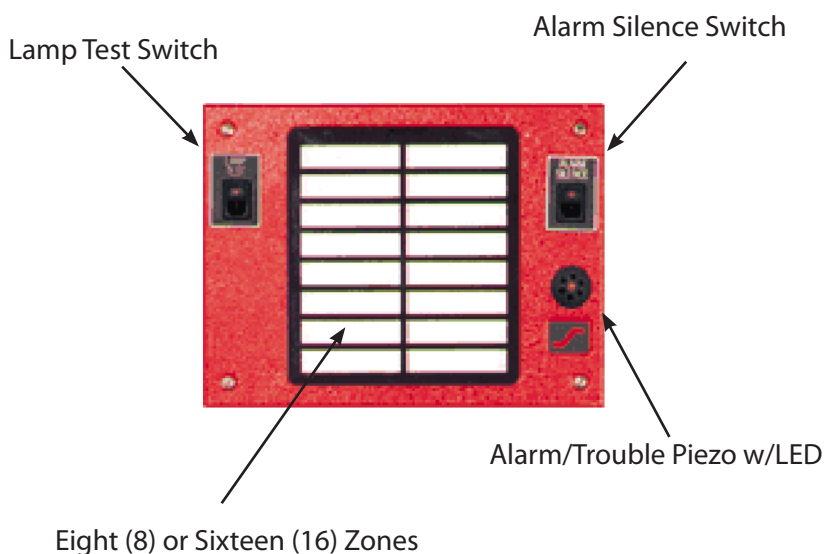
- 12 or 24 VDC operation
- 8 or 16 zones of annunciation
- Positive or negative zone input
- Choice of LED or backlit incandescent illumination for zone identification
- Indoor (BL) or outdoor (WA) enclosures
- Flush or surface mounting
- 1/8" Lexan® window w/removable legend
- Red or black textured enclosure finishes

Optional Features:

- Auxiliary key or rocker switch
- Custom switch label(s)
- Auxiliary piezo audible
- Key switch rain guard
- Field Lettering Kit
- Factory Screened Lettering



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Specifications:

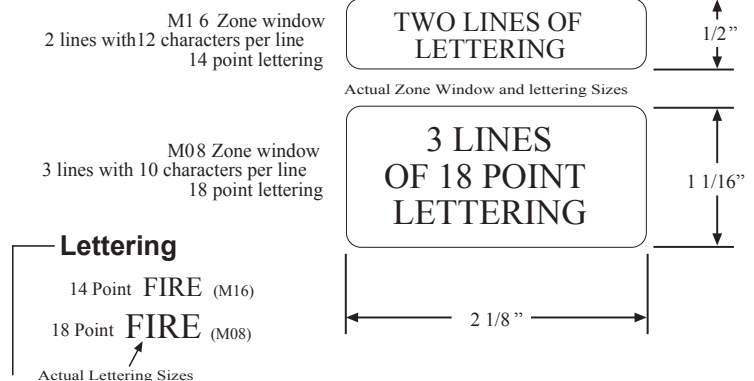
The M08/M16 Mini Annunciators are available as flush or surface mounted units. Choose backlit incandescent lamps or high intensity LED illumination to aid in clearly displaying your directory information. The grid is black with black factory screened lettering and white background, while LED's are red and incandescent lamps are clear. Contact SAE for a variety of LED colors as well as unit color. Choice of indoor or outdoor application. Annunciation by 8 or 16 zone grids which are printed with indelible ink onto a removable legend sheet for easy updates. The display incorporates LED point illumination or incandescent backlit behind the tabular faceplate with high intensity LED's (red) or incandescent bulbs (clear). Incandescent lamps are socketed. The units employ field wiring high barrier terminal strips and accessible plug in cable harnessing. Choice of Negative or Positive zone input with a variety of circuit options available. Space Age Electronics has a variety of standard circuitry options, with a modular wiring system method for easy field upgrades, changes and replacement of parts. Circuits are designed to work with virtually all Fire Alarm Control Panels "FACP". Circuit operations have been developed to meet State & AHJ specifications for operations. Standard operational voltage is designed for 12 or 24VDC.

Optional switches rated 3A @ 24VDC
Dry contact rated 1A @ 24VDC
24V Power input 21-30 VDC
12V Power input 8-18 VDC

Incandescent:
2 lamps per zone: 80mA @ 24VDC
(90 mA @ 30VDC)

LED:
1 lamp per zone: 13mA @ 24VDC
(15 mA @ 30VDC)

Grid Sizes



Specifications are provided for information only and are believed to be accurate. However, no responsibility is assumed by Space Age Electronics, Inc. for their use.

All Circuits Feature:

- 12 or 24VDC operation
- Incandescent or LED point illumination
- 01 = Negative zone input (positive lamp common)
- 03 = Positive zone input (negative lamp common)

Dimensions:

- Indoor: 8 1/2" wide by 6 1/2" high by 3 1/2" deep
- Outdoor: 9" wide by 7" high by 3 3/4" deep

Standard Circuits:

- SLO Standard lamps only. Each zone has individual input terminals and a single lamp common is provided. When alarm conditions exist, the corresponding zone/lamp is illuminated.
- SHT Standard lamp test and audible circuit. A trouble or alarm input signal sounds the piezo horn and lights the dedicated trouble LED. A silence switch quiets the horn. When all inputs are removed, the horn will resound to remind the operator to normalize the silence switch (ring back). Also provided is a common form 'C' dry contact set which activates when any zone lamp lights.

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Agency Listings:

UL	UOXX.S2580 Control Unit Accessories
MEA	355-91-E
CSFM	7120-0553:102

This document is subject to change without notice, see doc # ED0479 for legal disclaimer

Ordering Information:

Basic M08/M16 Annunciators

Try our on-Line Product Quote Pages at

www.1SAE.com

Indoor Cover		Outdoor Cover		Description
Black	Red	Black	Red	
SSU02020	SSU02022	SSU02040	SSU02042	8 Zone Unit - 'SLO' wiring, LED illumination @ 24VDC, negative zone inputs
SSU02024	SSU02026			8 Zone Unit - 'SHT' wiring, LED illumination @ 24VDC, negative zone inputs
SSU02030	SSU02032	SSU02050	SSU02052	16 Zone Unit - 'SLO' wiring, LED illumination @ 24VDC, negative zone inputs
SSU02034	SSU02036			16 Zone Unit - 'SHT' wiring, LED illumination @ 24VDC, negative zone inputs
Indoor Back Box		Outdoor Back Box		
SSU02002	SSU02003	SSU02004	SSU02005	Back box
SSU02006	SSU02007	NA for Outdoor		Trim ring flush mount

Custom Ordering Information:

M - - S M - - D -

1 Zones

CODE	DESCRIPTION
08	M08 (8 zone) Annunciator
16	M16 (16 zone) Annunciator

2 Indoor / Outdoor

CODE	DESCRIPTION
BL	Indoor enclosure
WA	Outdoor enclosure

3 Mounting

CODE	DESCRIPTION
S	Indoor surface mounting
F	Indoor flush mounting
P	Outdoor surface/flush mounting

4 Color

CODE	DESCRIPTION
R	Red enclosure
B	Black enclosure
Z	Custom finish

5 Illumination

CODE	DESCRIPTION
LD	LED point (standard red)
TI	incandescent lamp backlit

6 Voltage

CODE	DESCRIPTION
02	2 Volts DC
12	12 Volts DC
24	24 Volts DC

7 Wiring options

CODE	DESCRIPTION
SLO	Standard wiring
SHT	Lamp test, audible w/silence

8 Wiring Option Switch Type

CODE	DESCRIPTION
K	Key switch
O	Rocker switch
X	No switch

9 Zone Input

CODE	DESCRIPTION
1	Negative zone input
3	Positive zone input

Notes

- 1: Grid is black with black lettering, white background
- 2: Standard LED's are red and incandescent lamps are clear.
- 3: Weatherproof units require rainguards on keyswitches
- 4: Custom labels available, contact SAE for details.

Other options are available, contact SAE for more information.

Name: _____
 Company: _____
 Phone #: _____
 e-mail: _____

Include your
 contact information
 and fax to Space
 Age for a quote.

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**NO
EXCUSES!**

All Circuits Feature:

- 02, 12 & 24VDC Operation
- LED or incandescent illumination
- Solid State circuitry



Circuit Description

- UL SLO** (EL0001) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates. Normalization of the field contact extinguishes the zone's LED/lamp.
- UL SLT** (EL0004) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates. A key or rocker switch labeled "Lamp Test" ** lights all LEDs/lamps simultaneously. Normalization of the field contact extinguishes the zone's LED/lamp.
- UL SHM** (EL0017) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates, common form 'C' output energizes, 'trouble' LED and horn activate. A maintaining key or rocker switch labeled "Alarm Silence" silences the horn. Normalization of the field contact extinguishes the zone's LED/lamp, 'trouble' LED, deactivates the Form 'C' output and rings back the horn to remind the operator to return the switch to its' normal position.
- UL SHT** (EL0018) (Combination of SLT and SHM) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates, common form 'C' output energizes, 'trouble' LED and horn activate. A maintaining key or rocker switch labeled "Alarm Silence" silences the horn. Normalization of the field contact extinguishes the zone's LED/lamp, 'trouble' LED, deactivates the Form 'C' output and rings back the horn to remind the operator to return the switch to its' normal position. A key or rocker switch labeled "Lamp Test" ** lights all LEDs/lamps simultaneously.
- UL †SHR** (EL0005) For normally open field contact (blocking diode provided). Upon a input to the 'T' terminal, the common Form 'C' output energizes, 'trouble' LED and horn activate. A maintaining key or rocker switch labeled "Trouble Silence" silences the horn. Normalization of the field contact extinguishes the 'trouble' LED, deactivates the Form 'C' output and rings back the horn to remind the operator to return the switch to its' normal position.
- UL †RTI** (EL0021) For normally open field contact (isolated 2 VDC input, no blocking diode provided). Upon activation of the RTI card, the common Form 'C' output energizes, 'trouble' LED and horn activate. A maintaining key or rocker switch labeled "Trouble Silence" silences the horn. Normalization of the field contact extinguishes the 'trouble' LED, deactivates the Form 'C' output and rings back the horn to remind the operator to return the switch to its' normal position.



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UL SCC (EL0002) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates and common Form 'C' output activates. Normalization of the field contact extinguishes the zone's LED/lamp and deactivates the common Form 'C' output.

†**SHH** Isolated horn wired to two high barrier terminal strips.

UL †SDA (EL0007) For normally open field contacts (blocking diode provided) requiring an individual input per zone. When an alarm condition exists, the corresponding zone's LED/lamp illuminates. Normalization of the field contact extinguishes the zone's LED/lamp. Two momentary switches labeled "Alarm Silence" and "Reset" respectively are wired to terminals and a horn is wired to the 'T' terminal.

SFA (EL0012) A two stage circuit initiates upon the closing of a normally open field contact; the LED/lamp flashes, the horn sounds, and the common Form 'C' output activates. A momentary key or rocker switch labeled "ACK" steadies the LED/lamp, silences the horn and deactivates the Form 'C' output. Subsequent alarms follow the same cycle (resound). Normalization of the field contact extinguishes the zone's LED/lamp. A key or rocker switch labeled "Lamp Test" ** lights all LEDs/lamps simultaneously.

SFB (EL0013) A two stage circuit initiates upon the opening of a normally closed field contact; the LED/lamp flashes, the horn sounds, and the common Form 'C' output activates. A momentary key or rocker switch labeled "ACK" steadies the LED/lamp, silences the horn and deactivates the Form 'C' output. Subsequent alarms follow the same cycle (resound). Normalization of the field contact extinguishes the zone's LED/lamp. A key or rocker switch labeled "Lamp Test" ** lights all LEDs/lamps simultaneously.

SFC (EL0014) A two stage circuit initiates upon the closing of a normally open field contact; the input latches in, the LED/lamp flashes, the horn sounds, and the common Form 'C' output activates. A momentary key or rocker switch labeled "ACK" steadies the LED/lamp, silences the horn and deactivates the Form 'C' output. Subsequent alarms follow the same cycle (resound). Activation of the momentary key or rocker switch labeled "Reset" extinguishes all field normalized LEDs/lamps. A key or rocker switch labeled "Lamp Test" ** lights all LEDs/lamps simultaneously.

SFD (EL0015) A two stage circuit initiates upon the opening of a normally closed field contact; the input latches in, the LED/lamp flashes, the horn sounds, and the common Form 'C' output activates. A momentary key or rocker switch labeled "ACK" steadies the LED/lamp, silences the horn and deactivates the Form 'C' output. Subsequent alarms follow the same cycle (resound). Activation of the momentary key or rocker switch labeled "Reset" extinguishes all field normalized LEDs/lamps. A key or rocker switch labeled "Lamp Test" ** lights all LEDs/lamps simultaneously.

†Must be combined with 'SLO' or 'SLT' per 8 circuit option.

**Multiple "Lamp Test" switches are installed when current draw exceeds 2.5 amps. (One switch for each 2.5 amps.)

UL Most configurations are UL listed. Contact factory for details.

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Contact SAE for the following:
-Interface to an OEM's driver modules.
-Circuits cannot be combined unless verified by SAE.
-Other circuits and voltages are available.

**NO
EXCUSES!**

Prepared using fade resistant, UV-enduring inks, a durable glare-free finish and our quality aluminum display frame.

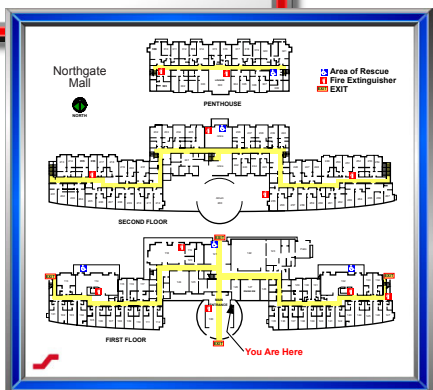


GD8

DI Graphic Display Frame

The GD8 DI Graphic Display Frame is designed to assist in the effective preparation of a proactive Emergency Operation Plan (EOP). With changing requirements from NFPA it provides the means and support as a year round training tool in the aid of fire drills and meeting emergency evacuation training requirements. The GD8 Graphic display provides a clear static layout of a building or campus and aids in requirements for public awareness of the building layout and evacuation egress routes.

The GD8 DI graphic display frame is the state of the art method for displaying messages. Utilizing UV durable inks that resist fading and harmful effects from light exposure, the GD8 DI boasts long lasting vibrant images, and offers the broadest selection of colors available. The graphic image is computer generated and plotted directly onto the back side of a clear .012 thick polycarbonate film which is permanently laminated to a rigid back plate. The film's surface texture diffuses light and cuts glare to a minimum. The graphic is plotted onto the back side of the film, eliminating the concerns of damage to the image from cleaning and wear and also protecting from water or environmental effects.



Standard Features:

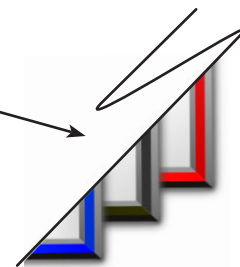
- Full color image printed on the reverse side of a .012 mil thick polycarbonate film, fire rated class A ASTM E84, matte finish
- Standard white background with colored image line work
- Graphic produced with UV rated inks and permanently laminated to resist environmental weather damage
- Rigid 1/8" ABS back plate
- Architecturally designed low profile aluminum frame with natural aluminum matte finish
- Continuous 1/2" inlay accent trim (reflective red, reflective blue, reflective black, beige or custom color)
- Assembly and mounting hardware supplied
- Concealed hardware, eliminating tampering
- Available in 3 standard sizes, custom sizes up to 34" x 44"



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Special Reflective Inlay

Different colors offer easy identification of the purpose and meaning of the graphic in the frame (RED for FIRE, BLUE for SECURITY, etc...) Special colors available on special order basis.



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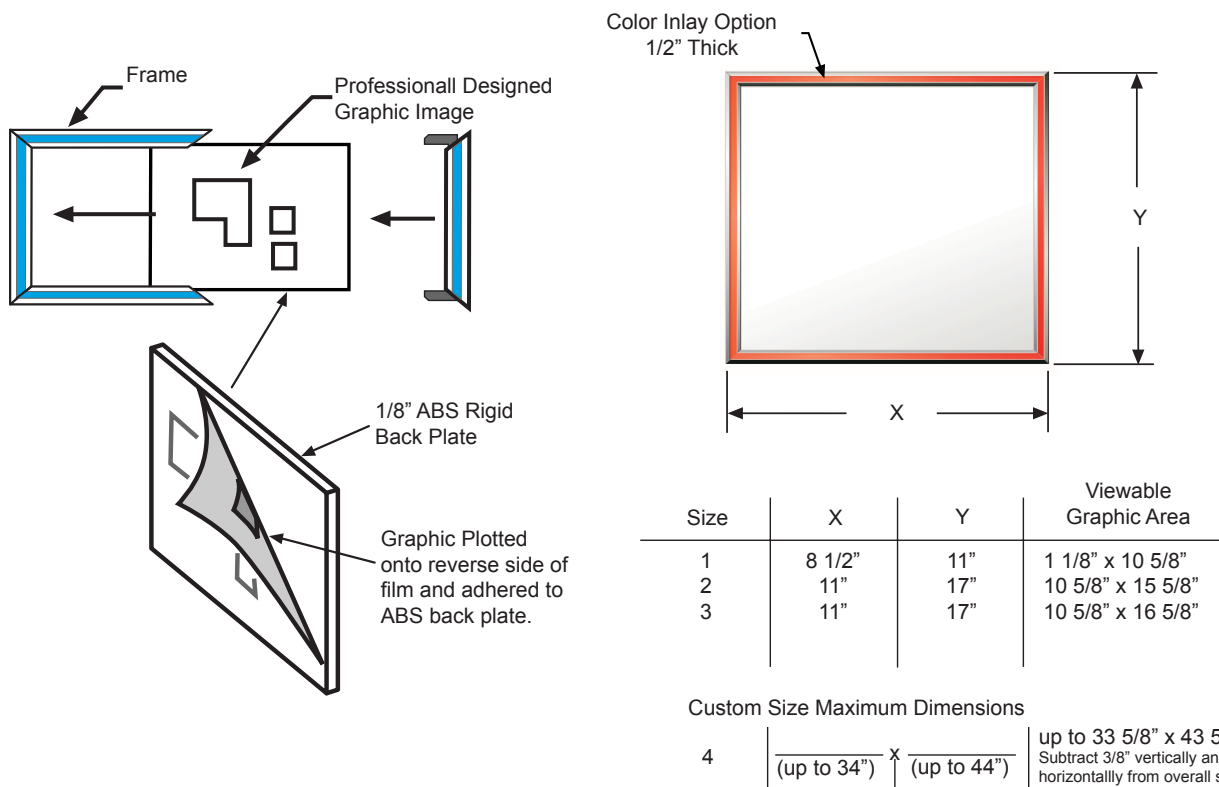
Specifications:

The GD8 DI Graphic Display Frame will be constructed of a 1/8" thick aluminum extruded frame. The finish will be an architectural soap matte finish all over, assembled with 45 degree mitered corners and concealed hardware for assembly. The GD8 frame will have a continuous 1/2" light reflective trim all around the graphic/text image, in specified color (red, blue or black). The GD8 will be securely mounted to a wall. The mounting hardware will be concealed for security to prevent any unauthorized removal or alteration.

With supplied graphic information established, a professionally designed and laminated building Emergency Operation Plan (EOP), map, instructions, and/or other pertinent information will be incorporated into the DI assembly. The final layout will be professionally prepared for proper identification of egress and exit routes, along with other specific and important information clearly displayed to initiate immediate action when required.

DI Assembly Graphic:

The GD8 DI assembly frame will incorporate a professionally designed graphic, plotted onto the back of .012 mil piece of (DMBPC12) polycarbonate backprint film. The film's surface texture diffuses light and cuts glare to a minimum. The film will be permanently adhered to a solid piece of 1/8" ABS rigid back plate for strength and durability. The polycarbonate film is rated class A according to ASTM E84 tunnel test for surface burning characteristics of building materials (fire test). UV-durable inks will be used to resist fading and harmful effects from light exposure producing long lasting images.



Ordering Information:

Part #	Description
SSU52000	Size 1 (8 1/2" x 11") Display Frame
SSU52001	Size 2 (11" x 17") Display Frame
SSU52002	Size 3 (17" x 17") Display Frame
SSU52003	Size 4 Custom Sized Display Frame up to 34" x 44"
SSU52004	GD8 DI Graphic Display custom artwork
SSU52006	Graphic design layout service CAD/ENG additional time/proc

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ED0251

LT10310

Rev.B

2/4

GD8 DI Preliminary Quote

Ordering:

Follow these 3 steps for Space Age Electronics to generate a preliminary quote for your Graphic/Map or try our free on-line Product Quote Pages at www.1SAE.com

1 QUANTITY (total number of displays needed)

Determine the quantity of maps that are needed for your facility(s). This assumes all maps needed will be of the same size (see Step 2 for available sizes) and similar in level of difficulty (see Step 3 for examples of Level of difficulty). If you are in need of different size maps, you will need separate quotes for an accurate determination of your product needs.

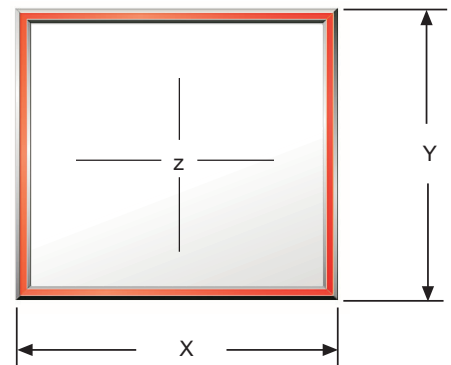
For same size and similar layout needs: count the number of floors per building, or if required, all entrances/exits for the building that are required to have a visual evacuation/map display.

2 Determine what **SIZE** GD8 Display Frame is needed for your display or would best fit your application. This assumes all maps are similar in information/level of difficulty (see Step 3 to determine level of difficulty)

Space Age offers 4 sizes (one size selectable per quote)

Check only one:

	Size	X	Y	Z
<input type="checkbox"/>	1	8 1/2"	11"	1 1/8" x 10 5/8"
<input type="checkbox"/>	2	11"	17"	10 5/8" x 15 5/8"
<input type="checkbox"/>	3	11"	17"	10 5/8" x 16 5/8"
	Custom Size Maximum Dimensions			
<input type="checkbox"/>	4	(up to 34")	X (up to 44")	up to 33 5/8" x 43 5/8" Subtract 3/8" vertically and horizontally from overall size.



3 Determine Graphic/Map **LEVEL OF DIFFICULTY**. Compare your drawings to the following levels of complexity.

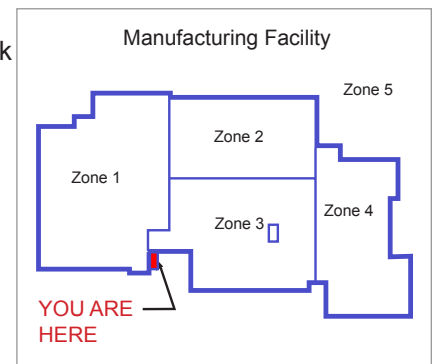
Check only one:

☐ Simple

Less than 20 rooms, with vertical and horizontal line work and basic building outlines. Standard artwork is black linework and lettering on a white background.

(check additional that may apply)

- ☐ Additional graphic colors required: # _____
- ☐ Each room numbered or titled
- ☐ Graphic display has a title
- ☐ 'You Are Here'
- ☐ Title and north arrow



Additional pertinent details: _____

(Quoting details continued on next page...)

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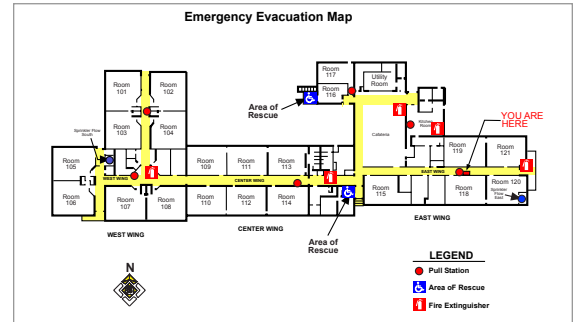
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- ☐ **Medium** 20-50 rooms with vertical and horizontal line work. Hallways, stairwells and elevators depicted. Standard artwork is black linework and lettering on a white background.

(check all that may apply)

- ☐ Additional graphic colors required: # _____
- ☐ All rooms titled and/or numbered
- ☐ Icons used for identification with legend
- ☐ Labeled exits
- ☐ Major egress escape routes
- ☐ 'You Are Here'
- ☐ Legend for icons
- ☐ Device icons
- ☐ Area of Rescue

Additional pertinent details: _____

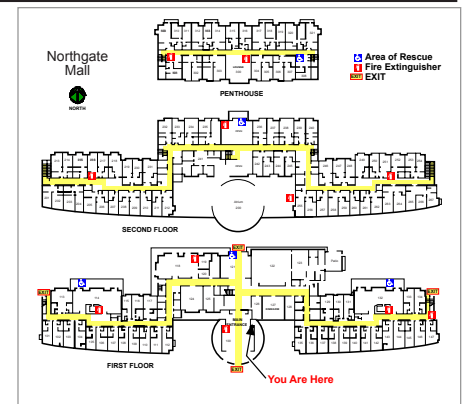


- ☐ **Difficult** 50 rooms or more, building outline may have curves and angles. Standard artwork is black linework and lettering on a white background.

(check all that may apply)

- ☐ Additional graphic colors required: # _____
- ☐ Building outline has curves and angles
- ☐ Hallways, stairwells and/or elevator details
- ☐ Entrances labeled including loading docks, etc.
- ☐ All rooms are titled and/or numbered
- ☐ 'You Are Here'
- ☐ Leader lines to depict details or special instructions
- ☐ Multiple icons and details on display legend
- ☐ Device icons
- ☐ Address location for devices (ie: pull station, smoke detector, etc.)
- ☐ Major Egress escape routes

Additional pertinent details: _____

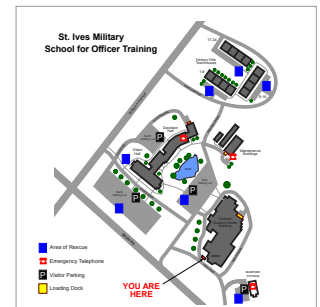


- ☐ **Campus Type Complex** This is a facility/site/campus complex that shows multiple buildings, parking lots, roads, walkways etc. Standard artwork is black linework and lettering on a white background.

(check all that may apply)

- ☐ Additional graphic colors required: # _____
- ☐ Graphic title
- ☐ Building labels, road names and other similar details
- ☐ Buildings and roads have curved lines or angles
- ☐ Trees, shrubbery
- ☐ 'You Are Here'

Additional pertinent details: _____



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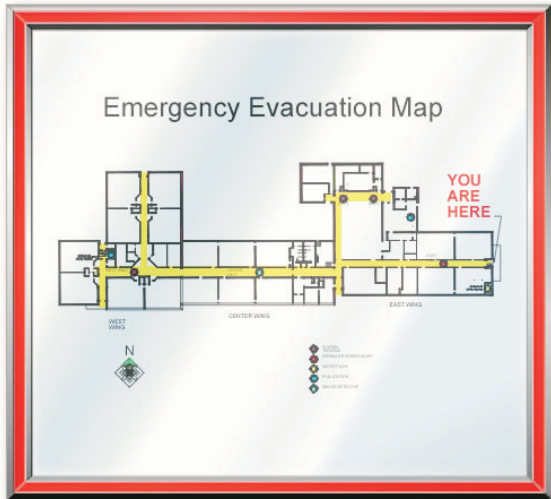
Include your
contact information
and fax to Space
Age for a quote.

Name: _____
Company: _____
Phone #: _____
e-mail: _____

**NO
EXCUSES!**

GD8

CS Graphic Display Frame



Your supplied graphic/map
will be professionally displayed
and securely held.

Color Inlay Applications
(Check your local AHJ for
possible requirements)

Red = Fire, Emergency
Blue = Information, Egress,
OSHA Requirements,
Maintenance

The GD8 CS Graphic Display Frame is designed to assist in the effective preparation of a proactive Emergency Operation Plan (EOP). Evacuation site maps are an essential component of a complete emergency fire alarm life safety installation. A GD8 Graphic display provides a clear static layout of a building or campus and aids in requirements for public awareness of the building layout and evacuation egress routes. With changing requirements from NFPA it provides the means and support as a year round training tool in the aid of fire drills and meeting emergency evacuation training requirements.

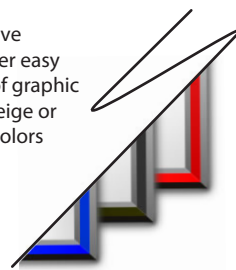
The GD8 CS Graphic Display Frame is designed to hold a field supplied evacuation egress map. It is ideally suited for customer supplied paper plots or architectural drawings for that professional look.

The GD8 frame features a 1/2" colored reflective inlay trim. Reflective inlays are ideal for quickly identifying the life safety information map during an emergency or for public awareness. The reflective inlays are easily identified when any light is passed over it or emergency backup lights are illuminated.

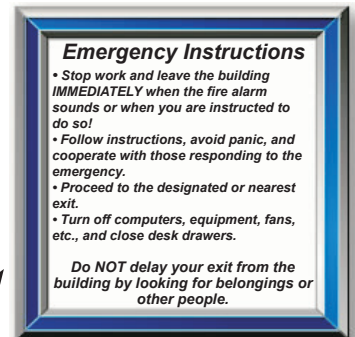
Standard Features:

- 1/16" crystal clear polycarbonate protective window
- Rigid 1/8" ABS plastic back plate
- Architecturally designed low profile aluminum frame with natural aluminum matte finish
- Continuous 1/2" inlay accent trim (reflective red, reflective blue, reflective black, beige or custom color)
- Assembly and mounting hardware supplied
- Concealed hardware, eliminating unauthorized access or tampering
- Available in 3 standard sizes, with custom sizes available up to 34" x 44"

Special Reflective
Inlay Colors offer easy
identification of graphic
or message. (beige or
other custom colors
available)



Example of color coded
inlay application using
Blue for Emergency
Instructions.



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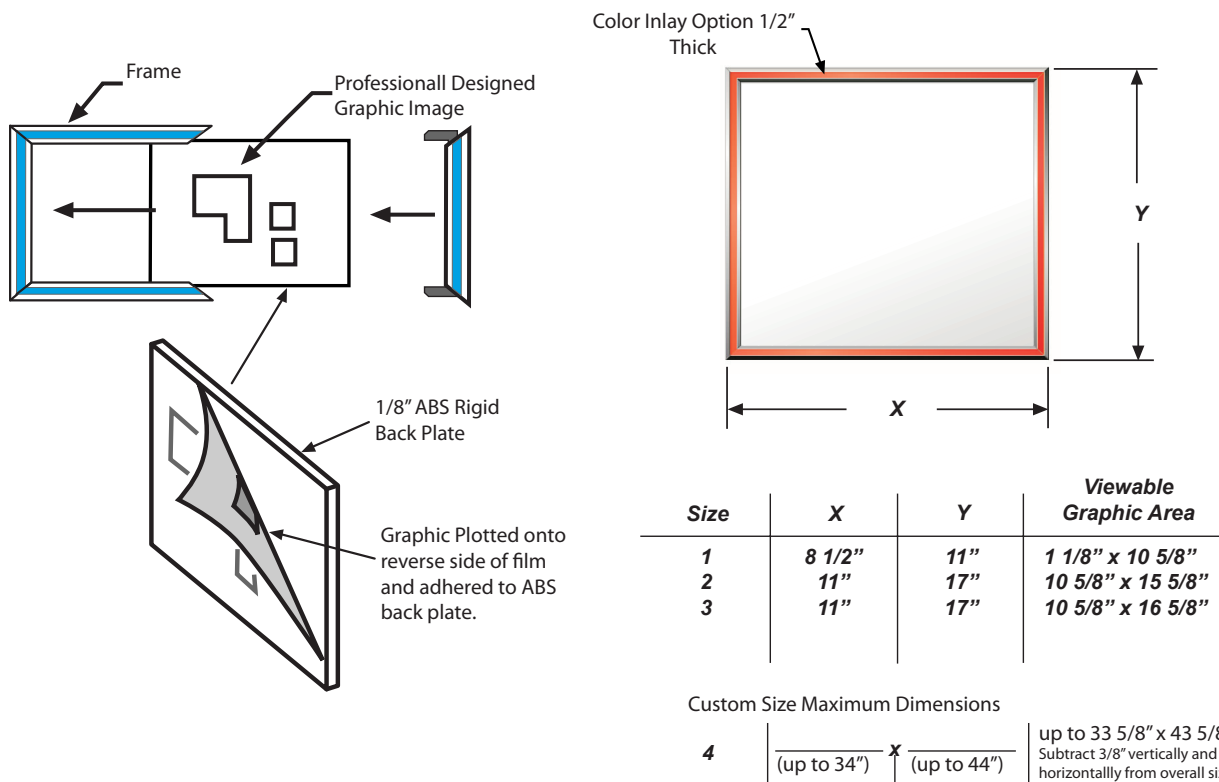
Made In  U.S.A

Specifications:

The GD8 CS Graphic Display Frame will be constructed of a 1/8" thick aluminum extruded frame. The finish will be an architectural soap matte finish all over, assembled with 45 degree mitered corners and concealed hardware for assembly. The GD8 frame will encapsulate the graphic/text message once assembled. The GD8 will be securely mounted to a wall. The GD8 frame will have continuous 1/2" light reflective trim all around the graphic/text image. The mounting hardware will be concealed for security to prevent any unauthorized removal or alteration.

CS Assembly:

The GD8 CS graphic map will be securely encapsulated in the GD8 frame. A 1/16" crystal clear polycarbonate protective viewing window in front of image and the supplied artwork shall be backed with a solid white 1/8" ABS rigid back plate.



Ordering Information:

Part #	Description
SSU52000	Size 1 (8 1/2" x 11") Display Frame
SSU52001	Size 2 (11" x 17") Display Frame
SSU52002	Size 3 (17" x 17") Display Frame
SSU52003	Size 4 Custom Sized Display Frame up to 34" x 44"
SSU52005	GD8 CS graphic display plotted, polycarb color encapsulated
SSU52006	Graphic design layout service CAD/ENG additional time/proc

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508.485.4740 Fax

**NO
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Code/Graphic Frame

The CGF Code/Graphic Frame is a durable metal housing that will protect your image or message. The frame is manufactured from 18 gauge steel with a baked-on red paint finish. A clear shatter proof Lexan® protective window insures your message or graphic remains safe and visible.

The design is aesthetically pleasing and cost effective. The slim 1/4" trim maximizes your area of visible message or graphic. The design features a fastening tab to secure your message. Also the concealed hardware eliminates tampering or vandalism.



Shatterproof
Lexan® Window

Standard Features:

- Durable 18 gauge construction
- High aesthetic red baked-on finish
- Easy field assembly and image updates
- Custom colors available
- Shatter proof Lexan® glass
- Adjustable for different media types (from paper to 3/8" thick material)
- Overall dimensions:
8 3/4" x 11 1/8" x 1/2" deep

Common Uses

Evacuation map
Emergency instructions
Code frame
Location indication map
Building floor plans



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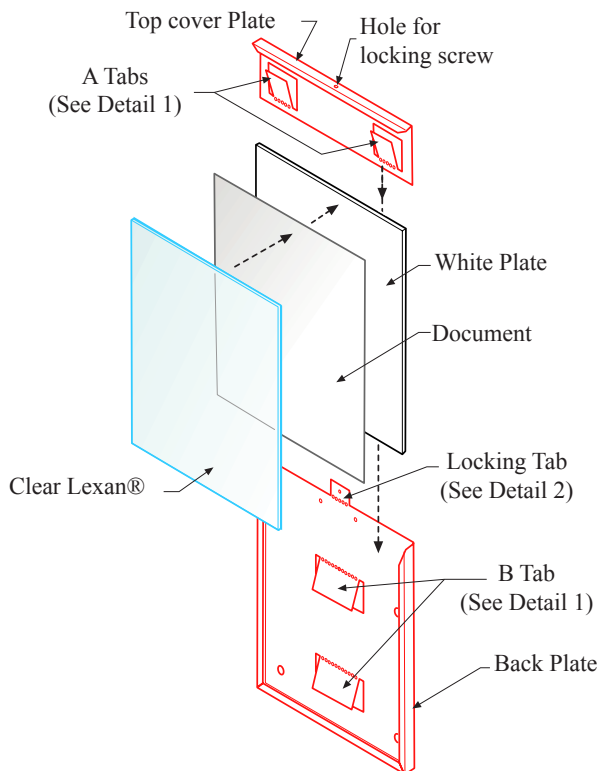
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Specifications:

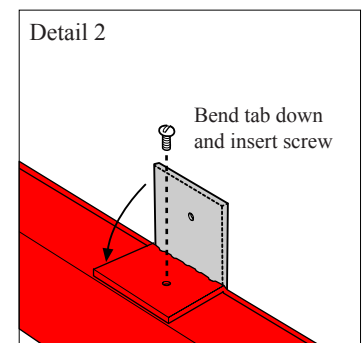
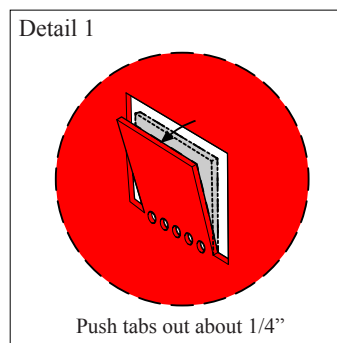
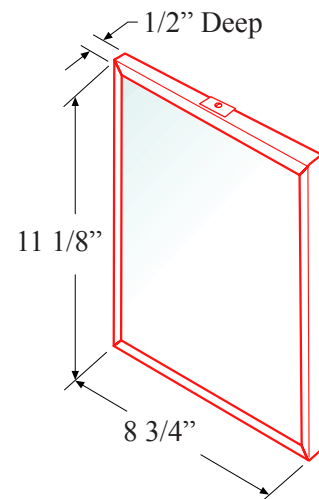
The **CGF Code/Graphic Frame** will allow for easy image display updates without the need to remove the frame from the wall. The top securing plate has an optional security screw to prevent tampering of information secured inside frame. The frame is constructed from 18 gauge CRS with a red baked-on powder coat textured finish. Dimensions are 8 3/4" x 11 1/8" x 1/2" deep. Image or display is protected between a polycarbonate shatter proof crystal clear Lexan® cover with a 1/16" thick white aluminum back plate to support image. The unit has concealed mounting hardware not accessible when the unit is fully assembled. Code/graphic frame shall be a Space Age Electronics CGF series code frame.

Installation Procedure:

- Remove top cover plate from unit.
- Push A & B tabs towards the inside of the plates, on both back plate and top plate (see Detail 1).
- Mount back plate to wall, with opening up.
- Place document on white plate, place clear Lexan over document.
- Slide all three pieces into back plate. Plate should push against tabs.
- Slide top plate into opening at top of back.
- Bend locking tab down and insert screw (see Detail 2).



Dimensions:



Ordering Information:

Part #	Description
SSU52010	CGF Code/Graphic Frame Red

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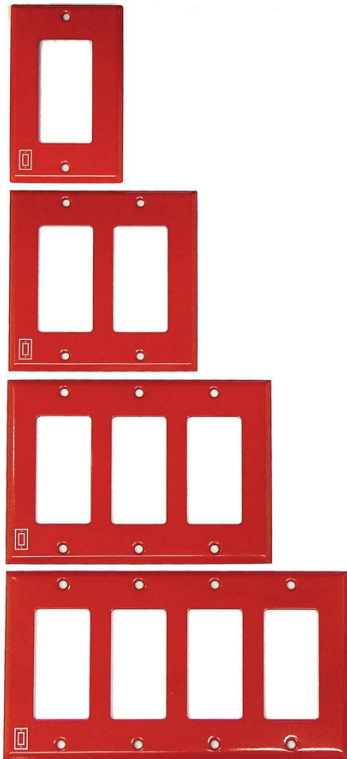
This document is subject to change without notice, see doc # ED0479 for legal disclaimer

ED0260 LT10269

Rev.B

2/2

**NO
EXCUSES**



Infinity **Gang Plates**

It all starts with the plate. This “**Decora**” style design is the basis of the Infinity Line. It is the basic building block upon which the whole product line revolves.

Space Age Electronics is proud to announce the Infinity Line of Solutions Based Products.

Infinity is Flexibility!

Infinity is Simplicity!

Infinity is Fire, Security, HVAC, Building Automation!

Infinity is Annunciation, Control, Notification!

Infinity is Integration!

Infinity is all this and more, it is the melding together of products that can Alert, Manage and Identify the functions that are faced n buildings around the globe.

Functions like Fan and Damper Control, Fire Alarm Annunciation and Fire Suppression Signaling can now be contained on a single “gangable” and “customizable console.

And that is just the beginning, Utilizing the format of the familiar “gangable” device mount work boxes, we can grow the Infinity line far beyond it’s current product offering. Think of it, a factory custom, You tell us your need and we will design the solution to fill that need, as long as it fits the Infinity plate format. Switches, Lights, Timers, anything..... The possibilities are Infinite!!!

Standard Features:

- Universal Recognition of the “Plate”
- The name “Infinity” means there are no pre-conceived limits to design
- Customizing is a natural for this “modular” type of product
- No “in-house” manufacturing/configuring, 1 from Column A, 1 from Column B approach.
- Listing is done on a module by module basis
- All inputs and outputs are relay or switch contacts = Universal Compatibility!!



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INFINITY SERIES
Modular Components

Space Age Electronics, Inc.
www.1sae.com

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508.485.4740 Fax

Specifications:

All Infinity devices shall fit the “single gang” footprint. This footprint enables the product to be mounted flush, alone on an old style work box, new work box or SAE’s surface mount Infinity Gang Back Box (IGB). It must also be “gangable” up to 6 places to fit flush workboxes that can be screwed or ganged together or SAE’s surface mount IGB boxes that come in 1 thru 6 gang sizes. All Infinity plates, sized 1 thru 6 gang shall be available in Red, White, Stainless or Yellow and may be placarded with a 1.5” x 3” custom plaque.

Space Age welcomes customization of the product line, if you require a large red mushroom type switch on a yellow place specially lettered for “Generator Shut Down” or a lighted push button switch on a stainless steel plate for a conveyor belt activation, Space Age will be happy to accommodate you.

Remember, we supply code compliant solutions, so we will not only take your custom order, we will check to see what the actual requirements are for the functionality you are looking for.

SSU#	Part #	Description
IGP1R	Infinity Gang Plate 1 Gang Red	
IGP2R	Infinity Gang Plate 2 Gang Red	
IGP3R	Infinity Gang Plate 3 Gang Red	
IGP4R	Infinity Gang Plate 4 Gang Red	
IGP5R	Infinity Gang Plate 5 Gang Red	
IGP6R	Infinity Gang Plate 6 Gang Red	
IGP1W	Infinity Gang Plate 1 Gang White	
IGP2W	Infinity Gang Plate 2 Gang White	
IGP3W	Infinity Gang Plate 3 Gang White	
IGP4W	Infinity Gang Plate 4 Gang White	
IGP5W	Infinity Gang Plate 4 Gang White	
IGP6W	Infinity Gang Plate 6 Gang White	
IGP1SS	Infinity Gang Plate 1 Gang Stainless Steel	
IGP2SS	Infinity Gang Plate 2 Gang Stainless Steel	
IGP3SS	Infinity Gang Plate 3 Gang Stainless Steel	
IGP4SS	Infinity Gang Plate 4 Gang Stainless Steel	
IGP5SS	Infinity Gang Plate 5 Gang Stainless Steel	
IGP6SS	Infinity Gang Plate 6 Gang Stainless Steel	
IGP1Y	Infinity Gang Plate 1 Gang Yellow	
IGP2Y	Infinity Gang Plate 2 Gang Yellow	
IGP3Y	Infinity Gang Plate 3 Gang Yellow	
IGP4Y	Infinity Gang Plate 4 Gang Yellow	
IGP5Y	Infinity Gang Plate 5 Gang Yellow	
IGP6Y	Infinity Gang Plate 6 Gang Yellow	



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Agency Approvals:

QCIT.E36078 Metallic Outlet boxes

**NO
EXCUSES!**



"A record of installed software and firmware version numbers shall be maintained at the location of the fire alarm control unit."



Fire Alarm Documents

The Space Age Electronics eFAD USB storage device has been developed to be a code compliant solution to a mandated item specified by the National Fire Code NFPA 72 section 6.2.2.1 states, "A record of installed software and firmware version numbers shall be maintained at the location of the fire alarm control unit."

The eFAD is a designed solution to prevent the reoccurring problem of non billable service calls and lost revenue. When your service technician arrives to your customer's location and the fire alarm software is not available due to it not being on site, not the right version or CD is damaged, it not only takes money directly from your bottom line, it can cause customer aggravation. These types of occurrences are typically caused by the previous technician forgetting to put the software back or the end-user misplacing it. None the less this causes downtime and customer retention issues.

Standard Features:

- Single gang electrical back box
- Standard Decora cover plate
- Can be mounted with other infinity single gang products
- Ensures that the files are always at the jobsite
- Easy access to a USB B port to files
- 2 GB flash drive, store electronically your T&I records, AS Built Drawings & service reports.
- Make changes to the fire alarm software without having to make a new CD.
- Durable steel frame mounts into an Infinity IGB Box or a standard electrical back box and securely holds the cover IGP plate.

The eFAD eliminates the need for the industry standard CD's when making changes to the fire alarm software by storing your software on 2GB USB flash drive. It stores your fire alarm software safe and secure, eliminating the occurrences of the software not being on site when technicians arrive to service the system. Along with your fire alarm software you can store your test & inspection documents, service records, manuals & AS built drawings for the system. Using a standard USB B connector it allows you to plug in with any standard SB printer cable to upload or download information. Simply erase the old version and up load the new one with your changes.



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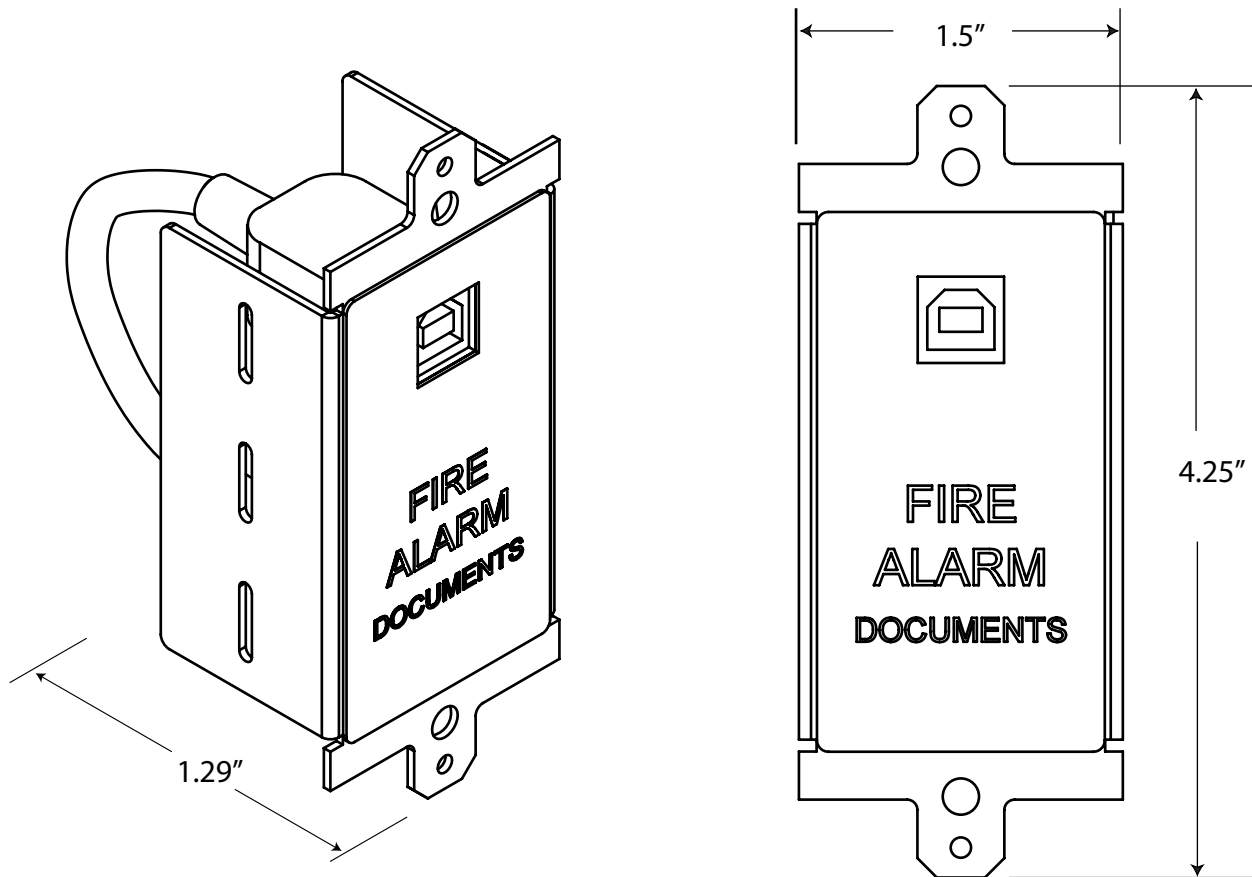


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Specifications:

The fire alarm documents shall be digitally stored within 6ft of the FACU panel. A Space Age Electronics eFAD shall be installed in a single gang electrical back box or a IGB series back box with a red Décor plate cover. The unit will be permanently marked "Fire Alarm Documents" and will not be able to be removed from the surface. The unit will install like an electrical device and be securely fastened. The eFAD unit shall have a minimum capacity of 2GB's of digital storage. The access will be a USB type B connector.



Ordering Information:

Part #	Description
IAMEFAD	eFAD Fire Alarm Documents



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**NO
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Infinity **Annunciator Modules**

The IAM part of the Infinity Series is the basic LED Annunciator package for the Infinity Line. Including the Audible Module for alarm and trouble annunciation as well as the Auxiliary Switches for various control functions, this flexible line is perfectly suited for that last minute requirement for alarm annunciation.

The Zone Module (IAM4Z) is a Common Positive or Negative 2, 12 or 24 Volt AC or DC device with 4 LEDS. This versatile 4 Zone annunciator has socketed LEDs for maximum flexibility.

The Audible Module (IAMAUD) can be used as an Alarm, Trouble or Supervisory annunciator and is made to be grouped with one or more IAM4Z annunciator modules.

The Auxiliary Switch Module (IAMAUX) gives you the flexibility of specifying key or rocker switch alone or in combination with other IAM modules.

Some of the specialty applications include Reset, Acknowledge, Lamptest, etc...

Options:

The Infinity IGP faceplate houses 1-6 modules in standard or multiple gang electrical back box (refer to our IGB back boxes for housing up to 6 units).



Standard Features:

- Cover switch plates are scalable to meet your capacity
- 2, 12 & 24 Volt AD/DC operation
- Common Positive or Negative w/changeable LED colors
- Utilizes standard Infinity IGP plate design that allows adaptation to surrounding architectural design features
- Red, white, stainless steel & yellow available
- Legend sheet is protected by a scratch resistant Lexan ® viewing window
- IGP plate is removable to allow for easy access to field wiring and trouble shooting
- Durable steel frame mounts into an Infinity GSB Box or a standard electrical back box.



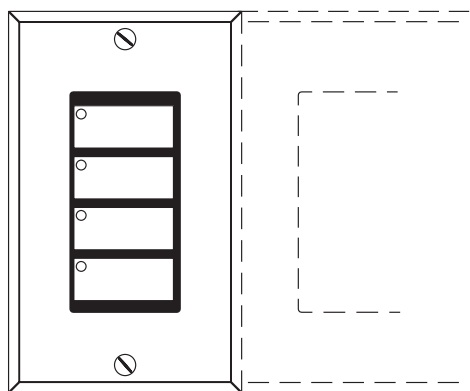
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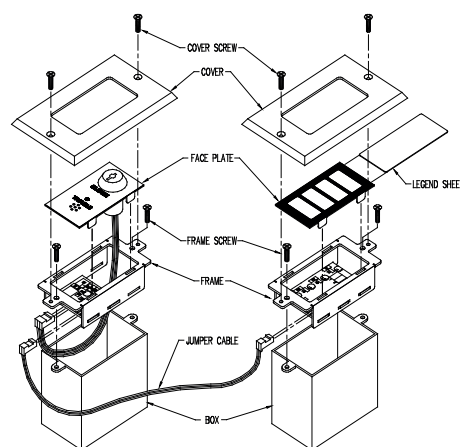
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Specifications:

The IAM Infinity Annunciator Module shall be assembled with UL Listed components (IAM4Z & IMAUD). The utilization of standard or multi-gang electrical mounting boxes and 1 - 6 gang capacity of the Infinity style face plates creates building blocks to produce job specific applications. The IAM4Z shall be 4 zones of LED (socketed Red LEDs standard) annunciation, multiples can be ganged together as the size of the job requires. Operating voltages shall be 2, 12 & 24 Volts AC or DC utilizing a Common Positive or Negative lighting circuit without any modification necessary. The IMAUD is an Alarm/Trouble/Supervisory audible annunciator and the IMAUX is a (non-UL) series of Auxiliary Function Switches. Any IAM device can be utilized in conjunction with any ICM or IAV device in the Infinity line.



Modular design expandable
to accommodate up to six modules



Two modules with appropriate Infinity
face plate illustrate the assembly
and modularity of the IAM Series

Agency Approvals:

UOXX.S2580 UL Listed Control Unit Accessories

Standard Label Options Supplied

Standard Switch Labels:

SILENCE
ACK.

RESET
BLANK

Key

Rocker

Key

Rocker



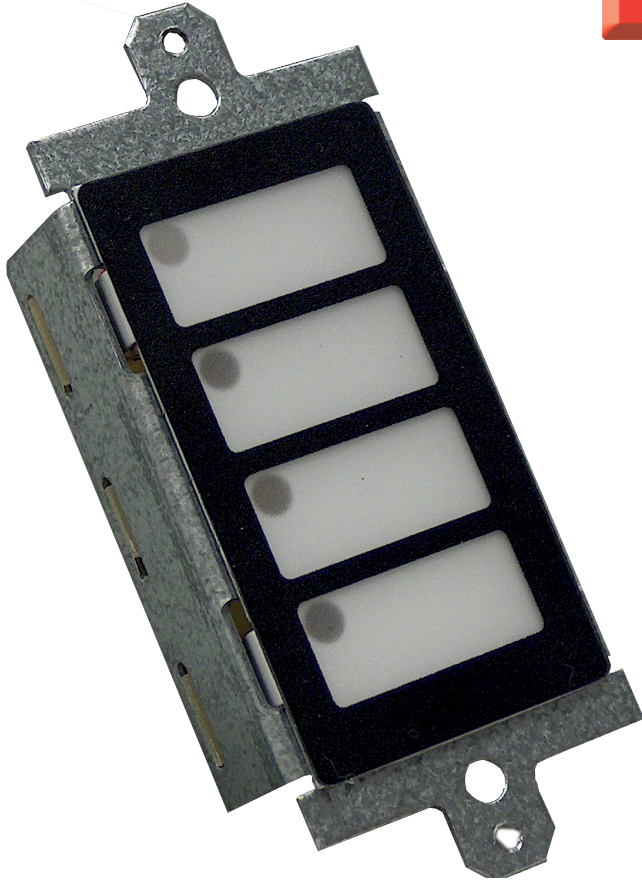
INFINITY SERIES
Modular Components

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**NO
EXCUSES!**



IAM4Z



4 Zone Annunciator Module

The IAM4Z Infinity Annunciator Module consists of a scratch resistant Lexan ® face panel with removable Lexan ® legend carrier for easy front field service access. The display consists of a white background and black screened grid comprised of four zones, each with red LED point illumination. The LEDs are socketed for the times a yellow, green or other colored LED is required.

Each input lights its respective LED utilizing a Common Positive or Negative, 12 or 24 VDC or VAC.

An optional Horn sounds if the IAM4Z is combined with an IMAUD (K or R) module and is configured to do so.

A clinch type terminal strip is employed for field connections. Units install into standard or multiple gang electrical boxes (IGB). Optional red, white, stainless steel or yellow IGP plates house up to six units.

The IAM4Z is compatible with all ICM and IAV units and can be utilized in the same housing.

Power Requirements:

45mA @ 24VDC/AC
@12VDC/AC
@2VDC/AC

Standard Module Features:

- Common Positive or Negative
- 2, 12 or 24 Volt AC or DC operation
- Legend sheet protected by Lexan ® viewing window
- IGP plate is removable to allow for easy access to field wiring and troubleshooting
- Durable steel frame mounts into an Infinity IGB Box or a standard electrical back box and securely holds the cover IGP plate
- Standard legend slip sheet and all mounting hardware included



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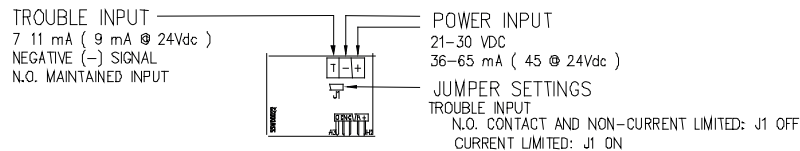
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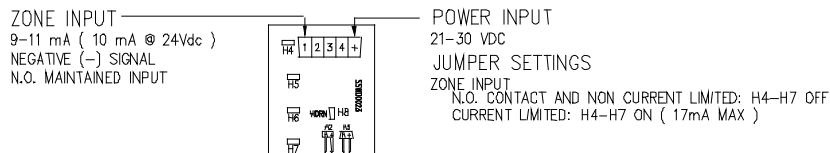
Specifications:

The IAM4Z shall be a 4 zone, tabular style annunciator. The annunciator shall be either Common Positive or Negative, 2, 12 or 24 Volts at either AC or DC. No modifications shall be necessary to use the various commons and voltages with the exception of installing a plugable jumper for the 2 Volt option. The unit must be 100% backward compatible with the original IAM4Z product and require no modifications to be compatible. Expansion shall be accomplished via a pre-manufactured jumper cable and up to 6 of these units can be mounted in the appropriately sized IGB box with its accompanying IGP plate. A standard clinch type terminal strip is used for field wiring. The IAM4Z Shall be UL Listed, unlisted product shall not be acceptable.

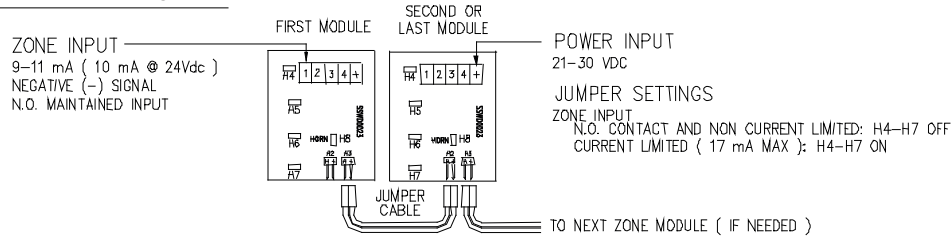
IAMAUD, Single Gang



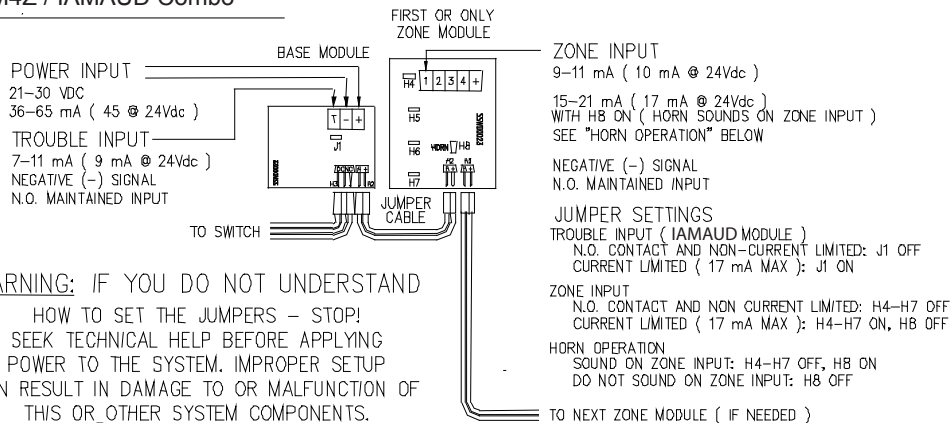
IAM4Z, Single Gang



IAM4Z, Multi Gang



IAM4Z / IAMAUD Combo



WARNING: IF YOU DO NOT UNDERSTAND HOW TO SET THE JUMPERS - STOP! SEEK TECHNICAL HELP BEFORE APPLYING POWER TO THE SYSTEM. IMPROPER SETUP CAN RESULT IN DAMAGE TO OR MALFUNCTION OF THIS OR OTHER SYSTEM COMPONENTS.

Agency Approvals:

UOXX.S2580 UL Listed Control Unit Accessories



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Ordering Information:

Part#	Description
IAM4Z	Four Zone Annunciator

**NO
EXCUSES!**



Infinity Annunciator Module Trouble Indicator

The IAMAUD Infinity Annunciator Module consists of a scratch resistant Lexan® face panel with removable Lexan® legend carrier for easy front field service access. The display consists of a black background and white screened lettering and includes one yellow LED and a maintaining silence switch. This is commonly used to indicate a trouble condition in an FACP.

An input sounds horn and lights the yellow LED. Silence switch quiets the horn, when input is removed the horn will ring back indicating that the switch needs to be normalized. Accepts dry contacts and current limited inputs. A screw clamp terminal strip is employed for field connections. Units install into standard or multiple gang electrical boxes (IGB). Optional red, white, stainless steel or yellow IGP plates house up to six units.

The IAMAUD is compatible with all ICM and IAV units and can be utilized in the same housing.

Standard Module Features:

- IGP plates are scalable to meet your capacity requirements as well as color requirements
- Legend sheet protected by Lexan® viewing window
- IGP plate is removable to allow for easy access to field wiring and troubleshooting
- Durable steel frame mounts into an Infinity IGB Box or a standard electrical back box and securely holds the cover IGP plate
- Standard legend slip sheet and all mounting hardware included

Power Requirements:

24 VDC (21—30)
17mA @24VDC w/Horn



ADA



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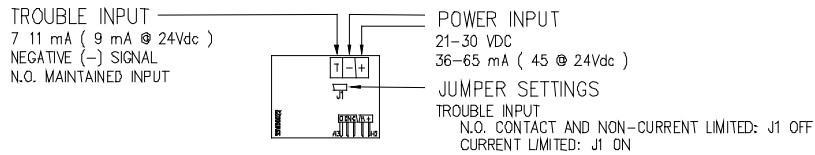


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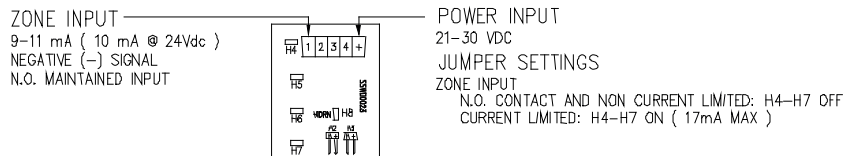
Specifications:

The IMAUD shall be a single gang IAM unit which sends an audible tone out when an Alarm, Trouble and/or Supervisory condition occurs in an FACP. A standard clinch type terminal strip is used for field wiring along with a either a keyed or a rocker switch used for silencing the audible. These units may be used with any Infinity units. The IMAUD shall be UL Listed.

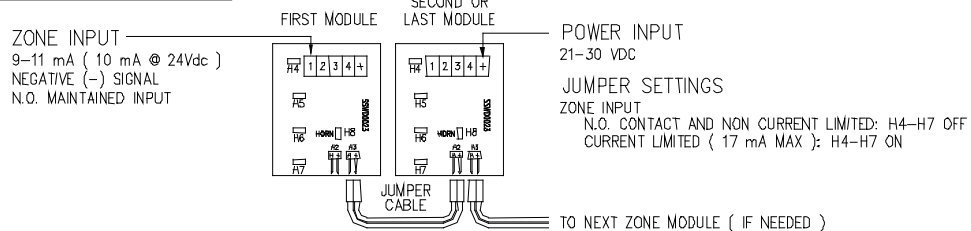
IMAUD, Single Gang



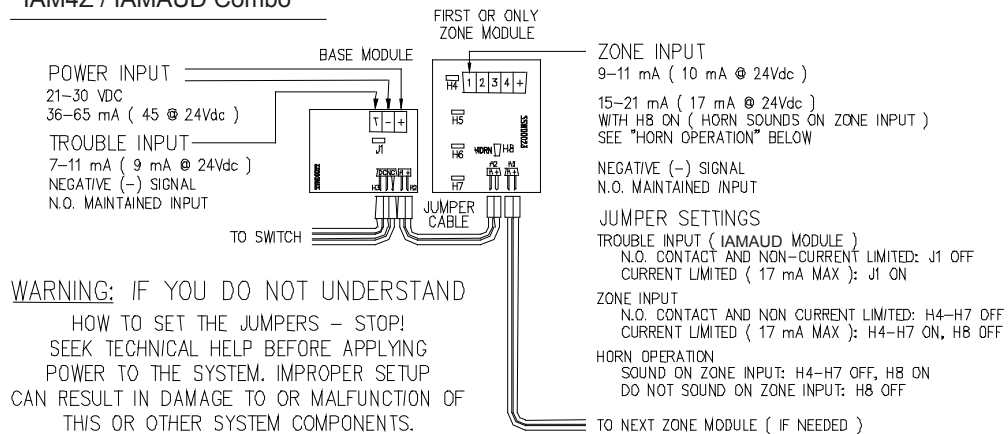
IAM4Z, Single Gang



IAM4Z, Multi Gang



IAM4Z / IMAUD Combo



WARNING: IF YOU DO NOT UNDERSTAND HOW TO SET THE JUMPERS - STOP! SEEK TECHNICAL HELP BEFORE APPLYING POWER TO THE SYSTEM. IMPROPER SETUP CAN RESULT IN DAMAGE TO OR MALFUNCTION OF THIS OR OTHER SYSTEM COMPONENTS.

Agency Approvals:

UOXX.S2580 UL Listed Control Unit Accessories



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Ordering Information:

Part#

IMAUDK

IMAUDR

Description

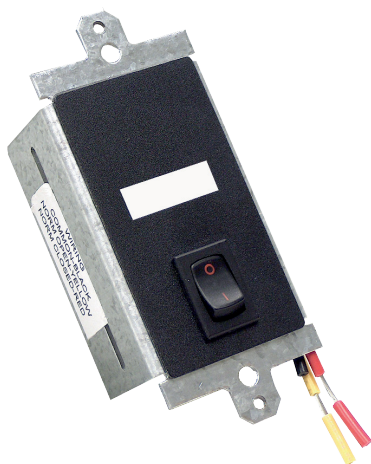
Annunciator Audible Keyed

Annunciator Audible Rocker

**NO
EXCUSES!**



Shown are IAMAUX Switches with clear Lexan window for insertion of Switch Function Test labels.



Infinity Annunciator and Control Module Auxiliary Switch

The IAMAUX\ICMAUX Infinity Annunciator Module consists of a scratch resistant Lexan ® face panel. The front display has a clear area for custom switch function labeling..

Each auxiliary switch features a Form "C" contact connection to the Switch. A few standards are Keyed or Rocker, Momentary or Maintaining and Blank or Pre-Labeled (Acknowledge, Silence, Reset).

A screw clamp terminal strip is employed for field connections (ICMAUX only). Units install into standard or multiple gang electrical boxes (IGB). Optional red, white, stainless steel or yellow IGP plates house up to six units.

Standard Features:

- IGP plates are scalable to meet your capacity requirements as well as color requirements
- Legend sheet protected by Lexan ® viewing window
- IGP plate is removable to allow for easy access to field wiring and troubleshooting
- Durable steel frame mounts into an Infinity IGB Box or a standard electrical back box and securely holds the cover IGP plate.
- Standard legend slip sheet and all mounting hardware included.

The IAMAUX is compatible with all ICM and IAV units and can be utilized in the same housing. The ICM AUX is compatible with all IAM and IAV units.

Switch Power Ratings:

3A @ 24VDC
3A @ 24VAC



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Specifications:

The IMAUX/ICMAUX shall be a single gang IAM/ICM unit. Each switch is configured to supply a Form "C" dry contact output. The switches shall be momentary or maintained in their actuation and be either keyed or rocker in their configuration.

The Switches shall be rated as follows:

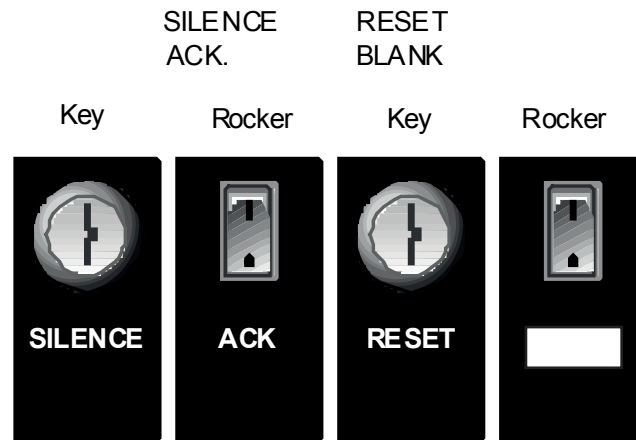
3 Amp @ 24 VDC

3 Amp @ 24 VAC

The IMAUX Switch Modules are not UL Listed and have "pigtailed" Connections for field wiring. The ICMAUX Switch Modules shall be UL Listed and contain clinch type terminal connectors for field wiring. These units may be used with any Infinity units.

Standard Label Options Supplied

Standard Switch Labels:



Agency Approvals:

UOXX.S2580 UL Listed Control Unit Accessories

UUKL. S2580 UL Listed Smoke-Control System Equipment

*The ICM units are manufactured to comply with UL 864 9th Edition while the IAM units hold no Listings.

Ordering Information:

Part#	Description
IMAUXKS	Auxiliary Keyed Momentary Pigtail
IMAUXKM	Auxiliary Keyed Maintaining Pigtail
IAM-AUXRS	Auxiliary Rocker Momentary Pigtail
IMAUXRM	Auxiliary Rocker Maintaining Pigtail
ICMAUXKS*	Auxiliary Keyed Momentary PC
ICMAUXRM*	Auxiliary Rocker Maintaining PC



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IAMFFPJAC



Fire Fighter's Phone Jack

The FFPJAC Firefighter Phone Jack plate is designed to allow the firefighter to plug a Portable Handset into the plate's jack and communicate with others throughout the building's Emergency Audio Evacuation System.

The IAMFFPJAC is designed with durability in mind with a metal Infinity series plate (IGP purchased separately). The artwork is screened on the back side of scratch resistant Lexan® material with an anti-glare matte finish.

Designed as part of Space Age Electronics IAM platform, the IAM-FFPJAC is easily installed into a standard single gang electrical box. Simple field connection to the terminal block mounted on the PC Board; one wire to the tip and one wire to the ring terminals is all it takes. The jack is insulated to eliminate ground shorts and is noise filtered.

Standard Features:

- Mounts quickly to a single gang device box (min. 1 3/4" depth, box sold separately)
- Mounting hardware included
- Terminal block mounting of TIP and Ring wires
- Noise filter on PCB
- Dimensions: 2 3/4" wide x 4 1/2" high x 1 1/2" deep

The IAMFFPJAC is compatible with all ICM and IAV units and can be utilized in the same housing.



**ISO 9001
REGISTERED
COMPANY**



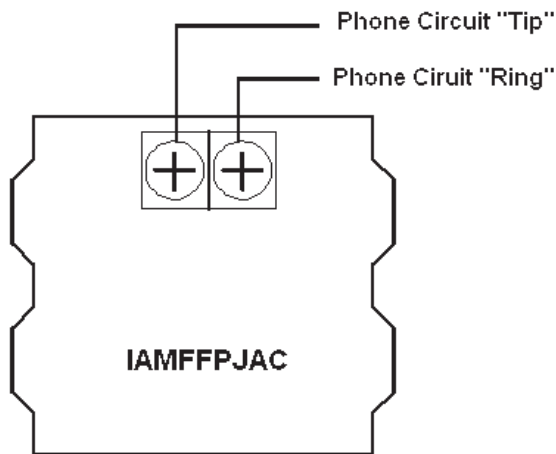
**INFINITY SERIES
Modular Components**

Space Age Electronics, Inc.
www.1sae.com
800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

Specifications:

The IAMFFPJAC shall be a single position 1/4" Emergency Telephone receptacle. The jack shall be wired to the Tip and Ring of a Space Age SSU00551 PHR Portable Firefighter Handset. A standard clinch type terminal strip is used for field wiring. The IAMFFPJAC shall be UL Listed, unlisted product shall not be acceptable. These units may be used with any Infinity units.

Wiring:



SSU00566 & 567
FPC A and FCPB
Firefighter Phone
Cabinets



Agency Approvals:

UOXX.S2580 v4s2 UL Listed Control Unit Accessories, System

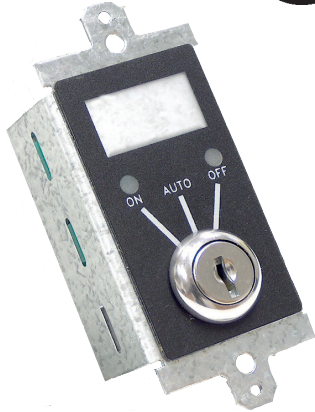
Ordering Information:

Part#	Description
IAMFFPJAC	Firefighter's Phone Jack
Accessories	
SSU00551	PHR Firefighter's Phone
SSU00566	FCPA Firefighter's Phone Cabinet
SSU00567	FCPD Firefighter's Phone Cabinet



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**NO
EXCUSES!**



Infinity **HOA** Smoke Control Module

The ICMHOAK/R Infinity Control Module for Smoke Control consists of a scratch resistant Lexan ® face panel with removable Lexan ® legend carrier for easy front field service access. The display consists of a black background and white screened legend with a green and a yellow LED point illumination.

Each unit is equipped with a Keyed Switch (K) or a Rotary (R) type switch. Each type gives you full control of this "On, Off Auto" control module for fan/damper and other types of control. A clinch type terminal strip is employed for field connections. Units install into standard or multiple gang electrical boxes (IGB). Optional red, white, stainless steel or yellow IGP plates house up to six units.

Standard Features:

- IGP plates are scalable to meet your capacity requirements as well as color requirements
- Legend sheet protected by Lexan ® viewing window
- IGP plate is removable to allow for easy access to field wiring and troubleshooting
- Durable steel frame mounts into an Infinity IGB Box or a standard electrical back box and securely holds the cover IGP plate
- Standard legend slip sheet and all mounting hardware included

ICMHOA's are compatible with all IAM and IAV units, and can be mounted in the same enclosure.

Ratings and Resistive Load Chart: Rotary Sw.

1Amp @ 24VDC
1Amp @ 24VAC

Key Switch

3Amps @ 24VDC
3Amps @ 24VAC



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COMPANY**



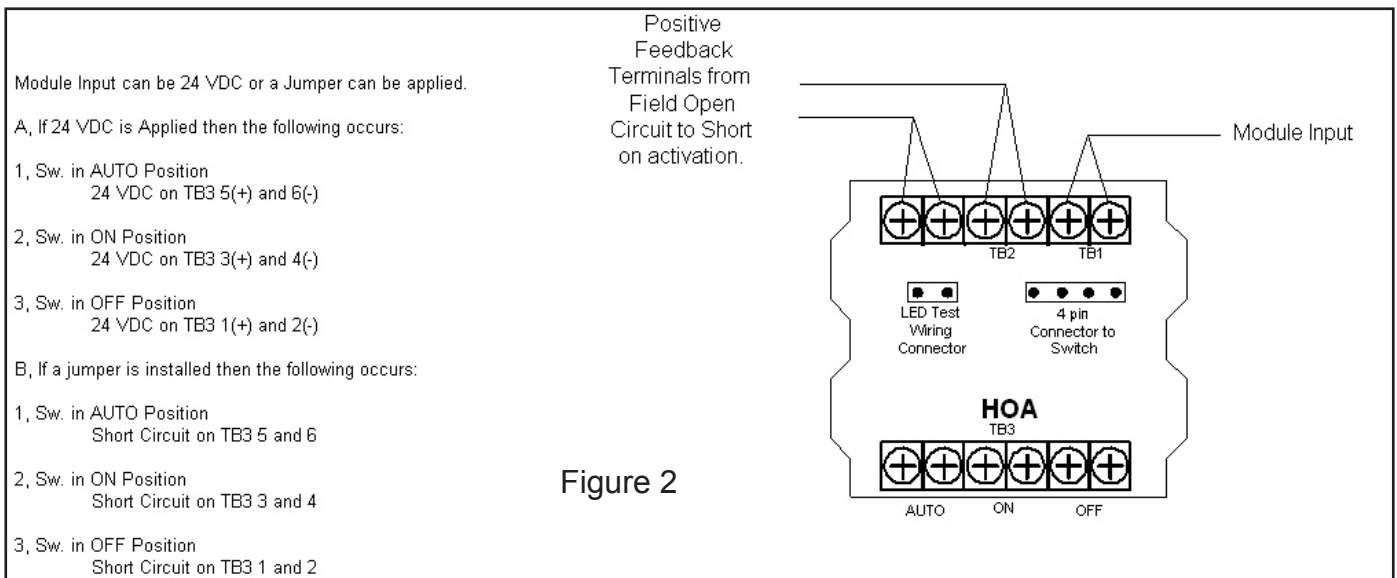
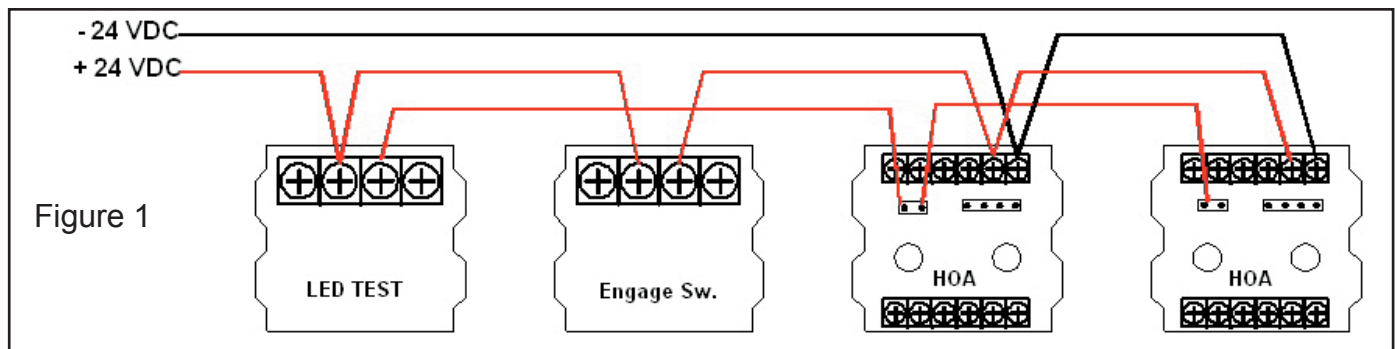
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www.1sae.com
800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

Specifications:

The Infinity Control Module (ICMHOAK/R) shall provide control over any HVAC units requiring 24 VDC or Dry Contact interface (See Figure 2).

The LEDs on the unit shall only light after "Positive Feedback" is received from the field onto TB2 in the form of a closed contact (See Figure 2).

If an LED Test Module (ICMLEDTST) is installed, all of the LEDs should light when the switch is activated, regardless of the state of an Engage Switch (ICMENGAGE, if installed). If an LED Test Module and an Engage Key Switch Module are supplied as part of the overall Infinity Control Line, the Engage Key Switch module must be wired electrically after the LED Test Switch (See Figure 1).



Agency Approvals:

UOXX.S2580 UL Listed Control Unit Accessories

UUKL. S2580 UL Listed Smoke-control System Equipment



Space Age Electronics, Inc.
 www.1sae.com
 800.486.1723 Toll Free
 508.485.0966 Local
 508.485.4740 Fax

Ordering Information:

Part#	Description
ICMHOAR	On, Off, Auto Rotary Sw.
ICMHOAK	On, Off, Auto Key Sw.

This document is subject to change without notice, see doc # ED0479 for legal disclaimer

**NO
EXCUSES!**



Infinity Control Modules



The Infinity Control Modules are designed to maximize your flexibility in the field. The ICM units can be used in a simple single fan stand-alone control element or with multiple fans, dampers and utilize units from the IAM series as well creating a sophisticated HVAC control center.

ICM component modules feature a Keyed or Rotary Switch fan/damper, On, Off, Auto control unit (ICMHOA), a key enabled ICMENGAGE switch supplied operating power to the HOA switches to prevent tampering by unauthorized individuals and the ICMLEDTEST switch allows for the testing of the visual annunciation on the ICMHOA switches.

The ICM units are designed to meet and exceed the requirements of NFPA 72 and UL 864 9th Edition. The ICM control/monitoring units are expandable in single gang increments and can be configured to provide precise control and monitoring functions. These design enhancements provide for greater capacity in large scale and complex control applications. Each controlled function must supply a feedback to the ICMHOA to meet the most stringent of specifications and code compliancy.

Standard Features:

- Cover Switch Plates are scalable to meet your capacity
- Utilizes standard Infinity IGP plates design that allows for adaptation to surrounding architectural design features (red, white, yellow and stainless steel available)
- Legend sheet is protected by scratch resistant Lexan® window
- Durable steel frame supports all operational devices in one to six gang electrical back boxes



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COMPANY**

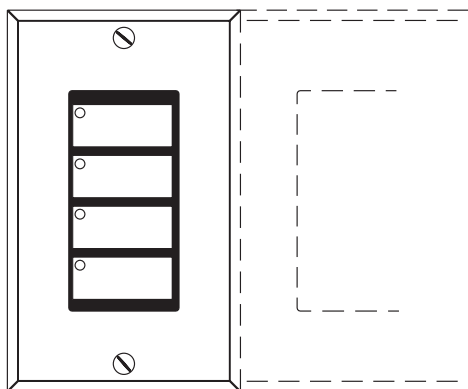


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508.485.4740 Fax

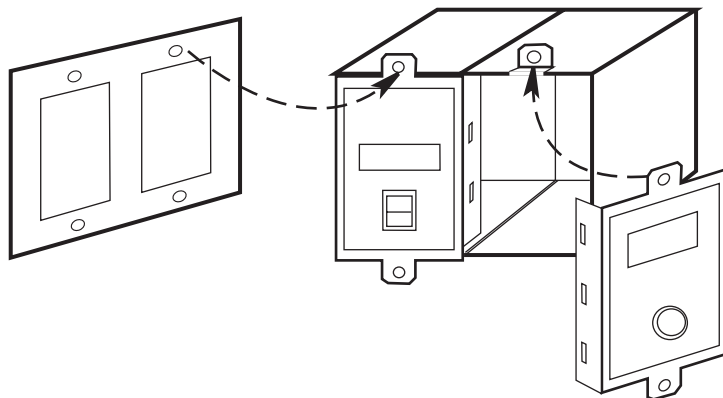
Specifications:

The control switch units shall be the Infinity Series ICM units manufactured by Space Age Electronics, Inc. The devices shall be manufactured under the requirements of NFPA 72 and UL 864 9th Edition. The ICMs shall be sized to fit a single gang electrical enclosure and be “gangable” to six units utilizing an appropriate IGB box and IGP plate.

The ICM units shall be enclosed in a Lexan® cover including a viewing window for identification of the individually controlled devices. All field wiring shall be wired to clinch type terminals on all units.



Modular design expandable
to accommodate up to six modules



Shown are two modules with
appropriate Infinity style face plate
to illustrate the assembly and
modularity of the DSC Series.

Sequence of Operation:

The Red and Green LEDs provide positive feedback from the fan/damper sail/microswitches when wired to the status/monitor terminals on each ICMHOA unit. These LEDs may not light immediately, dependant on the speed of the fan or damper.

The ICMENGAGE switch is a manual method of keeping unauthorized/untrained individuals from tampering with the building's HVAC systems. It does this by holding back operating power from the ICMHOAs until the key is activated.

The ICMLEDTEST is used to confirm the operational status of the ICMHOA's LEDs.

INFINITY SERIES Modular Components

Space Age Electronics, Inc.
www.1sae.com
800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

Agency Approvals:

UOXX.S2580 UL Listed Control Unit Accessories

UUKL. S2580 UL Listed Smoke-Control System Equipment

**NO
EXCUSES!**

ICMENGAGE



Infinity **Engage Switch** **Control Module**

The ICMENGAGE Infinity Control Module Engage Switch consists of a scratch resistant Lexan® face panel. The display consists of a black background and white screened legend. The actuation is via a key switch.

Each unit is equipped with a Keyed Switch and gives you full control of the “On, Off, Auto” control modules (ICMHOA) for fan/damper and other types of control by supplying operational voltage when the switch is turned on. A clinch type terminal strip is employed for field connections. Units install into standard or multiple gang electrical boxes (IGB). Optional red, white, stainless steel or yellow IGP plates house up to six units.

Standard Features:

- IGP plates are scalable to meet your capacity requirements as well as color requirements
- Legend sheet protected by Lexan® viewing window
- IGP plate is removable to allow for easy access to field wiring and troubleshooting
- Durable steel frame mounts into an Infinity IGB Box or a standard electrical back box and securely holds the cover IGP plate
- Standard mounting hardware included

The ICMENGAGE is compatible with all IAM and IAV units and can be utilized in the same housing, however, it must accompany at least 1 ICMHOA.

Switch Power Ratings:

3A @ 24VDC
3A @ 24VAC



ADA



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INFINITY SERIES
Modular Components

Space Age Electronics, Inc.
www.1sae.com
800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

Specification:

The Infinity Engage Key Switch module (ICMENGAGE) shall provide control over any IAM-HOA Control module receiving its operating 24 VDC through the ICMENGAGE.

The ICMENGAGE interrupts the positive supply to the ICMHOA Switches rendering them inoperative until such time as the operation of the HOA Switches is required, then the ICMENGAGE switch must be activated in order to allow the operation of the ICMHOA's functions.

If an ICMLEDTST Module is supplied as part of the overall Infinity ICM Package, the ICMENGAGE module must be wired electrically after the LED Test Switch as shown below (See Figure 1).

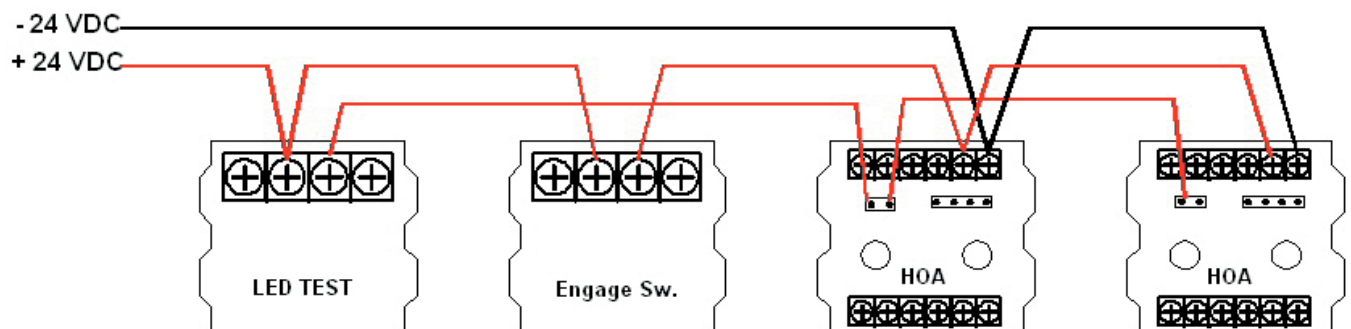


Figure 1

Agency Approvals:

UOXX.S2580 UL Listed Control Unit Accessories

UUKL. S2580 UL Listed Smoke-control System Equipment



Space Age Electronics, Inc.
www.1sae.com
800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

Ordering Information:

Part#	Description
ICMENGAGE	Keyed Engage Switch

**NO
EXCUSES!**



IAMLEDTST



Infinity **Lamp Test Control Module**

The ICMLEDTST Infinity Control Module Lamp Test consists of a scratch resistant Lexan® face panel. The display consists of a black background and white screened legend. The actuation is via a rocker switch.

The unit is equipped with a momentary rocker switch and lights the LEDs on all attached modules (ICMHOA). A screw clinch type terminal strip is employed for field connections.

Units install into standard or multiple gang electrical boxes (IGB). Optional red, white, stainless steel or yellow IGP plates house up to six units.

The IAMLAMPTST is compatible with all IAM and IAV units and can be utilized in the same housing, however, must be used with at least one IAMHOA.

Standard Features:

- IGP plates are scalable to meet your capacity requirements as well as color requirements
- IGP plate is removable to allow for easy access to field wiring and troubleshooting
- Durable steel frame mounts into an Infinity IGB Box or a standard electrical back box and securely holds the cover IGP plate
- Standard mounting hardware included

Switch Power Ratings:

**3A @ 24VDC
3A @ 24VAC**



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**INFINITY SERIES
Modular Components**

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800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

Specifications:

The Infinity LED Test Module (ICMLEDTST) shall provide a Lamp Test of all LEDs on all ICMHOA Control Modules wired to it. This shall be accomplished by passing on 24 VDC through the ICMLEDTST switch to the LED's on all the modules.

When an ICMLEDTST unit is installed, the LEDs shall light when the switch is activated, regardless of the state of an ICMENGAGE (if installed). If an ICMLEDTST Module and an ICMENGAGE Module are supplied as part of the overall Infinity ICM Package, the ICMENGAGE must be wired electrically after the ICMLEDTST Switch (See Figure 1).

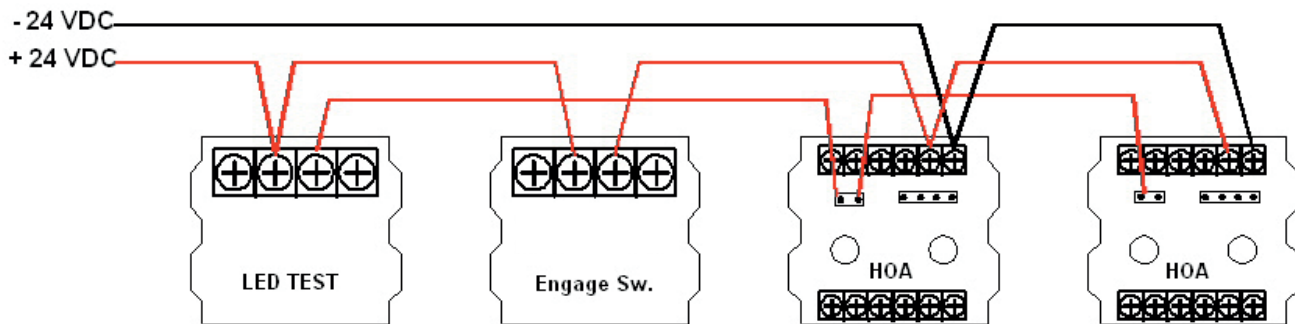


Figure 1

Agency Approvals:

UOXX.S2580 UL Listed Control Unit Accessories

UUKL. S2580 UL Listed Smoke-Control System Equipment



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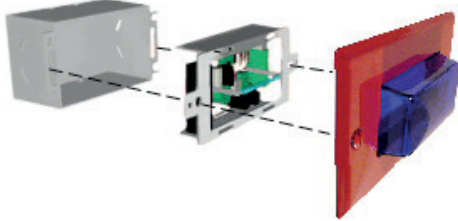
Ordering Information:

Part#	Description
ICMLEDTST	Lamp Test Switch

**NO
EXCUSES!**



Infinity Audible/Visuals



The IAVs are the Strobes, Lamps and Sounders of the Infinity line. These units are Listed for General Signaling and are perfect for the rising popularity of Mass Notification Systems. All the units fit the Infinity Series Plates.

The Strobes (IAVSTR) and Lamps (IAV-SLM and IAV-FLM) of the IAV Line are 12, 24 and 120 volt units. They fit the IGP Plates and the IGB Boxes. These units are not synchronized.

The Synchronized Strobes (IAV-SST) are 24 volts DC only and must be used with the IAV-SYNMAS (Master Sync Module) or the IAV-SYNSLA (Slave Sync Module).

The Horn (IAVHORN) is a Piezo driven Mini-Horn, 12/24 VDC with HI/Low sound settings.

The IAV-GSP is the General Signaling Platform for the Infinity Line. It allows for the mounting of two IAV STROBE or LAMP units along with a 4" Square sounding device (Horn or Speaker supplied by others).

Standard Features:

- Incandescent Lamps and Xenon Strobes available
- Utilizes standard Infinity IGP plate design that allows adaptation to surrounding architectural design features, red, white, stainless steel & yellow available
- Strobes/Lamps available in 12, 24 and 120 Volt versions
- Horn available in 12/24 Volt versions
- Durable steel frame mounts into an Infinity GSB Box or a standard electrical back box
- Multiple colored lenses allow the Strobes/Lamps to fit any application

NYC **BUILDINGS**



ISO 9001
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COMPANY

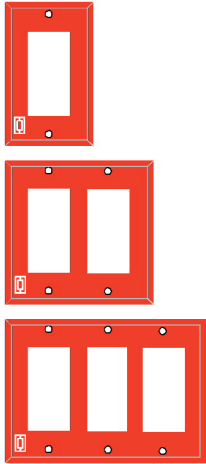


INFINITY SERIES
Modular Components

Space Age Electronics, Inc.
www.1sae.com
800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

Specification:

The IAV Infinity Audible Visuals shall be custom-built through its modularity and utilization of standard or multi gang electrical mounting boxes and 1-6 capacity Infinity style face plates.

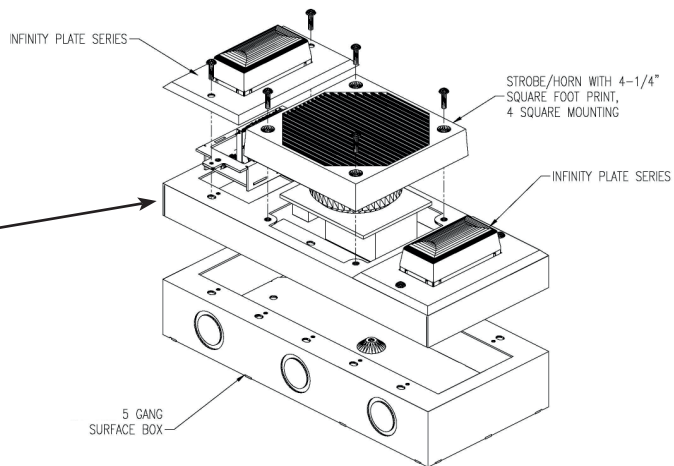


Modular design expandable
to accommodate up to six modules



Horn and Strobe with appropriate Infinity
face plate illustrate the assembly
and modularity of the IAV Series

Speciality trim rings such as
the GSP are engineered for
special applications such as
Mass Notification.



Agency Approvals:

UEES.E56737 UL Listed Visual-Signal Appliance

7300.0553-002 California State Fire Marshal (CSFM) Strobes Only
160-94-E B NYC Department of Buildings (MEA)



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No Excuses, Just Solutions!

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**NO
EXCUSES!**



Infinity **STROBES, LAMPS & Horns**

The IAVSTR Infinity Strobe unit along with its Incandescent IAVFLM and IAVSLM offers a broad range solution to your General Signaling needs. The Infinity Visuals come in 12, 24 and 120 Volt units the Incandescent Lamps come as either flashing or non-flashing.

The IAV Series Strobes/Lamps come with colored lenses to allow the visual signals to fit any application. The lenses come in red, blue, clear, amber, white and green.

The IAVHORN is a piezo driven white mini-horn with an operating voltage range of 12/24 VDC each with a HI and Low setting making it's range 78 to 53 dBA @ 24 VDC and 73 to 48 dBA @ 12VDC.

Standard Features:

- IGP plates are scalable to meet your capacity requirements as well as color requirements
- IGP plate is removable to allow for easy access to field wiring and troubleshooting
- Durable steel frame mounts into an Infinity IGB Box or a standard electrical back box and securely holds the cover IGP plate.
- Standard mounting hardware included.
- Optional 1 x 3 inch Plaque available:
 - Area of Rescue
 - Nurse Call
 - Hazardous Area
 - Halon/FM200 Discharge

Units install into standard or multiple gang electrical boxes (IGB). Optional red, white, stainless steel or yellow IGP plates house up to six units.

IAVs are compatible with all IAM and ICM units and can be mounted in the same inclosure.



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Specifications:

The IAV series of Audio/Visual devices, including strobes, lamps and horns shall be of a configuration to fit into the IGB series of back boxes and the utilize the Infinity Plates. The visual units shall be Listed for General Signaling Purposes.

The strobes shall be a minimum of 15 cd and range in voltage from 12 VDC, to 24 VDC and 120 VAC. The horn shall produce no less than 78 to 53 dBA @ 24 VDC and 73 to 48 dBA @ 12VDC dependant on their Hi and/or Low settings and shall have voltage ranges from 12 to 24 VDC.

All IAV modules use the clinch type of terminal connectors for field wiring.

Ordering Information:

Part number	Description	Current Draw	Flash/Minute
IAVSTR24	Xenon Strobe	115mA @ 24VDC	60
IAVSTR12	Xenon Strobe	155mA @ 12VDC	60
IAVST120	Xenon Strobe	30mA @ 120VAC	60
IAVSLM24	Steady Incandescent	96mA@ 24VDC	NA
IAVSLM12	Steady Incandescent	125mA@ 12VDC	NA
IAVSL120	Steady Incandescent	50mA@ 120VAC	NA
IAVFLM24	Flashing Incandescent	96mA@ 24VDC	30 approx.
IAVFLM12	Flashing Incandescent	125mA@ 12VDC	30 approx.
IAVFL120	Flashing Incandescent	50mA@ 120VAC	30 approx.
IAVHORN	Infinity Mini Horn (White)	25mA@ 24VDC HI 2.5mA@ 24VDC LO 73mA@ 12VDC HI 2.7mA@ 12VDC LO	NA NA NA NA

For Lens Color add to the above Part Numbers:

“A” for Amber, “B” for Blue, “C” for Clear, “G” for Green, “R” for Red and “W” for White

(Example **IAV-STR24R** = a 24 VDC Strobe with a Red Lens)
Order the Infinity Plates (**IGP**) and Back boxes (**IGB**) separately!

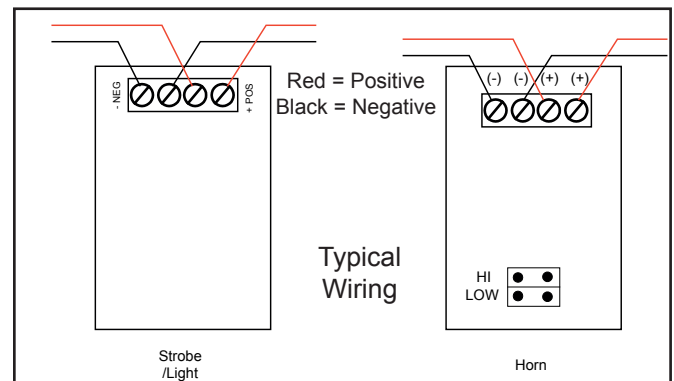
Agency Approvals: None of the above are synchronized (See IAVSST24 Strobes).

UEES.E56737 UL Listed Visual-signal Appliance

7300.0553-002 California State Fire Marshal (CSFM)
Strobes Only
160-94-E B NYC Department of Buildings (MEA)



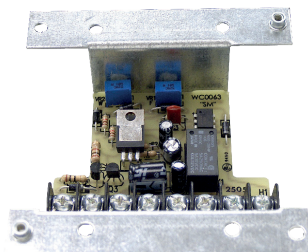
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**NO
EXCUSES!**



IAVSYNC



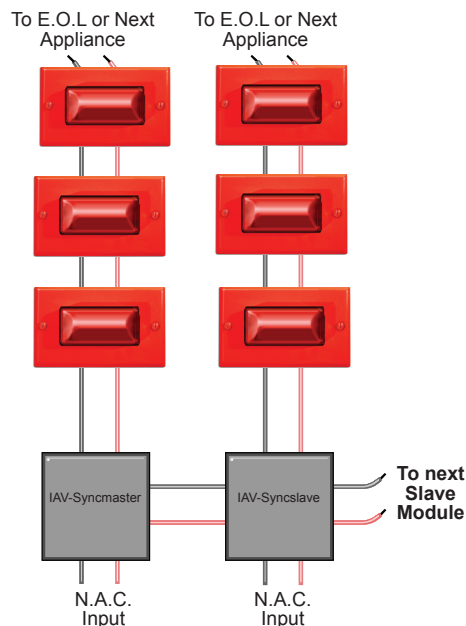
Strobe, Master and Slave Modules

The IAVSYNCSTRB Infinity Xenon Strobe offers a simple and cost effective solution to meet your General Signaling synchronized notification requirements. The aesthetic design is available in a variety of lens and plate colors and easily mounts to a standard single gang device back box. Count on this synchronized notification appliance to assist in your next requirement for private/public mode general signaling notification.

The IAVSYNMAS and IAVSYNSLA units are optimized for performance and designed specifically for all synchronized strobe requirements. Class A or B wiring for multi strobe synchronization configurations are possible

Standard Features:

- Strobe (IAVSST24) 24VDC Xenon flash tube
- Operating voltage range 16VDC to 33VDC
- IAVSYNMAS synchronizes 25 circuits (class A or B)
- Master sync module with 24 slave modules (model IAVSYNSLA)
- Meets ADA flash rate 1Hz (60 flashes per minute)
- Terminal strip rated for 12 to 20 gauge wire
- Circuit supervision (polarized appliance)
- Lens color selection: Clear, Red, Blue, Amber, white and Green
- Current Draw @24VDC 115mA
- Light output 75 candela (clear lens only)
- Weatherproof option available



ADA



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**INFINITY SERIES
Modular Components**

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Description:

The IAVSST24 General Signaling Appliance has a polycarbonate lens with a Xenon flashtube. The appliance mounts to a standard single gang electrical back box horizontally or vertically. The two piece design allows for easy field installation and maintenance. The IAVSST24 is set in a durable metal frame that carries the electronics. The electronics are tested prior to final installation of the front panel to ensure proper operation and system start-up and troubleshooting. The field connections have a clinch type terminal that mechanically fastens to eliminate field terminal shorts or breaks and are rated for 12-20 gauge wire. Additionally, Space Age offers the IGB series of red or white back box to match the panel color.

The IAV Sync systems consists of a master synchronizer module (Model IAVSYNMAS) and two or more IAVSST24 notification appliances. The synchronizer module is placed in series between the control panel or power booster and the first notification appliance in the circuit. Upon activation of 24VDC all appliances will flash simultaneously at 1hz (60 flashes per minute). The IAV Sync system master module is designed to expand up to 25 circuits utilizing the slave modules (Model IAVSYNSLA). All field connections have clinch type terminals rated for 12-20 gauge wire.

Specifications:

General signal alarm notification appliances shall employ a xenon strobe light minimum 75 candela. General signal alarm notification appliances will be UL listed under 1638 standards. The notification appliance flash rate will be no less than 1Hz and no more than 2Hz over the listed voltage range meeting NFP A 72 and ADA requirements. For synchronized applications, appliances shall be synchronized using Space Age IAVSYNMAS Module and IAVSYNSLA Module(s) in its system configuration. Installer will have the ability to change the notification appliance lens and plate. The notification appliance will be Space Age Electronics, Inc. IAV-SST24

Technical Specifications

Model = IAVSST24

Zero inrush after 1 millisecond (max inrush 160ma)

Average current draw

16VDC 150.09mA

24VDC 115.6mA

33VDC 88.5

Polarized appliance

Flash rate 1HZ 16-33VDC (1 flash per second)

Agency Approvals:

UUKC.S5504 UL Listed Signaling Appliances
and Equipment for the Hearing Impaired

Ordering Information:

Part

IAVSST24

IAVSYNMAS

IAVSYNSLA

Description

24 VDC Xenon Strobe Synchronised (for lens color see below)

Master Synchronization Module (fits standard 4" Square box)

Slave Synchronization Module (fits standard 4" Square box)



INFINITY SERIES
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For Lens Color add to the above Part Numbers:

"A" for Amber, "B" for Blue, "C" for Clear, "G" for Green, "R" for Red and "W" for White

(Example **IAVSST24R** = a 24 VDC Strobe with a Red Lens)

Order the Infinity Plates (**IGP**) and Back boxes (**IGB**) separately!

**NO
EXCUSES!**



SIGNALING
c UL US
17EN LISTED TYPE F,G

IAV

SINGLE-GANG AUDIO-VISUAL LED



The IAV series of infinity products provides an ideal solution for Audible and Visual private mode alarm notification or status. With a durable low profile design allowing for both Horn and Light to reside in a single gang location. This unique modular design provides for infinite possibilities and configurations. The Decora style compatibility for choice of cover plate colors and integration with other Infinity Products.

The UL 1638 listed appliance is ideal for emergency signaling applications. The IAV was designed to reduce power consumption and improve sound and visual performance. The LED packs a 30 candela flash at a 1 Hz cycle. The piezo horn output level is jumper selectable at either 68/69dB high or 53/54 dB low mode with selection of steady or temporal (Code 3). The units are shipped with the jumpers preset to High and Temporal. This appliance is designed for use with UL listed 24VDC polarized power circuits (Fire and Mass notification).

Standard Features:

- Reliable and durable LED technology
- Low profile design
- Modular components
- Polycarbonate housing
- Raised clamp terminals (14-28AWG)
- Single gang Mount
- Choice of cover plate color
- Code compliant & UL listed



Jumper
 Selectable
 Hi/Lo (dB)
 Temporal/Steady



Easy to integrate with
 other Infinity Components.



**ISO 9001
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 COMPANY**



**INFINITY SERIES
 Modular Components**

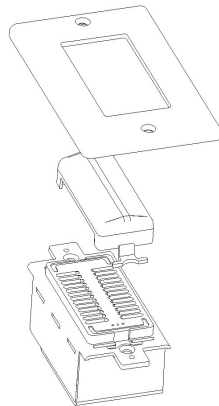
Space Age Electronics, Inc.
www.1sae.com
800.486.1723 Toll Free
 508.485.0966 Local
 508.485.4740 Fax

Specifications:

The Notification Appliance shall be a Space Age IAV series appliance. The notification appliance shall mount in a single gang electrical box for both the Horn and Light. It shall have an LED light that provides a min. of 30 candela white light at 10 FT. and be UL listed. The sounder shall be a piezo horn and provide selectable sound level of 53/54 dB at low and 68/68dB at a high setting. The sounder will have selectable steady or temporal (code 3) and the appliance will be polarized for circuit supervision. The terminals shall be a raised clamp screw terminal rated for 14-28AWG, solid or stranded wire.

Voltage	24Vdc
Standby Current	0.0mA
Alarm Current Horn	70mA
Alarm Current LED	35mA
Output Candela	30CD @10FT
Wiring	14 to 28 AWG solid or stranded

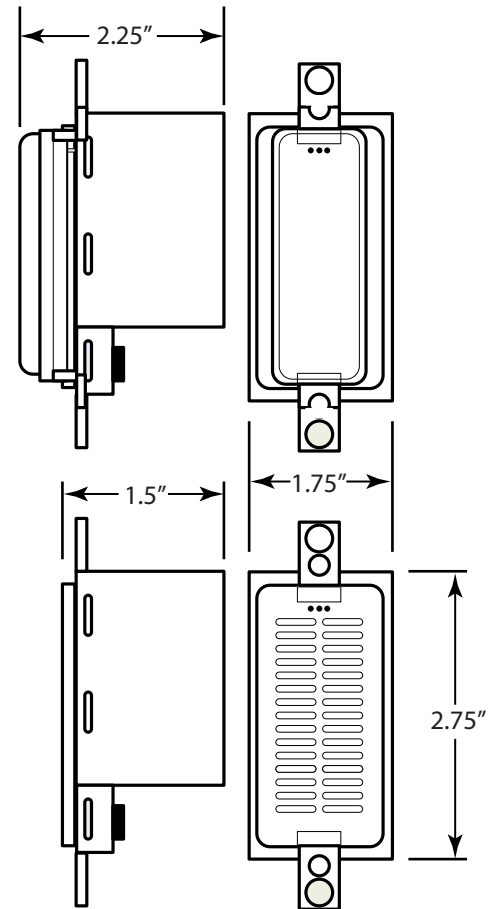
Be sure to see how the other infinity modular components can make your code compliant installation easier.



IAVLS24,
IAVLSH24



IAVH24



Plates Available in:

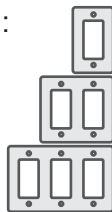
1 - 6 Gang

Red

White

Yellow

Stainless Steel



Ordering Information:

Part #	Description
IAVH24	IAV single Gang Horn only
IAVLS24	IAV single gang LED Strobe Light Only
IAVLSH24	IAV Single gang LED strobe and piezo horn

reference the Infinity IGP (Decora cover plates)

Note: unit mounts into standard electrical gang boxes,
reference the Infinity IGP (Decora cover plates)
and IGB for surface boxes if required.



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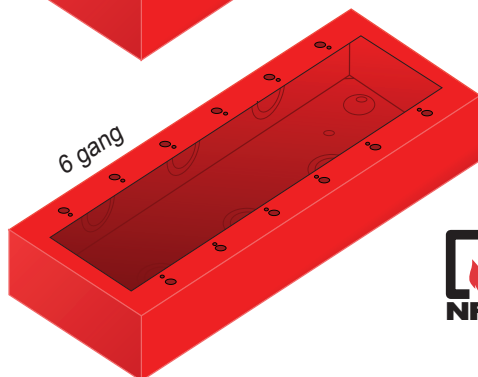
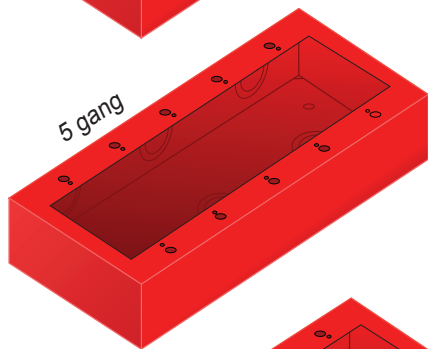
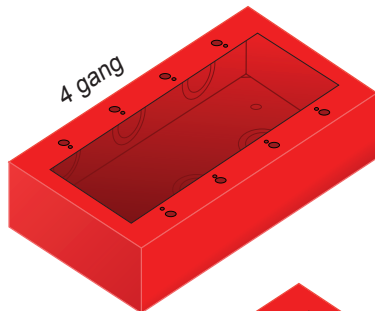
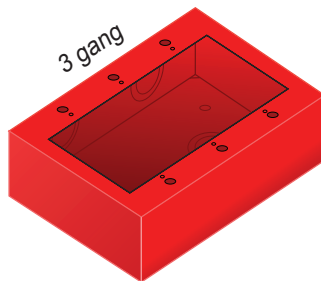
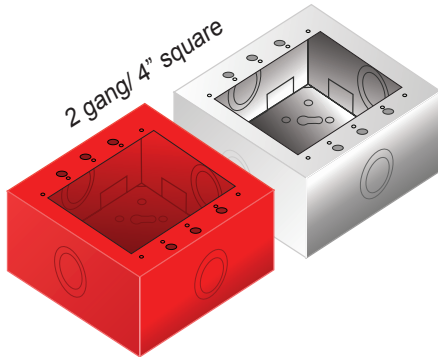
Infinity **Gang Back Boxes**

The IGB Surface Back Boxes are the ideal solution for surface mounting the 2 to 6 Gang Infinity devices. The IGB boxes are designed with attention to installation needs. Each box is designed with a solid surface area with pre-drilled and tapped hole configurations to mount the majority of industry appliances/devices. Durable 18 gauge steel finish in red or white professional grade baked on enamel finish. Each box comes with standard 1/2" & 3/4" EMT knockouts strategically located on the box.

Universal mounting pattern in the box for surface installation. The rugged construction and aesthetic appeal makes the IGB surface back box your logical choice for surface mounting 2 thru 6 gang appliances in your next design installation.

Standard Features:

- 18 gauge steel (.048 thk.)
- Textured baked-on enamel finish (red or white)
- 1/2" & 3/4" embedded EMT knockouts
- Infinity device mounting holes
- Universal mounting pattern



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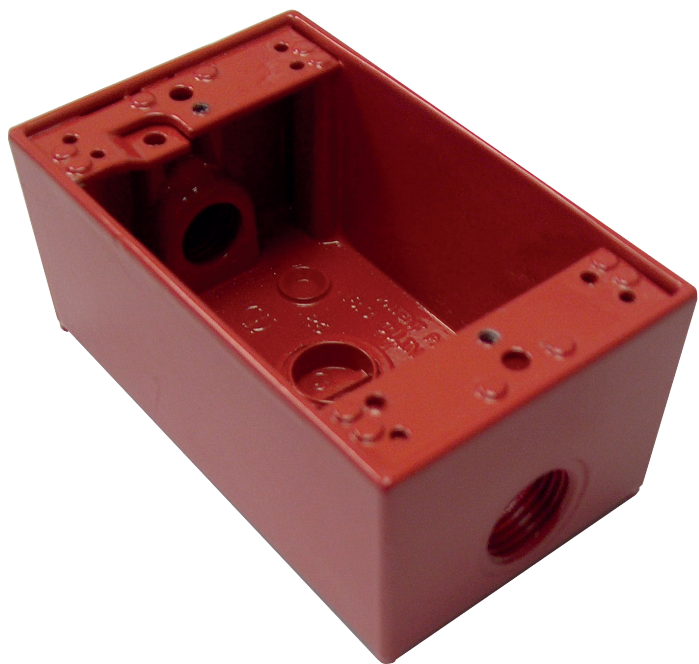
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IGB1



Infinity **Gang Back Box** **Single Gang**

The IGB-1 indoor/outdoor back box is the most versatile of the Infinity IGB back boxes.

Made from heavy duty cast aluminum with a durable powder coat backed on finish (red or white) this indoor/outdoor box will house a single Infinity unit, be it the IAM4Z annunciator through to the more advanced ICMHOA smoke control modules, as well as the IAV Devices. Suitable for mounting in wet locations with proper installation and gasket kit.

Standard Features:

- Dim 2.75" x 4.5" x 2.0" deep
- Heavy duty die cast aluminum (.094 thk.)
- Durable white or red finish
- UL Listed
- Ground screw and 2 close-up plugs supplied with each box
- Pre-tapped ground screw hole
- 1/2" I.P.S. rigid conduit connections one in each end and one on the back

Ordering Information:

Part #	Description
IGB1W	BACK BOX 1 GANG WHITE
IGB1R	BACK BOX 1 GANG RED

Accessories:

Outdoor gasket kit not included with box
Order IGB1WPK



ADA



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Integration Fire Alarm Terminal Cabinet 16 Point Tool-Less

The IF1 16 point "FIRE ALARM TERMINAL CABINET" is designed to enhance your fire alarm systems. Ideally suited for maintenance and troubleshooting with easy identification of system wiring.

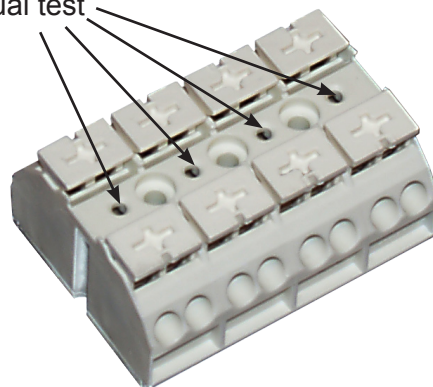
White 7/8" highly visible lettering and a "lift-a-way" hinged door with captive fastener are ideal contributing features for rapid cabinet location and easy access. This surface mount cabinet is fabricated from 16 gauge steel with a durable red textured, baked-on powder coat finish.

The IF1 is supplied with the SAE Tool-Less terminal blocks, saving you time and effort in your installation. Testing the circuits can be accomplished with the use of the TTS Test Probe in the individual test ports.

Standard Features:

- Dimensions:
6 1/2" W x 8 1/2" H x 2 1/2" D
- 16 gauge cold rolled steel construction
- Wall mounting holes
- Durable red textured finish
- White 7/8" indelible lettering
"FIRE ALARM TERMINAL CABINET"
- Lift-a-way hinge with captive fastener
- Interior labeling of terminal strip
- Field identification label inside cover
- Standard 1/2" & 3/4" EMT knockouts
- Galvanized Mounting Plate
- Four 4 Ckt. TTS Tool-Less terminal blocks
- Terminal points rated for 12 gauge wire
- Terminal strip rated for 20 amp max 250V
(Class B/UL) 300V (CSA)

When properly installed, there will be no conductors exposed. All circuit testing can be performed via the individual test ports per circuit.



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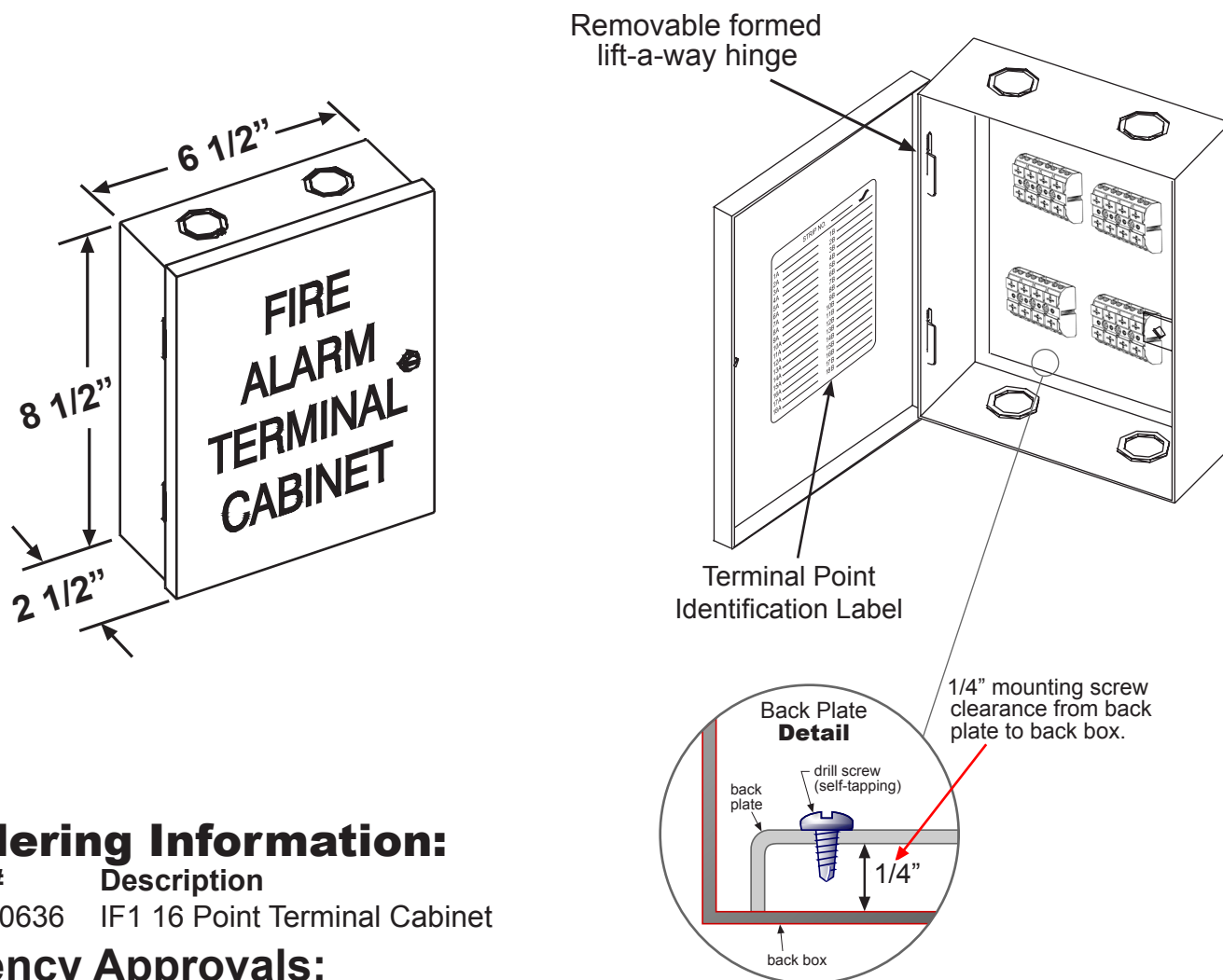
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Description:

The TC1 18 Point Terminal Cabinet is constructed of 16 gauge (.062 thk.) cold rolled steel and finished with a durable red textured, heat-resistant baked-on enamel finish. The front cover displays "FIRE ALARM TERMINAL CABINET" in 7/8" white screened indelible lettering, and is engineered with a removable formed lift-a-way hinge. A captive fastener secures the front cover. The interior of the box has a field identification label on the inside cover, corresponding to the terminal strip's labeling inside the back box. Overall dimensions measure 6 1/2" wide by 8 1/2" high by 2 1/2" deep. The cabinet includes standard 1/2" and 3/4" EMT knockouts on the top and bottom. A single 18 point high barrier terminal strip is rated for 12 gauge wire and 20 amp max 250V (Class B/UL) 300V (CSA).



Ordering Information:

Part #	Description
SSU00636	IF1 16 Point Terminal Cabinet

Agency Approvals:

UOXX.S2580 UL Listed Control Unit Accessories

Optional Accessories:

SAE 's Toolless Terminal Strip	
PN	Description
Included in IF1	
SSU00470	TTS Black
SSU00471	TTS White
Sold Separately	
SSU00472	TTS Test Probe


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ED0442

LT10481

Rev. B

2/2

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32 Point TTS Terminal Cabinet

The IF2 32 point "FIRE ALARM TERMINAL CABINET" is designed to enhance your fire alarm systems. Ideally suited for trouble shooting and maintenance with easy identification of system wiring.

This surface mount cabinet is fabricated from 16 gauge steel with a durable, baked on, red textured powder coat finish. White 2" highly visible lettering and a "lift-a-way" hinged door contribute to fast cabinet location and access. The door incorporates a high security CAT 30 keyed door lock.

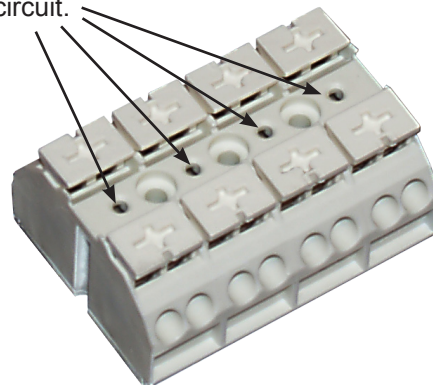
Standard Features:

- Dimensions: 14" wide x 14" high x 3 1/4" deep
- NEMA 1 Rated Construction
- 16 Gauge Steel Construction
- Removable Back Plate
- Durable Red Textured Finish
- White 2" Indelible Lettering
"FIRE ALARM TERMINAL CABINET"
- Lift-A-Way Hinge with CAT 30 Keyed Lock
- Terminals have "Built-in Test Point" w/o removing wires
- Field Identification Label Inside Cover
- 1/2", 3/4", 1", 1 1/2" and 2" EMT knockout clusters
- 8 - 4 Circuit TTS (tool less) Terminal Strips
- Terminal Points Rated for 12 Gauge Wire
- Terminal Strips Rated for 20 Amp Max
- 250V (Class B/UL) 300V (CSA)

The IF2 is UL listed for life safety under UL 864 Rev.9

The IF1 is supplied with the SAE Tool-Less terminal blocks, saving you time and effort in your installation. Testing the circuits can be accomplished with the use of the TTS Test Probe in the individual test ports.

When properly installed, there will be no conductors exposed. All circuit testing can be performed via the individual test ports per circuit.



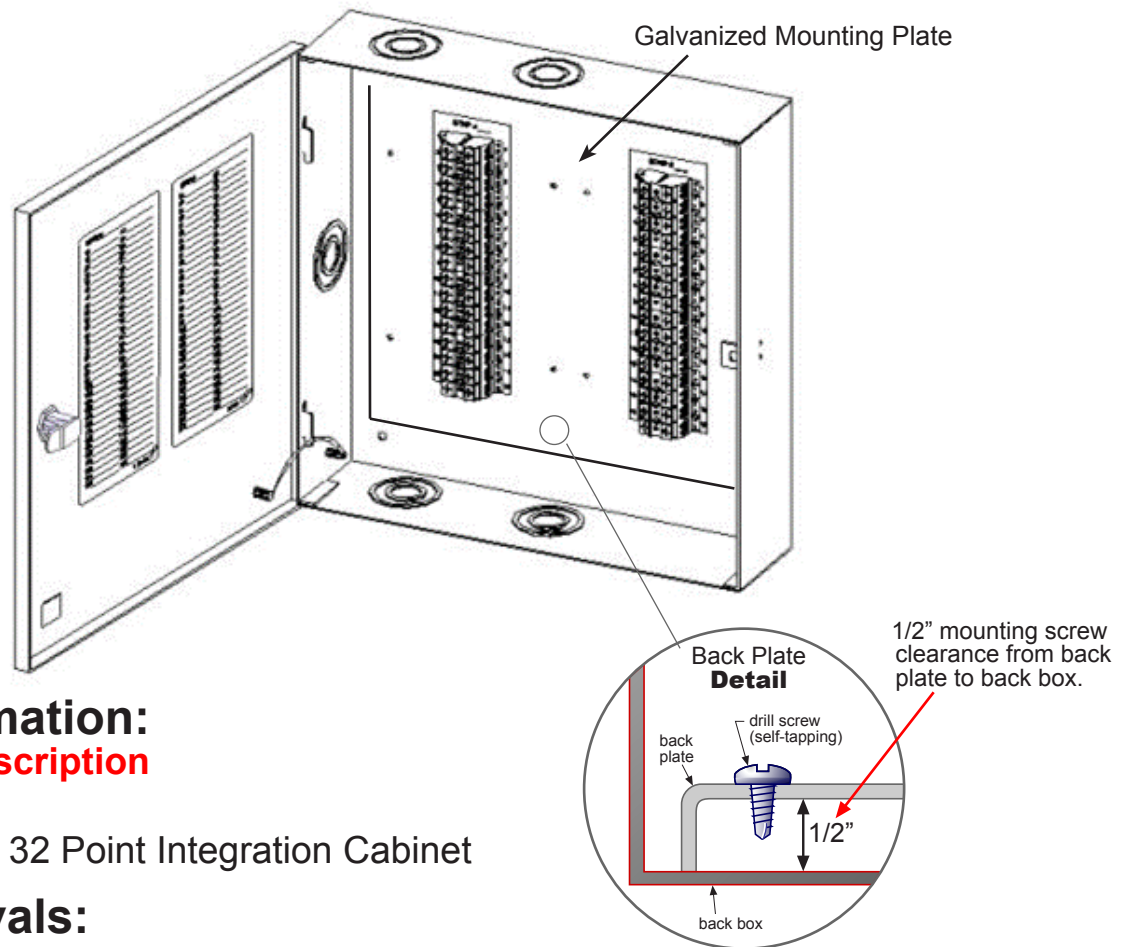
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Specification:

The **IF2 32 Point Terminal Cabinet** is constructed of 16 gauge (.062 thick) cold rolled steel and finished with a durable red textured, heat-resistant baked-on enamel finish. The front cover is engineered with a removable formed lift-a-way hinge and displays "FIRE ALARM TERMINAL CABINET" in 2" white screened indelible lettering. A CAT 30 keyed door lock secures the front cover. The interior of the box has field identification labels on the inside cover corresponding to the terminal strip's labeling inside the back box. Overall dimensions measure 14" wide by 14" high by 3 1/4" deep. The cabinet includes 1/2", 3/4", 1", 1 1/2" and 2" EMT knockout clusters on the top, bottom and left side. Eight - 4 circuit TTS terminal strips are rated for 12 gauge wire and 20 Amp max 250V (Class B/UL) 300V (CSA). The use of copper conductors is suggested.



Ordering Information:

Part #	Description
SSU00660	IF2 32 Point Integration Cabinet

Agency Approvals:

UOXX.S2580	UL Listed Control Unit Accessories
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Optional Accessories:

SAE 's Toolless Terminal Strip PN	Description
SSU00470	TTS Black
SSU00471	TTS White
Sold Separately	
SSU00472	TTS Test Probe


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Terminal Cabinet

The IFX "FIRE ALARM TERMINAL CABINET" offers easy identification of fire alarm wiring junctions for troubleshooting and maintenance of system wiring.

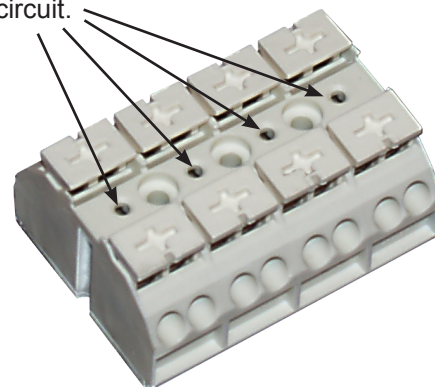
Highly visible 2" lettering and a removable "lift-a way" hinged door contribute to fast location and easy access. This surface mount cabinet is fabricated from 16 gauge steel with a durable, baked on, red textured powder coat finish. The IFX includes a high security CAT 30 keyed door lock and is UL listed for life safety.

The IFX is supplied with the SAE Tool-Less terminal blocks, saving you time and effort in your installation. Testing the circuits can be accomplished with the use of the TTS Test Probe in the individual test ports.

Standard Features:

- Available in size A or D
- 16 gauge steel construction
- Durable red textured finish
- White 2" indelible lettering
"Fire Alarm Terminal Cabinet"
- Lift-a way hinge with CAT 30 keyed door lock
- Interior labeling of terminal strips
- Field identification labels inside cover
- 1/2", 3/4", 1", 1 1/2" and 2" EMT knockout clusters
- Sace Age TTS Toolless terminal strips
- Terminal points rated for 20 - 12 gauge wire
- Terminal strips rated for 20 amp max 250V (Class B/UL) 300V (CSA)

When properly installed, there will be no conductors exposed. All circuit testing can be performed via the individual test ports per circuit.



Options:

- Custom finish
- Custom legend



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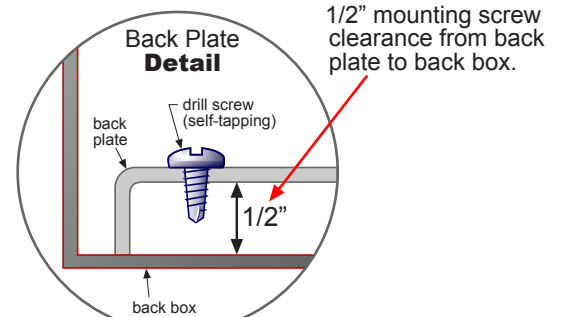
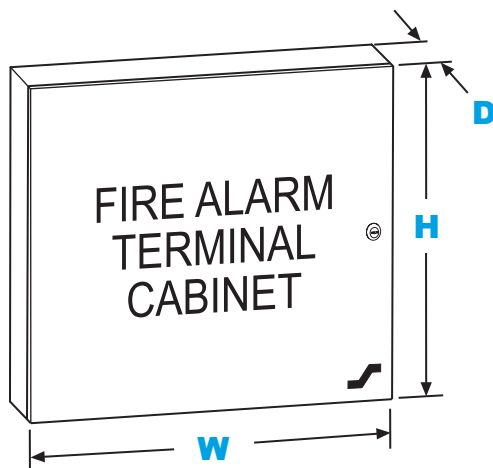
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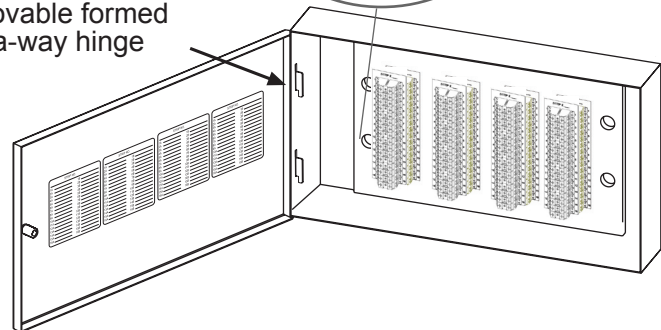
Description:

The IFX Terminal Cabinet is constructed of 16 gauge (.062 thk.) cold rolled steel and finished with a durable red textured, heat-resistant baked-on enamel finish. The front cover displays "FIRE ALARM TERMINAL CABINET" in 2" white indelible screened lettering and features a removable formed lift-a-way hinge and a high security CAT 30 keyed door lock. The interior of the box contains field identification labels on the inside cover corresponding to the terminal strip's labeling inside the back box. The cabinet employs SAE TTS Tool less terminal strips rated for 12 gauge wire and 20 amp max 250V (Class B/UL) 300V (CSA). The dual barrier terminal strips are mounted on a durable 18 GA cold rolled steel galvanize finish backboard and secured to the back box. Custom finish and legend available. The cabinet includes embedded 1/2", 3/4", 1", 1 1/2" and 2" EMT knockout clusters.

Size	# of Terminal Points	Overall Dimensions of Cabinet			Cubic Inches
		W	H	D	
A	64	23 1/2"	13"	5 1/2"	1582.00"
D	128	23 1/2"	23 1/2"	5 1/2"	2813.78"



Removable formed lift-a-way hinge



Ordering Information:

Part #	Description
SSU00661	IFXA 64 Point Terminal Cabinet
SSU00663	IFXD 128 Point Terminal Cabinet

Agency Approvals:

UOXX.S2580 UL Listed Control Unit Accessories

Optional Accessories:

SAE 's Tooless Terminal Strip	PN	Description
Included in IFX		
SSU00470	TTS Black	
SSU00471	TTS White	
Sold Separately		
SSU00472	TTS Test Probe	


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ED0417

LT10424

Rev.A

2/2

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18 Point Terminal Cabinet

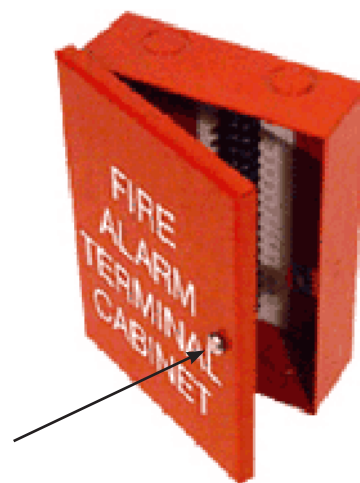
The TC1 18 point "FIRE ALARM TERMINAL CABINET" is designed to enhance your fire alarm systems. Ideally suited for maintenance and troubleshooting with easy identification of system wiring.

White 7/8" highly visible lettering and a "lift-a-way" hinged door with captive fastener or high security Cam Lock makes this an ideal "quick and easy" termination point. This surface mount cabinet is fabricated from 16 gauge steel with a durable red textured, baked-on powder coat finish.

The TC1 is UL listed for life safety.

Standard Features:

- Dimensions:
6 1/2" wide x 8 1/2" high x 2 1/2" deep
- 16 gauge cold rolled steel construction
- Captive Screw or Cam Lock securing devices
- Wall mounting holes
- Durable red textured finish
- White 7/8" indelible lettering
- "FIRE ALARM TERMINAL CABINET"
- Lift-a-way hinge
- Interior labeling of terminal strip
- Field identification label inside cover
- Standard 1/2" & 3/4" EMT knockouts
- Single 18 point high barrier terminal strip
- Terminal points rated for 12 gauge wire
- Terminal strip rated for 20 amp max 250V
- (Class B/UL) 300V (CSA)



The TC1 door can be equipped with a friction catch or a high security CAT 30 key and lock set.



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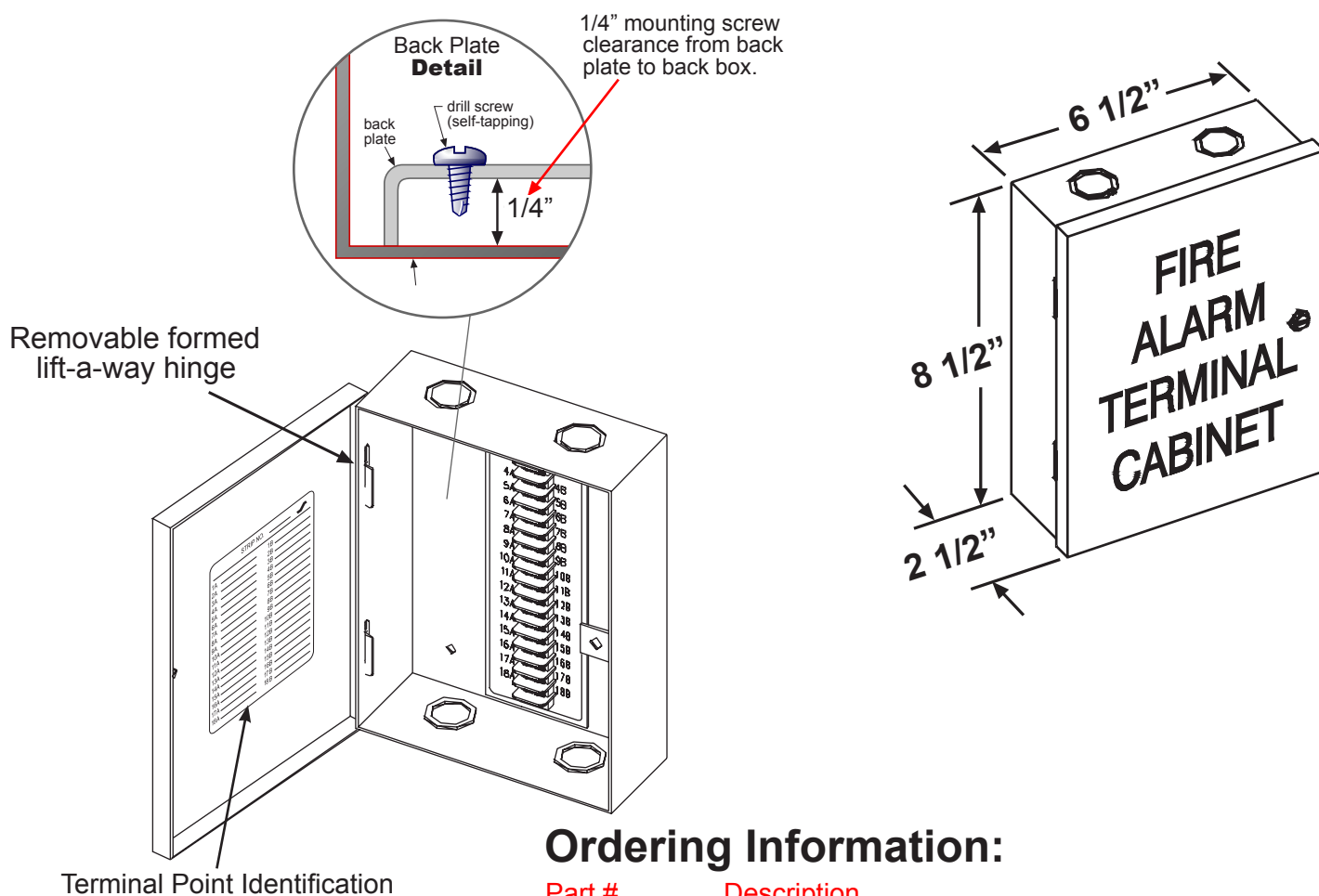
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Specifications:

The TC1 18 Point Terminal Cabinet is constructed of 16 gauge (.062 thk.) cold rolled steel and finished with a durable red textured, heat-resistant baked-on enamel finish. The front cover displays "FIRE ALARM TERMINAL CABINET" in 7/8" white screened indelible lettering, and is engineered with a removable formed lift-a-way hinge. The choice of a captive fastener or CAT-30 Cam Lock secures the front cover. The interior of the box has a field identification label on the inside cover, corresponding to the terminal strip's labeling inside the back box. Overall dimensions measure 6 1/2" wide by 8 1/2" high by 2 1/2" deep. The cabinet includes standard 1/2" and 3/4" EMT knockouts on the top and bottom. A single 18 point high barrier terminal strip is rated for 12 gauge wire and 20 amp max 250V (Class B/UL) 300V (CSA).



Ordering Information:

Part #	Description
SSU00635	TC1 18 Point Terminal Cabinet w/Captive Fastener
SSU00636	TC1 18 Point Terminal Cabinet w/CAT30 Lock*

Agency Approvals:

UOXX.S2580	UL Listed Control Unit Accessories
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* TC1 w/CAT30 Lock is not UL Listed

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ED0150

LT10221

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32 Point Terminal Cabinet

The TC2 32 point "FIRE ALARM TERMINAL CABINET" is designed to enhance your fire alarm systems. Ideally suited for trouble shooting and maintenance with easy identification of system wiring.

This surface mount cabinet is fabricated from 16 gauge steel with a durable, baked on, red textured powder coat finish. White 2" highly visible lettering and a "lift-a-way" hinged door contribute to fast cabinet location and access. The door incorporates a high security CAT 30 keyed door lock. The TC2 is UL listed for life safety.

Standard Features:

- Dimensions:
14" wide x 14" high x 3 1/4" deep
- 16 gauge steel construction
- Wall mounting holes
- Durable red textured finish
- White 2" indelible lettering "FIRE ALARM TERMINAL CABINET"
- Lift-a-way hinge with CAT 30 keyed door lock
- Interior labeling of terminal strip
- Field identification label inside cover
- 1/2", 3/4", 1", 1 1/2" and 2" EMT knockout clusters
- Dual 16 point high barrier terminal strips
- Terminal points rated for 12 gauge wire
- Terminal strips rated for 20 amp max 250V (Class B/UL) 300V (CSA)

Life Safety installations demand code compliant products. The TC2 uses only UL Recognized components.



ADA



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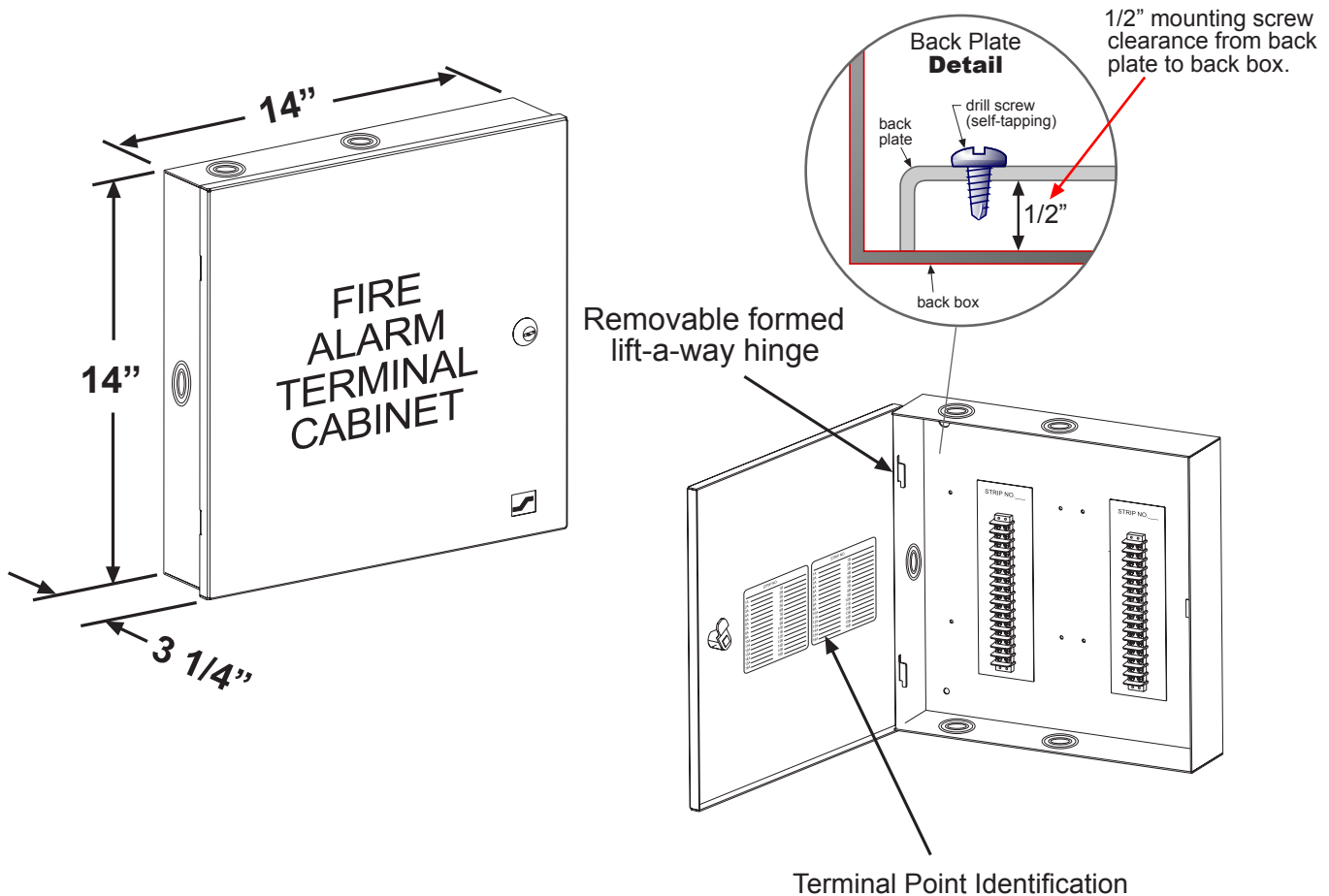
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Specifications:

The TC2 32 Point Terminal Cabinet is constructed of 16 gauge (.062 thk.) cold rolled steel and finished with a durable red textured, heat-resistant baked-on enamel finish. The front cover is engineered with a removable formed lift-a-way hinge and displays "FIRE ALARM TERMINAL CABINET" in 2" white screened indelible lettering. A CAT 30 keyed door lock secures the front cover. The interior of the box has field identification labels on the inside cover corresponding to the terminal strip's labeling inside the back box. Overall dimensions measure 14" wide by 14" high by 3 1/4" deep. The cabinet includes 1/2", 3/4", 1", 1 1/2" and 2" EMT knockout clusters on the top, bottom and left side. Interior dual 16 point high barrier terminal strips are rated for 12 gauge wire and 20 amp max 250V (Class B/UL) 300V (CSA).



Ordering Information:

Part #	Description
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SSU00645	TC2 32 Point Terminal Cabinet
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Agency Approvals:

UOXX.S2580	UL Listed Control Unit Accessories
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ED0142

LT10127

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2/2

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64 - 128 Point Terminal Cabinet

The TCX "FIRE ALARM TERMINAL CABINET" offers easy identification of fire alarm wiring junctions for troubleshooting and maintenance of system wiring.

Highly visible 2" lettering and a removable "lift-a-way" hinged door contribute to fast location and easy access. This surface mount cabinet is fabricated from 16 gauge steel with a durable, baked on, red textured powder coat finish. The TCX includes a high security CAT 30 keyed door lock and is UL listed for life safety.

Standard Features:

- Available in size A or D
- 16 gauge steel construction
- Durable red textured finish
- White 2" indelible lettering
"Fire Alarm Terminal Cabinet"
- Lift-a way hinge with CAT 30 keyed door lock
- Interior labeling of terminal strips
- Field identification labels inside cover
- 1/2", 3/4", 1", 1 1/2" and 2" EMT knockout clusters
- Dual 16 point high barrier terminal strips
- Terminal points rated for 12 gauge wire
- Terminal strips rated for 20 amp max 250V (Class B/UL) 300V (CSA)



The TCX is available in either the ACE "A" or "D" sizes. The ACE A supplies you with 64 terminals while the ACE D supplies you with 128 terminals.



Uses UL Recognized Components



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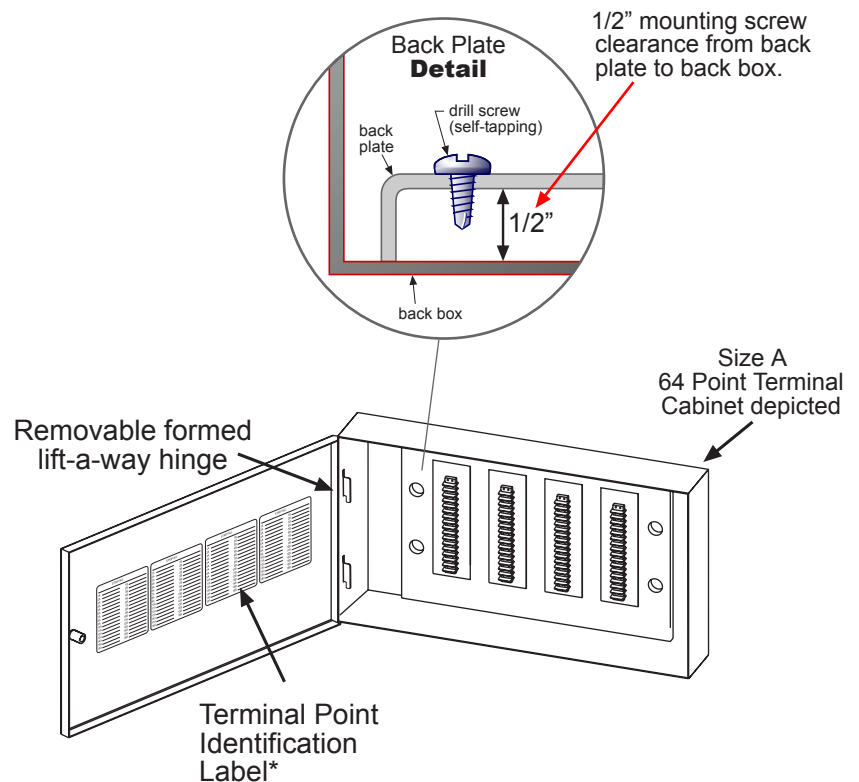
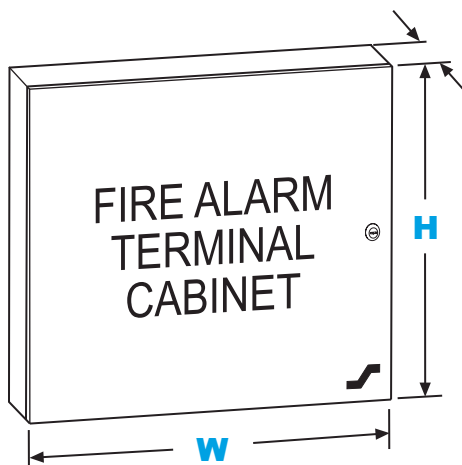
ACE BOX

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Specifications:

The TCX Terminal Cabinet is constructed of 16 gauge (.062 thk.) cold rolled steel and finished with a durable red textured, heat-resistant baked-on enamel finish. The front cover displays "FIRE ALARM TERMINAL CABINET" in 2" white indelible screened lettering and features a removable formed lift-a-way hinge and a high security CAT 30 keyed door lock. The interior of the box contains field identification labels on the inside cover corresponding to the terminal strip's labeling inside the back box. The cabinet employs dual 16 point high barrier terminal strips rated for 12 gauge wire and 20 amp max 250V (Class B/UL) 300V (CSA). The dual barrier terminal strips are mounted on a durable 18 GA cold rolled steel galvanized finish backboard and secured to the back box. Custom finish and legend available. The cabinet includes embedded 1/2", 3/4", 1", 1 1/2" and 2" EMT knockout clusters.

Size	# of Terminal Points	Overall Dimensions of Cabinet		
		W	H	D
A	64	23 1/2"	13"	5 1/2"
D	128	23 1/2"	23 1/2"	5 1/2"



Agency Approvals:

UOXX.S2580

UL Listed Control Unit Accessories

Ordering Information:

Part #	Description
SSU00651	TCX A 64 Point Terminal Cabinet
SSU00653	TCX D 128 Point Terminal Cabinet



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LT10121

Rev.D

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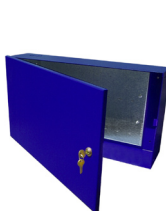
Accessory Cabinet Enclosure

The ACE Accessory Cabinet provides an economical enclosure, ideally suited for field trouble shooting and easy maintenance of system wiring. This surface mount cabinet is fabricated from 16 gauge steel with a durable, red textured powder coat finish. It features a formed lift-a-way hinged door for ease of access and maintenance and is key locked (CAT 30) for security.

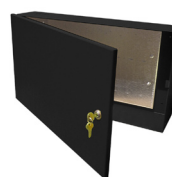
The ACE cabinet includes an interior galvanized back plate with hole matrix configuration for mounting optional components. The back plate is raised (1/2"), for clearance of mounting hardware, as not to interfere with the back box. With the use of drill screws, which easily penetrate and securely hold components in place, the interior back plate's material allows custom configuration and installation of other equipment.

Standard Features:

- Standard A and D surface mount, custom sizes available
- 16 gauge steel construction
- Durable red textured finish
- Lift-a-way hinge with a CAT 30 keyed door lock
- 1/2", 3/4", 1", 1 1/2" and 2" EMT knockout clusters
- 20 gauge galvanized back plate with mounting hole matrix
- Internal threaded grounding lug screw in back box
- Grounding stud screw on cover
- Removable, 1/2" raised back plate, mounted on 4 studs



blue



black



green

More custom cabinet colors available.

Custom Lettering Available:

- Fire Alarm Cabinet
- Access Control Cabinet
- Security Cabinet
- Intercom Cabinet



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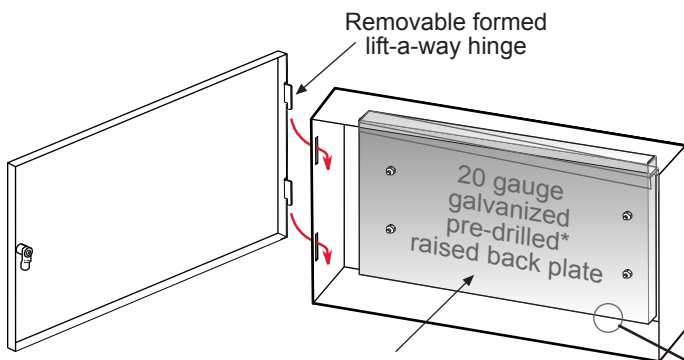
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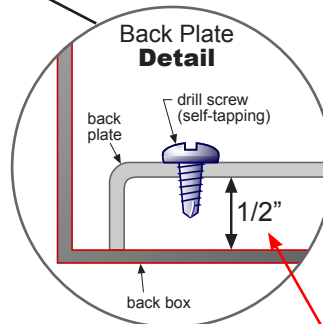
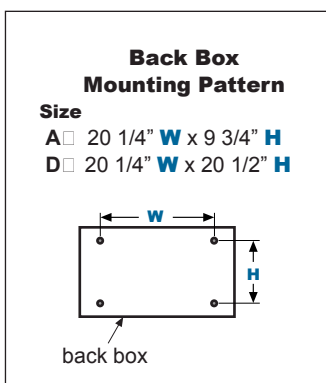
Specifications:

The ACE Accessory Cabinet Enclosure, A and D sizes, are constructed of 16 gauge (.062 thk.) cold rolled steel and finished with a durable red textured, heat-resistant baked-on enamel finish. The front cover features a removable formed lift-a-way hinge and a high security CAT 30 keyed door lock. Custom finishes and labeling available. EMT knockout 1/2", 3/4", 1", 1 1/2" and 2" clusters embedded in cabinet. The removable back plate is a 20 gauge galvanized plate mounted on studs to the back box. The back plate clears the back box by 1/2" to accommodate for mounting hardware on the back plate. Custom equipment mounting can be easily accomplished with the use of standard hole matrix or self tapping drill screws. Cover and back box include a threaded grounding stud and lug.

Size	Overall Dimensions of Cabinet
A	23 1/2" wide x 13" high x 5 1/2" deep
D	23 1/2" wide x 23 1/2" high x 5 1/2" deep

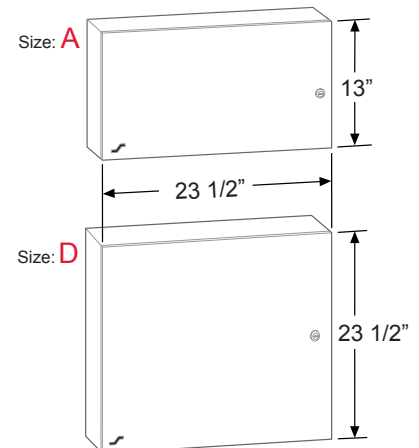


Removable back plate enables mounting components and modules easily to meet your custom configuration specifications.



1/2" mounting screw clearance from back plate to back box

Overall Cabinet Dimensions



Custom sizes available.

Ordering Information:

Part #	Description
SSU00655	ACE A Accessory Cabinet Enclosure, Red
SSU00657	ACE D Accessory Cabinet Enclosure, Red

Agency Approvals:

UOXX.S2580	UL Listed Control Unit Accessories
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ED0205

LT10065

Rev.E

2/2

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AC2



Accessory Cabinet Enclosure

The AC2 Accessory Cabinet provides an economical enclosure, ideally suited for field trouble shooting and easy maintenance of system wiring. This surface mount cabinet is fabricated from 16 gauge steel with a durable, red textured powder coat finish. It features a formed lift-a-way hinged door for ease of access and maintenance and is key locked (CAT 30) for security.

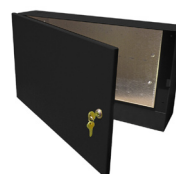
The AC2 cabinet includes an interior galvanized back plate with hole matrix configuration for mounting optional components. The back plate is raised (1/2"), for clearance of mounting hardware, as not to interfere with the back box. With the use of drill screws, which easily penetrate and securely hold components in place, the interior back plate's material allows custom configuration and installation of other equipment.

Standard Features:

- Dimensions: 13.75" wide x 13.75" high x 3 1/4" deep
- 16 gauge steel construction
- Durable red textured finish
- Lift-a-way hinge with CAT 30 keyed door lock
- 1/2", 3/4", 1", 1 1/2" and 2" EMT knockout clusters
- 20 gauge galvanized back plate with mounting hole matrix
- Internal threaded grounding lug screw in back box
- Grounding stud screw on cover
- Removable, 1/2" raised back plate, mounted on 4 studs
- Wall mounting holes



blue



black



green

More custom cabinet colors available.

Custom Lettering Available:

- Fire Alarm Cabinet
- Access Control Cabinet
- Security Cabinet
- Intercom Cabinet



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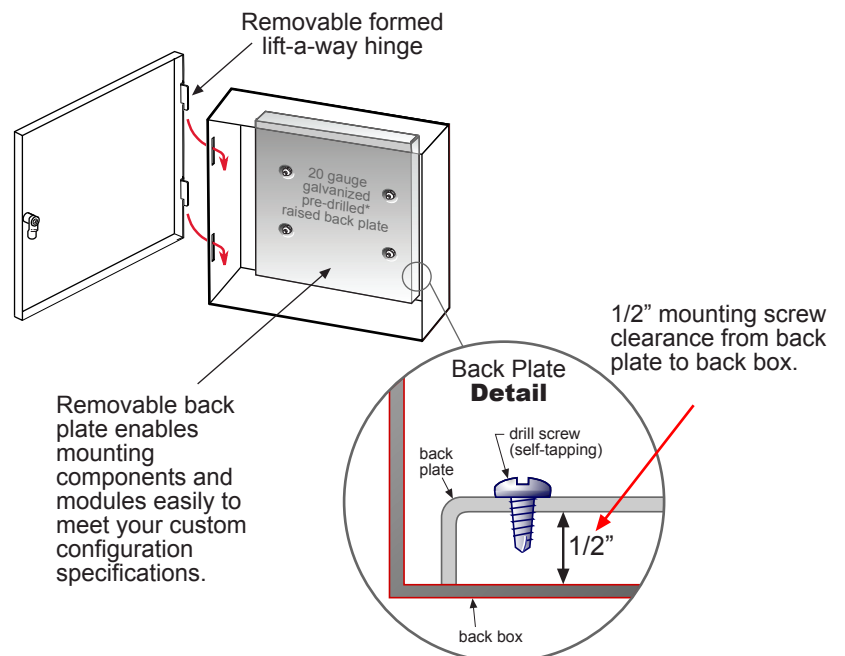
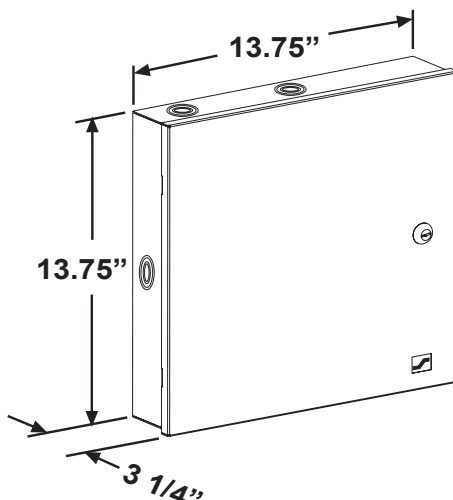
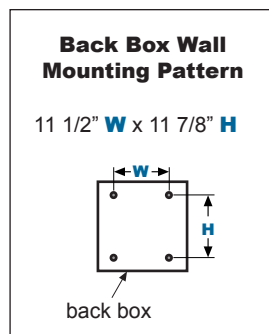


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Specifications:

The AC2 Accessory Cabinet Enclosure, is constructed of 16 gauge (.062 thk.) cold rolled steel and finished with a durable red textured, heat-resistant baked-on enamel finish. The front cover features a removable formed lift-a-way hinge and a high security CAT 30 keyed door lock. Custom finishes and labeling available. EMT knockout 1/2", 3/4", 1", 1 1/2" and 2" clusters embedded in cabinet. The removable back plate is a 20 gauge galvanized plate mounted on studs to the back box. The back plate clears the back box by 1/2" to accommodate for mounting hardware on the back plate. Custom equipment mounting can be easily accomplished with the use of standard hole matrix or self tapping drill screws. Cover and back box include a threaded grounding stud and lug.



Ordering Information:

Part #	Description
SSU00656	AC2 Accessory Cabinet Enclosure, Red

Agency Approvals:

UOXX.S2580	UL Listed Control Unit Accessories
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ED0315

LT10320

Rev.A

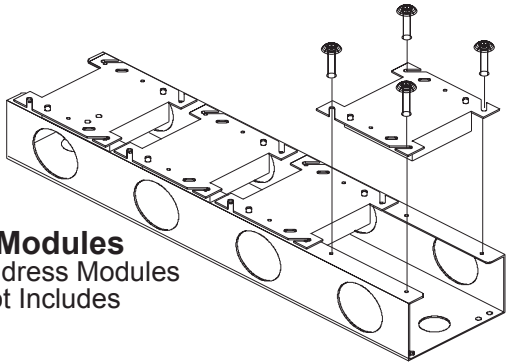
2/2

**NO
EXCUSES!**



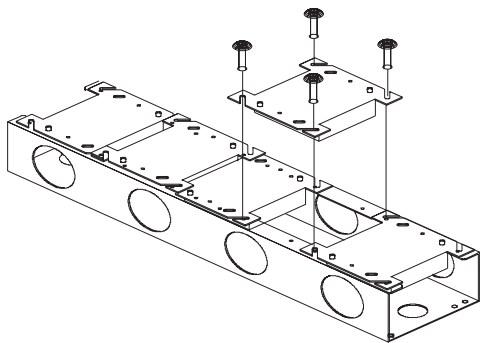
4 Modules

Address Modules
Not Includes



5 Modules

Address Modules
Not Includes



Standard Features:

- Dimensions:
 - 18" long x 4 5/16" wide x 2" deep
 - 9" long x 4 5/16" wide x 2" deep
- Secures 4 or 5 modules (18" long) 4" square pattern or only 2 (9" long)
- 24 gauge steel construction
- Durable galvanized finish
- Wire chase for vertical or horizontal
- Edge protector to eliminate wire cuts
- Mounting hole pattern for wall or cabinet mount



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Multi-Fast Rail Module

The MFR fast rail is designed to be configured to hold 4 or 5 addressable modules (with a 4" square footprint). This rail system, when installed in a proper enclosure eliminates the need for multiple 4" square boxes or even modification of a 4" trough. The MFR replaces all that work with an easy method of assembly for each addressable module.

Each address module is installed with the terminal field connections and address dials easily accessible after installation for serviceability. The MFR is supplied with edge protectors to eliminate wire shorts when pulling wire chases.

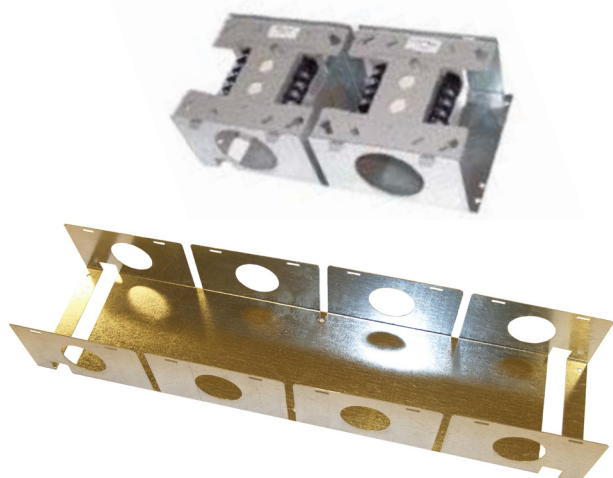
The MFR is manufactured from durable 24 gauge galvanized steel and is designed with multiple mounting hole patterns for wall or cabinet mount. Measurements are 18" long x 4 5/16" wide with a depth of 2" with module installed.

The MFR is ideally suited for the Space Age ACE cabinet size A (SSU00655) or D (SSU00657) for a professional installation. Features key access and a lift away removable door to access the address modules and field wiring thus allowing you time saving maintenance and trouble shooting of the system.

Ordering Info:

SSU00458 MFR 4/5 Module Rail
SSU00462 MFR 2/3 Module Rail

**NO
EXCUSES!**



Fast Rail 2 and 4 Module Holders

The FR2/4 fast rail system is designed to hold from two to four System Sensor style addressable modules with a quick snap in assembly.

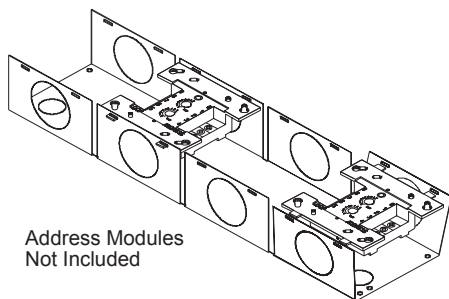
Each address module is installed independently with the terminal field connections and address dials easily accessible after installation for serviceability. The FR4 is supplied with edge protectors to eliminate wire shorts when pulling wire chases.

The fast rails are manufactured from durable 22 gauge galvanized steel and is designed with multiple mounting hole patterns for wall or cabinet mount. Measurements are 4.5" long x 4 5/16" wide x 2 1/2" deep for the FR2 and 18" long x 4 5/16" wide x 2 1/2" deep for the FR4.

The fast rail system is ideally suited for the Space Age ACE cabinet size A (SSU00655) or D (SSU00657) as well as the AC2 cabinet (SSU00656) for a professional installation. The key feature of these cabinets is the key access and a lift away removable door to access the address modules and field wiring thus allowing you time saving maintenance and trouble shooting of the system.

Standard Features:

- Secures 4 System Sensor modules (4" square)
- Spring loaded snap in design
- 24 gauge steel construction
- Durable galvanized finish
- Wire chase for vertical or horizontal
- Edge protector to eliminate wire cuts
- Mounting hole pattern for wall or cabinet mount



Ordering Info:

Part # Description

SSU00452 FR2 Fast Rail
SSU00457 FR4 Fast Rail



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Optional Cabinets:

ACE A holds 4 FR2 or 2 FR4 rails (SSU00655)
ACE D holds 8 FR2 or 4 FR4 rails (SSU00657)
AC2 holds 2 FR2 rails (SSU00656)



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ED0421

LT10430

Rev.B

1/1

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FP4/5



Fire Plate 4" Square

The FP4 4" square fire plate is designed to provide quick visual identification of field wiring for the Fire and Life Safety industry. This sturdy cover plate is fabricated of 18 gauge steel with a powder coated red finish. The nationally recognized NFPA fire symbol has been screened on the front with indelible white ink.

An address label on the reverse side of the plate gives the installer a place for noting field identification of the circuits within the junction box.

The FP4 has 4 Keyhole mounting holes to allow the plate to be easily mounted to a standard 4" Square box regardless of that box's orientation. The Key holed configuration allows the installer to easily mount the plate while on a ladder and to remove it as easily.

Standard Features:

- Packaging available in 10 and 100 quantities
- 18 gauge 4" square cover plates
- Address Label for circuit identification on inside of plate
- FP4 Plate dimensions are 4 3/8" x 4 3/8"
- FP5 Plate dimensions are 4 3/4" x 4 3/4"
- 1" High white FIRE in indelible lettering
- 1 3/4" High white NFPA indelible Fire Symbol
- Durable red powder coat finish



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COMPANY**

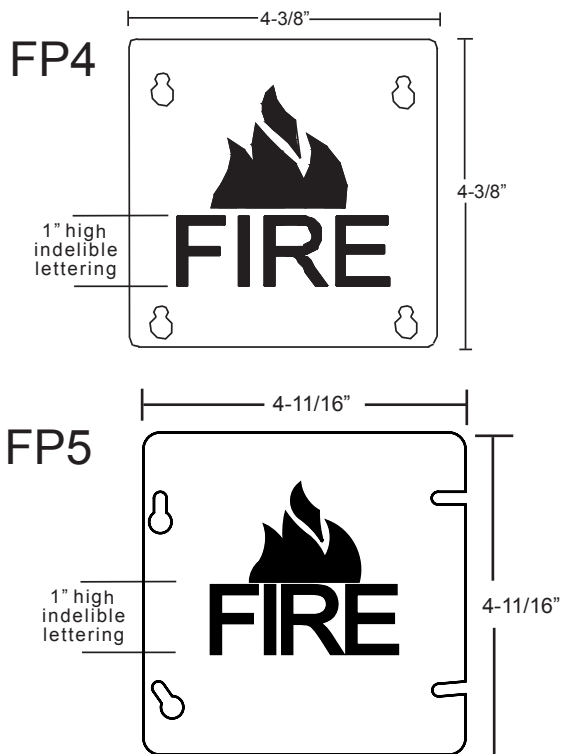


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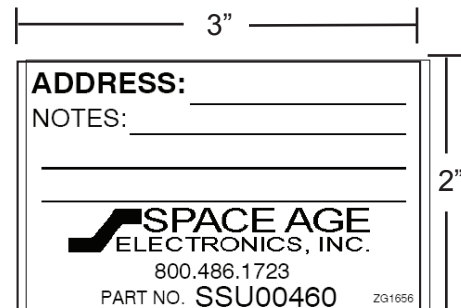
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Description:

The FP4 4" fire plate is designed to exceed present and future code compliant regulations allowing for quick identification of field wiring from the nationally recognized NFPA fire symbol screen on the front. The FP4 fire plate can be mounted to any 4 square electrical junction box. Convenient eyelets allow for ease of installation and trouble shooting while assuring that the word "FIRE" is always upright and legible. Address label on reverse side allows for quick and easy circuit identification.



Address Label (Reverse Side)



PART NO. SSU00461 4-11/16

Specifications:

The FP4/FP5 4" Fire Plate will be made of 18 gauge cold rolled steel and shall have a red powder coated finish. The FP4 4" Fire plate will measure 4 3/8" x 4 3/8". The FP5 4" Fire plate will measure 4 3/4" x 4 3/4". The word Fire will have 1" high lettering and shall have the nationally recognized NFPA fire symbol. The lettering and fire symbol will be screened with white indelible ink. It will have offset screw eyelets for one hand installation and maintenance. These same eyelets will assure that the FIRE legend will always be upright and legible. There will be an address label adhered to reverse side for quick circuit identification.

Ordering Information:

Part #	Description
SSU00460	FP4 4" Square Fire Cover Plate
SSU00461	FP5 4 11/16" Square Fire Cover Plate

Note: 4" Square Surface and Extra Deep Appliance box's available see SAB or IGP2R Data Sheets.

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ED04074

LT10374

Rev.C

2/2

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Fire Alarm Box 4" Square

The FB4 Fire Alarm Box 4" Square is conveniently packaged with everything needed for quick termination of fire alarm circuits. It was designed to aid in minimizing wiring cost and meeting Code Compliant UL 864 Rev. 9, Setc.12.4 Field Wiring Applications and Sect. 89.1.2 Markings and Indication of Connection requirements. The FB4 Box also will meet NEC Code requirements where a junction box is required after 360° degrees of conduit bends. The red finish with NFPA nationally recognized Fire Symbol and rugged construction make this the logical choice for your next job while displaying professionalism and improving system credibility with inspectors and AHJs. This economical kit comes with everything you will need for a quick professional looking installation.

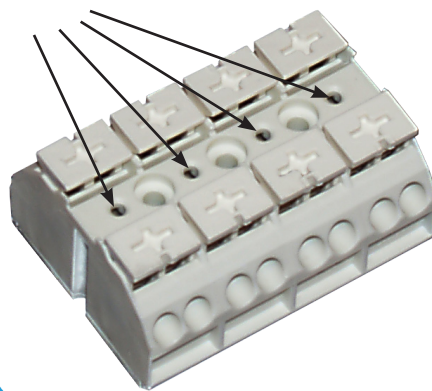


Standard Features:

- One red 4" square extra deep 16 gauge galvanized steel electrical appliance box
- Dimensions are 4" x 4" x 2 3/4" deep
- Five standard 1/2" & 3/4" EMT knockouts
- One red Fire plate with 1" lettering and NFPA Fire symbol screened with white indelible ink
- Address label for circuit identification
- One 4" square 18 gauge galvanized box bracket
- One 4 point TTS Tool-Less Terminal Strip installed and mounted on a convenient Box Bracket (BB4)

The FB4 is supplied with the SAE Tool-Less terminal blocks, saving you time and effort in your installation. Testing the circuits can be accomplished with the use of the TTS Test Probe in the individual test ports.

When properly installed, there will be no conductors exposed. All circuit testing can be performed via the individual test ports per circuit.



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- Uses UL Recognized Components



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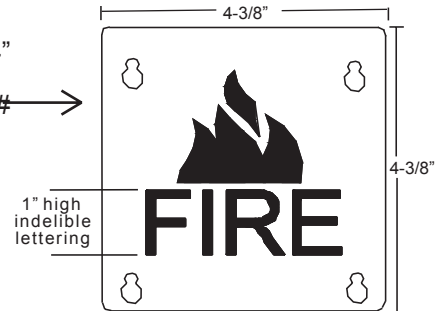
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Description:

The FB4 Fire Alarm Box 4" Square was designed to incorporate all the products needed for termination of fire alarm circuits. Each package consists of one SAB 4" Square Appliance Box, one TTS Tool-Less Terminal Strip mounted on a BB4 Box Bracket, one FP4 4" Square Fire Cover Plate and two 3/4" Red EMT Connectors. The FB4 Fire alarm box shows the AHJ or inspector that the installation is professional and code compliant, which increases first round sign-offs.

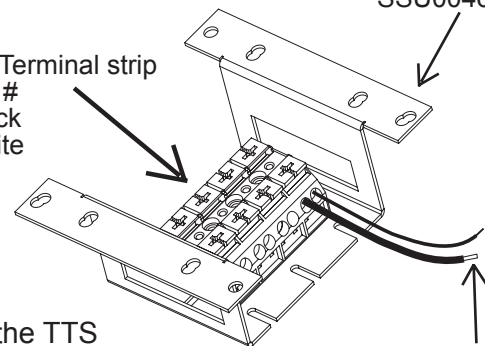
SAB Square Appliance Box
Accessory part #
SSU00454

FP4 Fire plate 4"
Square
Accessory part #
SSU00460



BB4 Box Bracket
Accessory part #
SSU00465

TTS Tool-Less Terminal strip
Accessory part #
SSU00470 Black
SSU00471 White



Warning:
Do not use Aluminum Conductors with the TTS
Terminals per UL 864 Rev. 9 Sect. 12.4.

20 AWG Stranded under 1 point
and 12 AWG Solid under 2nd point

Specifications:

The FB4 Fire Alarm Box 4" Square shall consist of one SAB Extra Deep Square Appliance Box, one BB4 Box Bracket 4" Square, one TTS Tool-Less Terminal Strip and one FP4 Fire Plate 4" Square. The 4" square extra deep appliance box and 4" square Fire plate will have a red powder coat finish. The FB4 Fire Alarm Box 4" Square will have one BB4 Box Bracket 4" square and one 4 Point TTS Tool-Less Terminal strip all mounted inside with UL listed assembly for fire alarm field connections. It will have the NFPA Fire Symbol and 1" Fire screened with white indelible ink and an address label on reverse side of FP4 Fire Plate. It also will contain two 3/4" Red forged steel EMT Conduit Connectors.

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Ordering Information:

Part #	Description
SSU00664	FB4 Fire Alarm Box 4" Square
SSU00472	TTS Test Probe



**NO
EXCUSES!**



Black
P/N: SSU00470

Tool-Less Terminal Strip

The TTS Tool-less Terminal Strip is designed to minimize wiring costs while meeting UL 864 Rev. 9 Sect. 12.4 Field Wiring applications requirements. It allows for quick easy mounting of multiple connection points. The clamp connections can accommodate wire sizes ranging from 20 to 12 AWG, stranded or solid core wire, and can be easily connected by depressing the terminal tab with either a finger or screwdriver, pushing the stripped conductor into the connection point and releasing the terminal tab to secure the wire. Up to four conductors can be connected to each terminal point. There are 4 built in test ports for quick circuit trouble shooting. The terminal strip can mount into the Space Age Electronics, Inc. Accessory cabinets or the BB4 Back Box Bracket (purchased separately) or can be surface mounted.



White
P/N: SSU00471

Standard Features:

- Each package consists of 1 terminal block
- (2) 4/40 machine screws for mounting
- Accepts 20 to 12 AWG
- Rated for 25A @ 300V and 5A @ 600V
- Measures 2" L X 1-3/8" W X 7/8"H
- Built in test ports for troubleshooting
- Available in black or white.



- Uses UL Recognized Components



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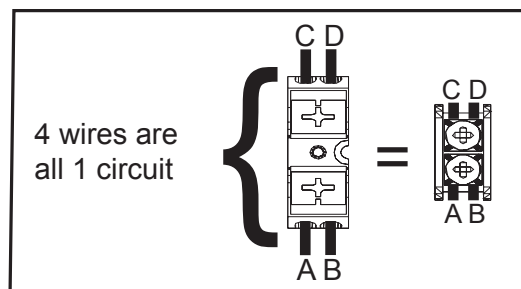
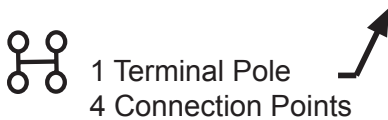
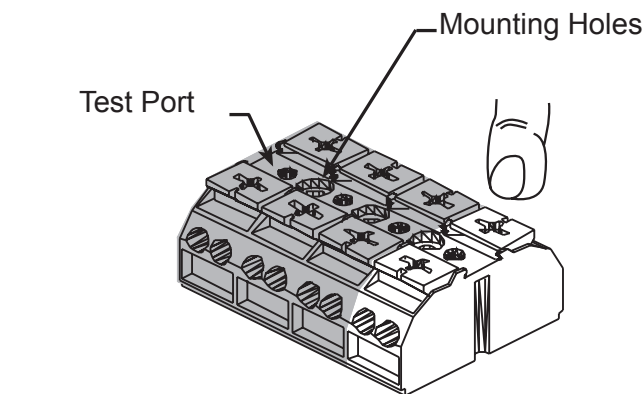
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Specifications:

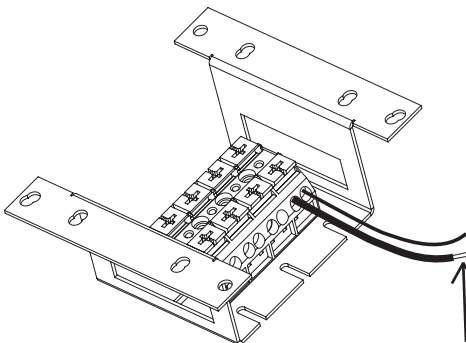
The TTS Tool-Less Terminal Strip will be a UL recognized component. There will be four terminal poles with four quick connection points per terminal pole. It shall accommodate connections of solid or stranded and wire sizes ranging from 20 to 12 AWG. There will be four direct test ports for each pole. It will be available in black or white. It will measure 2" L X 1-3/8" W X 7/8"H. It shall be rated for 25A @ 300V and 5A @ 600V.

The TTS Tool-Less Terminal Strip was designed to improve field termination and installation time while meeting full code compliance and allowing for first round inspection sign off. Built in test ports allow for quick and easy trouble shooting. Available in black or white to help improve circuit identification.



Wires sizes 20-12 AWG
Stranded or Solid core wire
4 poles / 16 connection points
300V @ 20A 600V @ 5A

BB4 4" Sq. Box Bracket
(SSU00465)



Versatile and strong enough to hold 20 AWG Stranded wire under 1 point and 12 AWG Solid under the second point.

Warning:

Do not use Aluminum Conductors with the TTS Terminals per UL 864 Rev. 9 Sect. 12.4.

Ordering Information:

Part #	Description
SSU00470	TTS Tool-Less Terminal Strip (Black)
SSU00471	TTS Tool-Less Terminal Strip (White)

Accessories:

SSU00460	BB4 Box Bracket 4" Square
SSU00472	TTP Tool-Less Test Plug



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Battery Cabinet Accessory

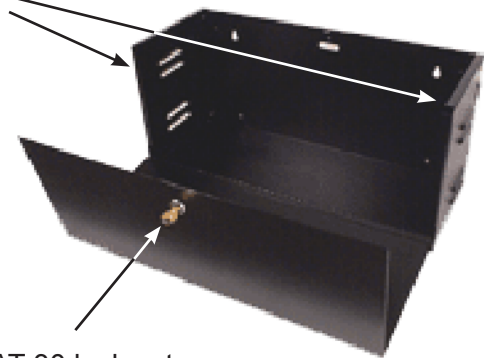
The BCA Battery Cabinet Accessory is designed for the professional installation of systems requiring battery storage and meets the requirement of NFPA 72 (1-5.2.9) standby battery storage for battery backup. The BCA allows for easy access and maintenance of the batteries while also assisting against unnecessary power drain, interference or degeneration of the battery. The unit can be mounted securely to a wall, preventing mechanical injury or damage to other equipment.

Constructed from heavy duty 16 gauge steel with a full length piano hinged door to allow optimum access to your equipment within the cabinet. Other features include a high security CAT 30 keyed door lock and vented sides. Complete interior and exterior finish is accomplished by a phosphate treatment followed by a durable baked-on textured polyester coating.

Standard Features:

- 16 Gauge (.062 thk.) cold rolled steel
- Stainless steel piano hinge
- Red or black textured finish
- CAT 30 keyed door lock
- Dimensions:
22" wide x 10" high x 8 1/2" deep
- Four 1/2" and 3/4" EMT conduit knockouts located on both sides and back
- Wall mounting holes

Vented Sides to
reduce corrosion



High Security CAT 30 lock set.



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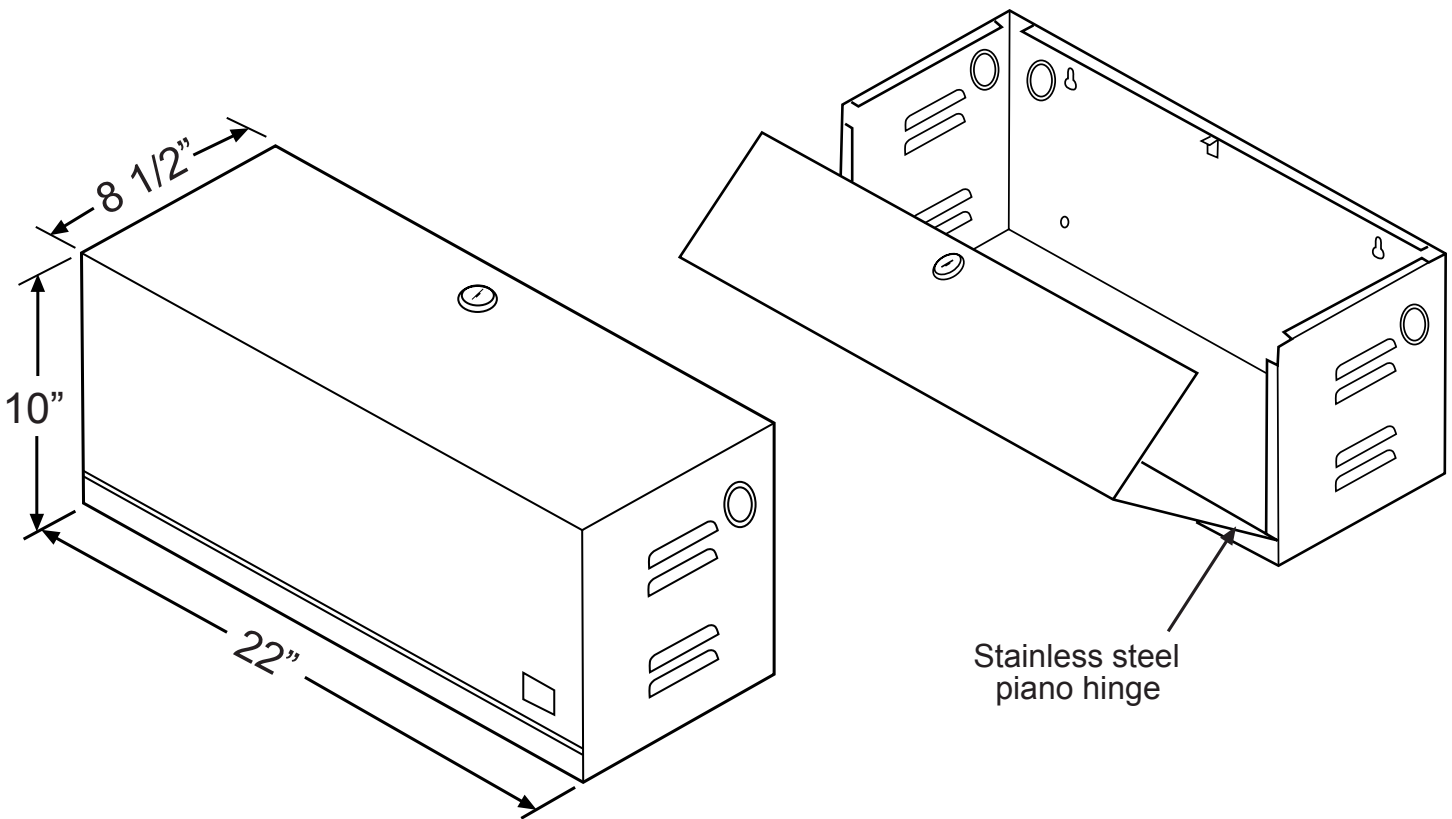


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Specifications:

The BCA Battery Cabinet Accessory is constructed of 16 gauge (.062 thk.) cold rolled steel and finished with a complete interior and exterior durable red or black textured, heat-resistant baked-on enamel finish. The front cover features a full length stainless steel piano hinge and includes a high security CAT 30 keyed door lock. Overall dimensions measure 22" wide by 10" high by 8 1/2" deep. Four 1/2" and 3/4" EMT conduit knockouts are located on the sides and back. The battery cabinet meets NFPA 72 (1-5.2.9) and the National Electric Code requirements. Batteries not included.



Agency Approvals:

UOXX.S2580 UL Listed Control Unit Accessories

Ordering Information:

Part #	Description
SSU00500	BCA Battery Cabinet, Red
SSU00501	BCA Battery Cabinet, Black

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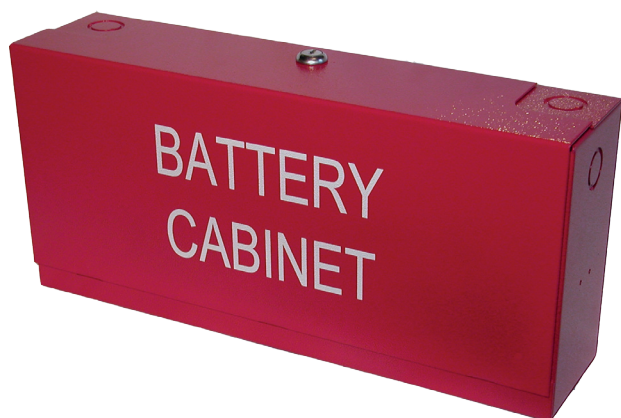
**NO
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Mini Battery Cabinet

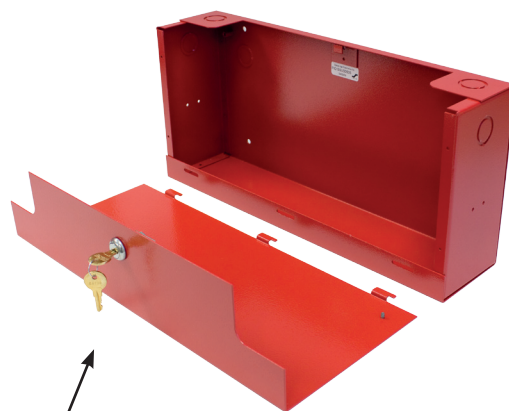
The MBC "BATTERY CABINET" is designed for the professional installation of systems requiring battery storage and meets the requirement of NFPA 72 (1-5.2.9) stand-by battery storage for battery backup.

The MBC allows for easy access and maintenance of the batteries while also assisting against unnecessary power drain, interference or degeneration of the battery. The unit can be mounted securely to a wall, preventing mechanical injury or damage to other equipment.



Standard Features:

- 16 Gauge (.062 thk.) cold rolled steel
- White 2" lettering "BATTERY CABINET"
- Green ground screw with threaded insert
- Formed lift-a-way hinge
- Red or Black textured finish
- CAT 30 keyed door lock
- Dimensions:
 - 17" wide x 8" high x 4" deep
- Six 1/2" and 3/4" EMT conduit knockouts located on both sides, top and back
- NFPA 72 National Electric Code



The door of the MBC lifts away for worry free wiring and battery change-out.



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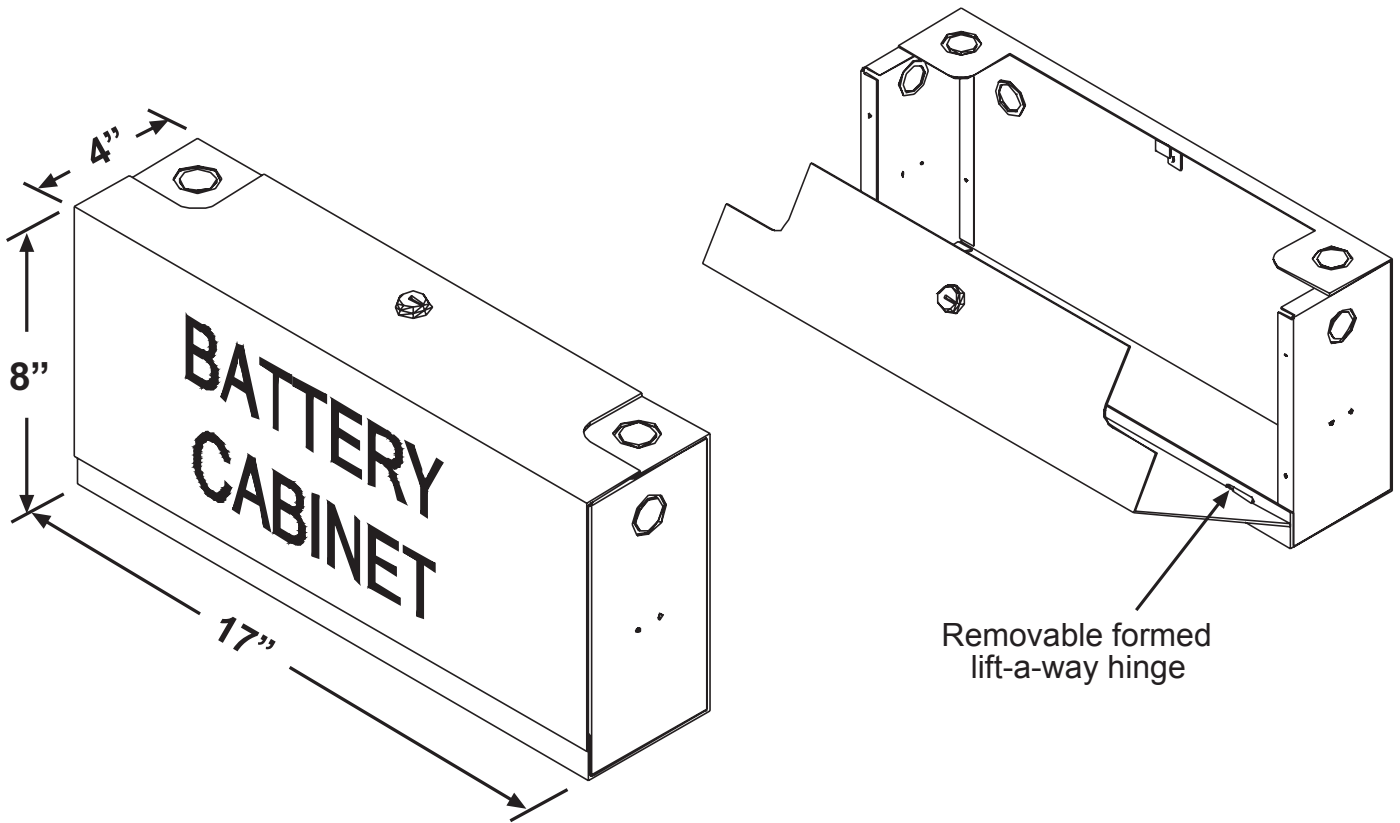


ACEBOX

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www.1sae.com
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508.485.0966 Local
508.485.4740 Fax

Specifications:

The MBC Mini Battery Cabinet is constructed of 16 gauge (.062 thk.) cold rolled steel and finished with a durable red or black textured, heat-resistant baked-on enamel finish. The front cover is engineered with a removable formed lift-a-way hinge, displays "BATTERY CABINET" in 2" white screened lettering and includes a high security CAT 30 keyed door lock. The unit comes with a green ground screw with threaded insert. Overall dimensions measure 17" wide by 8" high by 4" deep. Six 1/2" and 3/4" EMT conduit knockouts are located on both sides, top and back. The battery cabinet meets NFPA 72 National Electric Code requirements. Batteries not included.



Agency Approvals:

UOXX.S2580

UL Listed Control Unit Accessories

Ordering Information:

Part #	Description
SSU00505	MBC Mini Battery Cabinet - Red
SSU00506	MBC Mini Battery Cabinet - Black

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ED0247

LT10247

Rev.C

2/2

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BR2

Battery Rack

The BR2 Battery Rack allows for elevated, easy access and maintenance of your batteries while also assisting against unnecessary power drain, interference or degeneration of the batteries.

This rack is constructed from heavy duty 16 gauge steel with a durable black baked-on powder coat finish. Four battery rack supports adjust to multiple batteries size requirements. The rack easily assembles and can be mounted securely to the floor and to adjacent Battery Rack(s). Batteries not included.



Space for two large
60+ AH batteries



Standard Features:

- 16 Gauge (.062 thk.) cold rolled steel
- Black textured finish
- Dimensions assembled:
13" wide x 17 1/2" high x 14" deep
- Assembly hardware included
- Floor mounting holes
- Side holes for bolting to adjacent Battery Rack(s)



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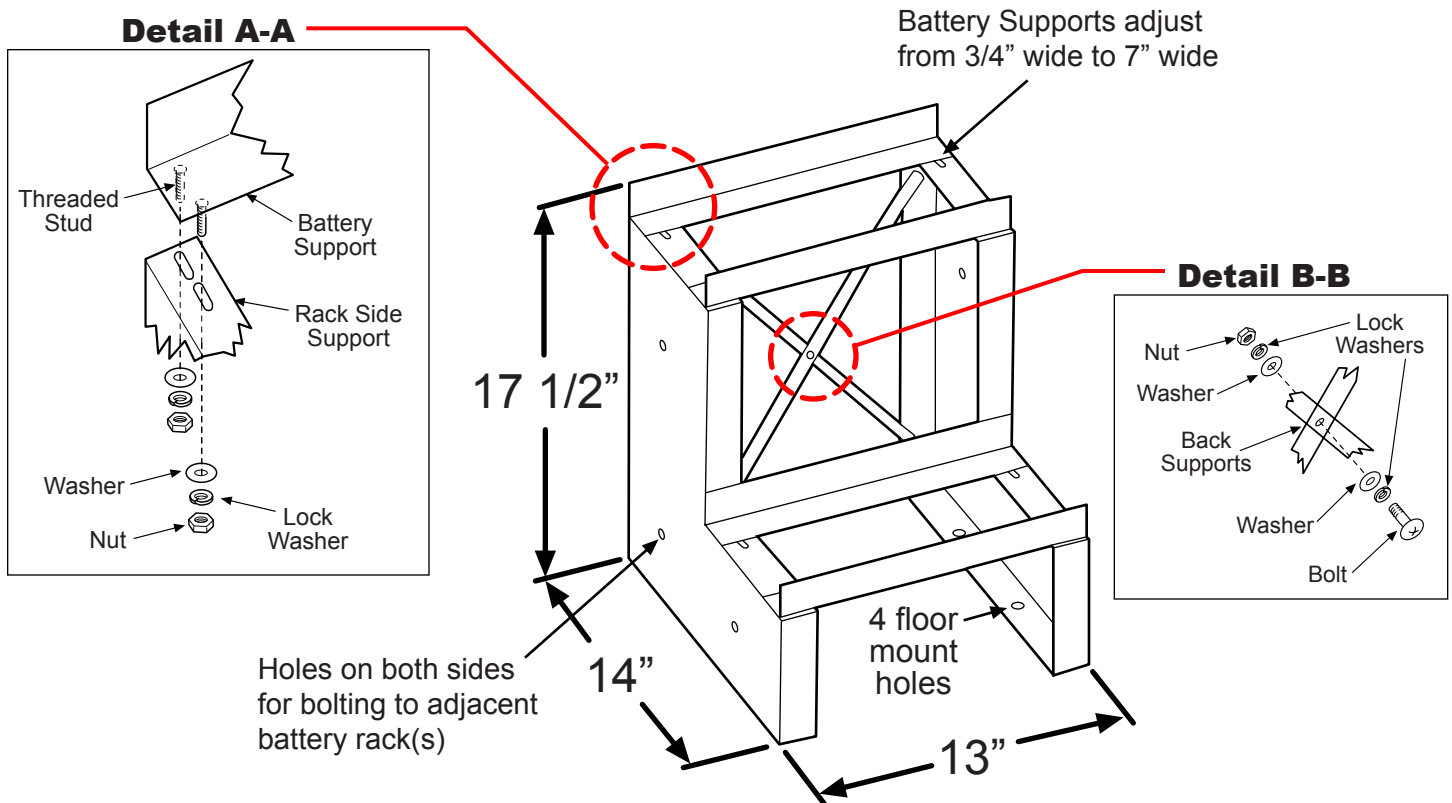
Space Age Electronics, Inc.
www.1sae.com
800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

Specifications:

The BR2 Battery Rack is constructed of 16 gauge (.062 thk.) cold rolled steel and finished with a durable black textured, heat-resistant baked-on enamel finish. Overall dimensions of the assembled battery rack measure 13" wide x 17 1/2" high x 14" deep. This two-tiered battery rack includes supports that adjust from 5 3/4" wide to 7" wide to accommodate the battery(s). Floor and adjacent Battery Rack mounting holes included. Batteries not included.

Installation Instructions:

1. Place Battery Supports (4) on top the two tiers of the Rack Side Supports.
2. Attach nuts and washers loosely, (see Detail A-A).
3. Attach the Back Supports (2) together at middle hole of the supports (see Detail B-B).
4. Attach the Back Supports to the rack assembly with the same method as Detail A-A.
5. Tighten all hardware after squaring the assembly.
6. Unit may be bolted to the floor or to an adjacent Battery Rack (hardware not supplied).



Ordering Information:

Part #	Description
SSU00200	BR2 Battery Rack, Black

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ED0256

LT10360

Rev.D

2/2

**NO
EXCUSES!**



FAD

Fire Alarm Documents

The FAD is the perfect fit to meet the demanding code requirements today. NFPA 72 10.18.2.2.1.8 states that a cabinet must be "prominently labeled 'FIRE ALARM DOCUMENTS'."

This durable 16 gauge steel enclosure with a solid piano hinge and key lock will keep all of your code required documents in one safe place. With a 2GB USB flash drive it stores your fire alarm software safely and securely eliminating the occurrences of the software not being on site when technicians arrive to service the system. Along with your fire alarm software you can store your test & inspection documents, service records, manuals & as built drawings for the system. Using a standard USB B connector it allows you to plug in with any standard USB printer cable to upload or download information.

The FAD is designed to hold critical manuals and documents with a durable steel sleeve. It has designated hooks to organize key rings and hold important business cards for easy access and reference. Inside the cover it has a organized note table that allows for documentation for passwords and other critical system information. The steel sleeve can be easily removed to hold a 1.5" three ring binder.

The innovation of a single gang cutout inside the box to implement the Infinity line products with conduit knockout access enables you to provide other system functions for test and inspection. See the complete Infinity product line from Space Age Electronics for single gang electrical product solutions.

Standard Features:

- Installed with a 2 gig digital flash drive with USB B connector
- 2 Key ring hooks to hold system keys
- Business card holder for key contacts
- Overall Dimensions are 12" x 13" tall and 2 1/4" deep
- 16 gauge steel box and cover for security
- Durable powercoat baked on finish other colors available
- Standard 3/4" cat 30 key lock other lock assemblies available
- Solid stainless steel piano hinge
- Permanently screened white ink 1" high "Fire Alarm Documents"
- Legend sheet for passwords and system information



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COMPANY**

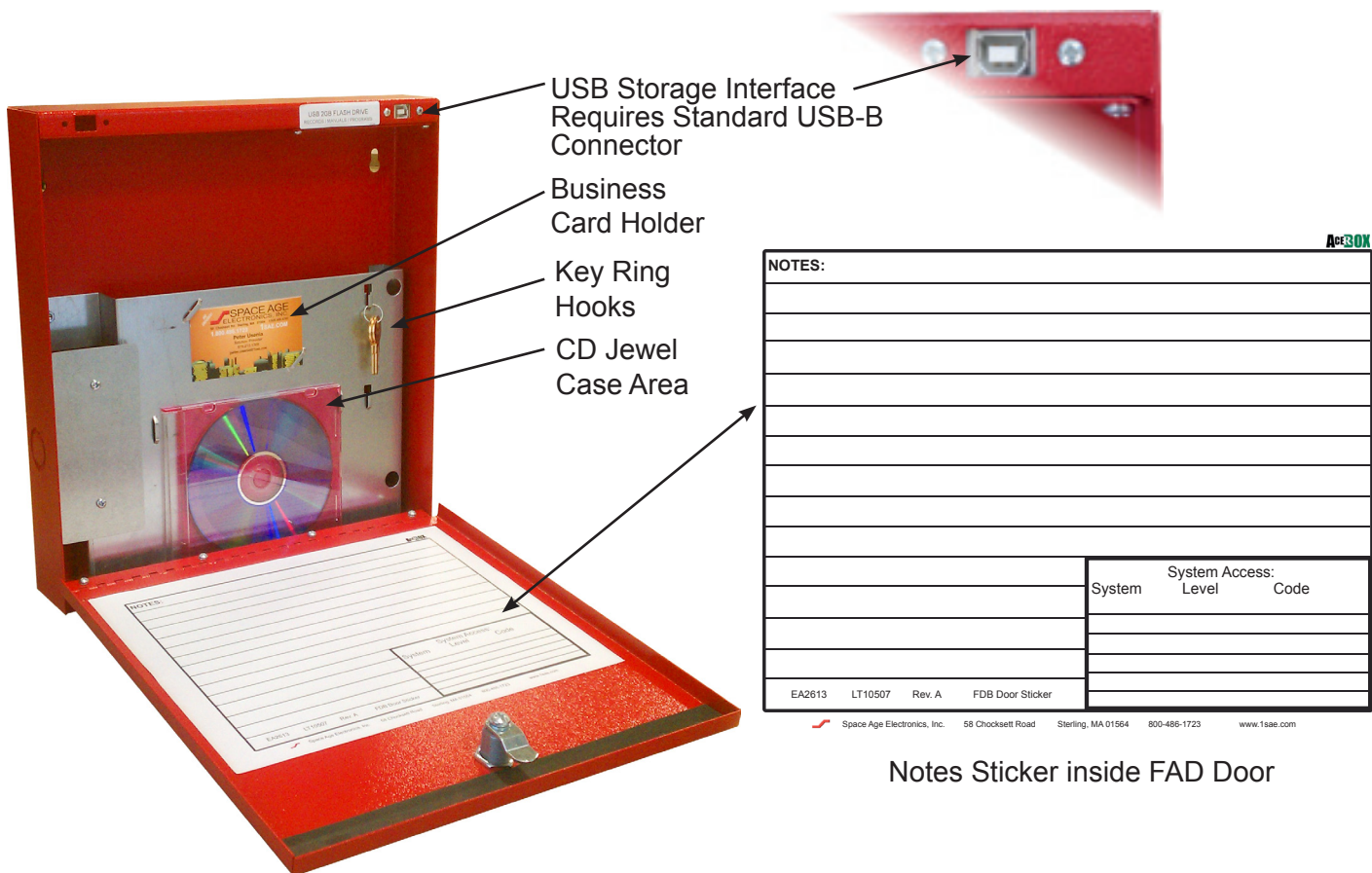


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800.486.1723 Toll Free
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Specifications:

The Fire Alarm Document Box (FAD) shall be constructed of 16 gauge cold rolled steel, it shall have a red powder coat epoxy finish. The cover shall be permanently screened with 1" high lettering "FIRE ALARM DOCUMENTS" with indelible ink. The access door shall be locked with a 3/4" barrel lock and the hinge shall be a solid width 12" stainless steel piano hinge. The FAD enclosure will supply 4 wall mounting holes inside. Inside the enclosure a removable steel sleeve that will accommodate standard 8 1/2 x 11 manuals and loose document records that will be protected within the enclosure. A legend sheet permanently attached to the door for system passwords and critical information and inspection notes. The FAD will have permanently and securely mounted inside a minimum of 2GB's digital flash memory drive with a standard USB B connector for uploading and downloading information. The drive shall not be accessible without tools to any person whom gains access to the records. The enclosure shall also provide 2 key ring holders with a location to mount standard business type cards for key contact personell.



Ordering Information:

Part # Description

SSU00685 Fire Alarm Storage Cabinet RED

SSU00686 Custom screening with your Logo

Check out our Infinity line eFAD single gang 2 Gig digital storage solutions (IAMEFAD)

Ac30X

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FDB

Fire Document Box

The FDB is the perfect fit to meet the demanding code requirements today. NFPA 72 10.18.2.1.2.8 states that a cabinet must be "prominently labeled 'FIRE ALARM DOCUMENTS'."

An internal galvanized sleeve holds the documents safely and securely. The sleeve is easily removable to allow storage of a 1.5" 3 ring binder or other media. The galvanized sleeve also contains 2 hooks for key rings or thumb drives, a place for several business cards, a cutout for a 1.4 Oz. can of test gas and a slot where a standard CD "jewel" case can be stored. Access to the documents is via a high security lock with a 3/4" barrel.

Standard Features:

- Overall Dimensions are:
12" Wide x 13.1" High x 2.25" Deep
- 3/4" barrel lock to secure door
- Piano Hinged Door w/Notes Sticker
- Removable document holder can hold 1" of 8.5" x 11" paperwork
- Powder Coat Red Finish
- 16 Gauge CRS construction
- Embossed:
 - Key Ring Hooks
 - Business Card Holder
 - CD Case Slot
- 1.4 Oz. can of detector smoke
- Custom screening with your logo

Key Ring
Hooks

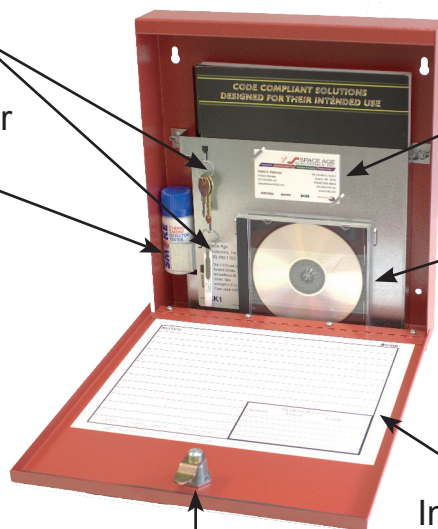
Detector
Smoke

Business
Card Holder

CD Jewel
Case

Installation &
Inspection Notes

Lock w/ 3/4" barrel



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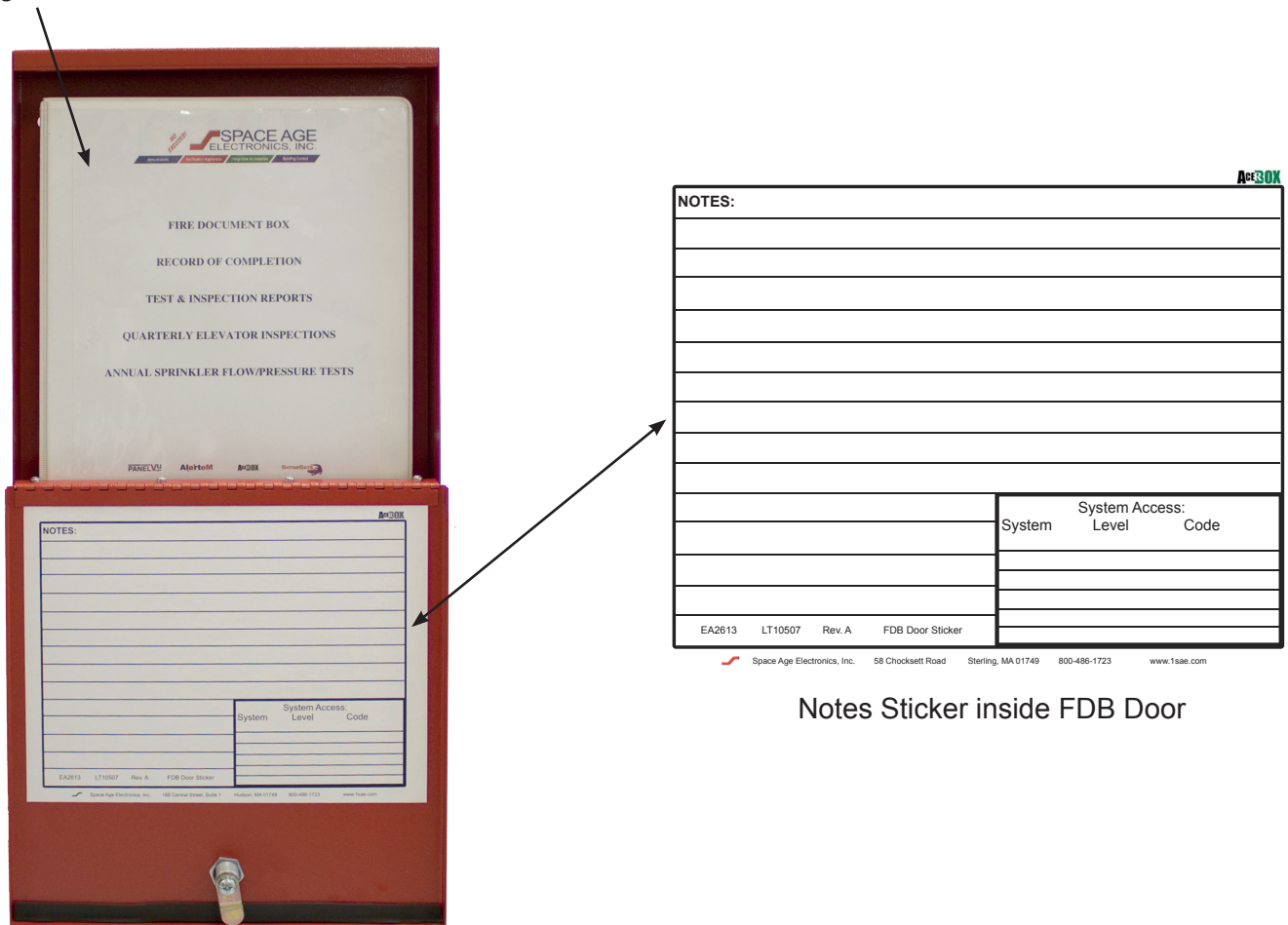
ACEBOX

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800.486.1723 Toll Free
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508.485.4740 Fax

Specifications:

The Fire Document Box (FDB) shall be constructed of 16 gauge cold rolled steel (CRS); it shall be painted with a durable red powder coat paint. The front door shall be lettered with the words "FIRE ALARM DOCUMENTS" in White indelible letters 1" in height. The door of the FDB shall be locked with a keyed lock, 3/4" barrel. The cabinet shall contain a 16 gauge galvanized CRS sleeve. This sleeve shall allow for the storage of 1" of paper, test and inspection records, manuals and other important documents. The sleeve shall also facilitate the hanging of key rings and thumb drives (for data storage) along with business cards and space for a CD "jewel" case. The unit shall also contain a 1.4oz can of smoke detector test gas. Adheared inside the door shall be a "Notes" label for the recording of valuable information such as AHJ approvals, various system codes and the location of hard to find devices.

If so desired, the internal sleeve (held in by 2 wing nuts) may be removed and the space used to insert a 1.5" 3 ring binder.



Notes Sticker inside FDB Door

Ordering Information:

Part #	Description
SSU00672	FDB Fire Document Box
SSU00673	FDB Custom Logo/lock
	(ask for Form FD10498 to order custom box)
CK1	Replacement 1.4 Oz Test Gas

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ED0447

LT10505

Rev.A

2/2

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DSB

Drawing Storage Box

The DSB (Drawing Storage Box) is an ideal solution to safely secure your critical building emergency plans such as evacuation and building layout drawings. In the event of an emergency, you are assured that responders will have immediate access to the proper drawings and information required. A critical and responsible component to any EOP (Emergency Operation Plan).

The DSB (Drawing Storage Box) is engineered using 18 gauge cold rolled steel and coated with a durable RED epoxy powder coat finish. A full length stainless steel hinge provides a long lasting durable construction. One inch tall lettering silk-screened with permanent white indelible ink on 2 sides provides a full 180 degrees of viewing for immediate identification to emergency responders.

The DSB (Drawing Storage Box) securely holds up to a 4" diameter 36" tall Architectural roll of drawings. With an industry standard key lock, the cabinet provides secure storage from improper access or removal of critical documentation. An additional retainer inside the box holds drawings securely upon opening the door. This cabinet also allows space to store other critical disks, USB drives, keys and contact information for the system.



← Business card slots

← Velcro strap

← Tab for hanging keys or USB drives

Standard Features:

- **Dimensions: 37" tall x 5 ½ x 4 ¼ deep**
- **Durable steel 18 gauge construction**
- **Continuous stainless steel hinge**
- **Color red, powder coat texture finish**
- **1" white indelible lettering**
- **Standard key lock to secure documents**
- **Hold a 4" dia 36" long roll of drawings**
- **Storage locations for digital media, keys and contacts**



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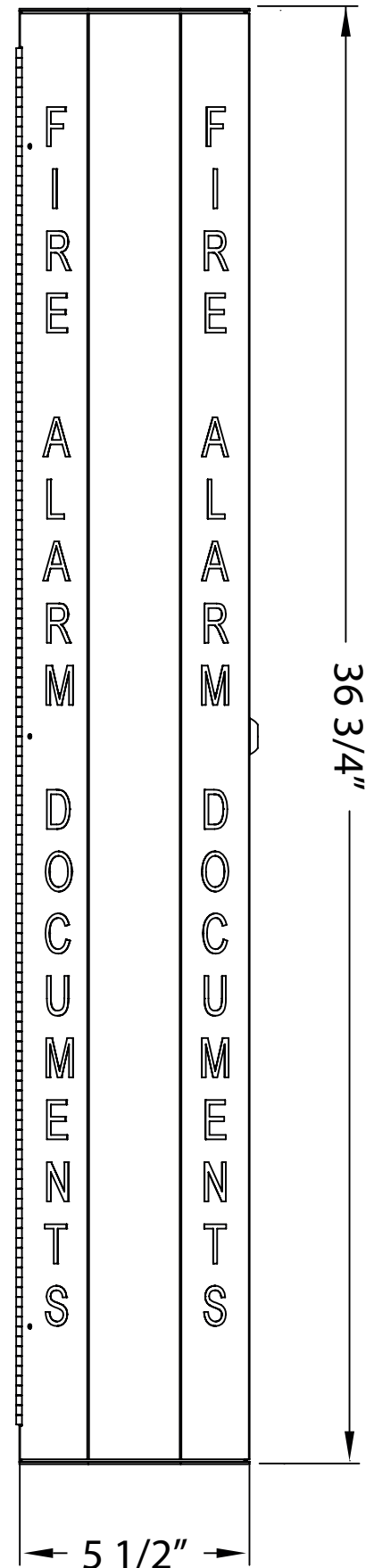
Space Age Electronics, Inc.
www.1sae.com
800.486.1723 voice
508.485.0966 direct
508.485.4740 fax

Specifications:

The Drawing Storage Box (DSB) shall be constructed of 18 gauge cold rolled steel (CRS), it shall be painted with a durable red powder coat paint. Over all dimensions 37" tall 5 1/2" wide and 4 1/4" deep. The access door shall be lettered on 2 angled sides of the cabinet providing 180 degrees of viewing. "FIRE ALARM DOCUMENTS" in White indelible letters minimum of 1" in height. The door shall have a stainless steel continuous piano hinge. The door of the DSB shall be locked with a keyed lock 3/4" barrel. Inside the cabinet shall have a strap to secure drawing in cabinet that is adjustable for size of rolled drawings. Location to hold keys and secure emergency contact information safely inside cabinet for easy access.

Ordering Information:

Part #	Description
SSU00625	Drawing Storage Box (DSB)


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**NO
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As Built Drawings Cabinet

The DBX "AS BUILT DRAWINGS" Cabinet offers the convenience of having building layouts and alarm documents readily accessible for fire departments and other authorized personnel.

This surface mount cabinet is fabricated from 16 gauge steel with a durable, baked on, red textured powder coat finish, white 1" high lettering and features a stainless steel piano hinge and a high security CAT 30 keyed door lock.



Standard Features:

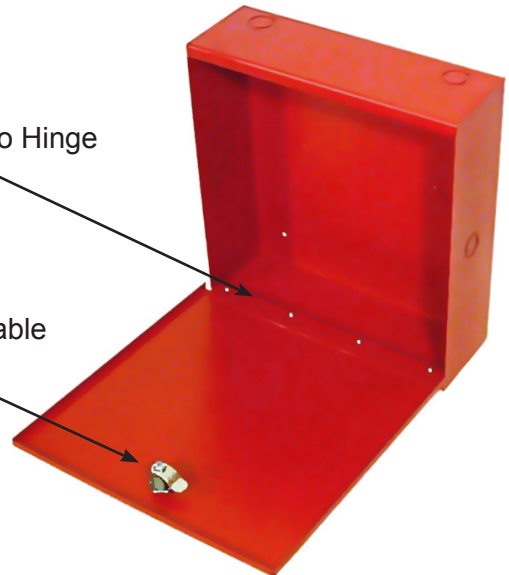
- 16 gauge steel construction
- Durable red textured finish
- White 1" indelible lettering "AS BUILT DRAWINGS"
- Stainless steel piano hinge with CAT 30 keyed door lock
- Surface mount box
- Wall mounting holes

Options:

- Custom finish
- Custom legend
- Custom lock
- Flush Flange

Stainless Steel Piano Hinge

Custom Locks Available



Available in Sizes
AA, A & D



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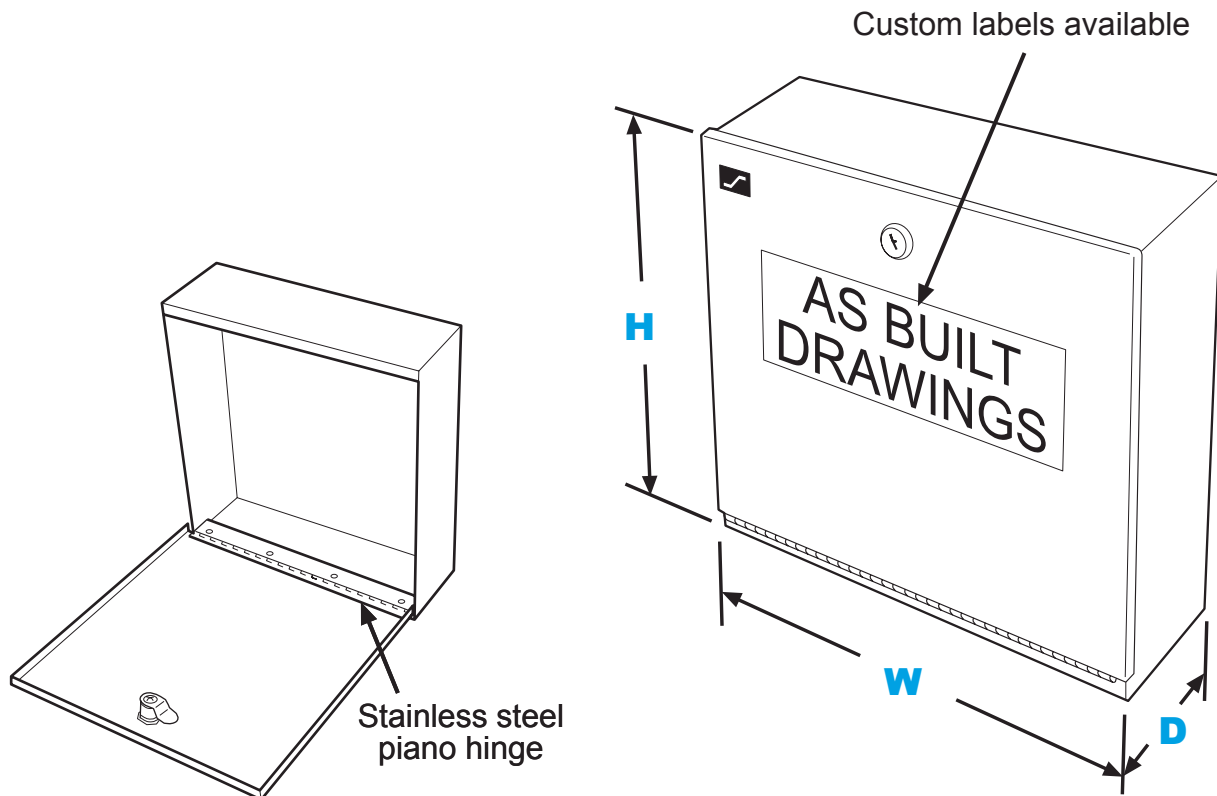
ACEBOX

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www.1sae.com
800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

Specifications:

The DBX As Built Drawings Cabinet is constructed of 16 gauge (.062 thk.) cold rolled steel and finished with a durable red textured, heat-resistant baked-on enamel finish. The front cover includes a durable label displaying "AS BUILT DRAWINGS" in 1" white indelible lettering, applied to the cover relative to the orientation of the installed back box. The front cover features a high security CAT 30 keyed door lock. Custom finish, legend and lock available. Back box universal surface mount design and wall mounting holes.

Size	Dimensions of Cabinet		
	W	H	D
AA	12 1/4"	14 1/4"	4"
A	26 1/4"	14 1/4"	4"
D	26 1/4"	23 5/8"	4"



Ordering Information:

Part #	Description
SSU00674	DBXAA As Built Drawings Cabinet, Red
SSU00677	DBXA As Built Drawings Cabinet, Red
SSU00678	DBXD As Built Drawings Cabinet, Red
SSU00680	DBXA Semi Flush Flange, Red
SSU00681	DBXD Semi Flush Flange, Red

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ED0132

LT10045

Rev.F

2/2

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Pull Station Back Box

The Pull Station Back Box (PSB) is a two (2) piece unit that allows the installer to mount a standard Fire Alarm Manual Pull Station to a typical Aluminum or Steel framed glass wall.

The two piece unit is manufactured of tough 16 gauge CRS and is painted Red, White, Black or Bronze and has a "FIRE" sticker that once applied can be seen through the glass alerting passers-by of the presence of this Life Safety device.

The back unit has a standard "device mount" hole spacing and an oversized wiring pull through hole; while the front cover has an industry standard 'Single Gang' mounting configuration to facilitate most Manual Stations' mounting requirements.

The PSB can be used for non-fire applications as well. Any device that maintains the standard single gang footprint will fit on the front cover of this versatile enclosure. Devices like Card Readers, Motion Detectors, CO Detectors, Flashing Lights or Strobes.

Standard Features:

- Convenient two piece construction
- Red, White, Black and Bronze color
- "FIRE" Sticker supplied for each unit
- 16 Gauge CRS construction made in the USA
- Oversized design for ample wiring space and Addressable Point Module mounting



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Specifications:

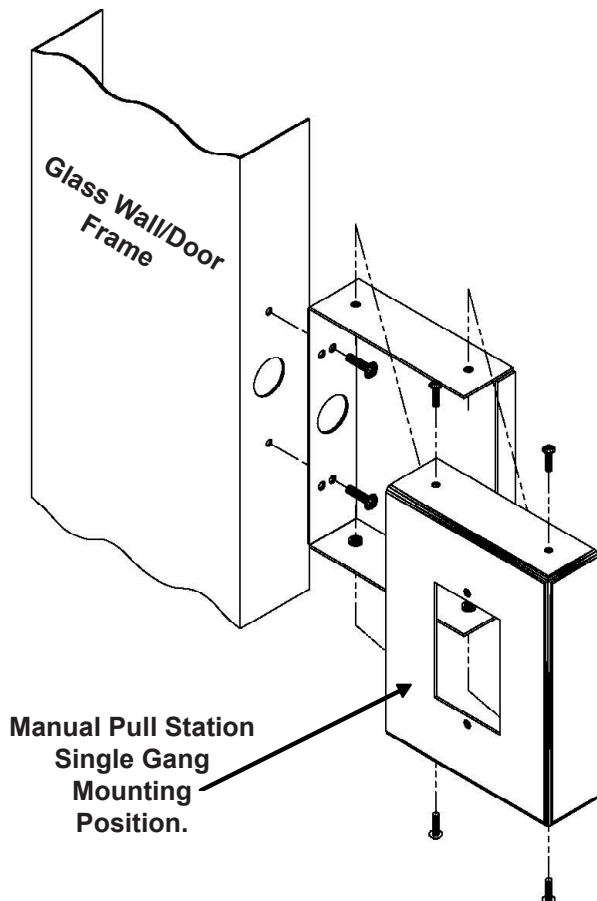
The Space Age Electronics' PSB is a 6 " High x 4.5" Wide x 1.5" Deep, 2 piece assembly that allows for the proper installation of a Manual Pull Station, or other such device that maintains a "Single Gang" mounting footprint, to the side of a steel or aluminum channel framed glass wall.

The PSB has a .835" hole to route wiring through and two double mounting holes used to secure the back box to the frame. The spacing of the two mounting holes that secure the PSB back box to the wall framework is 3.87" or the standard single gang device mount spacing. Double mounting holes keep the space between the PSB and the glass to a minimum.

The mounting for the Manual Pull Station is standard single gang device mount spacing.

The back box comes in Red, White, Black and Bronze colors and is supplied with 4 6x32 screws for securing the front cover to the back of the unit (4 threaded holes, 2 on the top edge and 2 along the bottom). The Manual Station (or other device) is secured by two 6x32 screws into threaded inserts on the front cover.

The PSB is made of 16 gauge CRS and Powder Coated for durability at Space Age Electronics, Inc.



Installation:

- If required, affix FIRE Sticker to back of the back unit.
- Attach back unit to frame by holding against the glass and choosing the correct set of double mounting holes to secure the unit to the frame.
- Pull wire through oversized wire entry hole.
- Mount Manual Station to the front of the cover unit .
- Connect wiring to Manual Station and slide cover unit over back unit and secure with 4 supplied screws
- Test per applicable codes

Ordering Information:

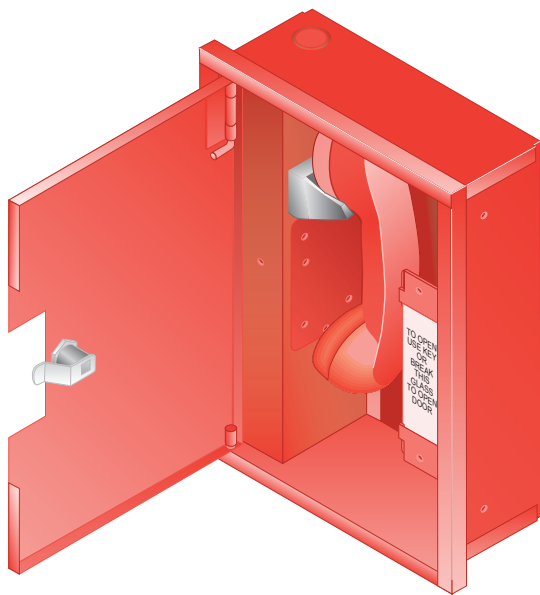
Part #	Description
SSU03171	Red PSB
SSU03172	White PSB
SSU03173	Black PSB*
SSU03174	Bronze PSB*

* = Special Order, non-stocking part.

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**NO
EXCUSES!**



Emergency Telephone Cabinet

The ETC Emergency Telephone "Warden Station" provides two-way emergency telephone communication between firefighters and other authorized personnel in a high-rise application.

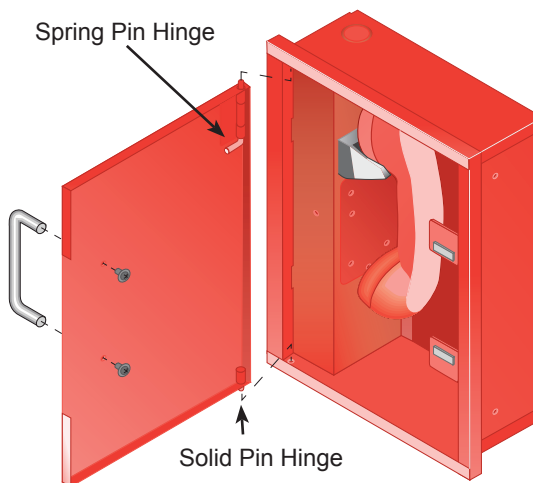
Universally compatible, standard telephone components make this unit easily integrated with systems that have addressable (Digital) or zoned (Analog) telephone circuits in a single flexible product package.

An LED, indicating that the handset has been lifted from the cradle and the telephone is ready for use is standard on the ETC.

The ETC has a red epoxy finish with enhanced graphics in white indelible ink permanently marked for identification. Optional surface or flush mounting with no visible hardware.

Standard Features:

- Durable red finish & 16 gauge steel construction
- Surface or flush back box
- Slide pin for removing and installing the door without tools
- Clinch type terminals for field wiring
- Key lock, Magnetic Catch or Break Glass access
- NYC Approved Warden Station magnet latch door with handle (see Right)
- Overall dimension 10"x 13.75" x 4" deep (meets ADA)
- "Connect" LED indicates connection to common talk circuit.



Each cabinet can be custom assembled as required using standard options.

For example:

Coiled Cord
Armored Cable

Break Glass Door
Magnetic Catch Door
Key Locked Door

Surface Back Box
Flush Back Box

This NYC Approved configuration shows pull handle hardware which magnetically latches closed.



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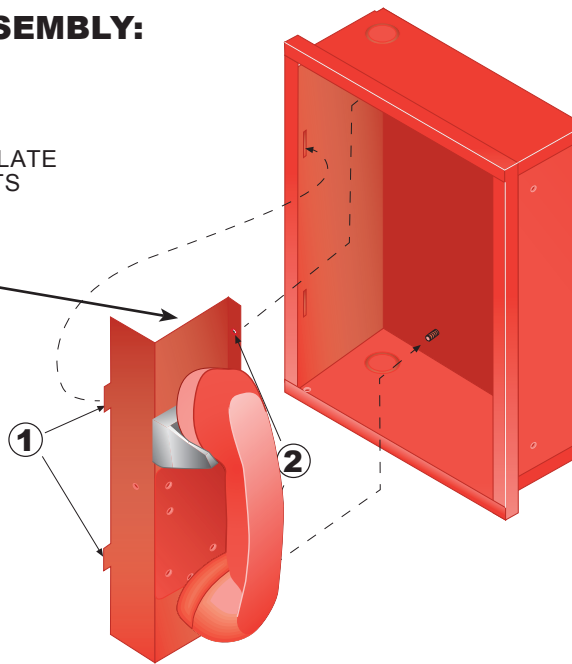
Specifications:

The ETC Emergency Telephone Cabinet is manufactured from 16 gauge steel and has a durable epoxy red finish. Cover shall have 1" high lettering for easy identification with permanent white indelible ink. The phone cradle switch is required to be a sealed micro switch based mechanism with contacts for internal functionality and a Form A contact for customer use (see Wiring). The phone cabinet shall have a removable door with finger slide pins for improved service and functionality. The hand set shall be red with option of a coiled cord or armored cable. Field connections shall be required to be terminated to a raised clamp terminal clearly marked for its purpose. Overall dimensions are 10" x 13.75" x 4" deep and meets the ADA depth for surface mount protrusion. The Emergency Telephone Cabinet shall be UL listed device and shall be model ETC by Space Age Electronics, Inc. The DC resistance of the ETC's Transducer shall not exceed 150 Ohms of Impedance and the ETC's Microphone has 100 Ohms of Impedance.

INSERT PLATE ASSEMBLY:

- ① INSERT PLATE ASSEMBLY TABS
- ② SECURE INSERT PLATE WITH 6-32 HEX NUTS

A Space Age Mini Module Bracket (MMB SSU00459) can be mounted to two studs on the reverse side of the ETC Phone Cradle assembly. This allows for the monitoring of the micro switch contacts by a Honeywell addressable Mini Module.



Installation and wiring should be performed by qualified personnel only. Equipment damage and/or malfunction may result from improper installation. Remove all power from the system until the installation is complete and ready for testing. All work of any kind shall be performed to meet the requirements of any and all local, state and federal codes and/or standards set by the authority having jurisdiction.

Digital Telephone Communications:

Analog phone signals are based on voltage and current, "old school", the phone works because we send a modulated signal over a pair of wires and it eventually causes a membrane to vibrate mimicking the sound of the transmitter at the receiver.

Digital phone Signals are created when the pulsed or modulated analog signal is received by a electrical circuit and is translated into a Digital signal, not voltage and current, but pulses and is heard at the receiving phone. Since there is no voltage drop or "noise" that can be induced into the digital signal, the signal can travel longer faster and clearer than the old long distance analog signals.



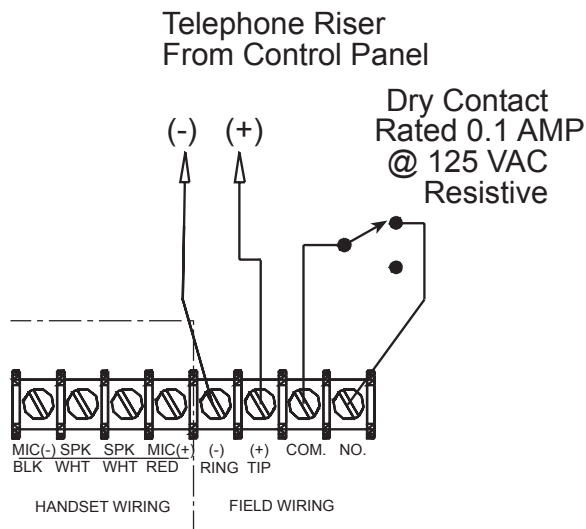
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Electrical Specifications:

ETC Transducer	150 Ohms impedance
ETC Microphone	100 Ohms Impedance
Micro Switch	.01Amp @ 24VAC Resistive

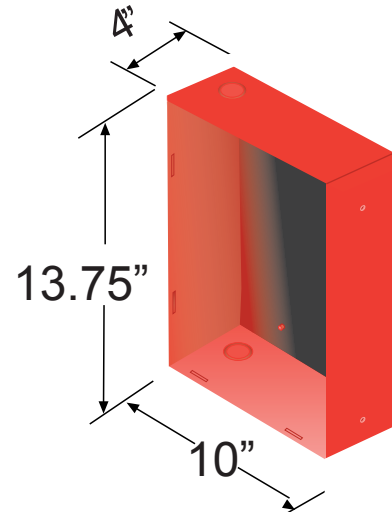
Wiring:

Telephone Riser from Control Panel

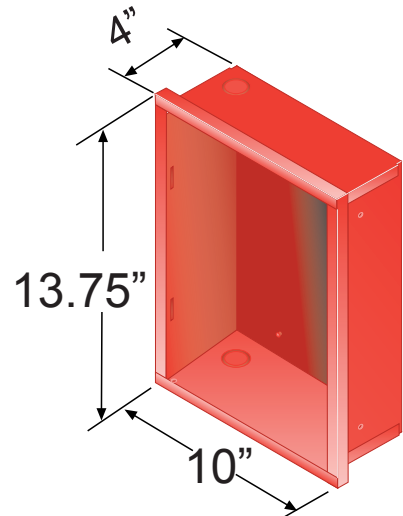


TYPICAL CONNECTIONS
TO TERMINAL STRIP

Back Box Overall Dimensions:



Surface Mount Box
Foot print on wall measures
10"W x 13.75"H x 4"D



Flush Mount Box
Foot print on wall measures
9.25"W x 12.85"H x 3.38"D

Ordering Information:

Part #	Description
SSU00535	ETC Cabinet Cover Assembly (See Back Page)
SSU00531	ETC 1" Extension Flange - Red
SSU00530	Flush Box - Red
SSU00532	Surface Box - Red
SSU00533	Replacement Break Glass Assembly
SSU00459	Mini Module Bracket

ETC Emergency Cabinet Listings:

UOXX.S2580 UL Listed Control Unit Accessories

MEA Number 108-01-E

Follow these steps for Space Age Electronics to generate a preliminary quote for your ETC Emergency Telephone quote or try our free on-line Product Quote Pages at www.1SAE.com

1 QUANTITY (total number of Emergency Telephone Cabinets needed)

Determine the quantity of Emergency Telephone Cabinet(s) that are needed for your facility(s). This assumes all ETCs needed will be of the same configuration (see Step 2 for available options). If you are in need of different ETC configurations, please submit separate quotes for an accurate determination of your product needs.

2 CONFIGURATION

Determine the configuration details for your ETC Emergency Telephone Cabinet that is needed

Back Box

Check selections:

- ☐ ETC back box Flush RED back box
- ☐ ETC backbox Surface RED back box
- ☐ ETC 1" extension flange retro/cover ring (Flush box only)
- ☐ ETC replacement glass kit

Code **A** ETC phone handset option. Check only one:

- ☐ AX ETC Armored cord/Std handset Red
- ☐ AP ETC Armored cord/ Push to Talk Red handset
- ☐ AV ETC Armored cord/ Volume control Red handset
- ☐ CX ETC Coil cord/Std handset Red
- ☐ CP ETC Coil cord/ Push to Talk Red handset
- ☐ CV ETC Coil cord/ Volume control Red handset
- ☐ AB ETC Aromred cord w/PTT Phone
- ☐ CB ETC Coil cord w/PTT phone

Code **B** ETC cover/image option. Check only one:

- ☐ FW Fire Warden Cover Magnet Latch w/Handle
- ☐ BG ETC Break Glass & Emergency Screening
- ☐ BX ETC Break Glass & No Screening
- ☐ BF ETC Break Glass & Fire Fighters Screening
- ☐ SL ETC Solid Door W/Lock & Emergency Screening
- ☐ SX ETC Solid Door w/Lock & No Screening
- ☐ MD ETC Solid Door, Magnet Latch & Emerg. Screening
- ☐ MX ETC Solid Door, Magnet Latch & No Screening

Code **C** ETC Key lock Assembly. Check only one:

- ☐ C CAT 30 (Simplex B Key)
- ☐ P PK 625 (FCI Key)
- ☐ T T 45 (Siemens)
- ☐ Z Custom Lock and Key

Code **D** ETC Break Glass Message. Check only one:

- ☐ S Standard Image Instructions
- ☐ Z Custom Message and Instructions
- ☐ X No Glass Installed

Emergency Phone Cabinet Order Code:

ETC - - - -
A B C D

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A, B, C & D in the code corresponds to the steps in the four boxes above. Fill in the Alpha Codes next to your check marks to create the part number for your custom application.

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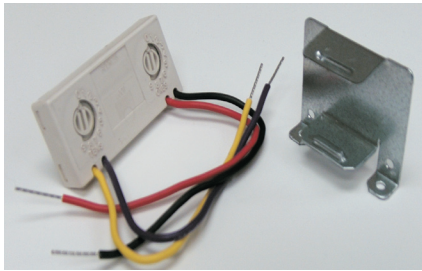
ED0100

LT10358

Rev.B

4/4

**NO
EXCUSES!**



Mini Module Bracket

The MMB is a bracket engineered to “Hard Mount” the smaller Honeywell “Mini Module” Addressable Monitoring Modules. This Bracket can hold both Clip and Flash Scan protocol units.

Each bracket holds one Mini Mod and can be mounted in one of several positions due to the multiple hole configurations on the bracket.

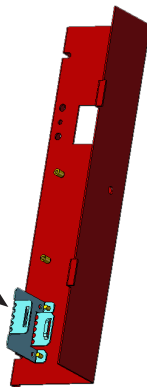
Made of sturdy 18 gauge galvanized cold rolled steel the brackets measure 1.75” H x 2.75” W x 1” D.

This bracket makes easy and clean work of mounting these units into systems (for example those systems that need the Mini Mods for Class A operation or for simple monitoring of auxiliary systems such as Security, Agent Release panels Positive Feedback from Fans/Dampers, etc...)

The MMB is ideally suited for use in the Space Age IF, TC and ACE Series Cabinets, as well as the FB4 Fire Box unit.

The ETC Emergency Telephone Cabinet phone bracket has studs added to accommodate the installation of an MMB. The associated Mini Module is used for supervising the condition of the phone cradle and to initiate connection to the Fire Fighter’s Phone.

MMB Bracket mounts to the reverse side of the ETC Phone Cradle assembly.



Standard Features:

- Mounts behind Manual Stations, Heat Detectors, Etc...
- Secures one (1) Honeywell “mini-module” addressable device
- Spring loaded slide-in design
- 18 gauge steel construction
- Durable galvanized finish

Ordering Information:

Part #	Description
SSU00459	Mini Module Bracket



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Firefighter Phone Cabinet

The FPC Firefighter Phone Cabinet offers convenient storage of Portable Handsets (SSU00550 & 551). The FPC are available in two sizes, "A" or 5 phone and "D" or 10 phone.

When mounted alongside an "As Built" Drawing Cabinet (SSU00677) the firefighter can locate a phone and the "as built" drawings all in one location.

This surface mount cabinet is fabricated from 16 gauge steel with a durable, baked on, red textured powder coat finish, white 1" lettering and features a stainless steel piano hinge and a high security CAT 30 keyed door lock.

Standard Features:

- 16 gauge steel construction
- Durable red textured finish
- White 1" indelible lettering "EMERGENCY TELEPHONE HANDSETS"
- Stainless steel piano hinge with CAT 30 keyed door lock
- Surface mount box
- Wall mounting holes



Ordering information:

Part#	Description
SSU00566	FPCA Firefighter Phone Cabinet
SSU00567	FPCD Firefighter Phone Cabinet

Cabinet Specs:

Cabinet	Width	Height	Depth
FPCA:	3 1/2"	13 1/8"	4"
FPCD:	23 1/2"	23 5/8"	4"

Agency Approvals:

UOXX.S2580 UL Listed Control Unit Accessories



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ED0335

LT10370

Rev.A

1/1

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Portable Firefighter Handset

The PHR Portable Handset with 1/4" plug is designed to be used with the FPJ and SST Firefighter's Phone Jacks. The PHR allows the firefighter to move from one location to another and still keep in contact with the Command Center.

The PHR is light and easy to carry from one location to another. The handset is made from high impact plastic. The PHR is small enough to be put in a coat pocket when on the go. Simply grab a phone from the handset cabinet (SSU00566/567 sold separately) and you are ready to plug into the building's Audio Evacuation System.

Standard Features:

- High impact red plastic handset
- 12" Red coil cord expands to 6'
- 1/4" (6.3mm) Male plug; Color: Red
- Tip and Ring connection with no built-in filtering



Ordering Information:

Part #	Description
SSU00551	Red Firefighter Handset



Integration Accessories

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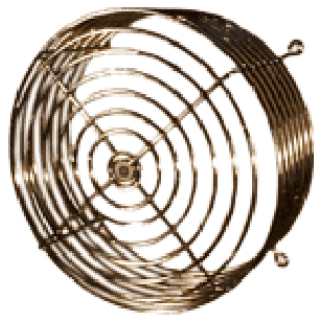


Smoke Detector
Guard



Heat Detector
Guard

Smoke Detector
Guard



SAE Device Guards

Our Device Guards are designed to protect audio visuals, heat detectors, smoke detectors and a variety of other devices. Manufactured of welded steel wire construction, these durable designs are engineered to protect the vital components of building systems without interfering with the device's operation.

The SDG's universal design provides maximum strength, air flow and visibility. Select from our variety of device guards and add a custom finish to compliment interiors, and to avoid vandalism, add optional custom tamper resistant hardware. Custom hardware and finishes sold separately.

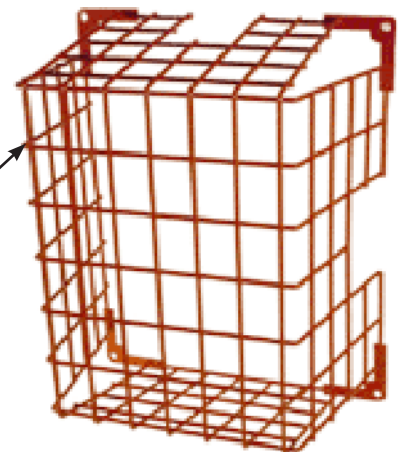
Standard Features:

- Heavy gauge welded steel wire construction
- Durable finishes
- Installation hardware included

Options:

- Tamper resistant hardware
- Custom finish

Welded Steel Wire



Rectangular Signal
Guard



**ISO 9001
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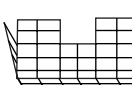
ACEBOX

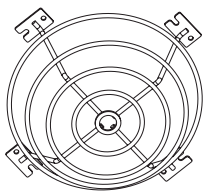
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Specifications:

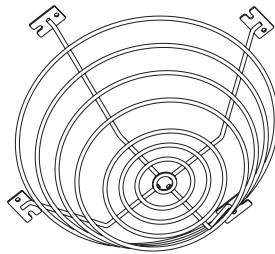
The SDG, SAE Device Guards, are constructed of heavy gauge welded steel wire and come standard in a white, red or chrome finish. Optional custom finishes and tamper resistant hardware are available upon request. Mounting hardware included.

Usable Interior Space

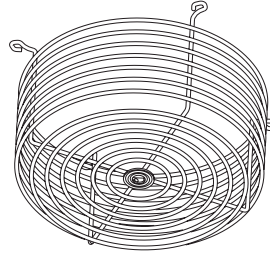
<p>Heat Detector Guard - SSU03501</p>  <p>16 gauge wire -white</p>	<p>Smoke Detector Guard - SSU03500</p>  <p>16 gauge wire -white</p>
<p>Smoke Detector Guard - SSU03515</p>  <p>11 gauge wire -chrome</p>	<p>Rectangular Signal Guard - SSU03505</p>  <p>16 gauge wire -red</p>



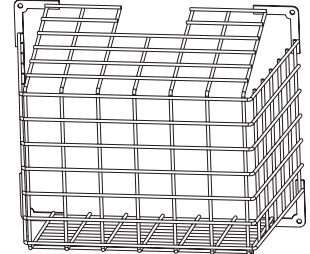
Heat Detector Guard
SSU03501
 White



Smoke Detector Guard
SSU03500
 White



Smoke Detector Guard
SSU03515
 Chrome



Rectangular Signal Guard
SSU03505
 Red

Ordering Information:

Part #

Description

SSU03501

Small Round Heat Detector Guard, White

SSU03500

Large Round Smoke Detector Guard, White

SSU03515

Large Round Smoke Detector Guard, Chrome

SSU03505

Rectangular Signal Guard, Red

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LT10109

Rev.D

2/2

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H/PSG



Horn Strobe/Pull Station Guard

The HSG Horn Strobe Guard is specifically designed to mount over audible, visual or combination appliances (i.e. horn/strobe), while the PSG Pull Station Guard is specifically designed to mount over fire alarm pull stations. Both wire guards are designed to assist in preventing false events (Alarms and/or Troubles) caused by inadvertent blows to the device.

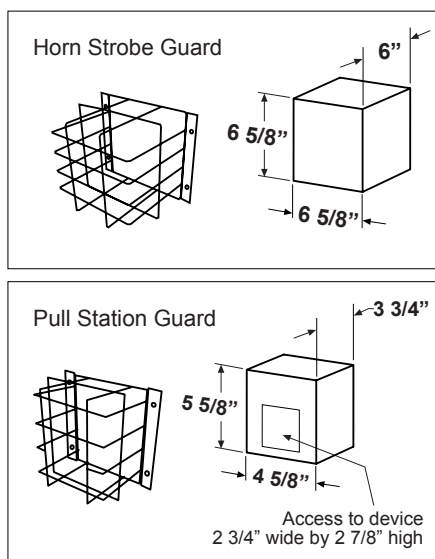
In addition, these guards deter vandalism in exposed areas such as prisons, housing projects, universities, hotels and other public locations.

The HSG's design provides maximum strength, air flow and visibility and mounts easily for new installation or retrofit. The PSG is constructed of heavy gauge tempered steel rod and designed for utilization of the device without operational interference. Both are constructed of heavy gauge tempered steel rod and designed to minimize interference with the operation of the device.

Standard Features:

- Heavy 7 gauge welded steel wire cage construction
- High aesthetic nickel chrome finish
- Hardware included

Useable Interior
Space



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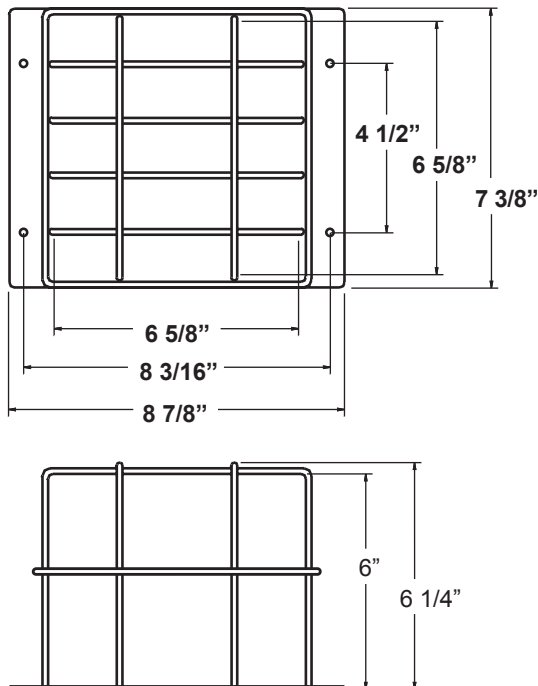
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Specifications:

The Space Age Electronics, Inc. Horn Strobe Guard (HSG) and Pull Station Guard (PSG) shall be manufactured of hardened steel rod measuring 7 gauge. All joints shall be welded for superior durability. These guards shall be designed to not interfere with the proper operation of the devices nor shall they sufficiently block the device as to render it's purpose unrecognizable. These Guards shall be nickel chrome finished.

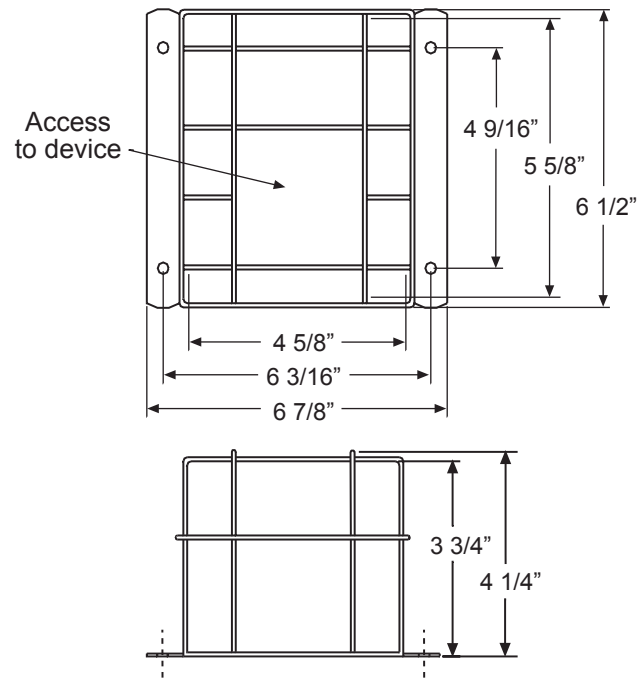
HSG

Dimensions:



PSG

Dimensions:



Ordering Information:

Part #	Description
SSU03503	HSG Horn Strobe Guard
SSU03502	PSG Pull Station Guard

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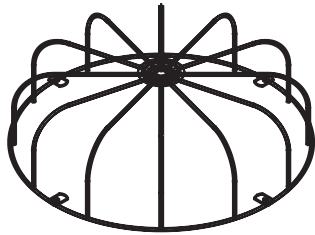
ED0082

LT10172

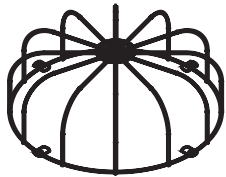
Rev.F

2/2

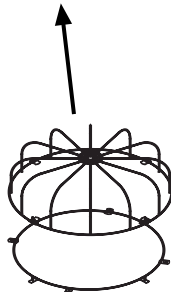
**NO
EXCUSES!**



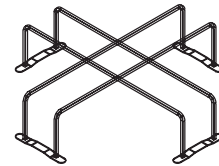
20" Dia. x 5 5/8" Deep
Round Wire Clock Guard



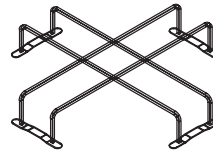
17" Dia. x 5 5/8" Deep
Round Wire Clock Guard



Two Piece
Design for
easy access



19 1/4" Dia. x 5 1/2" Deep
4 Bar Clock Guard



19 1/4" Dia. x 3 1/2" Deep
4 Bar Clock Guard

Standard Features:

Round Wire Clock Guard:

- Heavy gauge 1/4" steel wire construction
- Two piece design for easy access to devices
- Mounting ring attaches securely to the wall or ceiling
- 4 Wing nuts hold the guard to the mounting ring
- Finish: Chrome nickel plate
- Universal design to meet most applications

Standard Features:

4 Bar Clock Guard:

- Single piece heavy 1/4" welded bar construction
- Provides maximum strength and visibility
- Mounts securely to the wall or ceiling
- Finish: Chrome nickel plate
- Universal design to meet most applications
- All intersections welded for a solid durable design



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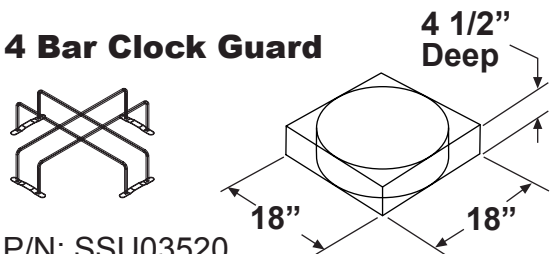
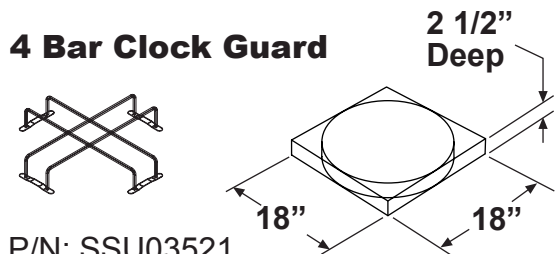
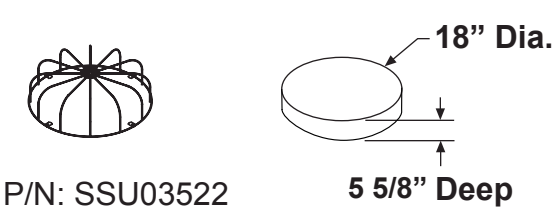
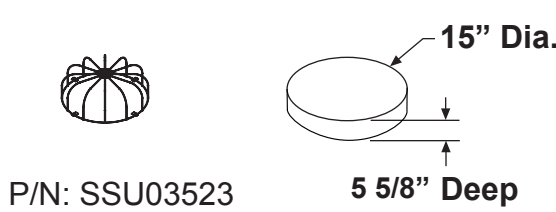
ACEBOX

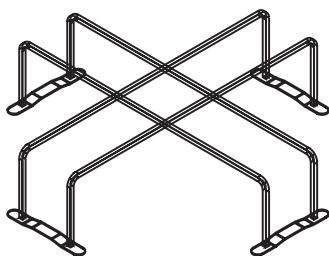
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Specifications:

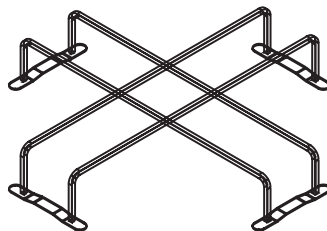
The TDG Time Device Guards are constructed of heavy 1/4" welded steel wire with a chrome nickel plate finish. All intersections welded for a solid durable design. Mounting hardware included.

Usable Interior Space

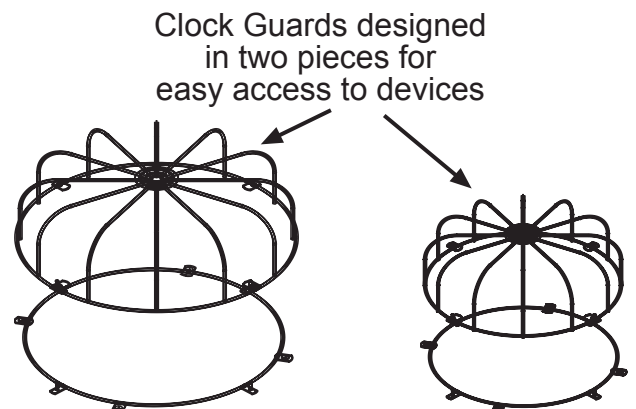
4 Bar Clock Guard  P/N: SSU03520	4 Bar Clock Guard  P/N: SSU03521
Round Wire Clock Guard  P/N: SSU03522	Round Wire Clock Guard  P/N: SSU03523



19 1/4" Dia. x 5 1/2" Deep
 4 Bar Clock Guard
SAE P/N: SSU03520



19 1/4" Dia. x 3 1/2" Deep
 4 Bar Clock Guard
SAE P/N: SSU03521



20" Dia. x 5 5/8" Deep
 Round Wire Clock Guard
SAE P/N: SSU03522

17" Dia. x 5 5/8" Deep
 Round Wire Clock Guard
SAE P/N: SSU03523

Ordering Information:

Part #

Description

SSU03520

19 1/4" x 5 1/2" 4 Bar Clock Guard

SSU03521

19 1/4" x 3 1/2" 4 Bar Clock Guard

SSU03522

20" x 5 5/8" Round Wire Clock Guard

SSU03523

17" x 5 5/8" Round Wire Clock Guard

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ED0147

LT10210

Rev.B

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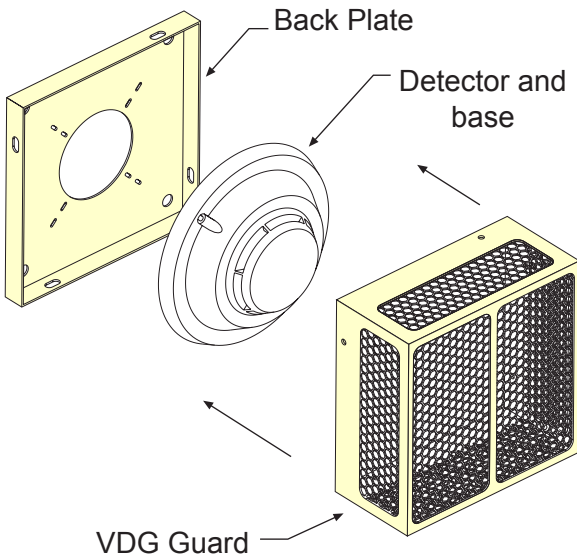


Vandalism Detector Guard

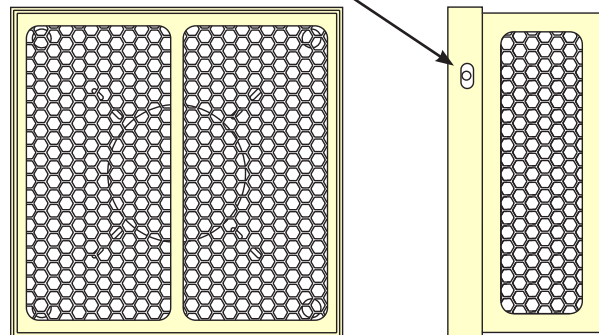
The VDG Vandalism Detector Guard is designed to protect smoke detectors from unauthorized tampering or vandalism. The VDG guard has been designed with airflow and UL smoke test criteria (smoldering fire).

The VDG guard allows particles to enter the smoke chamber of the detector device under normal conditions. This will ensure proper early notification of an alarm without changing the factory setting of the smoke detector device sensitivity. The rugged design provides protection to your system from tampering or vandalism in schools dormitories, prisons and public areas while maintaining a low profile and aesthetically pleasing appearance for a guard.

The VDG package includes the guard housing and all required hardware. The back box, smoke detector and detector base are ordered separately.



Tamper Proof Hardware



Standard Features:

- Rugged 14 gauge steel construction
- Tamper-proof hardware and key
- Anchor and mounting hardware
- Epoxy baked-on finish - beige
- Custom finishes available
- Patent pending design
- Overall dimensions:
6 5/8" square by 3" deep



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- Uses UL Recognized Components



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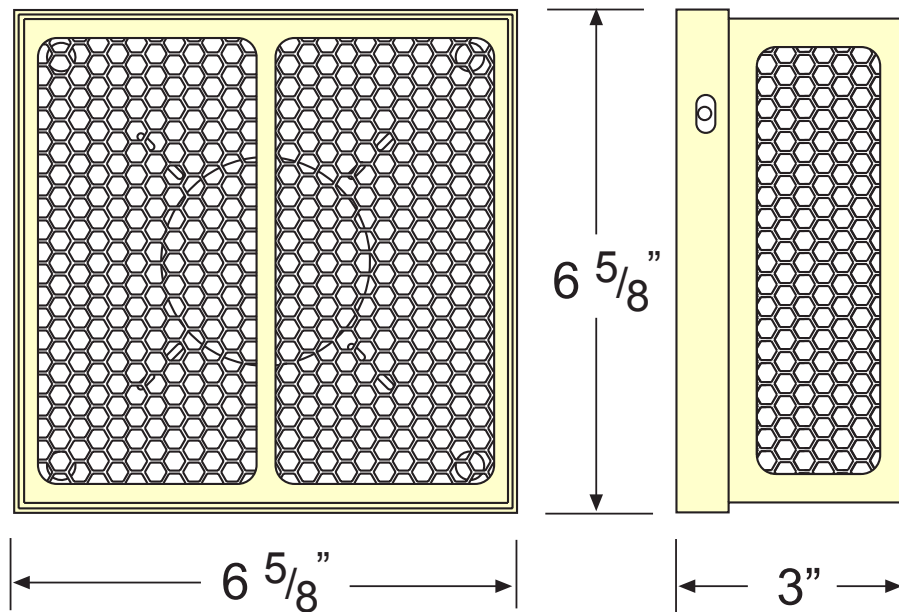
Specifications:

The smoke detectors on the system shall be protected with a guard that is UL listed with the smoke detector device. The guard is manufactured from 14 gauge sheet metal with a 22 gauge .250 hex hole on staggered centers and is welded into the guard in 6 open areas to optimize and allow for smoke and particle entry to the device chamber. The guard is finished all over with a baked-on powder coat finish. The guard shall be supplied with stainless steel tamper-proof hardware and key. The unit measures overall 6 5/8" square and 3" deep. The guard shall be Space Age Electronics, Inc. VDG series Vandalism Detector Guard.

Warning:

Installation and wiring should be performed by qualified personnel only. Equipment damage and/or malfunction may result from improper installation. Remove all power from the system until the installation is complete and ready for testing. All work of any kind shall be performed to meet the requirements of any and all local, state and federal codes and/or standards set by the authority having jurisdiction.

Dimensions:



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Ordering Information:

Part #	Description
SSU03508	VDG Vandalism Detector Guard

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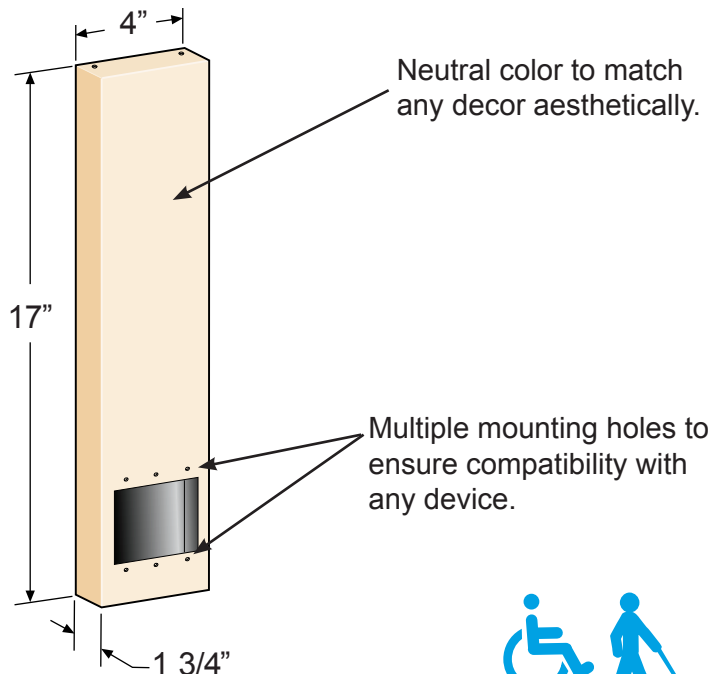
Device/Appliance Relocator

The DAR is designed to lower the height of an existing fire alarm pull station device or notification appliances to meet ADA (Americans with Disabilities Act) requirements.

The DAR is designed to assist in meeting ADA requirements and is the easiest and most economical way to do so. The device is lowered without the need to modify existing finished walls, move the existing device's back box, or the need to pull new wires. To install, simply remove the existing device from its back box, attach the Device or Appliance Relocator back plate to the existing back box, connect wires and assemble cover. The DAR supplies a professional and quality installation.

Standard Features:

- Dimensions:
4" wide x 17" high x 1 3/4" deep
- Moves appliance or device approximately 12"
- 16 gauge cold rolled steel construction
- Durable matte powder coat beige finish
- Raised clamp high barrier terminal strip
- 18 gauge stranded extension wires
- Wall mounting holes and hardware supplied
- Custom colors are available, contact SAE for more details



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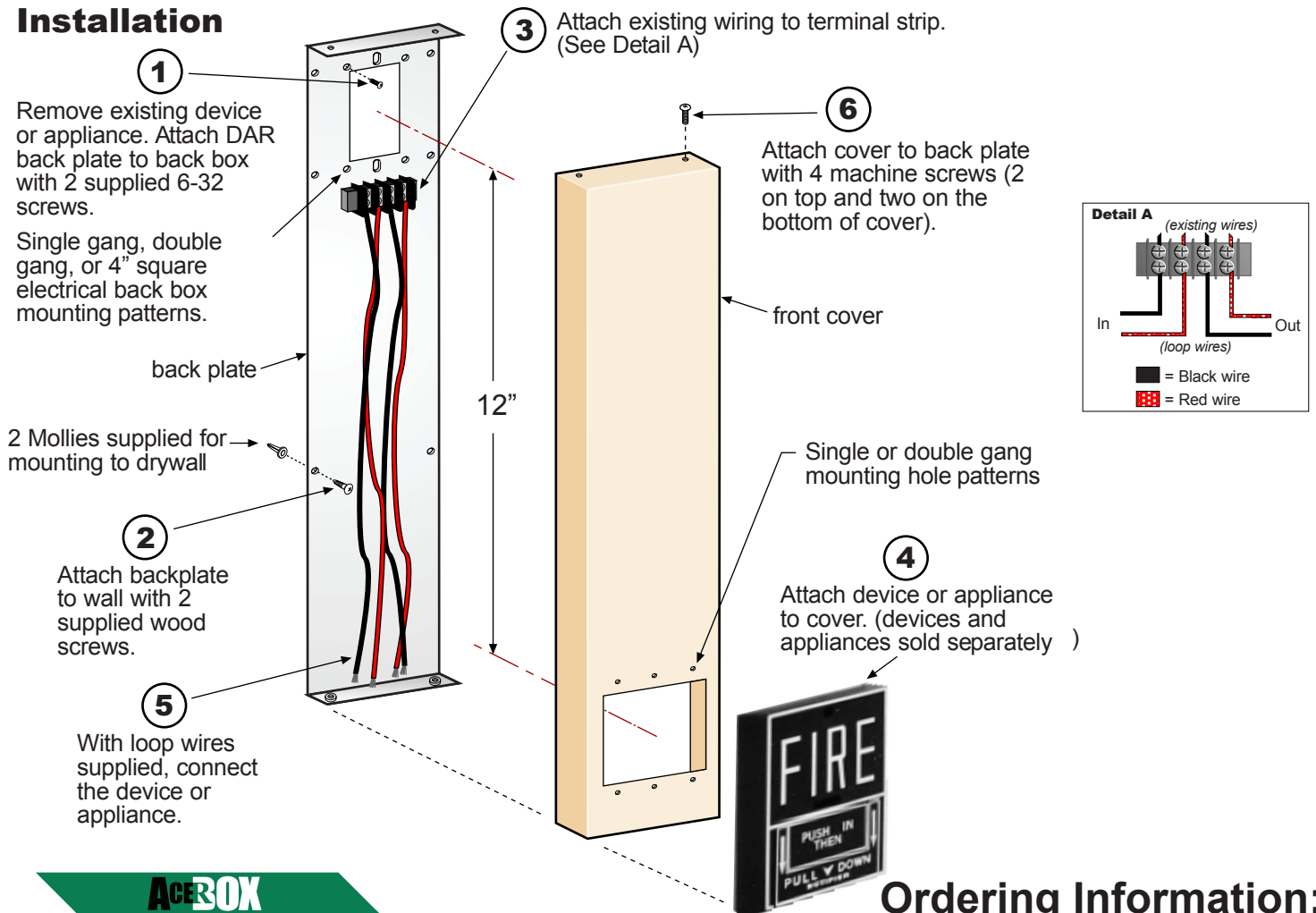
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Specifications:

The DAR Device or Appliance Relocator is designed to lower the height of a fire alarm pull station device or notification appliance to meet ADA requirements. ADA requires a pull station to be mounted a maximum of 54" high for wheelchair side access and 48" maximum for front access. Notification appliances need to be located 80" off finished floor or 6" below finished ceiling, whichever is lower. The DAR relocates the device or appliance approximately 12" from the original location. Also, the DAR lowers the height without the need to pull new wires or relocate the back box which may cause damage to finished walls.

The DAR is manufactured from 16 gauge cold rolled steel with a durable powder coat baked on matte beige finish (custom finishes available). The front cover is attached with machine screws and is easily removed to access wiring. The DAR attaches to most single gang, double gang or 4" square electrical back boxes and is supplied with appropriate holes for mounting to a wall (hardware included). Easy connections to a raised clamp high barrier terminal strip for field connections. Supplied with 18 gauge stranded wires to connect the notification appliance or initiation device to the original system. The terminal strip is rated for 20 amp max 250V (Class B/UL) 300V (CSA), while the points are rated for 12 gauge wire. Overall dimensions measure 4" wide x 17" high x 1 3/4" deep. The DAR complies with ADA standards.

Installation


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Ordering Information:

Part #	Description
SSU00595	DAR Device/Appliance Cabinet

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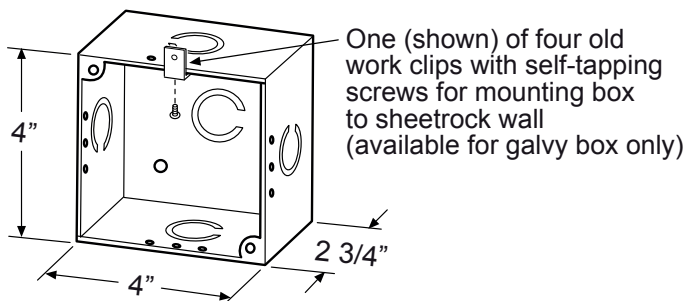
SAB

4" Square Appliance Box

The SAB Square Appliance boxes are top quality durable units, manufactured in a variety of styles to meet your requirements. Each comes complete with pre-punched conduit knockouts and tapped mounting holes and will accommodate all electrical appliances.

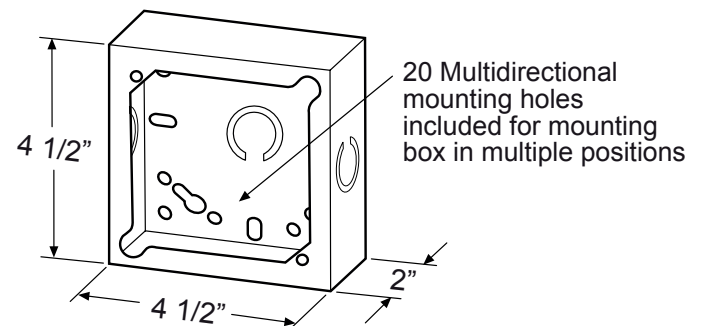
SAB Extra Deep Electrical Box

The SAB Wall Mount Appliance Box is an economical solution for custom installations. The extra deep design accepts mounting of speakers and horns without costly extension rings.



SAB Surface RED Electrical Box

The SAB Surface Mount Appliance Box is an alternative to wall mounting installation. The red finish and rugged construction make this the logical choice for the installation of fire alarm devices.



Standard Features:

- 16 gauge (0.062 thick) galvanized steel construction
- Galvy or Red baked-on epoxy finish
- Dimensions: 4" x 4" x 2 3/4" deep
- Five 1/2" and 3/4" pre-punched conduit knockouts
- Two 8-32 tapped appliance mounting holes
- Accommodates all electrical appliances
- Installation hardware included

Standard Features:

- Rugged 16 gauge (0.062 thick) cold rolled steel construction
- Dimensions: 4 1/2" x 4 1/2" x 2" deep
- Durable baked-on RED epoxy finish
- Three 1/2" and 3/4" pre-punched conduit knockouts
- Two 8-32 tapped appliance mounting holes
- Accommodates all electrical appliances
- Installation hardware included

Ordering Information:

Part #	Description
SSU09030	Extra Deep (2 3/4") 4 Square Box Galvy
SSU09037	Extra Deep (2 3/4") 4 Square Box Red
SSU00454	4 1/2" Square (2" Deep) Appliance Box Red



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ED0088 LT10258 Rev.B 1/1

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Outdoor Fire Beacon Bracket

The Outdoor Fire Beacon Bracket (OFB) is made of 16 Gauge cold rolled steel, Powder Coat painted Red and marked "FIRE" with 1" tall letters.



The back of the unit has a standard "device mount" and "4" Sq" mounting hole spacing and an oversized wiring pull through hole. The front cover is angled to prevent water intrusion into the unit.

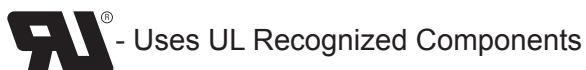
The beacon is mounted to a threaded 1/2 inch diameter pipe nipple on the top of the unit. The cover opens from the front of the unit with 4 screws and has plenty of room to work on the beacon's connections.

This unit is designed to accept any Beacon that mounts to a 1/2" nipple. The diameter of the beacon can not exceed 6".

Standard Features:

- Convenient two piece construction
- Red, color
- "FIRE" on each side for immediate identification
- 16 Gauge CRS construction made in the USA
- Oversized design for ample wiring space
- Standard 1/2 inch Threaded Mounting Pipe
- Two position terminal block standard
- Eliminates water intrusion issues

Two suggested sources for Fire rated beacons are Tomar (model 500P) and Cooper-Wheelock (model MAX). Both have 1/2 inch threaded bases and come in a variety of colors and voltages.



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Specifications:

The Space Age Electronics' OFB is a 5 " High x 4.4" Wide x 4.7" Deep, 2 piece assembly that allows for the proper installation of an outdoor Fire Beacon such as a Tomar model 500p-1228, CooperWheelock MAX, or other such device that maintains a 1/2 inch threaded "nipple" mounting footprint. The unit is weather proof and corrosion resistant.

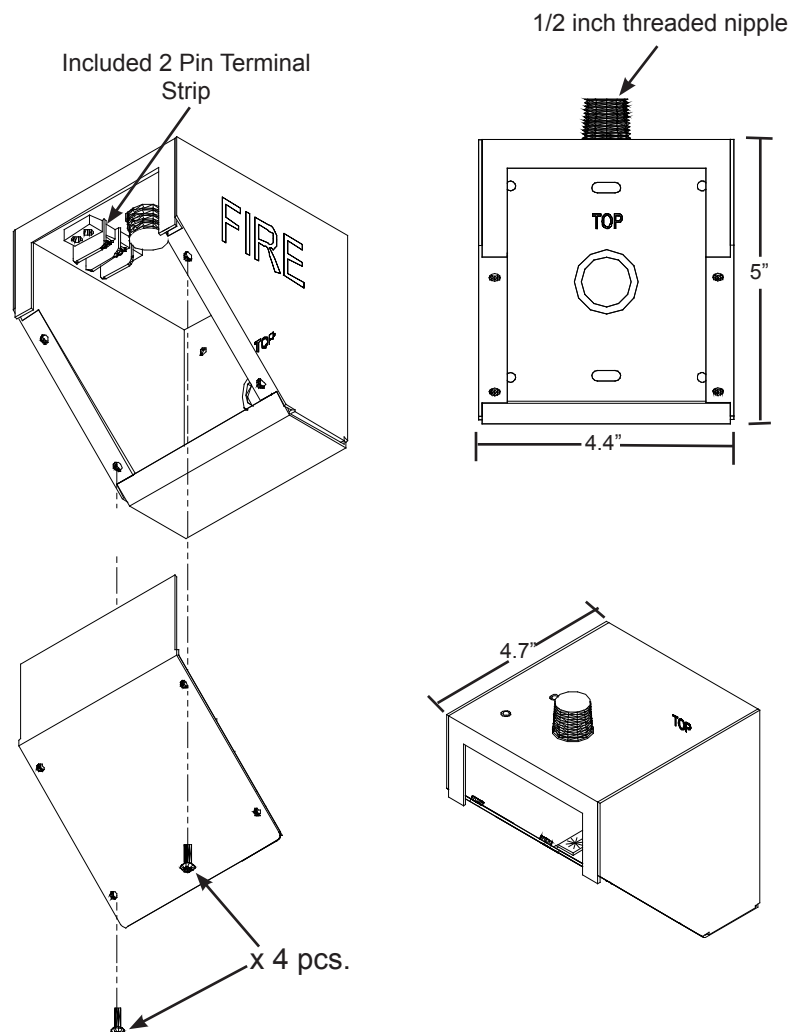
The OFB has a .875" hole to route wiring through and two double mounting holes (Single Gang and 4"Square) used to secure the back of the box to the wall.

The back box comes in Red and is supplied with a clinch type terminal strip and with 4 6x32 screws for securing the front cover to the back of the unit (4 threaded holes).

The OFB is made of 16 gauge CRS and Powder Coat Painted for durability at Space Age Electronics, Inc.

Installation:

- Rotate the unit so that the threaded nipple points straight up, the word Fire is legible and the word TOP on the back of the unit is above the wire pull thru hole.
- Attach the back of the unit to the wall either directly or to an existing surface or flush mount single gang device mount box or a 4 " square back box.
- Pull wire through oversized wire entry hole.
- Mount the Fire beacon (Tomar 500p-1228, Cooper-Wheelock MAX or equivalent) by inserting the wire "pigtailed" into the threaded nipple on the top of the unit and then screw and tighten the beacon itself on the threaded nipple.
- Connect wiring inside the unit using the supplied terminal strip. Place the cover on the front of the unit and secure with 4 supplied screws
- Test per applicable codes



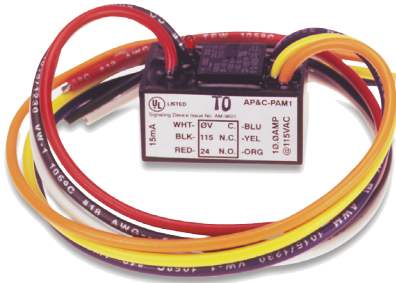
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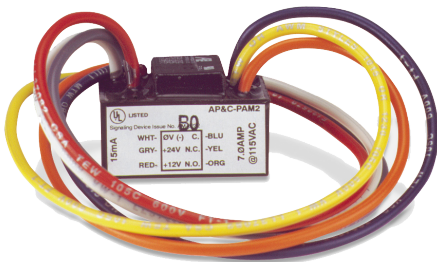
Ordering Information:

Part #	Description
SSU00600	OFB Beacon Bracket

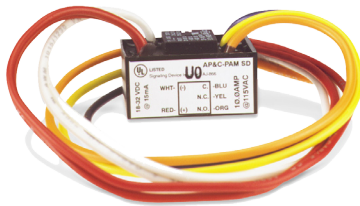
**NO
EXCUSES!**



The **SSU-PAM-1** Relay provides 10.0 Amp Form C contacts. The relay may be energized by one of three (3) input voltages: 24VDC, 24VAC, or 120VAC. The DC input voltages are polarity sensitive and diode protected. A red LED is provided which, when illuminated, indicates the relay coil is energized.
SAE PN# SSU-PAM-1



The **SSU-PAM-2** Relay provides 7.0 Amp Form C contacts. The relay may be energized by one of two (2) input voltages: 12VDC or 24VDC. The input voltages are polarity sensitive and diode protected. A red LED is provided which, when illuminated, indicates the relay coil is energized.
SAE PN# SSU-PAM-2



The **SSU-PAM-SD** Relay provides 7.0 Amp Form C contacts. The relay may be energized by an input voltage between 18VDC to 32VDC, making it ideal for

24VDC NAC circuits. The input voltages are polarity sensitive and diode protected. The PAM-SD provides an additional set of wires for redundant input voltage (Class "A" circuit supervision pass through).

SAE PN# SSU-PAM-SD

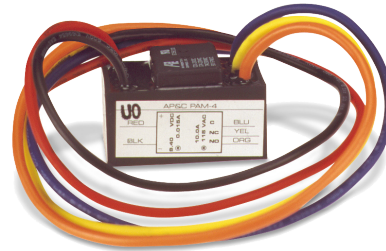
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Multi-Voltage Relay Modules

The PAM Series Relays are encapsulated multi-voltage devices with "flying" leads that offer versatile, reliable performance in a convenient package. Several of the versions provide a red LED which, when illuminated, indicates coil energization. The PAM Series Relays are packaged with a self-tapping screw and a piece of double sided tape for easy installation almost anywhere. The relays are also packaged with wire-nuts to aid installation.

PAM Relays are ideal for applications where remote relays are required for control or status feedback. They are suitable for use with HVAC, temperature control, fire alarm, security, energy management, lighting control systems and building automation systems.



The **SSU-PAM-4** Relay provides 10.0 Amp Form C contacts. The relay may be energized across a wide voltage range

from 9VDC to 40VDC. The 15mA operating current is constant across the operating range. The input DC voltages are polarity sensitive and diode protected.

SAE PN# SSU-PAM-4



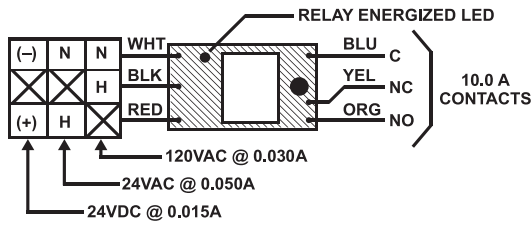
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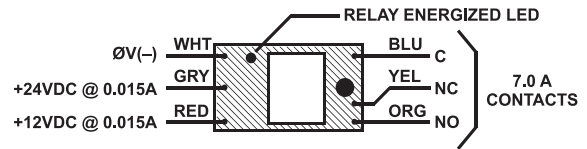
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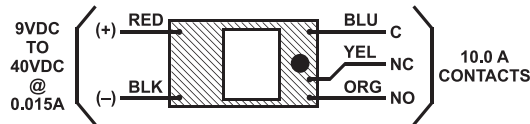
Wiring:



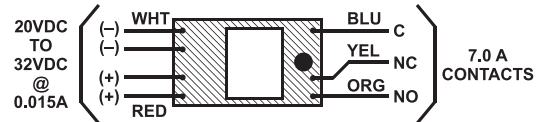
PAM-1



PAM-2



PAM-4



PAM-SD

PRODUCT SPECIFICATIONS

MODEL NUMBER:	PAM-1	PAM-2	PAM-4	PAM-SD
COIL VOLTAGE:	24VAC/24VDC/120VAC	12VDC/24VDC	9 to 40VDC	20 to 32VDC
POLARIZED:	Yes	Yes	Yes	Yes
ENERGIZED LED INDICATOR:	Yes	Yes	No N	o
CURRENT REQUIREMENT:				
@ 12VDC		15mA	15mA	
@24VDC	15mA	15mA	15mA	15mA
@24VAC	50mA			
@120VAC	30mA			
CONTACT CONFIGURATION:	(1) SPDT dry form "C"	(1) SPDT dry form "C"	(1) SPDT dry form "C"	(1) SPDT dry form "C"
CONTACT RATINGS:				
(contact rating/ power factor)				
@5VDC	250μA / .35 PF	250μA / .35 PF	250μA	250μA / .35 PF
@24VDC	7A / .35 PF 7	A / .35 PF 7	A	7A / .35 PF
@120VAC	1 0A 7	A / .35 PF 1	0A 7	A / .35 PF
WIRE LEADS:	6 "flying" leads 12" / 18 AWG Wire-nuts provided W	6 "flying" leads 12" / 18 AWG ire-nuts provided W	5 "flying" leads 12" / 18 AWG ire-nuts provided W	7 "flying" leads 12" / 18 AWG ire-nuts provided
AMBIENT TEMPERATURE:	32°F to 120°F (@ 100% RH, condensing) (0°C to 49°C) (32°F to 120°F 0°C to 49°C) (32°F to 120°F 0°C to 49°C) (32°F to 120°F 0°C to 49°C)
CONSTRUCTION:	100% potted (sealed) with "flying" lead			
MOUNTING:	Pre-drilled mounting screw hole and self tapping screw provided. Double sided tape provided.			
DIMENSIONS:				
H	1 .50" (38mm) 1	.50" (38mm) 1	.50" (38mm) 1	.50" (38mm)
W	1.20" (25mm) 1	.00" (25mm) 1	.00" (25mm) 1	.00" (25mm)
D	0 .90" (20mm) 0	.90" (23mm) 0	.90" (23mm) 0	.80" (20mm)
LISTINGS AND APPROVALS:				
UL*:	U0XX/7.S3403 U	0XX/7.S3403 U	0XX/7.S3403 U	0XX/7.S3403
MEA:	73-92-E Vol. 21	73-92-E Vol. 21	73-92-E Vol. 21	73-92-E Vol. 21
CSFM:	7300-1004:101	7300-1004:101	7300-1004:101	7300-1004:101

*UOXX=Control Unit Accessories, System; /7=also Certified for Canada



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ED0312

LT10277

Rev.D

2/2

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The **SSU-RIC-1** Relay, SPDT, provides 10.0 Amp resistive form C contacts. The relay coil may be energized by one of three input voltages: 24VDC, 24VAC, or 115VAC. **SAE PN# SSU-RIC-1**



The **SSU-RIC-2** Relay, DPDT, provides 10.0 Amp resistive form C contacts. The relay coil may be energized by one of three input voltages: 24VDC, 24VAC, or 115VAC. **SAE PN# SSU-RIC-2**



The **SSU-RIC-3** Relay, SPDT, provides 10.0 Amp resistive form C contacts. The relay coil may be energized by one of two input voltages: 24VDC (non-polarized) or 24VAC. **SAE PN# SSU-RIC-3**

The **SSU-RIC-4** Relay is identical except the 24VDC is polarity sensitive. **SAE PN#**



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RIC Series Relays (1 - 4)

The RIC Series is ideal for applications where remote relays are required for control or status feedback. They are suitable for use with HVAC, temperature control, fire alarms, security, energy management and lighting control systems.

The RIC Series Relay Modules are multi-voltage devices providing 10 Amp resistive dry form C contacts. These relays may be energized by one of three input voltages: 24VAC, 24VDC or 115VAC. A red LED is provided which when illuminated, indicates the relay coil is energized on the RIC-1 and RIC-2 only.

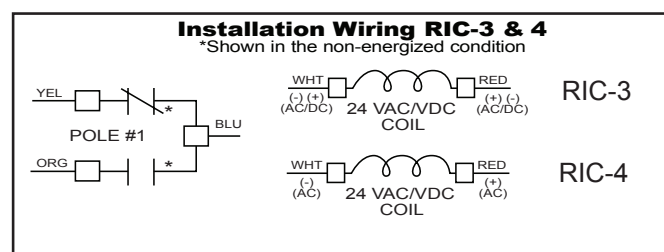
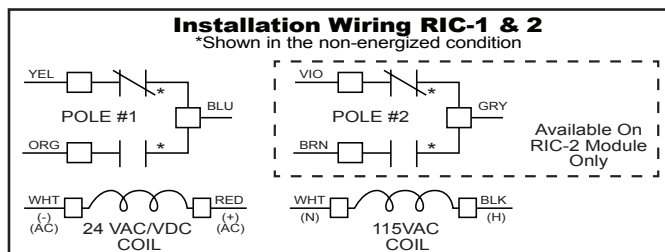
The RIC-3 and RIC-4 have a 2 - 3 Second "drop out" delay that allows the relay to remain actuated on dirty power or if a pulsed input is supplied.

To mount the RIC Series module, simply push the self-clinching spud through a 1/2" (12.7mm) knockout on a junction box and connect via the 12" long "flying" leads.

Standard Features:

- 10 Amp resistive dry form C contacts
- Coil input voltages: 24VAC, 24VDC, or 115VAC
- Contains a red LED which illuminates when the coil is energized (RIC 1 & 2 only)
- Wire nuts included for installation
- UL listed, file # S3403
- 12" wire leads
- Sturdy full plastic enclosure

Model Number	RIC-1	RIC-2	RIC-3	RIC-4
Power Requirements	24VAC, 24VDC, 115VAC	24VAC, 24VDC, 115VAC	24VAC, 24VDC (non-polarized)	24VAC, 24VDC (polarized)
Polarized	No	No	No	Yes (DC Only)
Energized LED Indication	Yes	Yes	No	No
Coil Requirements				
@24VDC	18mA	18mA	32mA	32mA
@24VAC	39mA	39mA	41mA	41mA
@115VAC	26mA	26mA	NA	NA
Delay upon De-Energization	No	No	2 - 3 Seconds	2 - 3 Seconds
Contact Configuration	SPDT	DPDT	SPDT	SPDT
Contact Ratings				
@28VDC	7Amp Resistive	7Amp Resistive	7Amp Resistive	7Amp Resistive
@115VAC	10Amp Resistive / 0.35PF Inductive	10Amp Resistive / 0.35PF Inductive	10Amp Resistive / 0.35PF Inductive	10Amp Resistive / 0.35PF Inductive
Wiring Leads	6 "Flying Leads" 12" - 18 AWG Wire Nuts Provided	6 "Flying Leads" 12" - 18 AWG Wire Nuts Provided	7 "Flying Leads" 12" - 18 AWG Wire Nuts Provided	7 "Flying Leads" 12" - 18 AWG Wire Nuts Provided
Ambient Temperature @85% RH, Non-Condensing	32°F to 120°F 0°C to 40°C	32°F to 120°F 0°C to 40°C	NA NA	NA NA
Ambient Temperature @93% RH, Non-Condensing	NA	NA	32°F to 120°F 0°C to 40°C	32°F to 120°F 0°C to 40°C
Mounting	Spud Mounting through 1/2" Knockout	Spud Mounting through 1/2" Knockout	Spud Mounting through 1/2" Knockout	Spud Mounting through 1/2" Knockout
Dimensions	2.5" H x 1.75" W x 1.3" D	2.5" H x 1.75" W x 1.3" D	2.5" H x 1.75" W x 1.3" D	2.5" H x 1.75" W x 1.3" D
Listings and Approvals				
UL	UOXX / 7.S3403	UOXX / 7.S3403	UOXX / 7.S3403	UOXX / 7.S3403
MEA	73-92-E Vol. 23	73-92-E Vol. 23	73-92-E Vol. 23	73-92-E Vol. 23
CSFM	7300-1004:101	7300-1004:101	7300-1004:101	7300-1004:101



Ordering Information:

Part # Description

SSU-RIC-1 RIC-1 10 Amp Relay SPDT
 SSU-RIC-2 RIC-2 10 Amp Relay DPDT
 SSU-RIC-3 RIC-3 10 Amp Relay SPDT
 SSU-RIC-4 RIC-4 10 Amp Relay SPDT



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ED0400

LT10280

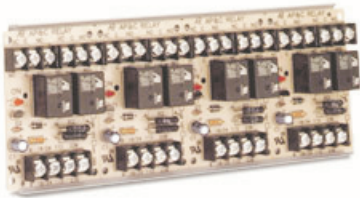
Rev.B

2/2

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MR1 MR2



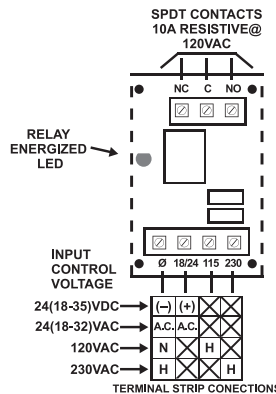
MR-100 & MR-200 Series Relays

The MR Series Multi-voltage Control Relays offer SPDT or DPDT 10 Amp resistive contacts which may be operated by one of four input control voltages. A single relay may be energized from a voltage source of 24VDC, 24VAC, 120VAC or 230VAC by wiring to appropriate input terminals.

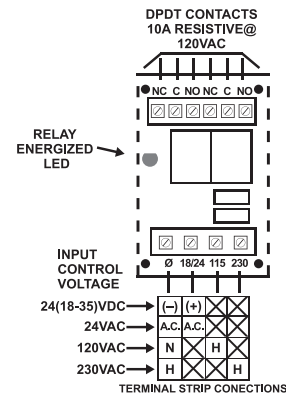
Standard Features:

- Relays may be energized from a voltage source of 18 to 35VDC or VAC, 120VAC or 230VAC
- Each relay position contains a red LED, which illuminates when the coil is energized.
- Single, dual or triple relay modules may be "snapped apart" from standard 4-position master
- DC input is polarized
- Continuous duty use
- Available in dust resistant enclosures with LED viewing port
- /C versions mounted in enclosures
- /C/R versions with red covers for NYC and other uses
- /T versions come complete with track mounting hardware which facilitates installation in standard cabinets
- UL recognized relays rated at 10,000,000 mechanical operations
- UL listed as Control Unit Accessory

Each relay position contains a red LED which indicates the relay coil is energized. Relays may be "snapped apart" from a standard 4 module assembly and used independently. These devices are ideal for applications where local contacts are required for system status, remote contacts for control of electrical loads and general purpose switching. They are suitable for use with HVAC, temperature control, fire alarm, security, energy management and lighting control systems.



**MR-101
(MR-104)**



**MR-201
(MR-204)**



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PRODUCT SPECIFICATIONS

MODEL NUMBER:	MODULE POSITIONS	CONTACT CONFIGURATION PER POSITION	TRACK MOUNTED H X W X D	ENCLOSURE MOUNTED H X W X D	COVER MATERIAL	UL* FILE S3403	MEA FILE 73-92-E	CSFM FILE 7300-1004
SSU-MR-101/T	1	SPDT	3.25" (82mm) 2.125" (54mm) 1.50" (38mm)			UOXX2		:106
SSU-MR-101/C	1	SPDT		5.125" (130mm) 3.125" (79mm) 2.50" (63mm)	Grey ABS-94VO Plastic	UOXX UOXX2	Vol. 14	:101
SSU-MR-101/C/R	1	SPDT			Red ABS-94VO Plastic	UOXX7	Vol. 22	
SSU-MR-104/T	4	SPDT	3.25" (82mm) 8.50" (215mm) 1.50" (38mm)			UOXX2		:106
SSU-MR-104/C	4	SPDT		5.125" (130mm) 9.50" (241mm) 2.50" (63mm)	Plated 18ga CRS	UOXX UOXX2	Vol. 14	:101
SSU-MR-104/C/R	4	SPDT			Red 18ga CRS	UOXX7		
SSU-MR-201/T	1	DPDT	3.25" (82mm) 2.125" (54mm) 1.50" (38mm)			UOXX2		:106
SSU-MR-201/C	1	DPDT		5.125" (130mm) 3.125" (79mm) 2.50" (63mm)	Grey ABS-94VO Plastic	UOXX UOXX2	Vol. 16	:101
SSU-MR-201/C/R	1	DPDT			Red ABS-94VO Plastic	UOXX7	Vol. 22	
SSU-MR-204/T	4	DPDT	3.25" (82mm) 8.5" (215mm) 1.50" (38mm)			UOXX2		:106
SSU-MR-204/C	4	DPDT		5.125" (130mm) 9.50" (241mm) 2.50" (63mm)	Plated 18ga CRS	UOXX UOXX2	Vol. 16	:101
SSU-MR-204/C/R	4	DPDT			Red 18ga CRS	UOXX7		

COIL VOLTAGE: MR-100: 24(18-35)VDC, 24(18-35)VAC, 120VAC, 230VAC
 MR-200: 24(18-35)VDC, 24VAC, 120VAC, 230VAC
 (Pull in voltage: 75% of nominal max. @ 25°C; Drop out voltage: 25% of nominal min. @ 25°C)

POLARIZED: DC input only

ENERGIZED LED INDICATOR: One per module position

CURRENT REQUIREMENT: Per module position: MR-100 Series = 18mA / MR-200 Series = 40mA

CONTACT RATINGS: 7A @ 28VDC / 10A (NO:1/6HP, NC:1/8HP) @ 120VAC / 7A @ 230VAC

CONTACT CONSTRUCTION: Dry Form "C"

ENVIRONMENTAL: 32°F to 120°F (0°C to 49°C) @ 85% RH (@ 32°F), Non-condensing, Non-freezing

WIRING: Solid or stranded; #12 to #22 AWG terminals

/T VERSIONS: 3.5" wide, low profile plastic snap track provided with mounting screws

/C VERSIONS: Backbox: 18ga CRS, plated with 1/2" conduit knockouts top and bottom

*UOXX=Control Unit Accessories, System; 2=Component; 7=Certified for Canada



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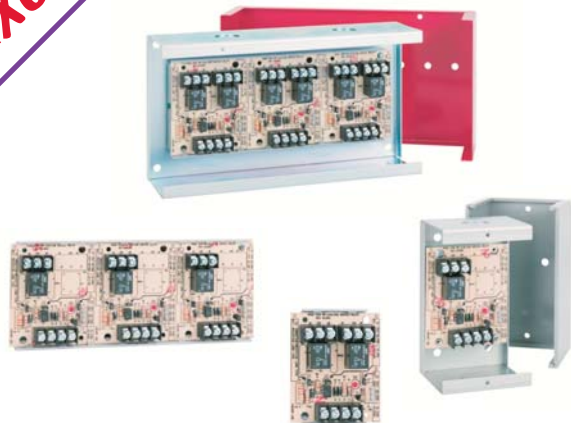
ED0313

LT10278

Rev.B

2/2

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A sampling of mounting, enclosures and configurations shown above.

MR3

MR-310, 320 Series Relays Low-Voltage, Low-Current TTL+ Relays

MR 300 Series Relays provide virtually endless options for low-voltage application interconnectability. This robust relay is available in SPDT or DPDT configurations. Available in enclosure, snap-track or spacer mounted versions and single or multi-unit assemblies. Enclosure configurations available with red or gray covers and provide 'energized on' LED viewing port(s). No special tools are required for installation. Industrial/commercial sized PCB. Code required approvals in place.

The MR3 utilizes all pre-qualified, reliable hi-grade U.L. recognized components. Trip circuitry is 100% opto-isolated for complete non-interference and protection. Easy reversible selectability for trip/host voltages, low and ultra-low current trip operation which allows proper matching of trip to type of load switched (no tools necessary). Both trip and host inputs are diode protected against accidental reversed polarity DC hook-up. These relays are polarized so that either or both may be supervised and/or utilize input voltage logic for complex multi-criteria operations. Both trip and host are universal for use with standard TTL, fire, security and building control voltages. All field wiring terminations are done with positive clamping-action captive screw commercial/industrial terminals (#12 to #22 AWG). The design provides for positive or negative trigger inputs, and an integral energized (on) red LED indicator. There is also zener diode protection across relay coil. Environmental temperature ratings are between 32°F to 120°F @ 93% RH non-condensing / freezing. The unit provides for use of two differently referenced power sources on trip and host inputs. The MR3 will not false trip on less than four volts and allows regulated and un-regulated power sources.

User-Selectable Operation Modes:

- **Super-low current dedicated** 24VDC trip mode allows for a variety of fire alarm driver type applications.
- **TTL level** trip is "real world" useable for building control/relay/annunciator driver board applications.
- **Trip / host "bridged"** mode provides a 12-27.3VDC standard package for security and general purpose solutions.

Options/Configurations:

- Available in SPDT or DPDT configurations
- Available in enclosure, snap-track or spacer mounted versions
- Available in single or multi-unit assemblies
- Track mount version allows for adhesive, single/dual screw or optional DIN/"A" rail mounting
- Spacer configuration provides for screw or stud mounting
- Enclosure configurations available with red or gray covers

CSFM & MEA Listings targeted for approval April 2004.

File numbers furnished upon request.

ISO9001
REGISTERED



MEA



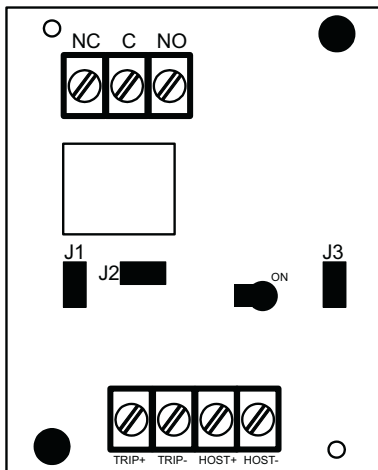
Building Control

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Installation Wiring

MR-310 SERIES

SPDT CONTACTS
RESISTIVE 10A @ 120 VAC
7A @ 24VDC/VAC
INDUCTIVE 0.35 PF(Power Factor)

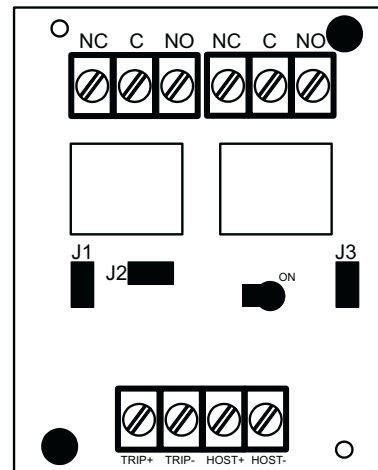


TRIP+ / TRIP- 5-27.3VDC @ 2.0-17mA
(Min.-Max.)* Relay **Triggering** Power
Input (Polarized)

HOST+ / HOST- 12-27.3VDC @ 36-46mA
(Min.-Max.)* Relay **Operating** Power
Input (Polarized)

MR-320 SERIES

DPDT CONTACTS
RESISTIVE 10A @ 120 VAC
7A @ 24VDC/VAC
INDUCTIVE 0.35 PF(Power Factor)



TRIP+ / TRIP- 5-27.3VDC @ 2.0 -17mA
(Min.-Max.)* Relay **Triggering** Power
Input (Polarized)

HOST+ / HOST- 12-27.3VDC @ 56-79mA
(Min.-Max.)* Relay **Operating** Power
Input (Polarized)

*Refer to application specific jumper configuration programming guide for precise current draw requirements. Relay is shipped with J1, J2 and J3 installed in OUT positions. You must perform all jumpers for the motor load type and special motors in your application to guarantee proper relay operation.

MR-310 and MR-320 SERIES JUMPER CONFIGURATIONS

MR-310 & MR-320 Operating Mode Examples											
Application Configuration					Trip Input				Host Input		General Usage Examples
Modes (Application)	J1 (Load)	J2 (Trip)	J3 (Host)	Load Type	Inductive Breaking Power	Voltage	Current	Voltage	Current		
									MR-310 (SPDT)	MR-320 (DPDT)	
"A" (LO trip - HI host)	In	In	Out	Any	Maximum	5 - 18.4VDC	3.2 - 17mA	18.5 - 27.3VDC	38 - 46mA	56 - 79mA	TTL/Security to Fire Alarm
"B" (LO trip - HI host)	Out	In	Out	Resistive	Moderate	5 - 18.4VDC	2.5 - 13mA	18.5 - 27.3VDC			
"C" (HI trip - LO host)	In	Out	In	Any	Maximum	18.5 - 27.3VDC	2.1 - 3.3mA	12 - 18.4VDC	36 - 40mA	69 - 73mA	Fire Alarm to Security
"D" (HI trip - LO host)	Out	Out	In	Resistive	Moderate	18.5 - 27.3VDC	2 - 3.2mA	12 - 18.4VDC			
"E" (LO trip - LO host)	In	In	In	Any	Maximum	5 - 18.4VDC	3.2 - 17mA	12 - 18.4VDC	36 - 40mA	69 - 73mA	TTL/Security to Security
"F" (LO trip - LO host)	Out	In	In	Resistive	Moderate	5 - 18.4VDC	2.5 - 13mA	12 - 18.4VDC			
"G" (HI trip - HI host)	In	Out	Out	Any	Maximum	18.5 - 27.3VDC	2.1 - 3.3mA	18.5 - 27.3VDC	38 - 46mA	56 - 79mA	Fire Alarm to Fire Alarm
"H" (HI trip - HI host As Shipped)	Out	Out	Out	Resistive	Moderate	18.5 - 27.3VDC	2 - 3.2mA	18.5 - 27.3VDC			

BRIDGED MODE

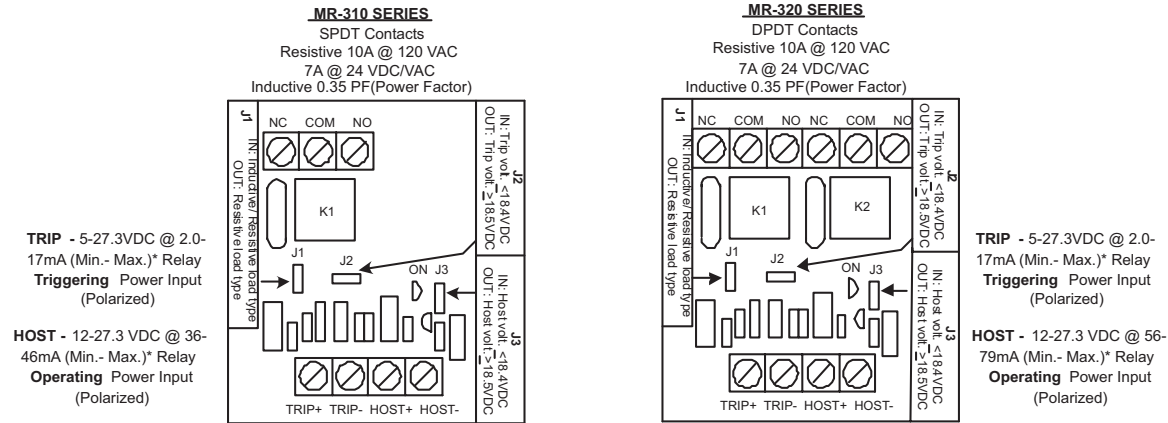
- To operate in bridged mode, connect jumpers from HOST+ to TRIP+ and from HOST- to TRIP-
- Only a single voltage input from 12-27.3VDC is required for relay operation (or nominal 24VDC as above)
- Jumper configurations as noted above may be used to tune relay operation

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Configuration Examples

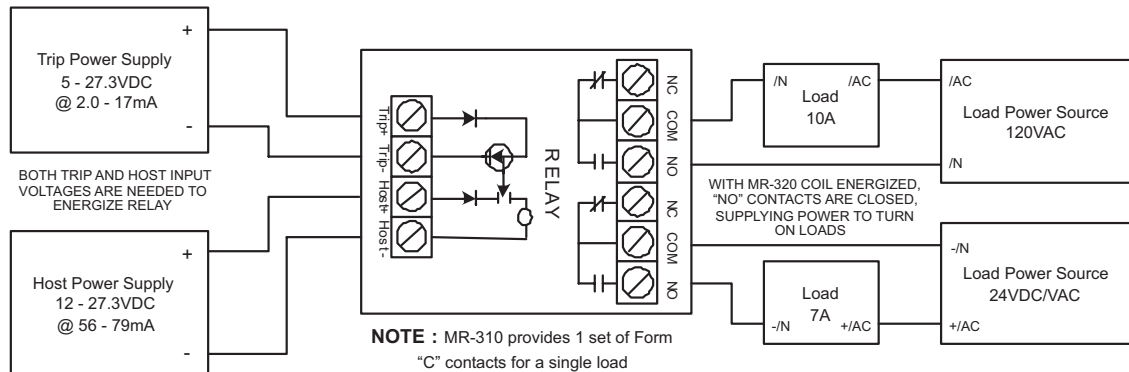
CAUTION: De-energize power prior to removing or installing jumpers and installation or service.



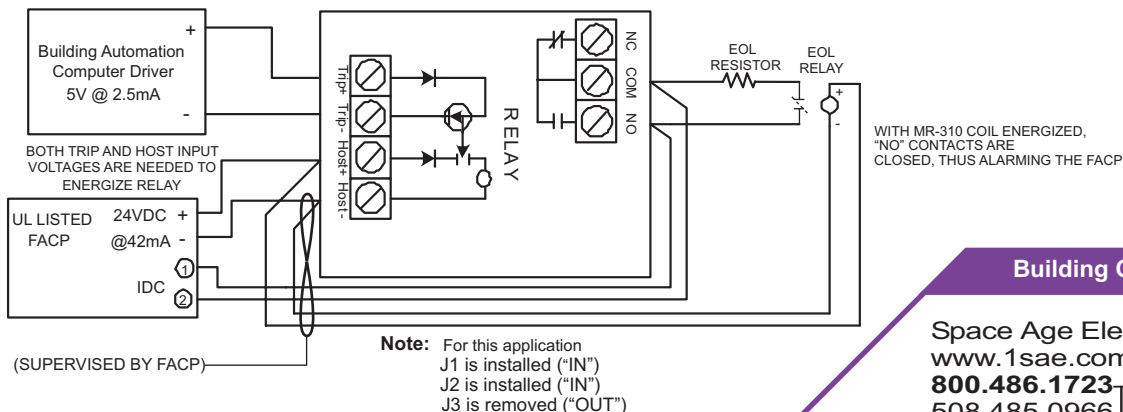
*Refer to application specific jumper configuration programming guides for precise current draw requirements. Relay is shipped with J1, J2 and J3 installed in the "OUT" position. You must program all jumpers for the proper load type and specific voltages in your application to guarantee proper relay operation.

Application Examples

MR-320 Dual Contact Voltage Example (Simultaneously switches 120VAC and 24VDC/VAC)



MR-310 Typical TTL Driver Board to Fire Alarm System Example



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Product Specifications

/S = Spacer Mounted /T = Track Mounted
/C = Enclosure /R = Red Finish Enclosure Cover

SAE PN#	MODULE POSITIONS	CONTACT CONFIGURATION PER POSITION	SPACER MOUNTED H X W X D	TRACK MOUNTED H X W X D	ENCLOSURE MOUNTED H X W X D	COVER MATERIAL	UL FILE* S3403
SSU-MR-311/S	1	SPDT	3.25"(83mm)				UOXX2 NMTR2 UUKL2 PAZX2 UEHX2
SSU-MR-321/S		DPDT	2.75"(70mm)				
SSU-MR-311/T		SPDT	1.44"(36.7mm)	3.40"(86.8 mm)			
SSU-MR-321/T		DPDT		2.75"(70mm)			
SSU-MR-311/C		SPDT					UOXX NMTR UUKL PAZX UEHX
SSU-MR-321/C		DPDT			5.13"(131mm)	GREY ABS 94V-O PLASTIC	
SSU-MR-311/C/R		SPDT			3.13"(80mm)	RED ABS 94V-O PLASTIC	
SSU-MR-321/C/R		DPDT			2.50"(64mm)		
SSU-MR-312/S	2	SPDT	3.25"(83mm)				UOXX2 NMTR2 UUKL2 PAZX2 UEHX2
SSU-MR-322/S		DPDT	5.5"(140mm)				
SSU-MR-312/T		SPDT	1.44"(36.7mm)	3.40"(86.8mm)			
SSU-MR-322/T		DPDT		6.0"(152.4mm)			
SSU-MR-312/C		SPDT					UOXX NMTR UUKL PAZX UEHX
SSU-MR-322/C		DPDT			5.13"(131mm)	PLATED 18GA CRS	
SSU-MR-312/C/R		SPDT			9.5"(241.3mm)	RED 18GA CRS	
SSU-MR-322/C/R		DPDT			2.50"(64mm)		
SSU-MR-313/S	3	SPDT	3.25"(83mm)				UOXX2 NMTR2 UUKL2 PAZX2 UEHX2
SSU-MR-323/S		DPDT	8.25"(210mm)				
SSU-MR-313/T		SPDT	1.44"(36.7mm)	3.40"(86.8mm)			
SSU-MR-323/T		DPDT		8.25"(210mm)			
SSU-MR-313/C		SPDT					UOXX NMTR UUKL PAZX UEHX
SSU-MR-323/C		DPDT			5.13"(131mm)	PLATED 18GA CRS	
SSU-MR-313/C/R		SPDT			9.5"(241.3mm)	RED 18GA CRS	
SSU-MR-323/C/R		DPDT			2.50"(64mm)		

VOLTAGE REQUIREMENTS:	Host: 12 - 27.3VDC Trip: 5 - 27.3VDC
POLARIZED INPUTS:	Yes, on both trip optoisolator and host coil inputs
ENERGIZED INDICATOR:	One red LED per module position
CURRENT REQUIREMENTS:	Refer to Jumper Configuration Chart
CONTACT RATINGS:	Resistive: 10A @120VAC; 7A @ 24VDC/VAC Inductive 0.35 PF (Power Factor)
CONTACT CONSTRUCTION:	Dry Form "C"
AMBIENT TEMPERATURE:	32°F to 120°F (0°C to 49°C) @ 93% RH (@32°C), NON-condensing/freezing
WIRING:	#12 to #22 AWG terminals
"/S" VERSIONS:	Aluminum spacers provided with #8 X 7/8" self tapping sheet metal screws
"/T" VERSIONS:	3.5" wide, low profile plastic snap track provided with mounting screws
"/C" VERSIONS:	Backbox: 18ga CRS, plated with 1/2" conduit knockouts top and bottom
*UOXX (UL864) =	Control Unit Accessories, System; 2 = Component
*UUKL (UL864) =	Smoke Control System Equipment, System; 2 = Component
*NMTR (UL508) =	Miscellaneous Apparatus, System; 2 = Component
*PAZX (UL916) =	Energy Management Equipment, System; 2 = Component
*UEHX (UL2017) =	General Purpose Signaling Devices and Systems, System; 2 = Component
LISTINGS AND APPROVALS: MEA: File 73-92-E Vol.29	

NOTICE: The information contained in this document is intended only as a summary and is subject to change without notice. The products described have specific instructional/ installation documentation, which covers various technical, approval, code, limitation and liability information. Copies of this documentation along with any general product warning and limitation documents, which also contain important information, are provided with the product and are also available from Space Age Electronics, Inc. The information contained in all of these documents should be considered before specifying or using the products. Any example applications shown are subject to the most current enforced local/national codes, standards, approvals, certifications, and/or the authority having jurisdiction. All of these resources, as well as the specific manufacturer of any shown or mentioned related equipment, should be consulted prior to any implementation. For further information or assistance concerning the products, contact Space Age Electronics, Inc. Space Age Electronics Inc. reserves the right to change any and all documentation without notice.

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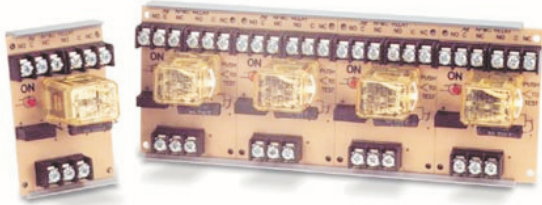
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MR4

MR-400 Series Relays

The MR-400 Series Relays provide DPDT 10 Amp contacts which are operated from either a 24VDC, 24VAC, or 115VAC control input. Each relay is equipped with a "Test Button" which enables the contacts to transfer manually.

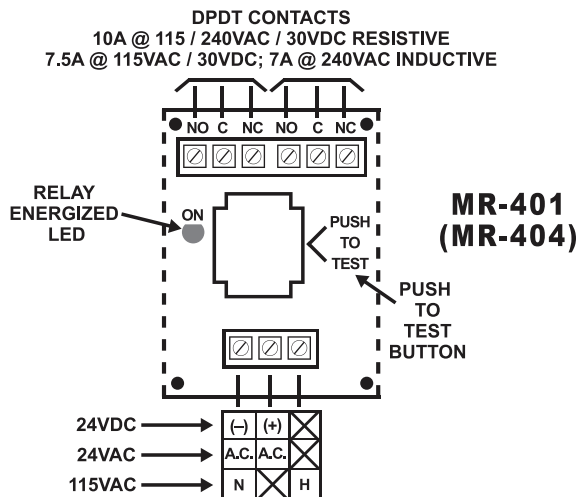


Each relay contains a high intensity LED which when illuminated indicates the relay coil is energized. This provides a time saving convenience when checking an installed system, no metering is required. Track mounting hardware included on /T versions for easy installation in standard boxes.

Standard Features:

- Relay contains a high intensity red LED indicating energized coil status
- Single, dual, or triple relay modules may be "snapped apart" from a standard 4 position master
- /C and /C/R versions available in dust proof metal enclosures with LED viewing port(s)
- /T versions include track mounting hardware to facilitate installation in standard cabinets
- UL recognized relays rated at 10,000,000 mechanical operations
- Manual contact test button to verify switching without energizing the coil

These devices are well suited for applications such as fire alarm and security systems, HVAC, energy management, temperature control and lighting systems.



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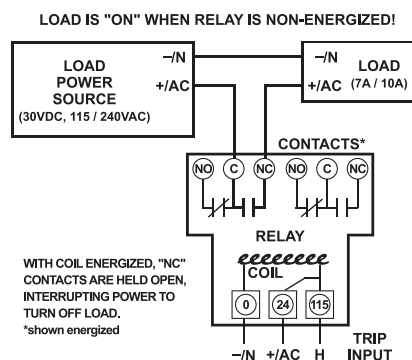
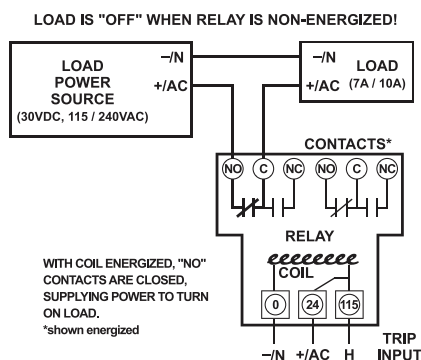


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PRODUCT SPECIFICATIONS

MODEL NUMBER	MODULE POSITIONS	CONTACT CONFIGURATION PER POSITION	TRACK MOUNTED H x W x D	ENCLOSURE MOUNTED H x W x D	COVER MATERIAL
SSU-MR-401/T	1	DPDT	3.40" (87mm) 2.13" (54mm) 1.94" (49mm)		
SSU-MR-401/C				5.13" (130mm) 3.13" (79mm) 2.50" (64mm)	Grey ABS 94V-O Plastic
SSU-MR-401/C/R					Red ABS 94V-O Plastic
SSU-MR-404/T	4	DPDT	3.40" (87mm) 8.50" (215mm) 1.94" (49mm)		
SSU-MR-404/C				5.13" (130mm) 9.50" (241mm) 2.50" (64mm)	Plated 18ga CRS
SSU-MR-404/C/R					Red 18ga CRS
POWER REQUIREMENTS: (per position)		24VDC @ 31mA 24VAC @ 28mA 115VDC @ 34mA			
COIL DATA:		24VDC/VAC, 115VAC Pull in voltage = 80% of rated voltage Drop-out voltage (AC) = 30% of rated voltage Drop-out voltage (DC) = 10% of rated voltage Max. voltage = 110% of rated voltage			
COMPONENTS:		Uses UL Recognized Components			
POLARIZED:		No			
ENERGIZED LED INDICATOR:		One per module position			
CONTACT RATINGS:		Resistive load: 10A @ 115VAC / 240VAC / 30VDC Inductive load: 7.5A @ 115VAC / 30VDC; 7A @ 240VAC			
ENVIRONMENTAL:		32°F to 120°F (0°C to 49°C) @ 85% RH, Non-condensing, Non-freezing			
WIRING:		Solid or stranded; #12 to #22 AWG terminals			
MANUAL TEST BUTTON:		One per module position			
/T VERSIONS:		3.5" wide, low profile plastic snap track provided with mounting screws			
/C VERSIONS:		Backbox: 18ga CRS, plated with 1/2" conduit knockouts top and bottom			

APPLICATION EXAMPLES



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**NYC
BUILDINGS**



MR6

MR-600 Series Relays

The MR-600 Series Relays are ideal for applications where local manual controlled contacts are required for switching of electrical loads. They are suitable for use with HVAC, temperature control, fire alarm, security, energy management, and lighting control systems.

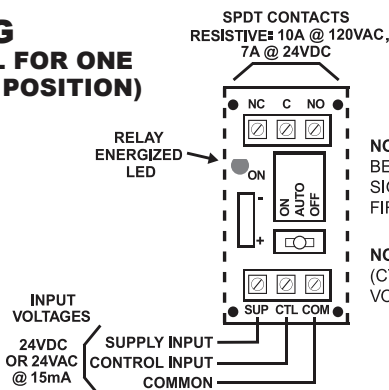
MR-600 Series Relays offer SPDT 10 Amp contacts @ 120VAC and 7 Amp @ 24VDC with manual override capabilities by means of an integral "ON-AUTO-OFF" switch. The switch requires a 24VAC or 24VDC constant power source supplied by the controlling system. When the switch is in the "ON" position the relay is energized. With the switch in the "AUTO" position the relay is allowed to operate as signaled by the controlling system with a separate control input of the same 24VAC or 24VDC. With the switch in the "OFF" position the relay will not be energized.

Each relay position contains a high intensity red LED which, when illuminated, indicates the relay coil is energized. This provides a time saving convenience when checking an installed system - no metering is required. Relays may be "snapped apart" from standard 2, 4 or 8 position modules and are also available in the single circuit configuration. Relays are supplied with either mounting spacers, track mounting hardware or mounted in enclosures. The common (black) and supply (white) power to each relay position is bussed on the printed wiring board via color coded jumpers which permits power to be connected only once per multi-position module. These jumpers also allow position isolation or separation of cut.

Standard Features:

- Relays may be energized from a voltage source of 24VDC or 24VAC
- Each relay position contains a red LED which illuminates when the coil is energized
- Single, dual or triple relay modules may be "snapped apart" from standard 2, 4 and 8 position masters
- Integral "ON-AUTO-OFF" switch for local manual control
- For continuous duty use
- Available in dust resistant enclosures with LED viewing port(s)
- /C versions mounted in enclosures
- /C/R versions with red covers for NYC and other uses
- /T versions come complete with track mounting hardware which facilitates installation in standard cabinets
- /S versions supplied with spacers for installation on standard back panels
- Uses UL Recognized Components

WIRING (TYPICAL FOR ONE MODULE POSITION)



NOTE: INPUT POWER SUPPLY SHOULD BE UL LISTED FOR FIRE PROTECTION SIGNALING SYSTEMS WHEN USED IN FIRE ALARM APPLICATIONS

NOTE: SUPPLY (SUP) AND CONTROL (CTL) INPUT MUST BE OF THE SAME VOLTAGE TYPE AND POLARITY



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PRODUCT SPECIFICATIONS

MODEL NUMBERS:	MODULE POSITIONS	CONTACT CONFIGURATION PER POSITION	SPACER MOUNTED H x W x D	TRACK MOUNTED H x W x D	ENCLOSURE MOUNTED H X W X D	COVER MATERIAL	UL* FILE	MEA FILE	CSFM FILE
SSU-MR-601/S	1	SPDT	3.25" (83mm) 1.06" (27mm) 1.25" (32mm)				S3403	73-92-E	7300-1004
SSU-MR-601/T	1	SPDT		3.50" (89mm) 2.00" (51mm) 1.375" (35mm)			UOXX2		
SSU-MR-601/C	1	SPDT			5.125" (131mm) 3.125" (80mm) 2.50" (64mm)	Grey ABS 94V-O Plastic	UOXX		:110
SSU-MR-601/C/R	1	SPDT				Red ABS 94V-O Plastic	UOXX2	Vol. 29	
SSU-MR-602/S	2	SPDT	3.25" (83mm) 2.125" (54mm) 1.25" (32mm)				UOXX2		
SSU-MR-602/T	2	SPDT		3.50" (89mm) 2.125" (54mm) 1.375" (35mm)					
SSU-MR-602/C	2	SPDT			5.125" (131mm) 3.125" (80mm) 2.50" (64mm)	Grey ABS 94V-O Plastic	UOXX		:110
SSU-MR-602/C/R	2	SPDT				Red ABS 94V-O Plastic	UOXX2	Vol. 29	
SSU-MR-604/S	4	SPDT	3.25" (83mm) 4.25" (108mm) 1.25" (32mm)				UOXX2		
SSU-MR-604/T	4	SPDT		3.50" (89mm) 4.25" (108mm) 1.375" (35mm)					
SSU-MR-604/C	4	SPDT			5.125" (131mm) 9.50" (242mm) 2.50" (64mm)	Plated 18ga CRS	UOXX		:110
SSU-MR-604/C/R	4	SPDT				Red 18ga CRS	UOXX2	Vol. 29	
SSU-MR-608/S	8	SPDT	3.25" (83mm) 8.50" (215mm) 1.25" (32mm)				UOXX2		
SSU-MR-608/T	8	SPDT		3.50" (89mm) 8.50" (215mm) 1.375" (35mm)					
SSU-MR-608/C	8	SPDT			5.125" (131mm) 9.50" (242mm) 2.50" (64mm)	Plated 18ga CRS	UOXX		:110
SSU-MR-608/C/R	8	SPDT				Red 18ga CRS	UOXX2	Vol. 29	

POWER REQUIREMENTS: Per Position: 24VAC or 24VDC @ 15mA

POLARIZED COIL INPUT(S): No

ENERGIZED LED INDICATOR: One red LED per module position

CONTACT RATINGS: Resistive load: 10A @ 120VAC; 7A @ 24VDC

CONTACT CONSTRUCTION: One dry form "C" SPDT per module position

AMBIENT TEMPERATURE: 32°F to 120°F (0°C to 49°C) @ 85% RH (@ 32°F), Non-Condensing, Non-Freezing

WIRING: Solid or stranded; #12 to #22 AWG terminals

/T VERSIONS: 3.5" wide, low profile plastic snap track provided with mounting screws

/S VERSIONS: Aluminum Spacers provided with #8 X 7/8" self tapping sheet metal screws

/C VERSIONS: Back Box: 18ga CRS, plated with 1/2" conduit knockouts top and bottom

*UOXX (UL864)=Control Unit Accessories, System; 2=Component



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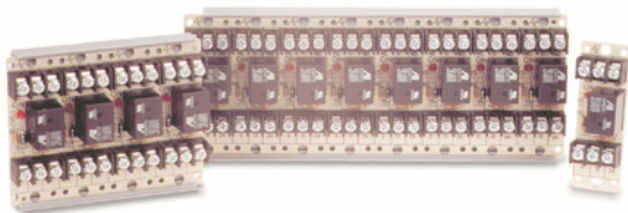
Rev.B

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MR7



MR-700 Series Relays

The MR-700 Series Relays offer SPDT 10 Amp contacts which may be operated by one of two input voltages; 12VDC or 24VDC.

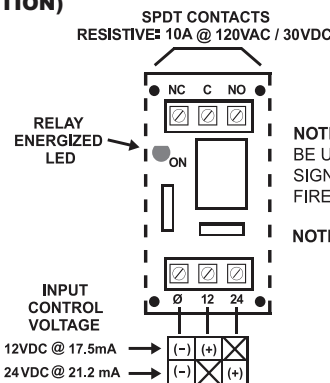
Each relay position contains a red LED which when illuminated, indicates the coil is energized. This provides a time saving device when checking an installed system - no metering is required. Relays may be "snapped apart" from standard 2, 4, or 8 position modules, and are also available in the single circuit configuration. Relays are supplied with either mounting spacers, track mounting hardware or are mounted in enclosures.

Standard Features:

- Relays may be energized from a voltage source of 12VDC or 24VDC
- Each relay position contains a red LED, illuminates when the coil is energized
- Single, dual or triple relay modules may be "snapped apart" from standard 2, 4 or 8 position masters
- DC input is polarized
- For continuous duty use
- Available in dust resistant enclosures with LED viewing port(s)
- /C versions mounted in enclosures
- /C/R versions with red covers for NYC and other uses
- /T versions come complete with track mounting hardware which facilitates installation in standard cabinets
- /S versions supplied with spacers for installation on standard back panels
- Uses UL recognized components

These devices are ideal for applications where local contacts are required for control of electrical loads or general purpose switching. They are suitable for use with HVAC, temperature control, fire alarm, security, energy management and lighting control systems.

WIRING (TYPICAL FOR ONE MODULE POSITION)



NOTE: INPUT POWER SUPPLY SHOULD BE UL LISTED FOR FIRE PROTECTION SIGNALING SYSTEMS WHEN USED IN FIRE ALARM APPLICATIONS

NOTE: DC COIL INPUTS ARE POLARIZED



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PRODUCT SPECIFICATIONS

MODEL NUMBERS:	MODULE POSITIONS	CONTACT CONFIGURATION PER POSITION	SPACER MOUNTED H x W x D	TRACK MOUNTED H x W x D	ENCLOSURE MOUNTED H x W x D	COVER MATERIAL	UL* FILE S3403	MEA FILE 73-92-E	CSFM FILE 7300-1004
SSU- MR-701/S	1	SPDT	3.25" (83mm) 1.06" (27mm) 1.25" (32mm)						
SSU- MR-701/T	1	SPDT		3.50" (89mm) 2.00" (51mm) 1.375" (35mm)			UOXX2		
SSU- MR-701/C	1	SPDT			5.125" (131mm) 3.125" (80mm) 2.50" (64mm)	Grey ABS 94V-O Plastic	UOXX		:110
SSU- MR-701/C/R	1	SPDT				Red ABS 94V-O Plastic	UOXX2	Vol. 29	
SSU- MR-702/S	2	SPDT	3.25" (83mm) 2.125" (54mm) 1.25" (32mm)						
SSU- MR-702/T	2	SPDT		3.50" (89mm) 2.125" (54mm) 1.375" (35mm)			UOXX2		
SSU- MR-702/C	2	SPDT			5.125" (131mm) 3.125" (80mm) 2.50" (64mm)	Grey ABS 94V-O Plastic	UOXX		:110
SSU- MR-702/C/R	2	SPDT				Red ABS 94V-O Plastic	UOXX2	Vol. 29	
SSU- MR-704/S	4	SPDT	3.25" (83mm) 4.25" (108mm) 1.25" (32mm)						
SSU- MR-704/T	4	SPDT		3.50" (89mm) 4.25" (108mm) 1.375" (35mm)			UOXX2		
SSU- MR-704/C	4	SPDT			5.125" (131mm) 9.50" (242mm) 2.50" (64mm)	Plated 18ga CRS	UOXX		:110
SSU- MR-704/C/R	4	SPDT				Red 18ga CRS	UOXX2	Vol. 29	
SSU- MR-708/S	8	SPDT	3.25" (83mm) 8.50" (215mm) 1.25" (32mm)						
SSU- MR-708/T	8	SPDT		3.50" (89mm) 8.50" (215mm) 1.375" (35mm)			UOXX2		
SSU- MR-708/C	8	SPDT			5.125" (131mm) 9.50" (242mm) 2.50" (64mm)	Plated 18ga CRS	UOXX		:110
SSU- MR-708/C/R	8	SPDT				Red 18ga CRS	UOXX2	Vol. 29	

POWER REQUIREMENTS: Per Position: 12VDC @ 17.5mA or 24VDC @ 21.2mA

POLARIZED COIL INPUT(S): DC inputs only

ENERGIZED LED INDICATOR: One red LED per module position

CONTACT RATINGS: Resistive load: 10A @ 120VAC / 30VDC

CONTACT CONSTRUCTION: One dry form "C" SPDT per module position

AMBIENT TEMPERATURE: 32°F to 120°F (0°C to 49°C) @ 85% RH (@ 32°F), Non-Condensing, Non-Freezing

WIRING: Solid or stranded; #12 to #22 AWG terminals

/T VERSIONS: 3.5" wide, low profile plastic snap track provided with mounting screws

/S VERSIONS: Aluminum Spacers provided with #8 X 7/8" self tapping sheet metal screws

/C VERSIONS: Back Box: 18ga CRS, plated with 1/2" conduit knockouts top and bottom

UOXX (UL864)=Control Unit Accessories, System; 2=Component



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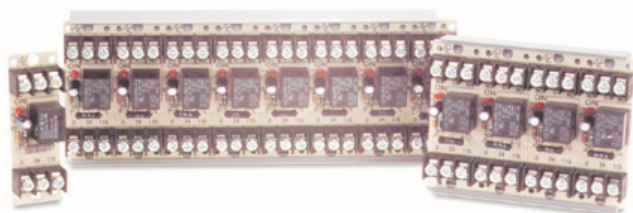
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MR8



MR-800 Series Relays

The MR-800 Series Relays provide SPDT 10 Amp contacts which may be operated by one of three input control voltages; 24VDC, 24VAC or 120VAC.

Each relay position contains a red LED which indicates the relay coil is energized. This provides a time saving device when checking an installed system - no metering is required. Relays may be "snapped apart" from standard 2, 4 or 8 position modules, and are also available in the single circuit configuration. Relays are supplied with either mounting spacers, track mounting hardware or are mounted in enclosures.

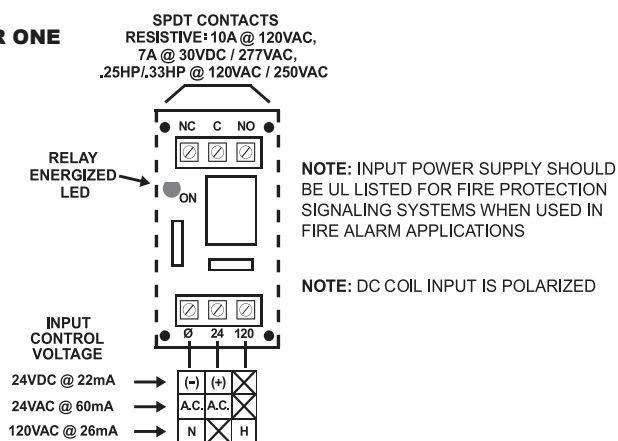
Standard Features:

- Relays may be energized from a voltage source of 24VDC, 24VAC or 120VAC
- Each relay position contains a red LED, which illuminates when the coil is energized
- Single, dual or triple relay modules may be "snapped apart" from standard 2, 4 or 8 position masters
- DC input is polarized
- For continuous duty use
- Available in dust resistant enclosure with LED viewing port(s)
- /C versions mounted in enclosures
- /C/R versions with red covers for NYC and other uses
- /T versions come complete with track mounting hardware which facilitates installation in standard cabinets
- /S versions supplied with spacers for installation on standard back panels
- Uses UL recognized components

These devices are ideal for applications where local contacts are required for control of electrical loads or general purpose switching. They are suitable for use with HVAC, temperature control, fire alarm, security, energy management and lighting control systems.

These devices are ideal for applications where control of 20 Amp electrical loads is required. They are suitable for use in HVAC, temperature control, fire alarm, security, energy management and lighting control systems.

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PRODUCT SPECIFICATIONS

MODEL NUMBERS:	MODULE POSITIONS	CONTACT CONFIGURATION PER POSITION	SPACER MOUNTED H x W x D	TRACK MOUNTED H x W x D	ENCLOSURE MOUNTED H x W x D	COVER MATERIAL	UL* FILE S3403	MEA FILE 73-92-E	CSFM FILE 7300-1004
SSU-MR-801/S	1	SPDT	3.25" (83mm) 1.06" (27mm) 1.25" (32mm)				UOXX2		
SSU-MR-801/T	1	SPDT		3.50" (89mm) 2.00" (51mm) 1.375" (35mm)					
SSU-MR-801/C	1	SPDT			5.125" (131mm) 3.125" (80mm)	Grey ABS 94V-O Plastic	UOXX		:110
SSU-MR-801/C/R	1	SPDT			2.50" (64mm)	Red ABS 94V-O Plastic	UOXX2	Vol. 29	
SSU-MR-802/S	2	SPDT	3.25" (83mm) 2.125" (54mm) 1.25" (32mm)				UOXX2		
SSU-MR-802/T	2	SPDT		3.50" (89mm) 2.125" (54mm) 1.375" (35mm)					
SSU-MR-802/C	2	SPDT			5.125" (131mm) 3.125" (80mm)	Grey ABS 94V-O Plastic	UOXX		:110
SSU-MR-802/C/R	2	SPDT			2.50" (64mm)	Red ABS 94V-O Plastic	UOXX2	Vol. 29	
SSU-MR-804/S	4	SPDT	3.25" (83mm) 4.25" (108mm) 1.25" (32mm)				UOXX2		
SSU-MR-804/T	4	SPDT		3.50" (89mm) 4.25" (108mm) 1.375" (35mm)					
SSU-MR-804/C	4	SPDT			5.125" (131mm) 9.50" (242mm)	Plated 18ga CRS	UOXX		:110
SSU-MR-804/C/R	4	SPDT			2.50" (64mm)	Red 18ga CRS	UOXX2	Vol. 29	
SSU-MR-808/S	8	SPDT	3.25" (83mm) 8.50" (215mm) 1.25" (32mm)				UOXX2		
SSU-MR-808/T	8	SPDT		3.50" (89mm) 8.50" (215mm) 1.375" (35mm)					
SSU-MR-808/C	8	SPDT			5.125" (131mm) 9.50" (242mm)	Plated 18ga CRS	UOXX		:110
SSU-MR-808/C/R	8	SPDT			2.50" (64mm)	Red 18ga CRS	UOXX2	Vol. 29	

POWER REQUIREMENTS: Per Position: 24VDC @ 22mA, 24VAC @ 60mA, or 120VAC @ 26mA

POLARIZED COIL INPUT(S): DC inputs only

ENERGIZED LED INDICATOR: One red LED per module position

CONTACT RATINGS: **Resistive load:** 10A @ 120VAC; 7A @ 30VDC / 277VAC **Inductive Load:** .25HP / .33HP @ 120VAC / 250VAC

CONTACT CONSTRUCTION: One dry form "C" SPDT per module position

AMBIENT TEMPERATURE: 32°F to 120°F (0°C to 49°C) @ 85% RH (@ 32°F), Non-Condensing, Non-Freezing

WIRING: Solid or stranded; #12 to #22 AWG terminals

/T VERSIONS: 3.5" wide, low profile plastic snap track provided with mounting screws

/S VERSIONS: Aluminum Spacers provided with #8 X 7/8" self tapping sheet metal screws

/C VERSIONS: Back Box: 18ga CRS, plated with 1/2" conduit knockouts top and bottom

UOXX (UL864)=Control Unit Accessories, System; 2=Component



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ED0287

LT10287

Rev.B

2/2

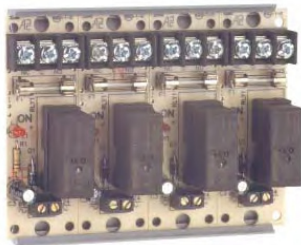
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EXCUSES!**

MR81

MR-810 Series Relays

The MR-810 Series Relays offer SPDT 10A resistive contacts which may be operated from either a 24VDC or a 24VAC control input. The input voltages are polarity sensitive and diode protected. The common output contact contains a 10A fuse which protects the contacts and load from over current. Each relay position contains a red LED which indicates when the relay coil is energized. Relays may be "snapped apart" from a standard 8 module assembly and used independently. Relays are available with snap track and mounting hardware or swage type spacers. A single MR-811, MR-812, MR-814 or MR-818 is also available mounted in a sturdy NEMA 1 enclosure.

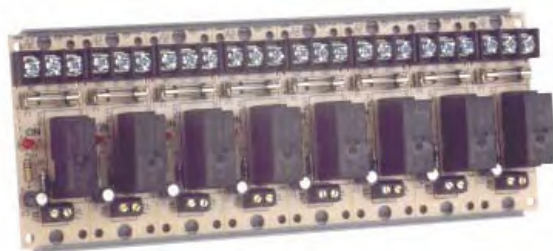
These devices are ideal for applications where protected control of up to 10A electrical loads are required. They are suitable for use with HVAC, Temperature Control, Fire Alarm, Security, Energy Management and Lighting Control Systems.



MR-814/T



MR-811/T



MR-818/T

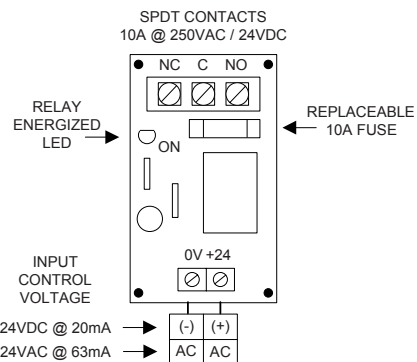
Standard Features:

- Each relay contains a high intensity LED indicating an energized coil status
- /C versions in dust proof metal enclosures with LED viewing port(s)
- /T versions include track mounting hardware to facilitate installation in standard cabinets
- UL recognized relays rated at 10,000,000 mechanical operations

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PRODUCT SPECIFICATIONS

MODEL NUMBER	MODULE POSITIONS	CONTACT S CONFIGURATION PER POSITION	PACER T MOUNTED M x W x D	RACK MOUNTED M H x W x D	ENCLOSURE MOUNTED M H x W x D	COVER MATERIAL
SSU- MR-811/S	1	SPDT	3.25" (83mm) 1.06" (27mm) 1.10" (28mm)			
SSU- MR-811/T				3.45" (88mm) 2.00" (51mm) 1.07" (27mm)		
SSU- MR-811/C					5.13" (130mm) 3.13" (79mm) P	Grey ABS 94V-O lastic
SSU- MR-811/C/R					2.50" (64mm) R	ed ABS 94V-O Plastic
SSU- MR-812/S	2	SPDT	3.25" (83mm) 2.12" (54mm) 1.10" (28mm)			
SSU- MR-812/T				3.45" (88mm) 2.13" (54mm) 1.07" (27mm)		
SSU- MR-812/C					5.13" (130mm) 3.13" (79mm) P	Grey ABS 94V-O lastic
SSU- MR-812/C/R					2.50" (64mm) R	ed ABS 94V-O Plastic
SSU- MR-814/S	4	SPDT	3.25" (83mm) 4.25" (108mm) 1.10" (28mm)			
SSU- MR-814/T				3.45" (88mm) 4.25" (108mm) 1.07" (27mm)		
SSU- MR-814/C					5.13" (130mm) 9.50" (241mm)	Plated 18ga CRS
SSU- MR-814/C/R					2.50" (64mm) R	ed 18ga CRS
SSU- MR-818/S	8	SPDT	3.25" (83mm) .50" (215mm) 1.10" (28mm)			
SSU- MR-818/T				3.45" (88mm) 8.50" (215mm) 1.07" (27mm)		
SSU- MR-818/C					5.13" (130mm) 9.50" (241mm)	Plated 18ga CRS
SSU- MR-818/C/R					2.50" (64mm) R	ed 18ga CRS

POWER REQUIREMENTS: 24VDC @ 20mA

(per position) 2 4VAC @ 63mA

COIL DATA: 24VDC/VAC nominal; Pick-up = 19.2VDC; Drop-out = 3.6VDC; Max. = 26.4VDC

COMPONENTS: Uses UL Recognized Components

POLARIZED: Yes

ENERGIZED LED INDICATOR: One per module position

CONTACT RATINGS: R esistive load: 10A @ 24VDC / 250VAC

ENVIRONMENTAL: 32°F to 120°F (0°C to 49°C) @ 85% RH, Non-condensing, Non-freezing

WIRING: Solid or stranded; #14 to #22 AWG terminals

FUSE: 10A field replaceable 0.25" Dia. X 0.75" L buss type

/S VERSIONS: Aluminum spacers provided with #8 X 7/8" screws

/T VERSIONS: 3.5" wide, low profile plastic snap track provided with mounting screws

/C VERSIONS: Backbox: 18ga CRS, plated with 1/2" conduit knockouts top and bottom



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LT10512

Rev.A

2/2

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MR9

MR-900 Series Relays

The MR-900 Series Latching Relays provide DPDT 10 Amp contacts which only requires a momentary impulse (24VAC or 24VDC) in order to latch. The relay also requires a like 24VAC or 24VDC steady power source; reset occurs either by depressing the on board N.C. momentary push button switch or by momentarily removing the steady (SUP) power from the circuit.

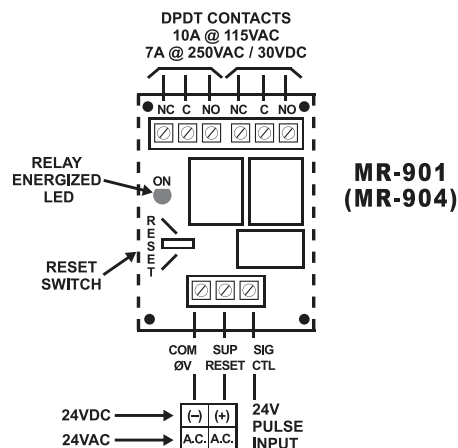
Each relay position contains a high intensity LED which when illuminated indicates the relay coil is energized. This provides a time saving convenience when checking an installed system, no metering is required.

Individual relay circuits may be "snapped apart" from a standard 4 position module and are also available in the single circuit configuration. These relays are equipped with either track mounting hardware or metal enclosure.

Standard Features:

- Each relay contains a high intensity red LED indicating energized coil status
- Single, dual, or triple relay modules may be "snapped apart" from a standard 4 position master
- /C versions available in dust proof metal enclosures with LED viewing port(s)
- /T versions include track mounting hardware to facilitate installation in standard cabinets
- UL recognized relays rated at 10,000,000 mechanical operations

WIRING (TYPICAL FOR ONE MODULE POSITION)



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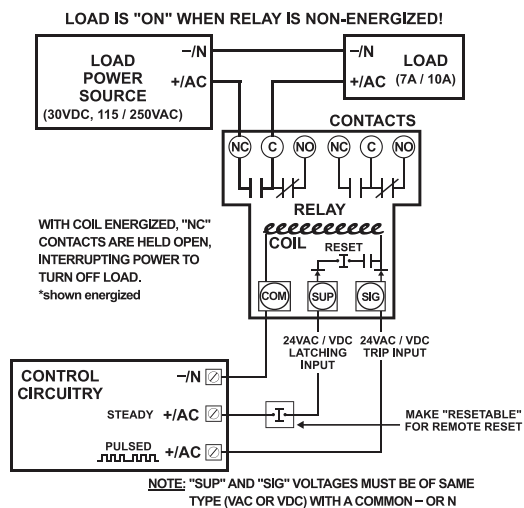
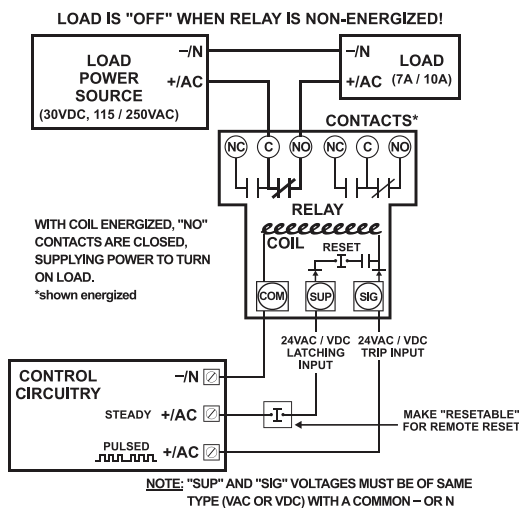


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PRODUCT SPECIFICATIONS

MODEL NUMBER	MODULE POSITIONS	CONTACT T CONFIGURATION PER POSITION H	RACK MOUNTED M x W x D	ENCLOSURE MOUNTED H x W x D	COVER MATERIAL
SSU-MR-901/T	1	DPDT	3.40" (87mm) 2.13" (54mm) 1.25" (32mm)	5.13" (130mm) 3.13" (79mm) 2.50" (64mm)	Grey ABS 94V-O Plastic
SSU-MR-901/C					
SSU-MR-901/C/R					Red ABS 94V-O Plastic
SSU-MR-904/T	4	DPDT	3.40" (87mm) 8.50" (215mm) 1.25" (32mm)	5.13" (130mm) 9.50" (241mm) 2.50" (64mm)	Plated 18ga CRS
SSU-MR-904/C					
SSU-MR-904/C/R					Red 18ga CRS

POWER REQUIREMENTS:	24VDC @ 42mA (per position)	24VAC @ 45mA
COIL DATA:	24VDC/VAC nominal; Pick-up = 19.2VDC; Drop-out = 3.6VDC; Max = 26.4VDC	
COMPONENTS:	Uses UL Recognized Components	
POLARIZED:	Yes	
ENERGIZED LED INDICATOR:	One per module position	
CONTACT RATINGS:	Resistive load: 10A @ 115VAC; 7A @ 250VAC / 30VDC	
ENVIRONMENTAL:	32°F to 102°F (0°C to 49°C) @ 85% RH, Non-condensing, Non-freezing	
WIRING:	Solid or stranded; #12 to #22 AWG terminals	
PUSHBUTTON SWITCH:	One per module position	
/T VERSIONS:	3.5" wide, low profile plastic snap track provided with mounting screws	
/C VERSIONS:	Backbox: 18ga CRS, plated with 1/2" conduit knockouts top and bottom	



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LT10288

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MR-820 Series Relays

The MR-820 Series Relays provide SPDT contacts which operate from a 24VDC input. Each relay position contains two independent UL recognized relays and a red LED which indicates a relay energized condition.

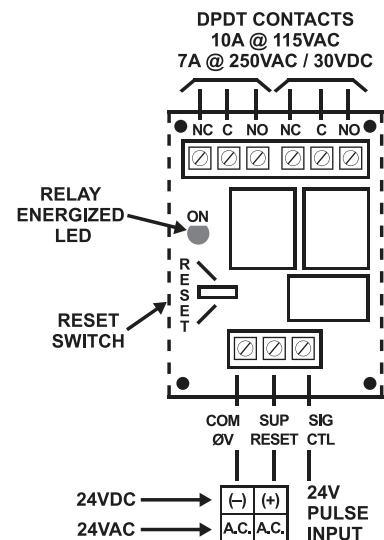
The MR-828 is an 8 position (16 relays) standard module. Individual sections which contain 2 relays may be "snapped apart" in any increments, up to 8.

Relays are equipped with either mounting spacers or track mounting hardware. These devices are Ideal for applications where high density relay switching is required. They are suitable for use with HVAC, fire alarm security and energy management systems.

Standard Features:

- Each relay contains two high intensity red LED indicating energized coil status
- Relay modules may be "snapped apart" from a standard 8 position master
- /S versions supplied with spacers for installation on standard back panels
- /T versions include track mounting hardware to facilitate installation in standard cabinets

WIRING (TYPICAL FOR ONE MODULE POSITION)



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PRODUCT SPECIFICATIONS

MODEL NUMBER	MODULE POSITIONS	CONTACT CONFIGURATION PER POSITION	SPACER MOUNTED H x W x D	TRACK MOUNTED H x W x D	ENCLOSURE MOUNTED H x W x D	COVER MATERIAL
MR-821/S	1	SPDT	3.25" (83mm) 1.06" (27mm) 1.76" (45mm)			
MR-821/T				3.45" (88mm) 2.00" (51mm) 1.83" (46mm)		
MR-821/C					5.13" (130mm) 3.13" (79mm) 2.50" (64mm)	Grey ABS 94V-O Plastic
MR-821/C/R						Red ABS 94V-O Plastic
MR-824/S	4	SPDT	3.25" (83mm) 4.25" (108mm) 1.76" (45mm)			
MR-824/T				3.45" (88mm) 4.25" (108mm) 1.83" (46mm)		
MR-824/C					5.13" (130mm) 9.50" (241mm) 2.50" (64mm)	Plated 18ga CRS
MR-824/C/R						Red 18ga CRS
MR-828/S	8	SPDT	3.25" (83mm) 8.50" (215mm) 1.76" (45mm)			
MR-828/T				3.45" (88mm) 8.50" (215mm) 1.83" (46mm)		
MR-828/C					5.13" (130mm) 9.50" (241mm) 2.50" (64mm)	Plated 18ga CRS
MR-828/C/R						Red 18ga CRS

POWER REQUIREMENTS: Per position: 24VDC @ 17mA

COIL DATA: 24VDC nominal; Pick-up = 19.2VDC; Drop-out = 3.6VDC; Max. = 26.4VDC

COMPONENTS: Utilizes UL Recognized Components

POLARIZED: Yes

ENERGIZED LED INDICATOR: One per module position

CONTACT RATINGS: Resistive load: 40mA @ 115VAC / 2A @ 30VDC

Inductive load: 20mA @ 115VAC / 1A @ 30VDC

ENVIRONMENTAL: 32°F to 120°F (0°C to 49°C) @ 85% RH, Non-condensing, Non-freezing

WIRING: Solid or stranded; #14 to #22 AWG terminals

/S VERSIONS: Aluminum spacers provided with #8 X 7/8" screws

/T VERSIONS: 3.5" wide, low profile plastic snap track provided with mounting screws

/C VERSIONS: Backbox: 18ga CRS, plated with 1/2" conduit knockouts top and bottom



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MR-110 Series Relays

The MR-110 Series Relays provide SPDT 20 Amp contacts which are operated from a 24VDC control input. The common output contains a 20 Amp fuse which protects the contacts and load from over current.

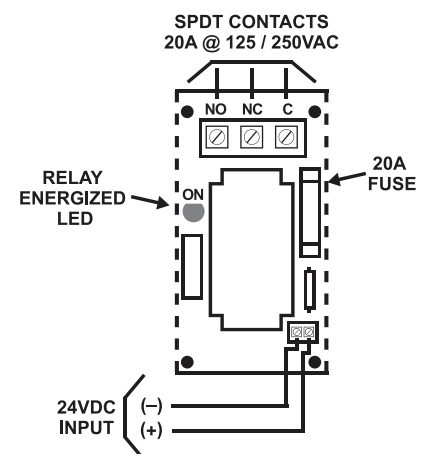
Each relay contains a high intensity red LED which when illuminated indicates the relay coil is energized. Individual relays may be "snapped apart" from a standard 4 position module. Relays are available with track mounting hardware or a single MR-110 is available mounted in a NEMA 1 enclosure.

These devices are ideal for applications where control of 20 Amp electrical loads is required. They are suitable for use in HVAC, temperature control, fire alarm, security, energy management and lighting control systems.

Standard Features:

- Relay contains a high intensity red LED indicating energized coil status
- Single, dual, or triple relay modules may be "snapped apart" from a standard 4 position master
- /C versions available in dust proof metal enclosures with LED viewing port(s)
- /T versions include track mounting hardware to facilitate installation in standard cabinets

WIRING (TYPICAL FOR ONE MODULE POSITION)



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PRODUCT SPECIFICATIONS

MODEL NUMBER	MODULE POSITIONS	CONTACT CONFIGURATION PER POSITION	TRACK MOUNTED M H X W X D	ENCLOSURE MOUNTED H X W X D	COVER MATERIAL
SSU-MR-111/T	1	SPDT	3.40" (86mm) 2.14" (54mm) 3.65" (92mm)		
SSU-MR-111/C	1	SPDT	3	5.125" (130mm) .1" (78mm) 4.12" (104mm)	Plated 18ga CRS
SSU-MR-111/C/R	1	SPDT	3	5.125" (130mm) .1" (78mm) 4.12" (104mm)	Red 18ga CRS
SSU-MR-114/T	4	SPDT	3.40" (86mm) 8.56" (217mm) 3.65" (92mm)		

POWER REQUIREMENTS:	Per module position: 24VDC @ 67mA
COIL DATA:	24VDC nominal, Pick-up = 19.2VDC, Drop-out = 3.6VDC, Max = 26.4VDC
COMPONENTS:	Uses UL Recognized
POLARIZED:	Yes
ENERGIZED LED INDICATOR:	One per module position
CONTACT RATINGS:	20A @ 125 / 250VAC resistive; 10A @ 125 / 250VAC inductive 0.75PF; 0.5KW @ 125VAC lamp; 0.75HP @ 125VAC / 2HP @ 250VAC motor; 15A @ 24VDC / 0.8A @ 125VDC resistive
ENVIRONMENTAL:	32°F to 120°F (0°C to 49°C) @ 85% RH (@ 32°F), Non-condensing, Non-freezing
WIRING:	Solid or stranded; #12 to #22 AWG terminals
FUSE:	20A field replaceable 1.25" buss type
/T VERSIONS:	3.5" wide, low profile plastic snap track provided with mounting screws
/C VERSIONS:	Backbox: 18ga CRS, plated with 1/2" conduit knockouts top and bottom



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ED0284

LT10284

Rev.C

2/2

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MRH

MR0199 Series Relays

The MR-199 Series Heavy Duty Power Relays provide DPDT 30 Amp contacts which are operated from either a 120VAC or 24VDC control input. These relays are designed for control applications where 30-AMP DPDT contacts are required. Two models are available; a 120VAC coil and a 24VDC coil each of which may be mounted in a rugged steel enclosure.

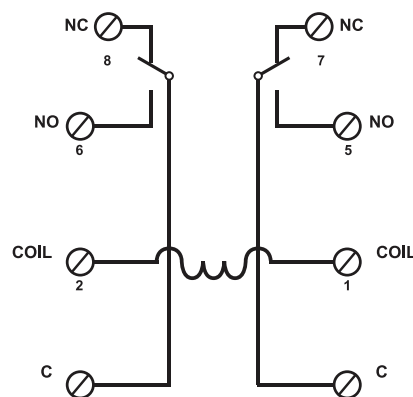


WIRING

Standard Features:

- DPDT Standard contact arrangement
- /C versions mounted in rugged steel enclosure

MR-199 Series



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PRODUCT SPECIFICATIONS

MODEL NUMBER V	INPUT VOLTAGE	MODULE POSITIONS	CONTACT CONFIGURATION PER POSITION	RELAY ONLY H X W X D	ENCLOSURE MOUNTED H X W X D	COVER MATERIAL	UL* FILE S3403
SSU-MR-199X-13	24VDC	1	DPDT	3.33" (84mm) 2.50" (63mm) 2.18" (55mm)			UOXX2
SSU-MR-199X-14	120VAC						
SSU-MR-199X-13/C	24VDC	1	DPDT		5.35" (136mm) 3.41" (86mm) 3.04" (77mm)	Grey 18ga CRS	UOXX UOXX2 UUKL UUKL2
SSU-MR-199X-14/C	120VAC						
SSU-MR-199X-13/C	24VDC	1	DPDT		5.35" (136mm) 3.41" (86mm) 3.04" (77mm)	Red 18ga CRS	UOXX UOXX2 UUKL UUKL2
SSU-MR-199X-14/C	120VAC						

POWER REQUIREMENTS: **MR-199X-13** 24VDC @ 85mA, Minimum pull-in voltage: 75% of nominal voltage @ 25°C
MR-199X-14 120VAC @ 85mA, Minimum pull-in voltage: 85% of nominal voltage @ 25°C

COIL DATA: Nominal DC coils (-13) 2.0 Watts @ 25°C
 AC coils (-14) 9.8VA @ 25°C
 Max DC coils (-13) 8.0 Watts @ 25°C

COMPONENTS: UL Recognized as component; UL Listed when installed in enclosure (/C versions)

POLARIZED: No

CONTACT RATINGS: 30A @ 240VAC; 20A @ 277VAC; 2HP @ 240VAC / 1.5HP @ 120VAC

CONTACT CONSTRUCTION: Dry form "C" DPDT

ENVIRONMENTAL: 32°F to 120°F (0°C to 49°C) @ 85% RH (@ 32°F), Non-condensing, Non-freezing

WIRING: #6 to #14 AWG terminals

/C VERSIONS: Backbox: 18ga CRS, plated with 1/2" conduit knockouts top and bottom

*UOXX = Control Unit Accessories, System; 2 = Component

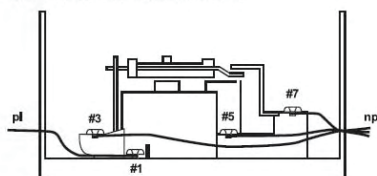
UUKL = Smoke Control System Equipment

UUKL2 = Control System Equipment, Smoke

POWER LIMITED WIRING

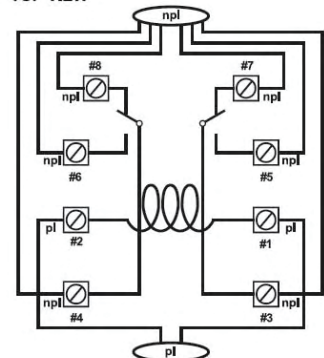
MR-199X-13
MR-199X-13/C
MR-199X-13/C/R
 COIL POWER: 24VDC

SIDE VIEW - OTHER SIDE IDENTICAL



*pl = POWER LIMITED
 *npl = NON-POWER LIMITED

TOP VIEW

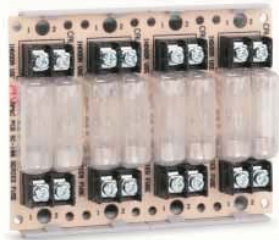


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CAUTION: MINIMUM 1/4" SEGREGATION BETWEEN POWER LIMITED AND NON-POWER LIMITED WIRING
CAUTION: DE-ENERGIZE POWER BEFORE SERVICE
CAUTION: NON-ENCLOSED VERSIONS MUST BE MOUNTED IN THE APPLICATION ENCLOSURE

**NO
EXCUSES!**



SC1

SC-100 Series Fuse Board Module

The SC-100 Series Fuse Modules provide a safe and convenient way to protect control and load circuits from over-current conditions. The SC-100 series is properly configured for maximum rated limit of (10A @ 250VAC). The SC-100 Series comes complete with 10A @ 250VAC fuses pre-installed with a protective cover on the fuse.

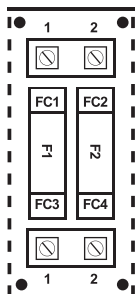
Modules may be 'snapped apart' from a standard 4 module assembly and used independently. SC-100 Series modules provide two independent circuits per module position. By jumpering the individual fused circuits together on the power input side, these modules make an excellent power distribution solution for a centralized power source.

Standard Features:

- Provides two independent fuse circuits (per module)
- Circuits rated to a maximum of 10A @ 250VAC
- Protective fuse covers provided
- Simple wire jumpering on feed side allows use as a dual circuit power distribution module
- Compact PCB size allows for high density integration
- Provided fuse clips accept standard .25" X 1.25" buss type fuse(AG Series) (max. 10A @ 250VAC)
- Un-loaded fuse clips allow for custom application fusing of independent circuits- VAC and VDC at various currents up to 10A @ 250VAC max. (SC-110 Series)
- "T" versions come complete with track and track mounting hardware which facilitates installation in standard cabinets
- "C" versions mounted in dust resistant enclosures
- "C/R" versions, enclosure mounted with red cover for NYC and other uses

WIRING (TYPICAL FOR ONE MODULE POSITION)

10A @ 250VAC / VDC
(MAXIMUM PER FUSE CIRCUIT)



SSU-SC-111



CAUTION: DO NOT EXCEED FUSE RATINGS
CAUTION: DE-ENERGIZE POWER BEFORE SERVICE
NOTE: SC-100 SERIES FUSES INSTALLED ARE TO BE UL LISTED OR UL RECOGNIZED

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Specifications

/T = Track Mounted
/C = Metal Enclosure
/R = Red Finish

 SAE PN# WITH 10A FUSES LOADED	MODULE POSITIONS	TOTAL FUSE CIRCUITS	TRACK MOUNTED H X W X D	ENCLOSURE MOUNTED H X W X D	COVER MATERIAL
SSU-SC-111/T	1	2	3.40" (86mm) 2.00" (51mm) 1.15 (30mm)	5.13" (131mm) 3.13" (80mm) 2.50" (64mm)	
SSU-SC-111/C					Grey ABS 94V-O Plastic
SSU-SC-111/C/R					Red ABS 94V-O Plastic
SSU-SC-112/T	2	4	3.40" (86mm) 2.13" (54mm) 1.15" (30mm)	5.13" (131mm) 3.13" (80mm) 2.50" (64mm)	
SSU-SC-112/C					Grey ABS 94V-O Plastic
SSU-SC-112/C/R					Red ABS 94V-O Plastic
SSU-SC-114/T	4	8	3.40" (86mm) 4.25" (108mm) 1.15" (30mm)	5.13" (131mm) 9.50" (242mm) 2.50" (64mm)	
SSU-SC-114/C					Plated 18ga CRS
SSU-SC-114/C/R					Red 18ga CRS
SSU-SC-118/T	8	16	3.40" (86mm) 8.50" (215mm) 1.15" (30mm)	5.13" (131mm) 9.50" (242mm) 2.50" (64mm)	
SSU-SC-118/C					Plated 18ga CRS
SSU-SC-118/C/R					Red 18ga CRS
POWER CAPACITY: Per fuse circuit: 0 to 250VAC/VDC @ 0 to 10A max.					
FUSE RATING: SC-110 Series:Factory installed fuses with a maximum rated limit of 10A @ 250VAC/VDC					
FUSE TYPE: .25" X 1.25" buss type-3AG					
FUSE SIZING: SC-100 versions only: refer to NEC (National Electric Code) for guidelines on sizing fuses to match application					
AMBIENT TEMPERATURE: 32°F to 120°F (0°C to 49°C) @ 93% RH, NON-condensing					
WIRING: #12 to #22 AWG terminals					
"R" VERSIONS: Red Backbox: 18ga CRS, plated with 1/2" conduit knockouts top and bottom					
"T" VERSIONS: 3.5" wide, low profile plastic snap track provided with mounting screws					
"C" VERSIONS: Backbox: 18ga CRS, plated with 1/2" conduit knockouts top and bottom					

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**NO
EXCUSES!**



SC-200 Series Diode Matrix Module

The SC-200 Series Triple Diode Matrix Modules provide a convenient way to insert diode based isolation and logic functionality to low voltage DC control circuitry. The SC-200 Series is equipped with three individual 1A diodes. The module also incorporates 4 re-configurable jumpers which allow for an individual common cathode and/or common anode matrix format. By jumpering from module to module an endless size and format matrix can be application configured.

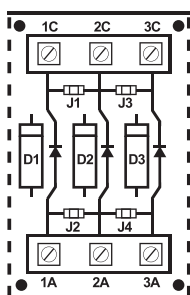
For isolation of a single circuit control input, polarization of control circuits, or custom application logic matrix construction, the SC-200 provides and easy field configurable diode matrix solution.

Standard Features:

- Provides three diode circuits
- Diode circuits can be jumper configured for independent, common anode, common cathode, and/or combinations
- Plug and header jumpers allow for easy future re-configuration
- Diodes are 1A (3W) rated for low voltage DC control circuits (up to 48 VDC)
- Compact PCB size allows for high density integration
- "/T" versions come complete with track and track mounting hardware which facilitates installation in standard cabinets
- "/T" version track is a DIN/"A" rail mounted clip ready both DIN and A series rail
- "/C" versions mounted in dust resistant enclosures
- "/C/R" versions, enclosure mounted with red cover for NYC and other uses

WIRING (TYPICAL FOR ONE MODULE POSITION)

Diodes Block ≤ 400



SSU-SC-201
Diodes Drop
1.1 VDC @ 1A MAX

DC VOLTAGE PASSES
48VDC @ 1A MAX



CAUTION: DE-ENERGIZE POWER BEFORE SERVICE

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Specifications

/T = Track Mounted
/C = Metal Enclosure
/R = Red Finish

SAE PN#	MODULE POSITIONS	TOTAL DIODE CIRCUITS	TRACK MOUNTED H X W X D	ENCLOSURE MOUNTED H X W X D	COVER MATERIAL
SSU-SC-201/T	1	2	3.40" (86mm) 2.00" (51mm) 1.10" (28mm)	5.13" (131mm) 3.13" (80mm) 2.50" (64mm)	
SSU-SC-201/C					Grey ABS 94V-O Plastic
SSU-SC-201/C/R					Red ABS 94V-O Plastic
SSU-SC-202/T	2	4	3.40" (86mm) 2.13" (54mm) 1.10" (28mm)	5.13" (131mm) 3.13" (80mm) 2.50" (64mm)	
SSU-SC-202/C					Grey ABS 94V-O Plastic
SSU-SC-202/C/R					Red ABS 94V-O Plastic
SSU-SC-204/T	4	8	3.40" (86mm) 4.25" (108mm) 1.10" (28mm)	5.13" (131mm) 9.50" (242mm) 2.50" (64mm)	
SSU-SC-204/C					Plated 18ga CRS
SSU-SC-204/C/R					Red 18ga CRS
SSU-SC-208/T	8	16	3.40" (86mm) 8.50" (215mm) 1.10" (28mm)	5.13" (131mm) 9.50" (242mm) 2.50" (64mm)	
SSU-SC-208/C					Plated 18ga CRS
SSU-SC-208/C/R					Red 18ga CRS

FORWARD POWER CAPACITY: Per diode circuit: 0 to 48VDC @ 0 to 1A max. (3W max.)

FORWARD VOLTAGE DROP: Per diode circuit: 1.1VDC @ 1A max.

PEAK INVERSE BLOCKING VOLTAGE: Per diode circuit: 400VDC

DIODE TYPE: 1N4004, DO-41 package

AMBIENT TEMPERATURE: 32°F to 120°F (0°C to 49°C) @ 93% RH, NON-condensing

WIRING: #12 to #22 AWG terminals

"/R" VERSIONS: Red Backbox: 18ga CRS, plated with 1/2" conduit knockouts top and bottom

"/T" VERSIONS: 3.5" wide, low profile plastic snap track provided with mounting screws

"/C" VERSIONS: Backbox: 18ga CRS, plated with 1/2" conduit knockouts top and bottom

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**NO
EXCUSES!**

SC3



SSU-SC-314/C



SSU-SC-311/C/R

SC-310 Series Timing Relay Module

The SC-310 Series Timing Relay modules provide convenient, programmable timing control functionality for a large range of applications. The module may be easily field configured (and re-configured) on demand for control input voltage type, timer delay modes, time measurement units and timing increments.

The SC-310 incorporates an extremely accurate microprocessor-based digital timing circuit for repeatable reliability and long life. In addition, each module includes a dual color LED, which provides visual status of control input voltage, timer circuitry activation and relay contact state. Automatic timer reset is accomplished by simply removing and/or momentarily interrupting the control input voltage. Timing relays may be used in cascaded and paralleled configurations (and/or matrixes of both) for nearly endless custom application functionality. The SC-310 Series Timing Relay is suitable for Fire Alarm, Security, Access Control, CCTV, HVAC, Industrial Process Control, Energy Management, Lighting Control and general purpose applications.

Standard Features:

- Control input voltage choices of 12 or 24 VAC/VDC
- DC type control inputs are polarized for use in supervised circuits
- Timing mode choices of "Delay On" (delay relay on operation) or "Delay Off" (automatic relay shut down)
- Time units of measure selection for seconds or minutes
- Timing increment choices of 15, 30, 45 or 60 seconds; or 2, 5, 10 or 15 minutes
- Accurate microprocessor digital timing to 1/1,000,000th of a second
- All programming choices are easily field configured or re-configured without special tools
- Dual color LED status indicator yields "No-Tools" diagnostics; green for timer active and red for relay energized
- On board 5A dry form "C" (SPDT) contact for direct load switching and reverse logic functionality
- "/C" versions mounted in sturdy enclosures with LED viewing port(s)
- "/C/R" versions with red covers for NYC and other uses
- "/T" versions come complete with track and mounting hardware - track is pre-configured for an optional DIN/"A" series rail mounting clip (TK-CL)
- Comprehensive selection of Listings and Approvals

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WIRING (TYPICAL FOR ONE MODULE POSITION)

NOTE: INPUT POWER SHOULD BE UL LISTED FOR FIRE PROTECTION SIGNALING SYSTEMS WHEN USED IN FIRE ALARM APPLICATIONS.

NOTE: DC COIL INPUT IS POLARIZED.

TIMING RELAY OPERATION

DELAY ON: Delays the transfer of a relay's contacts from the normal (non-energized) state until after a present amount of time has elapsed following application of the control input voltage.

DELAY OFF: Automatically returns a relay's contacts to the normal (non-energized) state after a preset amount of time has elapsed following application of the control input voltage, even though the control input voltage remains present. Also known as a "cut off" or "shut down" timer.



SPDT Contact:

Resistive: 5A @ 30VDC, 120VAC, 240VAC
1/8HP @ 250VAC
Inductive: 1.5A @ 24VAC, 120VAC, 240VAC
Power: 150W, 1200VA

Control Input Voltages:

12 (9.6-13.2) VAC/VDC @ 60mA
24 (19.2-26.4) VAC/VDC @ 45mA

POWER REQUIREMENTS:

Voltage	Active	Relay On
12VDC	10.0mA	60.0mA
12VAC	12.0mA	58.0mA
24VDC	17.0mA	44.0mA
24VAC	18.0mA	45.0mA

POLARIZED:	Yes, on DC control inputs
STATUS INDICATOR:	Dual color LED; Green = timer active; Red = relay energized
CONTACT CONSTRUCTION:	Dry Form "C" (SPDT)
CONTACT RATINGS:	Resistive: 5A @ 30VDC, 120VAC, 240VAC; 1/8HP @ 250VAC Inductive: 1.5A @ 24VDC, 120VAC, 240VAC Power: 150W, 1200VA
ENVIRONMENTAL:	32°F to 120°F (0°C to 49°C) @ 93% RH (@32°C), Non-Condensing / Non-Freezing
WIRING:	Solid or Stranded; #12 to #22 AWG terminals
"T" VERSIONS:	3.5" wide, low profile plastic snap track with mounting screws; optional TK-CL ready
"C" VERSIONS: Backbox:	18ga CRS, plated with 1/2" conduit knockouts top and bottom

- *UOXX (UL864) = Control Unit Accessories, System; 2=Component; 7=Certi.ed for Canada
- *UUKL (UL864) = Smoke Control System Equipment, System; 2=Component
- *NMTR (UL508) = Miscellaneous Apparatus, System; 2=Component
- *PAZX (UL916) = Energy Management Equipment, System; 2=Component
- *UEHX (UL2017) = General Purpose Signaling Devices and Systems, System; 2=Component

Product Specifications

SAE PN#	MODULE POSITIONS	TRACK MOUNTED H x W x D	ENCLOSURE MOUNTED H x W x D	COVER MATERIAL	UL* FILE S3403
SSU-SC-311/C	1		5.13" (131mm) 3.13" (80mm) 2.50" (64mm)	Grey ABS 94V-0 Plastic	UOXX UUKL PAZX
SSU-SC-311/C/R	1			Red ABS 94V-0 Plastic	UOXX7 NMTR UEHX
SSU-SC-311/T	1	3.50" (89mm) x 2.13" (54mm) x 1.50" (38mm)			UOXX2 NMTR2 UEHX2
SSU-SC-314/C	4		5.13" (131mm) 9.50" (241mm) 2.50" (64mm)	Plated 18ga CRS	UOXX UUKL PAZX
SSU-SC-314/C/R	4			Red 18ga CRS	UOXX7 NMTR UEHX
SSU-SC-314/T	4	3.50" (89mm) x 8.50" (215mm) x 1.50" (38mm)			UOXX2 NMTR2 UEHX2

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**NO
EXCUSES!**

SC4



SSU-SC-414/C



SSU-SC-411/C/R

SC-410 Series Sequencing Relay Module

The SC-410 Series Sequencing Relay modules provide convenient, programmable timed control functionality for a large range of applications. The module may be easily field configured (and re-configured) on demand for control input voltage type and sequence patterns.

The SC-410 incorporates an extremely accurate microprocessor-based digital sequencing circuit for repeatable reliability and long life. In addition, each module includes a dual color LED, which provides visual status of control input voltage, sequence circuitry activation and relay contact state. Automatic sequence reset is accomplished by simply removing and/or momentarily interrupting the control input voltage. Sequencing relays may be used in cascaded and paralleled configurations (and/or matrixes of both) for nearly endless custom application functionality. The SC-410 Series Sequencing Relay is suitable for Fire Alarm, Security, Access Control, CCTV, HVAC, Industrial Process Control, Energy Management, Lighting Control and general purpose applications.

Standard Features:

- Control input voltage choices of 12 or 24 VAC/VDC
- DC type control inputs are polarized for use in supervised circuits
- Sequencing mode choices of :
 - *One Shot*
 - *Temporal* (ANSI Temporal Code 3)
 - *Duty Cycle* (including 1, 5 and 10 minute "on" time choices)
 - *March Time Beat* (including 30, 60 and 120 beats/minute choices)
- Accurate microprocessor digital timing to 1/1,000,000th of a second
- All programming choices are easily field configured or re-configured without special tools
- Dual color LED status indicator yields "No-Tools" diagnostics; green for sequencing circuitry active and red for relay energized
- On board 5A dry form "C" (SPDT) contact for direct load switching and reverse logic functionality
- "/C" versions mounted in sturdy enclosures with LED viewing port(s)
- "/C/R" versions with red covers for NYC and other uses
- "/T" versions come complete with track and mounting hardware - track is pre-configured for an optional DIN/"A" series rail mounting clip (TK-CL)
- Comprehensive selection of Listings and Approvals

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WIRING (TYPICAL FOR ONE MODULE POSITION)

NOTE: INPUT POWER SHOULD BE UL LISTED FOR FIRE PROTECTION SIGNALING SYSTEMS WHEN USED IN FIRE ALARM APPLICATIONS.

NOTE: DC COIL INPUT IS POLARIZED.

SEQUENCING OPERATION

ONE SHOT: Yields a relay contact transfer for one second after a sixty second delay upon control voltage input, provided the control input voltage is still present after the sixty second delay.

TEMPORAL: Yields a relay contact transfer at an ANSI Temporal (Code 3) rate as long as the control voltage is present.

DUTY CYCLE: Yields a repeated transfer of relay contacts on and off (for equal intervals) at a preset interval, as long as the control voltage is present. Options include one, five and ten minute on/off intervals.

MARCH TIME BEAT: Yields a repeated transfer of relay contacts on and off (for equal intervals) at a preset beats-per-minute (BPM) frequency, as long as the control voltage is present. Options include the following:

March Time Slow: 30BPM (0.5Hz); relay contacts are on for 1 second, off for 1 second

March Time Normal: 60BPM (1Hz); relay contacts are on for 0.5 second, off for 0.5 second

March Time Fast: 120BPM (2Hz); relay contacts are on for 0.25 second, off for 0.25second

POWER REQUIREMENTS:	<u>Voltage</u>	<u>Active</u>	<u>Relay On</u>
	12VDC	10.0mA	60.0mA
	12VAC	13.0-26.0mA	58.0mA(*Depending on program selection)
	24VDC	16.0mA	47.0mA
	24VAC	20.0mA	44.0mA

POLARIZED:	Yes, on DC control inputs
STATUS INDICATOR:	Dual color LED; Green = sequencing circuit; Red = relay energized
CONTACT CONSTRUCTION:	Dry Form "C" (SPDT)
CONTACT RATINGS:	Resistive: 5A @ 30VDC, 120VAC, 240VAC; 1/8HP @ 250VAC Inductive: 1.5A @ 24VDC, 120VAC, 240VAC Power: 150W, 1200VA
ENVIRONMENTAL:	32°F to 120°F (0°C to 49°C) @ 93% RH (@32°C), Non-Condensing / Non-Freezing
WIRING:	Solid or Stranded; #12 to #22 AWG terminals
"/T" VERSIONS:	3.5" wide, low profile plastic snap track with mounting screws; optional TK-CL ready
"/C" VERSIONS: Backbox:	18ga CRS, plated with 1/2" conduit knockouts top and bottom

*UOXX (UL864) = Control Unit Accessories, System; 2=Component; 7=Certified for Canada

*UUKL (UL864) = Smoke Control System Equipment, System; 2=Component

*NMTR (UL508) = Miscellaneous Apparatus, System; 2=Component

*PAZX (UL916) = Energy Management Equipment, System; 2=Component

*UEHX (UL2017) = General Purpose Signaling Devices and Systems, System; 2=Component

Product Specifications

SAE PN#	MODULE POSITIONS	TRACK MOUNTED H x W x D	ENCLOSURE MOUNTED H x W x D	COVER MATERIAL	UL* FILE S3403	
SSU-SC-411/C	1		5.13" (131mm) 3.13" (80mm) 2.50" (64mm)	Grey ABS 94V-0 Plastic	UOXX UUKL PAZX	UOXX7 NMTR UEHX
SSU-SC-411/C/R	1			Red ABS 94V-0 Plastic		
SSU-SC-411/T	1	3.50" (89mm) x 2.13" (54mm) x 1.50" (38mm)			UOXX2 NMTR2 UEHX2	UKL2 AXZ2
SSU-SC-414/C	4		5.13" (131mm) 9.50" (241mm) 2.50" (64mm)	Plated 18ga CRS	UOXX UUKL PAZX	UOXX7 NMTR UEHX
SSU-SC-414/C/R	4			Red 18ga CRS		
SSU-SC-414/T	4	3.50" (89mm) x 8.50" (215mm) x 1.50" (38mm)			UOXX2 NMTR2 UEHX2	UKL2 PAZX2

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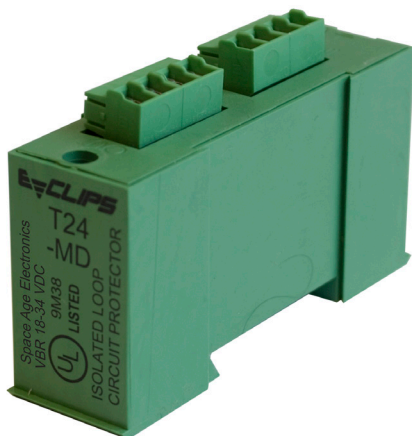
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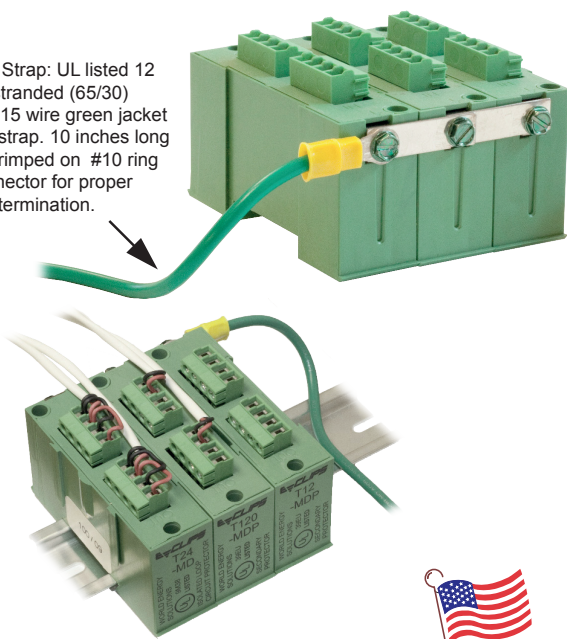
**NO
EXCUSES!**



Standard Features:

- Hybrid electronics SAD and GDT
- Single point ground
- 12 AWG green ground strap
- Available voltage 5v, 12v, 24v, 48v, 70v, 90v, 120v
- Polycarbonate plastic case AF-312
- Removable terminal connection
- Each device is easily field replaceable
- 3 mounting configuration
 - din rail
 - snap track
 - panel mount (screw)

Ground Strap: UL listed 12 gauge stranded (65/30) AWM1015 wire green jacket ground strap. 10 inches long with a crimped on #10 ring lug connector for proper ground termination.



Low Voltage Surge Protection Device

The Eclipse MD series of hybrid TVSS devices are designed with silicone avalanche diodes (SAD) and metal oxide varistors (MOV) to protect sensitive electronic equipment by clamping over-voltage energy pulses and discharging them to ground. This unique design along with the hybrid electronics will protect critical system components. The first Surge Protection Device (SPD) that is truly scalable and provides real solutions. The packaging allows for mixed technology to be configured together that maintains system integrity managing ground planes and structured wiring for service and maintenance. The design features slide together modules and provides panel screw mount, snap track or Din rail mounting options. Coupled with pluggable screw terminals for easy replacement and servicing.

Transient Voltage Surge Suppressors (TVSS) must have a stable ground. Eclipse is the first to design a SPD that has a managed ground bus that features a single point of ground to ensure ideal conditions. This allows you to maintain system integrity inspection and proper maintenance against electrical transients introduced to sensitive low voltage electronics. providing protection against nuisance alarm and preventable system failure and ensure that your SPD utilizes proper ground path.

How it works: In most instances the SAD does the majority of the work. The SAD clamps closer to the "working" voltage to provide the highest level of protection of the device. The SAD does not degrade until the diode exceeds its rated value. The SAD can manage daily voltage pulses over and over with no degrade of component. MOV can withstand greater peak energy. When the energy exceeds the capacity of the SAD the MOV provides protection against larger and more sustained energy pulses. MOVs are susceptible to degrade every time they clamp.



ECLIPS

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- Uses UL Recognized Components

Made In U.S.A.

TMD and TMDP Product Specifications

Transient Voltage surge protection devices will be UL 497A or B listed device Eclips TMD or TMDP series. each unit is field replaceable. Surge Protective Device provides transient and over voltage protection on all electronic components. The device will employ a single ground bus with single point of ground termination and a 12AWG green ground strap with lug ring connector. All electronics are encased in a ABS polycarbonate type AF-312 enclosure that protects the electronics. Each device will have pluggable terminal connectors rated from 12-26 AWG. Each device is scalable and interlock with other like devices. Mounting option are direct screw in, snap track or standard din rail mounting.

Typical applications include:

Fire/Life safety, Video Surveillance, access Control, Voice/Data and Building Automations, gate access, IP and networks,

MD Device	T05	T12	T24	T48	T70	T90	T120
Series Voltage:	6v	17v	30v	60v	95v	115v	130v
Dissipation (J):	25j	32j	40j	80j	132j	160j	212j
Capacitance:	11,133pF	9,133pF	7,433pF	3,633pF	2,033pF	1,733pF	1,333pF
MCOV:	6v	14.4v	28.8v	57.6v	84v	108v	144v
(Max current operating Voltage)							
Clamping Volts:	9v	17v	34v	65v	95v	122v	168v

Maximum Surge Current: 5v thru 24v 4000A
48v thru 120v 18,000A

Clamping response: <1Pico Second

Circuit protected: 2 Circuits 4 wires

Current Limiting: TMDP- Yes | TMD – No

Max Continuous Current: TMDP -150mA | TMD – 5A

Connection type: Screw terminal

Termination rating: 12AWG – 26AWG

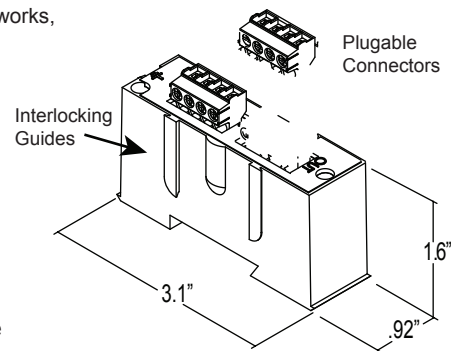
Installation: Series Device

Operating Temp: 45C/113F

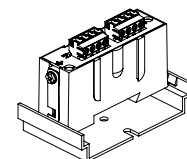
Max humidity: 85%

Weight: 2.08Oz

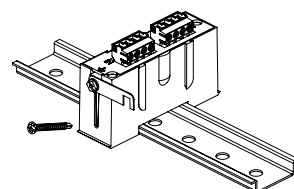
Dimensions:



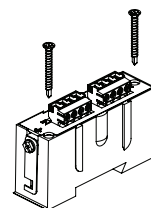
Mounting Options:



Snap Track Mount

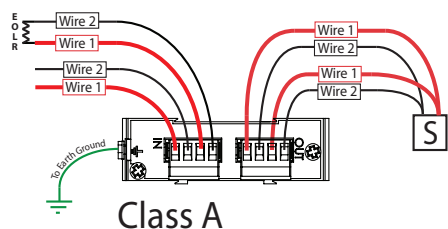


35mm Din-Rail Mount

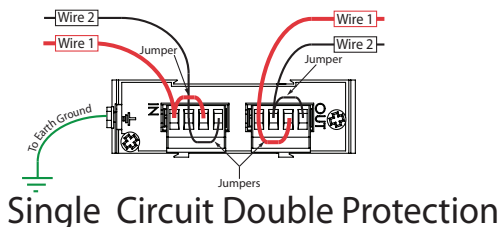


Screw Mount

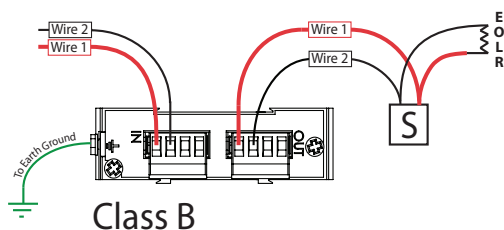
Wiring Diagrams:



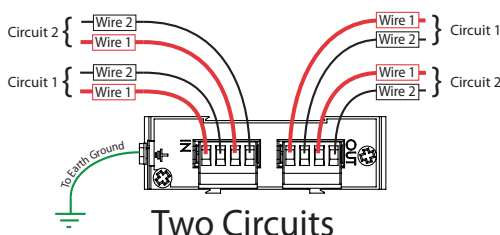
Class A



Single Circuit Double Protection



Class B



Two Circuits

Ordering Information:

Model No.	Description	Model No.	Description
T05-MD	5v	T05-MDP	5v Current Limiting
T12-MD	12v	T12-MDP	12v Current Limiting
T24-MD	24v	T24-MDP	24v Current Limiting
T48-MD	48v	T48-MDP	48v Current Limiting
T70-MD	70v	T70-MDP	70v Current Limiting
T90-MD	90v	T90-MDP	90v Current Limiting
T120-MD	120v	T120-MDP1	20v Current Limiting



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V Series



Video Line Surge Protection Device

The first and only Transient Voltage Surge Suppressor (TVSS) ever designed that is truly scalable. Ideal for moves, adds, and changes in system layout. Maintains system integrity and protects against transients introduced into wiring serving sensitive electronics. Reduces downtime associated with power surges and lightning strikes. Prevents the interruption of Recurring Monthly Revenue (RMR) based systems. Eliminates nuisance and non-billable service calls and expensive repairs.

Commonly used on:

Closed Circuit Television (CCTV) and Cable Television (CATV)

Typical applications:

BNC Connector version - Fixed and Pan, Tilt, Zoom (PTZ) cameras, video recorders, multiplexers, monitors and other CCTV head-end equipment.


F-Connector version – Building / Residential entrance CATV protection

Standard Features:

- Fully scalable
- Connection types: BNC or F
- Completely passive devices.
No impedance, resistance or interference of video signal quality
- Custom component designed to insure no "ghosting"
- UL 497B listed
- Available application voltages: 1v P to P
- Single point grounding
- Self restoring
- Lifetime warranty
- Field swappable modules



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V Series BNC, F - Product Specifications

Specifications – Operating:

Service Voltage:	5VDC
Impedance:	50 Ohms
Operation Temperature: C	-40-+85
Ground Type:	Center pin to ground lug
Connection Method:	BNC (Female) In/Out F Connector
Band Pass Range:	0Hz –2GHz
Standing Wave Ratio (SWR):	1.2:1
Insertion Loss:	< .3dB @ 2GHz

Specifications – Performance:

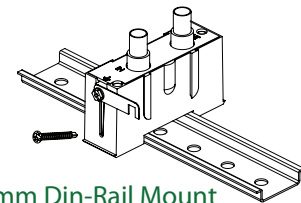
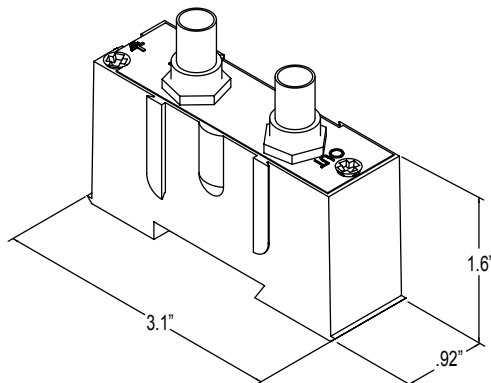
Clamping Voltage: VDC	1.84
Clamping Response Time:	<1 Micro Second
Peak Surge Current:	20,000 A
Operation Indicators:	NO
Energy Dissipation: (Joules)	25
Thermal Protection:	NA
Current Limiting:	NO

Specifications – Compliance:

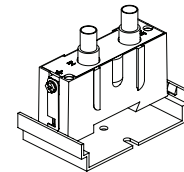
UL Listed:	UL 497B
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Specifications – Physical:

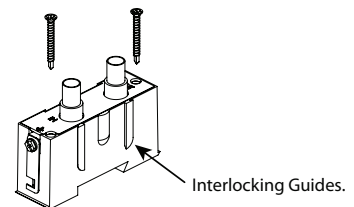
Weight	BNC - 1.13 Oz F - 1.23 Oz
Height	1.6 inches
Length	3.1 inches
Width	.92 inches
Connection	BNC (Female) In/Out
Plastic Rating	V-5



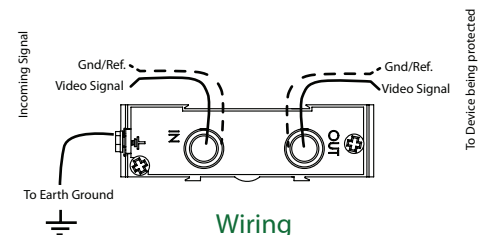
35mm Din-Rail Mount



Snap Track Mount



Screw Mount



Wiring



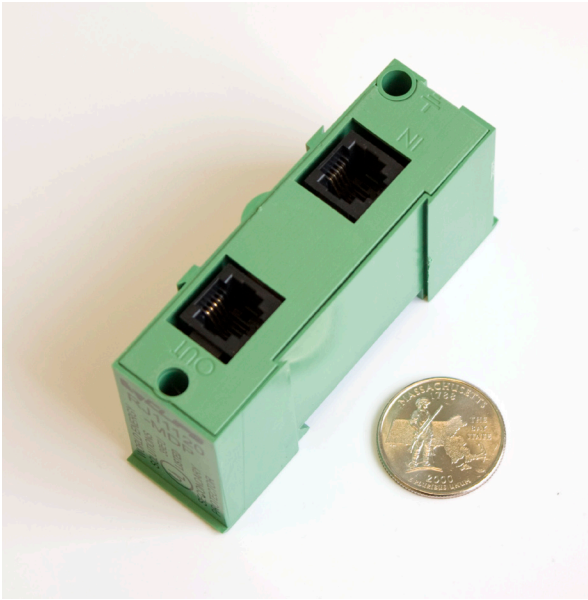
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Ordering Information:

Model No.	Description
VBNC15	1v BNC
VBNC15D	1v BNC Current Limiting
VF15D	1v F connector Current Limiting

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RJ Series



Low Voltage Surge Protection Device

The first and only Transient Voltage Surge Suppressor (TVSS) ever designed that is truly scalable. Ideal for moves, adds, and changes in system layout. Maintains system integrity and protects against transients introduced into wiring serving sensitive electronics. Reduces downtime associated with power surges and lightning strikes. Prevents the interruption of Recurring Monthly Revenue (RMR) based systems. Eliminates nuisance and non-billable service calls.

Commonly used on:

Fire or Burglary 31X alarm dialers and building entrance telephone lines

Typical applications:

Fire, Burglary, and Telephone systems

Standard Features:

- Fully scalable
- Connection methods: RJ11, RJ14, RJ45, RJ 31X
- UL 497A listed
- Available application voltages: 5, 12, 24, 48, 75, 90, 130
- Single point grounding
- Self restoring
- Lifetime warranty
- Field Swappable Modules.



- Uses UL Recognized Components



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RJ Series MD, MDP- Product Specifications

Specifications – Operating:

Service Voltage:	6(5v) 17(12v) 30(24v) 60(48v)
Circuits Protected:	RJ 11- 2wire, RJ 14 - 4 wire, RJ 31x - 2 wire, RJ 45 - 8 wire
Installation Configuration:	Series
Ground Type:	Lug

Specifications – Performance:

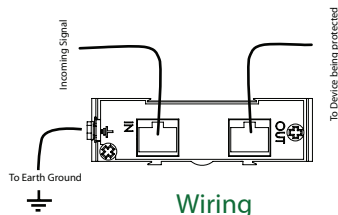
Maximum Surge Current:	4,000A 4,000A 4,000A 18,000A
Energy Dissipation Joules:	28(5v) 32(12v) 40(24v) 80(48v) 132(70v) 160(90v) 212(120v)
Capacitance @1kHz: (pF)	11,133 9,133 7,433 3,633 2,033 1,733 1,333
Clamping Response Time:	<1 Pico Second
Current Limiting:	MD - No MDP - Yes
Maximum Continuous Current:	MD - 5A MDP - 150 mA
Maximum Operating Voltage (MCOV):	7.2(5v) 13.3(12v) 26.7(24v) 53(48v)
Clamping Voltage: VDC	6.8 (5v) 15.3(12v) 36.2(24v) 60.5(
Operation Indicators:	None

Specifications – Compliance:

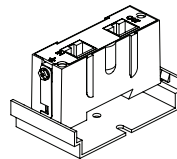
UL Listed	MD - UL 497B MDP - UL 497A
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Specifications – Physical:

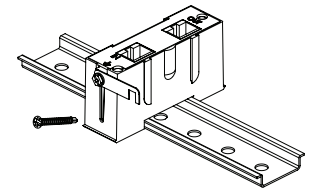
Weight	2.08 Oz
Height	1.6 inches
Length	3.1 inches
Width	.92 inches
Operation Temperature: Centigrade	45
Maximum Humidity	85%
Plastic Flame Rating	V-5



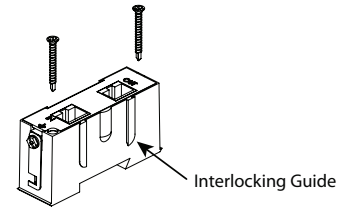
Wiring



Snap Track Mount



35mm Din-Rail Mount



Screw Mount

Model No.	Description	Model No.	Description
RJ31120-MD	120v RJ31	RJ31120-MDP	120v RJ31 Current Limiting

Model No.	Description	Model No.	Description
RJ1405-MD	5v RJ14	RJ1405-MDP	5v RJ14 Current Limiting
RJ1412-MD	12v RJ14	RJ1412-MDP	12v RJ14 Current Limiting
RJ1424-MD	24v RJ14	RJ1424-MDP	24v RJ14 Current Limiting
RJ1448-MD	48v RJ14	RJ1448-MDP	48v RJ14 Current Limiting
RJ1470-MD	70v RJ14	RJ1470-MDP	70v RJ14 Current Limiting
RJ1490-MD	90v RJ14	RJ1490-MDP	90v RJ14 Current Limiting
RJ14120-MD	120v RJ14	RJ14120-MDP	120v RJ14 Current Limiting

Model No.	Description
RJ4505-MD	5v RJ45
RJ4512-MD	12v RJ45
RJ4524-MD	24v RJ45
RJ4548-MD	48v RJ45
RJ4570-MD	70v RJ45
RJ4590-MD	90v RJ45
RJ45120-MD	120v RJ45

Model No.	Description
RJ4505-MDP	5v RJ45 Current Limiting
RJ4512-MDP	12v RJ45 Current Limiting
RJ4524-MDP	24v RJ45 Current Limiting
RJ4548-MDP	48v RJ45 Current Limiting
RJ4570-MDP	70v RJ45 Current Limiting
RJ4590-MDP	90v RJ45 Current Limiting
RJ45120-MDP	120v RJ45 Current Limiting

Model No.	Description
RJ1105-MD	5v RJ11
RJ1112-MD	12v RJ11
RJ1124-MD	24v RJ11
RJ1148-MD	48v RJ11
RJ1170-MD	70v RJ11
RJ1190-MD	90v RJ11
RJ11120-MD	120v RJ11

Model No.	Description
RJ1105-MDP	5v RJ11 Current Limiting
RJ1112-MDP	12v RJ11 Current Limiting
RJ1124-MDP	24v RJ11 Current Limiting
RJ1148-MDP	48v RJ11 Current Limiting
RJ1170-MDP	70v RJ11 Current Limiting
RJ1190-MDP	90v RJ11 Current Limiting
RJ11120-MDP	120v RJ11 Current Limiting



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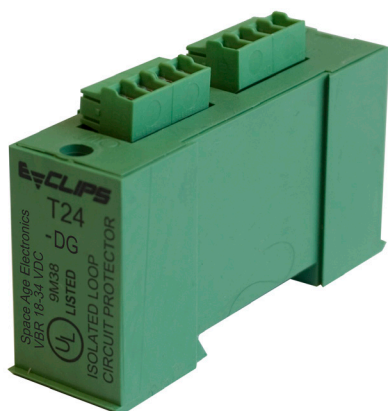
ED00544

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Rev.1

2/2

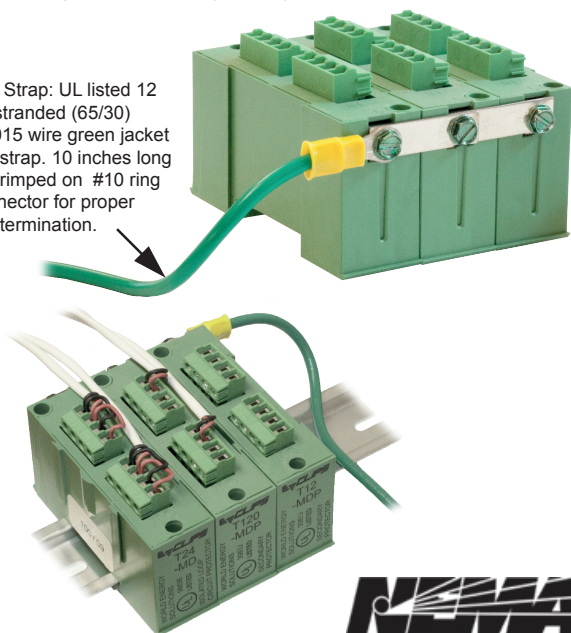
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Standard Features:

- Hybrid electronics SAD and GDT
- Single point ground
- 12 AWG green ground strap
- Available voltage 5v, 12v, 24v, 48v, 70v, 90v, 120v
- Polycarbonate plastic case AF-312
- Removable terminal connection
- Each device is easily field replaceable
- 3 mounting configuration
 - din rail
 - snap track
 - panel mount (screw)

Ground Strap: UL listed 12 gauge stranded (65/30) AWM1015 wire green jacket ground strap. 10 inches long with a crimped on #10 ring lug connector for proper ground termination.



The Eclipse DG series of hybrid TVSS devices are designed to provide ultra low line capacitance with superior protection. Gas Discharge Tube (GDT) and Silicone Avalanche Diodes (SAD) provide protection to sensitive electronic equipment by clamping over-voltage energy pulses and discharging them to ground. This unique design along with the hybrid electronics will protect critical system components. The first Surge Protection Device (SPD) that is truly scalable and provides real solutions. The packaging allows for mixed technology to be configured together that maintains system integrity managing ground planes and structured wiring for service and maintenance. The design features slide together modules and provides panel screw mount, snap track or Din rail mounting options. Coupled with pluggable screw terminals for easy replacement and servicing.

Transient Voltage Surge Suppressors (TVSS) must have a stable ground. Eclipse is the first to design a SPD that has a managed ground bus that features a single point of ground to ensure ideal conditions. This allows you to maintain system integrity, inspection and proper maintenance against electrical transients introduced to sensitive electronics. Providing protection against nuisance alarm and preventable system failure and ensure that your SPD utilizes proper ground path.

How it works: In most instances the SAD does the majority of the work the SAD clamps closer the "working" voltage to provide the highest level of protection. An SPD clamping devices uses a non-linear element that conducts or short to ground when exposed to over-voltage. Such a device absorbs a large portion of the impulse energy, converting it to heat. When a transient voltage surge occurs SAD diode clamps the voltage at safe level and divert the over voltage to ground. The SAD can conduct over-voltage pulses over and over without degrading of component.

The Gas Discharge Tube (GDT) is a fully re-settable device that will protect against high voltage surges (lighting). Both GDT and SAD components return to its high impedance state when the voltage returns to normal levels.



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TDG Product Specifications:

Transient Voltage surge protection devices will be UL 497A or B listed device Eclips TDG series. each unit is field replaceable. Surge Protective Device provides transient and over voltage protection on all electronic components. The device will employ a single ground bus with single point of ground termination and a 12AWG green ground strap with lug ring connector. All electronics are encased in a ABS polycarbonate type AF-312 enclosure that protects the electronics. Each device will have pluggable terminal connectors rated from 12-26 AWG. Each device is scalable and interlock with other like devices. Mounting option are direct screw in, snap track or standard din rail mounting.

Typical applications include:

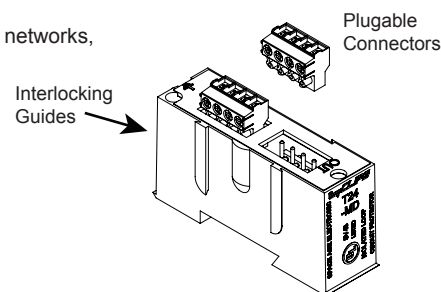
Fire/Life safety, Video Surveillance, access Control, Voice/Data and Building Automations, gate access, IP and networks,

DG Device	T05	T12	T24	T48	T70	T90	T120
Series Voltage:	6v	17v	30v	60v	95v	115v	130v
Dissipation (J):	25j	32j	40j	80j	132j	160j	212j
Capacitance:	35pF per circuit						
MCOV:	6v	14.4v	28.8v	57.6v	84v	108v	144v
Max current operating Voltage							
Clamping Volts:	9v	17v	34v	65v	95v	122v	168v

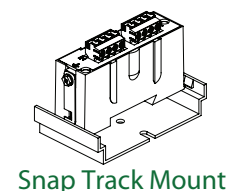
Maximum Surge Current: 10,000A
Clamping response: <1Pico Second
Circuit protected: 2 Circuits 4 wires
Current Limiting: TDG - Yes
Max Continuous Current: TDG - 5A

Connection type: Screw terminal
Termination rating: 12AWG – 26AWG
Installation: Series Device
Operating Temp: 45C/113F
Max humidity: 85%
Weight: 2.08Oz

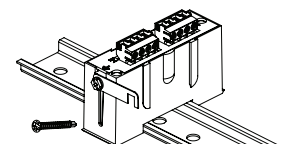
Dimensions:



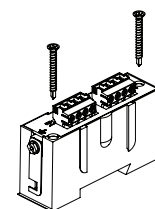
Mounting Options:



Snap Track Mount

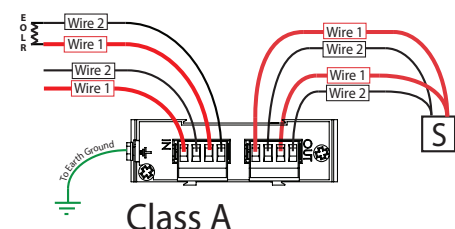


35mm Din-Rail Mount

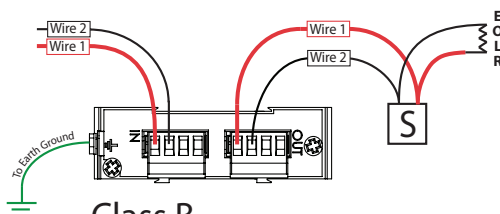


Screw Mount

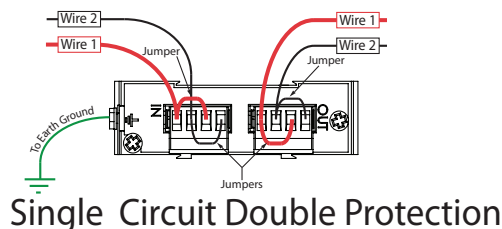
Wiring Diagrams:



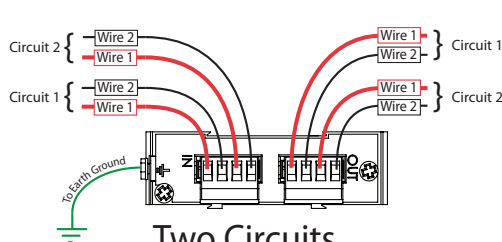
Class A



Class B



Single Circuit Double Protection



Two Circuits

Ordering Information:

Model No.	Description
T05-DG	5v
T12-DG	12v
T24-DG	24v
T48-DG	48v
T70-DG	70v
T90-DG	90v
T120-DG	120v



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E120



LED Diagnostic Indicator

Surge Protection Device

Safety and performance is what Eclips is all about. While there are many varying criteria to be considered for Surge Protective Device (SPD), if the design engineer neglects the importance there can be serious implications for the client and equipment.

Every piece of electrical equipment is designed to operate at a specified nominal voltage example: 120Volts AC. Most equipment is designed to handle minor variations in their standard nominal operating voltage. However, surges transients and lighting can be very damaging to equipment system operation and Quality Of Service (QOS).

Hard-wire electrical panels like Fire Alarm panels, Mass Notification systems, amplifiers, motors, pumps (HVAC), power boosters and many more must require appropriate levels of power fluctuation and surge protection. The E120 series is an ideal choice for your 120V AC applications.

The fact is the number one cause of the destruction, degradation and downtime of critical electrical equipment is power surges and lightning strikes. The E120 device is an ideal solution to protect equipment. UL listed it maintains system integrity and protects against transients introduced into / onto electrical lines via poor atmospheric and utility conditions as well as internally generated inductive loads and transient TVSS. It reduces system downtime associated with power surges and lightning strikes. Prevents destruction and degradation of electrical components in the system. Fix your nuisance and non-billable service calls as a result of transients and poor power quality and show your customer you care about system integrity.

Standard Features:

- Available in 120 VAC
- UL 1449 3rd Edition Type 2 & 3
- Durable enclosure
- Surface or conduit mounting
- Diagnostic indicator light
- Self restoring
- 3 Wire device (18" length)
- Lifetime warranty



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Specifications:

All 120volt AC equipment will have transient surge protection manufactured by Space Age Electronic, Inc. part number E120V ECLIPS Brand. The Unit shall be UL listed to standard 1449 rev 3. the unit will be labeled clearly with indelible ink. mounting can be conduit mounted with a 3/4" pipe threaded nipple to secure in panel. or surface panel mount with 2 external mounting holes. The unit shall have thermal fuses to protect against fire in short circuit conditions. The E120V will have 18" long, 14 gauge wires (3x) ground wire must be green. The enclosure will be a non dielectric material UL94 QMFZ2/8 grade material providing UV protection. The unit shall provide visual indication (LED) that unit is protecting and functioning.

Specifications - Operating:

Service Voltage : 120 Single Phase
Circuits Protected : L-N L-G N-G
Connection Type : Hardwired
Installation Configuration : Parallel

Specifications - Performance:

Short Circuit Current Rating (SCCR) : 5KA
Maximum Surge Current (8x20μs) : 15,000 Amps
Enclosure Material : UL94 QMFZ2/8 (green)
Energy Dissipation Joules : 500 Joules
VPR=700(L – N) 700 (L – G) 600 (N – G)
Capacitance : < 2,000 pf
Clamping Response Time : < 5 nanoseconds
Current : Non-Load Bearing
Max Operating Voltage (MCOV) : 140 volts AC, 50/60 Hz
Clamping Voltage : 250 Volts RMS
Design : Thermally Fused Hybrid
Operation Indicators : Red LED

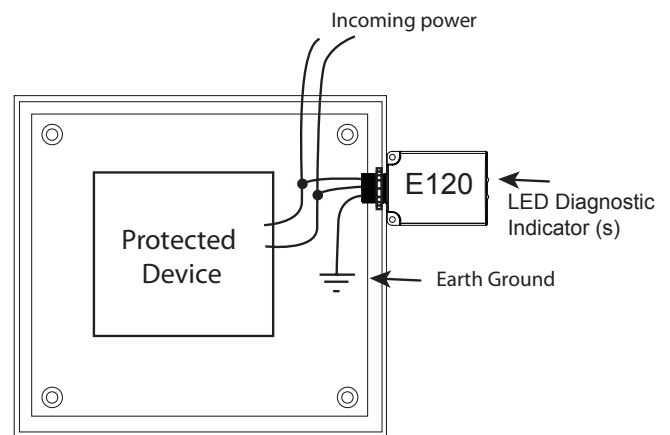
Specifications - Compliance:

UL Listed : 1449 Third Edition
File Number : E319370 Vol. 1 Sec. 1

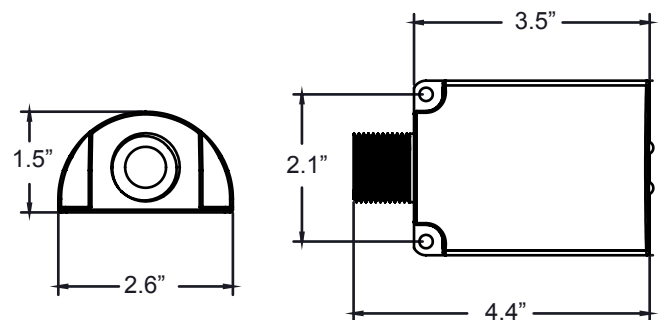
Specifications - Physical:

Weight : 5.2oz
Dimensions : 2.75" x 1.55" x 4" long
Operation Temperature : -40 to +85° C

Wiring Diagram:



Mechanical Drawing:



Ordering Information:

Part #	Description
E120V	120V Surge Protective Device



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Video Smoke Detection - Overview



SAEVU is an advanced digital Video Smoke Detection (VSD) system based on the NetVU connected platform. Its hard wired outputs are fully configurable volt free contacts which are activated on smoke and or Flame detection. It continuously monitors and records the incoming video stream from up to four video cameras. It event records the information to the internal hard drive while distributing the smoke and flame events providing live and recorded video images to multiple users distributed over the TCP/IP network with full color overlay of the event for fast visual verification.

Images are recorded in watermarked (MD5) MJPEG format. Live or recorded images can be requested over the network in either MJPEG or MPEG4 formats, offering significantly higher frame rates over limited bandwidth connections.

Remote system configurations and operation is carried out via a series of web pages using a browser such as Netscape or Internet Explorer.

Alarms can be generated by physical wired inputs or VSD events from any camera. These recorded events can then be protected on disk to prevent accidental erasure.

SAEVU Observer is a Java based software package which allows the user to view live or recorded images from any SAEVU connected unit on the network. This powerful database offers the user a step by step video history of a recorded alarm events, if required, incidents can be selected and downloaded for storage on any computer or LAN/WAN destination; full central monitoring functions are also included. SAEVU observer is shipped with every SAEVU digital Video Smoke Detection System.

Standard Features:

- 4 Camera inputs
- Desktop or Rack Mounted
- Up to 4 IDE hard drives providing from 300GB to 2 Terabytes of storage
- 100 images per second recording capability at full MJPEG quality

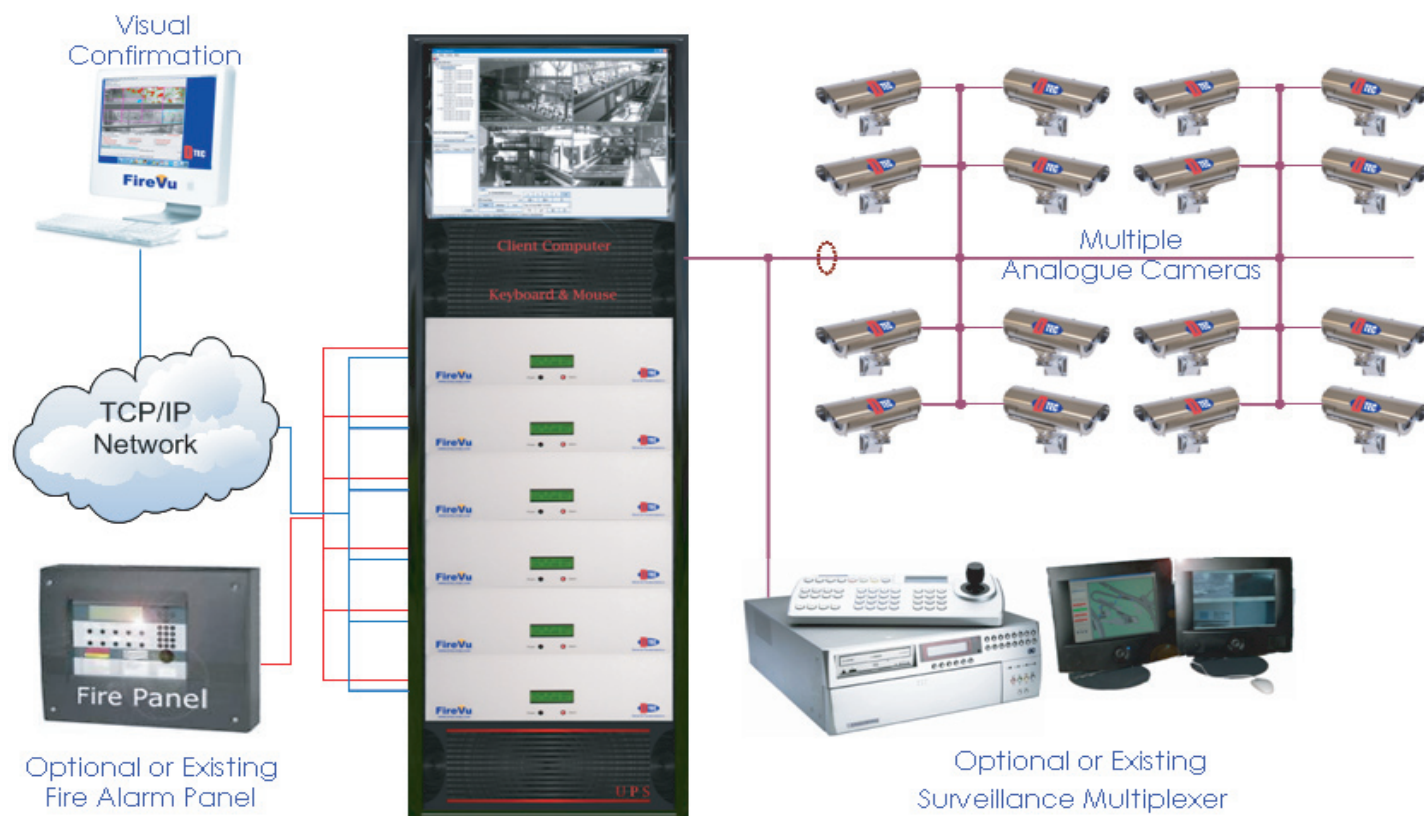
As an example, a 2 Terabyte video server could record for almost 2 months recording at 20 images per second based on 20kB high resolution images.



Space Age Electronics, inc.
www.SAEVU.com
800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

- Color smoke overlay for fast visual confirmation
- 16 customizable zones per camera
- 16 relay outputs
- 16 alarm inputs, N/O or N/C contacts
- HTML control and set-up pages
- Pre and post-alarm event recording
- Alarm and VSD events can be protected on disk
- Standard or variable record rate for each camera
- Variable play back speed
- Digital watermark of MJPEG images with certificate creation using the MD5 algorithm
- Video streaming MPEG4 while simultaneously recording high quality MJPEG
- Video expiry period to comply with data regulations

- Configurable for central monitoring applications
- SMS and E-mail reporting of events
- Full security with multiple passwords
- Dial-on-alarm sends images to remote units via ISDN, PSTN or Ethernet
- 10/100 BaseT LAN network interface with full/half duplex support and auto DHCP/DNS on capable networks
- Bandwidth limitation option avoids network congestion
- Front panel display indicates IP address and fault messages
- LED's Display alarm and fault
- Software Firewall allows users to restrict access
- Security log files record all connections and illegal access



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FE-F2000

Projected Beam Detector

The system is comprised of a transmitter which projects a modulated infrared light beam to a receiver. The received signal is analyzed by a controller usually located at ground level. If smoke is present in the beam path for more than 8—10 seconds, a fire relay is activated in the controller. The system is designed to be mounted so that the beam will project between 1ft. (0.305 m) and 2ft. (0.61m) below and parallel to the ceiling. Lateral detection may be up to 30ft. (9.144m) either side of the beam, providing a maximum total coverage area of up to 19,800 square feet (60ft. x 330ft. or 18.288m x 100m). The control unit must be located within 330ft. cable run of the receiver unit.

Smoke Detection:

If smoke is present in the beam's path, the received signal is reduced by a level determined by the density of the smoke. If the smoke reduces the signal strength to between the obscuration threshold and 93% for more than 8 to 10 seconds, the fire alarm relay is activated. The alarm threshold may be set to 25%, 35% or 50% to suit the installation.

Operation:

The infrared signal is sent from the transmitter via an optical system. At 330 ft. (100m) the diameter of this infrared signal is approximately 10 ft. (3.05m). The wide angle beam arrangement simplifies alignment and increases stability. It is important that the projected beam smoke detector is positioned correctly to minimize the detection time. A fire alarm condition occurs when the smoke obscures the infrared beam. The time to detect a fire condition depends on the location of the smoke beam within the premises, the volume of smoke produced, the construction of the roof, and ventilation considerations.



Standard Features:

- Separate Transmitter and Receiver Units
- Signal Strength indicating LED's
- Range 33ft. To 330ft. (10m to 100m)
- Easy set up and alignment
- Internal test switch
- Calibrated obscuration test filter included
- 3 selectable alarm thresholds:
25%, 35% or 50%
- Microprocessor controlled
- Alarm latching or auto reset
- Automatic gain control
- 12 VDC or 24 VDC operation
- Separate alarm and trouble contacts
- Ground Level Control Unit
- Alignment by Universal Bracket



Space Age Electronics, inc.
www.1SAE.com
800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

Specifications:

The projected beam type smoke detector shall be a 4-wire 12/24 VDC device to be used with a Nationally Recognized Testing Laboratory's Listed separately supplied 4-wire control panel. Unit shall be listed to U.L. 268 and shall consist of a transmitter, receiver and control box. The detector shall operate between a range of 33ft. to 330 ft. (10m to 100m). The temperature range of the beam shall be -4°F to +131°F (-20°C to +55°C). The beam detector shall feature automatic gain control which will compensate for gradual signal deterioration from dirt accumulation on the lenses. The unit shall include a wall mounting bracket. Testing shall be carried out by using a calibration test filter. The Projected beam type smoke detector shall be a Space Age Electronics, Inc. Fireray 2000.

Beam Detector Spacing:

On smooth ceilings, up to 60 ft. (18.288m) between projected beams and not more than one-half that spacing between a projected beam and a sidewall. Other spacing may be used depending on ceiling height, airflow characteristics and response requirements. See NFPA 72 for further information.

Electrical Specifications:

Primary Input Power	Sensitivity:
10.2 to 30 VDC	25%, 35%, 50%
Protection:	Fire Alarm Thresholds:
100ma Fuse in Control unit	1.25dB (25%), 1.87dB (35%), 3dB (50%)
Standby Current	Beam tolerance to misalignment at 35%:
8.5mA @ 24VDC	Transmitter +/- 1°
Alarm Current	Receiver +/- 4°
16.5 mA @ 24 VDC	Weight-Controller:
Relay Contacts	4.00 lbs (1.8 kg)
2A at 30 VDC, resistive	Weight-Transmitter/Receiver:
Reset Time	12 oz. (650 gms.)
5 Seconds maximum	Dimensions-Controller:
Start Up Time (Automatic)	8.5" W x 10.5" H x 3.5" D
45 Seconds	(210mm W x 265mm H x 88mm D)
Optical Wavelength:	Dimensions-Transmitter/Receiver (including mounting brackets):
880nm.	4" W x 3.25" H x 3.75" D
Temperature Rating:	(83mm W x 95mm H x 101mm D)
-4°F to +131°F (-20°C to +55°C)	Unit shipping weight 8 lbs.
Relative Humidity:	
0% to 93% RH non-condensing	
Operational Range:	
33 ft.- 330 ft. (10m - 100m)	
RFI Immunity:	
10V/m @ KHz-1 GHz	
Field wiring size:	
14-24 AWG	

Approvals:

UL	UROX.S3417
ULC	UROXC.S3417
MEA	293-98-E
CSFM	7260-1508:101

This Product Manufactured by
Fire Fighting Enterprises

Ordering Information:

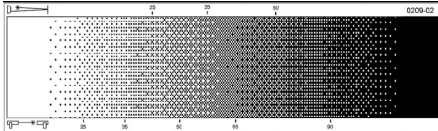
Part #	Description
FE-F2000	Projected beam smoke detector 33ft. to 330ft. (10m to 100m)

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**NO
EXCUSES!**

FE-F2000& FE-F2000EEXD

Projected Beam Accessories



FE-0209

FE-0209 Obscuration Filter

Replacement Obscuration Filter for performing UL sensitivity test for both Projected and Reflected Beam Smoke Detectors 25% to 100% Obscuration



FE-0201

FE-0201 Alignment Tool

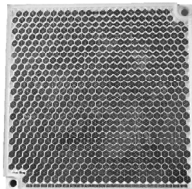
Remote Alignment tools is used with Fireray 2000 Project Beam Detector for alignment of the receiver at the installed location. This allows 1-man to set up, service and test a Fireray 2000. Requires a 4th conductor to be run from control box to receiver head.



FE-23835

FE-23835 Surface Mount Wall Bracket

Surface Mount Wall Alignment Bracket for Fireray 2000 EExd Explosion Proof Projected Beam Detector. Bracket pivots horizontally and vertically for accurate alignment of Beam Detector. (Atex Head not included).



FE-23901

FE-23901 Prism

Replacement Prisms for Reflective Beam Smoke Detectors Also used for "Retro Mode" with the Fireray 2000.



**NO
EXCUSES!**



FE-F2000 EExd

Explosion Proof Projected Beam

The Fireray 2000 EExd is ideally suited to protect large areas with potentially explosive atmospheres, protection against smoking fires can be provided by this beam. Fireray 2000 EExd includes an infrared transmitter and a receiver, both of which are ATEX-certified for use in Group 2 hazardous areas (comparable to US CSA Certification for use in Class 1, Division 2, Groups A, B, C & D hazardous locations). There is a separate, safe area, wall-mounted remote low level control unit to allow adjustment and testing from a convenient non-hazardous location.

The product is designed for large enclosures with oil rigs, refineries, ordinance stores, waste water treatment plants, and similar premises. It provides an early warning of smoldering smoke-generated fires, some of which may not be picked up by flame detectors installed in many hazardous areas.

Smoke Detection

If smoke is present in the beam's path, the received signal is reduced by a level determined by the density of the smoke.

If the smoke reduces the signal strength to between the obscuration threshold and 93% for more than 8 to 10 seconds, the fire alarm relay in the control unit is activated. The alarm threshold may be set to 25%, 35% or 50% to suite the installation.

Operation:

The infrared signal is sent from the transmitter via an optical system. At 330 ft. (100m) the diameter of this infrared signal is approximately 10 ft. (3.05m). The wide angle beam arrangement simplifies alignment and increases stability. It is important that the projected beam smoke detector is positioned correctly to minimize the detection time.

A fire alarm condition occurs when the smoke obscures the infrared beam. The time to detect a fire condition depends on the location of the smoke beam within the premises, the volume of smoke produced, the construction of the roof, and ventilation considerations.

Standard Features:

- Separate Transmitter and Receiver Units certified to EExd
- Signal Strength indicating LED's
- Range 33ft. to 330ft. (10m to 100m)
- Easy set up and alignment
- Internal test switch
- Conforms to BS5839 Part 5 EExd IIB T6
- 3 selectable alarm thresholds:
25%, 35% or 50%
- Alarm latching or auto reset
- Automatic gain control
- 12 VDC or 24 VDC operation
- Separate alarm and trouble relay contacts
- Ground Level Control Unit
- Alignment by Universal Bracket



Specifications:

The projected beam type smoke detector shall be a 4-wire 12/24 VDC device to be used with a Nationally Recognized Testing Laboratory's Listed separately supplied 4-wire control panel. The unit shall consist of an integrated transmitter and receiver. The detector shall operate between the range of 33ft to 330ft (10m to 100m). The temperature range of the beam shall be -4°F to +131°F (-20°C to +55°C). The beam detector shall feature automatic gain control which will compensate for gradual signal deterioration from dirt accumulation on the lense. The beam detector shall be ATEX Certified, comply with BS5839 Part 5 and meet Eexd IIB T6 temperature range requirements. The unit shall include one wall mount alignment bracket. Testing shall be carried out by using a calibration test filter. The projected beam smoke detector shall be a Space Age Electronics, Inc. Fireray 2000 EExd.

Beam Detector Spacing:

On smooth ceilings, up to 60ft. (18.288m) between projected beams and not more than one-half that spacing between a projected beam and a side wall. Other spacing may be used depending on ceiling height, airflow characteristics and response requirements. See NFPA 72 for further information

Electrical Specifications:


Primary Input Power	Sensitivity:
11.5 to 30 VDC	25%, 35%, 50%
Protection:	Fire Alarm Thresholds:
100ma Fuse in Control unit	1.25dB (25%), 1.87dB (35%), 3dB (50%)
Standby Current	Beam tolerance to misalignment at 35%:
8.5mA @ 24VDC	Transmitter +/- 1°
Alarm Current	Receiver +/- 4°
16.5 mA @ 24 VDC	Weight-Controller:
Relay Contacts	4.00 lbs (1.8 kg)
2A at 30 VDC, resistive	Weight-Transmitter/Receiver:
Reset Time	8.8 lbs. (4 kg.)
5 Seconds maximum	Dimensions-Controller:
Start Up Time (Automatic)	8.5" W x 10.5" H x 3.5" D
45 Seconds	(210mm W x 265mm H x 88mm D)
Optical Wavelength:	Dimensions-Transmitter/Receiver (including mounting brackets):
880nm.	4.8" W x 4.8" H x 4.8" D
Temperature Rating:	(120mm W x 120mm H x 120mm D)
-4°F to 131°F (-20°C to +55°C)	Unit shipping weight 18.5 lbs.
Relative Humidity:	
0% to 93% RH non-condensing	
Operational Range:	
33 ft.- 330 ft. (10m - 100m)	
RFI Immunity:	
10V/m @ KHz-1 GHz	
Field wiring size:	
14-24 AWG	

Approvals:

ATEX	Group 2
Sira	03ATEX1504
BS5839	Part 5 EExd IIB T6
This Product Manufactured by Fire Fighting Enterprises	

Ordering Information:

Part #	Description
FE-F2000 EExd	Explosion Proof Projected Beam Detector



Space Age Electronics, inc.
www.ISAE.com
800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

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ED0515

LT10515

Rev.1

2/2

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FE-50RU/ FE-100RU

Reflective Beam Detector

The system is comprised of a single unit incorporating an infra-red transmitter and receiver. The signal generated in the transmitter element and reflected by the prism back to the receiver element is analyzed for the presence of smoke. The internal microprocessor determines an alarm condition when a predetermined level is reached. The system is designed to be mounted so the beam will project between 1ft. (0.305 m) and 2ft. (0.61m) below and parallel to the ceiling. Lateral detection may be up to 30ft. (9.144m) on either side of the beam, providing a maximum total coverage area of up to 19,800 square feet (60ft. x 330ft. or 18.288m x 100m).

Standard Features:

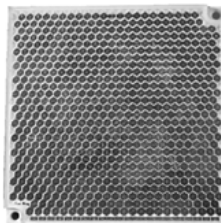
- Models for ranges of
 - 15 ft. to 160 ft. (5m to 50m)
 - 160 ft. to 330 ft. (50m to 100m)
- Easy set up and alignment
- Single Compact Housing
- Calibrated obscuration test filter included
- 3 selectable alarm thresholds:
 - 25%, 35% or 50%
- Microprocessor controlled
- Alarm latching or auto reset
- Automatic gain control
- 12 VDC or 24 VDC operation
- Separate alarm and trouble contacts
- Remote Test Station

Applications:

Open areas where ceiling heights exceed 25ft. (Warehouses, Hotel Atriums, Industrial Plants and School Gymnasiums)
Public areas where cosmetics are of prime importance and detector heads need to be small and unobtrusive. (Shopping Malls, Libraries, Theaters and Churches)

Benefits:

Reduces installation costs where 6 or more spot detectors are required in a single area. Reduces service time by taking advantage of optional remote test station located at ground level for system test without disruption of the site.



1 Prism supplied for the FE-50RU
and 4 Prisms supplied for the FE-100RU



Space Age Electronics, inc.
www.1SAE.com
800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

Specifications:

The projected beam type smoke detector shall be a 4-wire 12/24 VDC device to be used with a Nationally Recognized Testing Laboratory's Listed separately supplied 4-wire control panel. Unit shall be listed to U.L. 268 and shall consist of an integrated transmitter and receiver. The detector shall operate between a range of 15 ft. to 330 ft. (5m to 100m). The UL Listed temperature range of the beam shall be 32°F to 100°F (0°C to 37.8°C). The beam detector shall feature automatic gain control which will compensate for gradual signal deterioration from dirt accumulation on the lenses. The unit shall include a wall mounting bracket. Testing shall be carried out by using a calibrated obscuration test filter. The Reflective beam type smoke detector shall be a Space Age Electronics, Inc. 50RU (160 ft./50m) or 100RU (330 ft./100m).

Beam Detector Spacing:

On smooth ceilings, up to 60 ft. (18.288m) between reflective beams and not more than one-half that spacing between a reflective beam and a sidewall. Other spacing may be used depending on ceiling height, airflow characteristics and response requirements. See NFPA 72 for further information.

Electrical Specifications:

Primary Input Power:
10.2 to 30 VDC
Standby Current:
4mA @ 24VDC
Alarm Current:
15 mA @ 24 VDC
Relay Contacts:
1A at 30 VDC Resistive
Reset Time:
5 Seconds maximum
Start Up Time:
10 Seconds
Optical Wavelength:
880nm.
Temperature Rating:
-22°F to 131°F (-30°C to 55°C)
32°F to 100°F (0°C to 37.8°C) UL
Relative Humidity:
10% to 93% RH non-condensing
Range:
50RU 15-160 ft. (5m to 50m)
100RU 160-330 ft. (50m - 100m)
Sensitivity:
25%, 35%, 50%

Dimensions:
8.25" H x 4.5" D x 4.75" W
(21.0cm H x 11.43cm D x
12.065cm W)
Unit shipping weight 3 lbs

Operational Specifications:

- Latching / Non Latching Alarm
- Fault condition (Trouble)
- 90% or more obscuration (Trouble)
- Automatic gain control
- Improper set up alignment (Trouble)
- Reflector targeting mode
- Microprocessor Controlled
- 3 Sensitivity Selections
- Alarm Indicator—Red LED
- Trouble Indicator—Amber LED

Approvals:

UL	UROX.S3417
ULC	UROXC.S3417
MEA	70-02-E
CSFM	7260-1508:102

This Product Manufactured by
Fire Fighting Enterprises

Ordering Information:

Part #	Description
FE-50RU	160FT Reflective Beam Detector
FE-100RU	330FT Reflective Beam Detector



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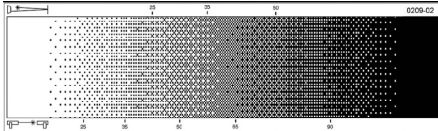
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**NO
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FE-50RU/ FE-100RU

Reflective Beam Accessories



FE-0209

FE-0209 Obscuration Filter

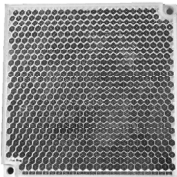
Replacement Obscuration Filter for performing UL sensitivity test for both Projected and Reflected Beam Smoke Detectors 25% to 100% Obscuration



FE-0400-01

FE-0400-01 LLC Remote Test Station

Compatible with either 50RU or 100RU
Single Gang Stainless Steel Wall Plate
7" Pigtail Leads
Includes Data Link Cable Assembly
Allows Low Level Testing of Reflective Beam Detectors
Approvals: UL, ULC, MEA, CSFM



FE-23901

FE-23901 Prism

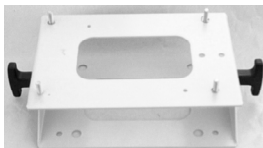
Replacement Prisms for Reflective Beam Smoke Detectors
Also used for "Retro Mode" with the Fireray 2000.



FE-0608

FE-0608 Surface Mount Back Box

Surface Mount Back Box for 50RU/100RU Reflective Beam Detectors. Two 1/2"-3/4" conduit knock-outs on each side. Finished size 9 1/4" H x 6" W x 2" D. Termination block included. Universal back plate mounting with one conduit knock-out.



FE-0893

FE-0893 Surface Mount Wall Bracket

Surface Mount Wall Alignment Bracket for 50RU/100RU Reflective Beam Detectors or Prism. Bracket pivots up to 45° for accurate alignment of Beam Detector or Prism.

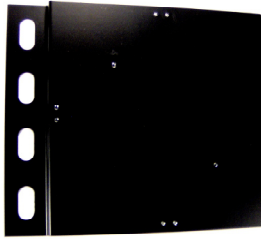




FE-5000-005

FE-5000-005 Universal Mounting Bracket

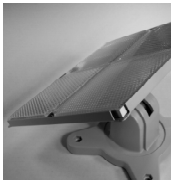
Universal Mounting Bracket for Fireray 5000 Reflective Beam Detector and Accessories. Bracket pivots for accurate alignment of Beam Detector and Prisms.



FE-5000-006

FE-5000-006 Prism Wall Bracket

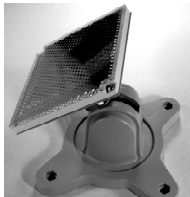
Reflector Wall Bracket comes pre-drilled to mount 1 (Up to 160 Feet) or 4 (160 Feet to 330 Feet) prisms. Hole pattern on side mounting flange similar to Unistrut. Prisms are ordered separately.



FE-5000-007

FE-5000-007 4 Prism Alignment Adaptor

Comes pre-drilled to mount 4 Prisms. Designed to mount on the Alignment Adaptor 5000-5005. Prisms and Alignment Adaptor 5000-5005 are ordered separately.



FE-5000-008

FE-5000-008 Single Prism Alignment Adaptor

Comes pre-drilled to mount 1 Prism. Designed to mount on the Alignment Adaptor 5000-5005. Prisms and Alignment Adaptor 5000-5005 are ordered separately.



FE-5000-014

FE-5000-014 Ceiling Pendant Mount Bracket

Comes pre-drilled to mount F-5000 Detector Head. Supplied with 1-2 1/2" long nipple. Other lengths by contractor. Can be used for Single or Bi-Directional Applications. Includes 2 mounting plates and 1 blank cover.



**NO
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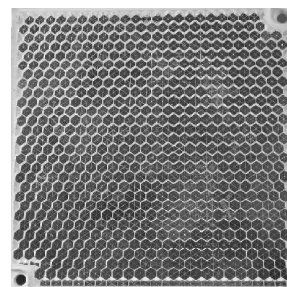
FE-5000

Self-Aligning Reflective Beam

The Fireray 5000 System is an auto-aligning infrared beam smoke detector. Once the detector head is installed, using the easyfit mounting system, an integral LASER can be activated. This allows the reflective prism to be located quickly and with confidence. The AutoOptimiser beam alignment system then takes over and automatically steers and maintains the beam in the optimum position for reliable performance. The signal generated in the transmitter element and reflected by the prism back to the receiver element is analyzed for the presence of smoke. The internal microprocessor determines an alarm condition when a predetermined level of obscuration is reached. The system is designed to be mounted so the beam will project between 1ft. (0.31m) and 2ft. (0.61m) below and parallel to the ceiling. Lateral detection may be up to 30ft. (9.144m) on either side of the beam, providing a maximum total coverage area of up to 19,800 square feet (60ft. x 330ft. or 18.29m x 100m).

Standard Features:

- Range of 26.25 ft. to 330 ft. (8m to 100m)
- AutoOptimiser beam alignment system
- Ground Level System Controller
- LASER Assisted Prism Mounting
- AutoOptimise Beam Alignment
- Electronic Obscuration Test
- Contamination Compensation
- Building Shift Compensation
- Separate alarm and trouble contacts
- Remote display and control unit with LCD backlight
- Password protected settings
- Programmable obscuration thresholds:
10% - 60% in 1% increments
- Programmable Fault and Alarm Timing:
2—30 Seconds
- 3 Year Warranty



1 Prism included for 15 - 160 Foot installations.
4 Prisms required for 160 - 330 Foot installations.
Use the FE-5000-004 Long Range Kit.



Space Age Electronics, inc.
www.1SAE.com
800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

Specifications:

The projected beam type smoke detector shall be a 4-wire 24 VDC device to be used with a Nationally Recognized Testing Laboratory's Listed separately supplied 4-wire control panel. Unit shall be listed to U.L. 268 and shall consist of an integrated transmitter/receiver and a remote control unit. The detector shall operate between a range of 26.25 ft. to 330 ft. (8m to 100m). The UL Listed temperature range of the beam shall be 32°F to 100°F (0°C to 37.8°C). The beam detector shall feature automatic gain control which will compensate for gradual signal deterioration from dirt accumulation on the lenses. The Reflective Beam shall include the AutoOptimise Beam Alignment feature to ensure the unit is always receiving the maximum signal available, and shall be able to compensate for building shift. The unit shall include a wall mounting remote display and control unit with LCD backlight.

Testing shall be carried out by using the UL approved internal obscuration test. The Reflective beam type smoke detector shall be an Space Age Electronics, Inc. Fireray 5000.

Electrical Specifications:

Primary Input Power:

14 to 28 VDC

Standby Current:

Low Current Mode: 12mA @

24VDC

High Current Mode: 52mA

@24VDC

Alarm Current:

52 mA @ 24 VDC

Relay Contacts:

1A at 30 VDC Resistive

Reset Time:

5 Seconds maximum

Start Up Time:

45 Seconds

Optical Wavelength:

850nm.

Temperature Rating:

-22°F to 131°F (-20°C to 55°C)

32°F to 100°F (0°C to 37.8°C) UL

Relative Humidity:

0% to 93% RH non-condensing

Range:

26.25ft. to 330ft. (8m to 100m)

Cableing Between Detector & Controller:

24—14 AWG 1—Pair Shielded

Sensitivity:

10% - 60% (35% Default)

Dimensions:

Head:

5.28" H x 5.31" L x 5.28" W

(135mm H x 134mm L x 132mm W)

Controller:

2.80" H x 9.25" L x 7.87" W

(71mm H x 235mm L x 200mm W)

Prism:

0.37" H x 4.13" L x 3.94" W

(9.5mm H x 105mm L x 100mm W)

Unit ship weight 5.75 lbs.

Approvals:

UL	UROX.S3417
ULC	UROXC.S3417
MEA	22-08-E
CSFM	7260-1508:104

This Product Manufactured by
Fire Fighting Enterprises

Ordering Information:

Part #

FE-5000-001

Description

Self-Aligning Reflective Beam Detector



Space Age Electronics, inc.

www.ISAE.com

800.486.1723 Toll Free

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EXCUSES!**



FE-5000

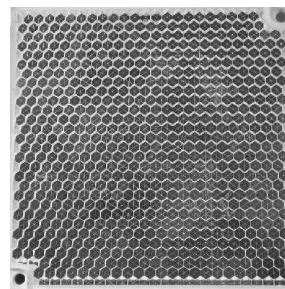
Self-Aligning Reflective Beam

The Fireray 5000 System is an auto-aligning, selfcorrecting infrared beam smoke detector. Up to 4 detector heads can report to a single ground level controller. Once the detector head is installed, using the easyfit mounting system an integral LASER can be activated. This allows the reflective prism to be located quickly and with confidence. The Auto-Align function ensures proper alignment and maximum signal during the beam installation. AutoOptimise automatically steers and maintains the beam in the optimum position for reliable performance. The signal generated in the transmitter element and reflected by the prism back to the receiver element is analyzed for the presence of smoke. The internal microprocessor determines an alarm condition when a predetermined level obscuration is reached. The system is designed to be mounted so the beam will project between 1ft. (0.31m) and 2ft. (0.61m) below and parallel to the ceiling. Lateral detection may be up to 30ft. (9.144m) on either side of the beam, providing a maximum total coverage area of up to 19,800 square feet (60ft. x 330ft. or 18.29m x 100m).



Standard Features:

- Up to 4 Detector Heads reporting to One Ground Level Controller
- Range of 26.25 ft. to 330 ft. (8m to 100m)
- Built in Laser assisted prism mounting
- Auto-Alignment 2-4 minutes per head
- AutoOptimise - Auto-Correction due to building shift
- Built-In electronic UL/ULC obscuration acceptance Fire Test
- Contamination compensation
- Common alarm and trouble contacts
- Password protected settings
- Low current draw 10-16 mA.
- Built-In 1/2"/M-20 conduit knock-outs on the system controller
- Programmable obscuration thresholds: 10% - 60% in 1% increments
- Programmable Fault and Alarm timing: 2—30 Seconds
- 5 Year Warranty



1 Prism included for 15 - 160 Foot installations.
4 Prisms required for 160 - 330 Foot installations.
Use the FE-5000-004 Long Range Kit.



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Specifications:

The projected beam type smoke detector shall be listed to U.L. 268 and shall consist of up to four integrated transmitter, receiver detector heads and single low level remote control unit. The detector shall operate between a range of 26.25 ft. to 330 ft. (8m to Fireray 5000 Reflective Beam Smoke Detector 100m). The temperature range of the system shall be -4°F to 131°F (-20°C to 55°C). The beam detector heads shall include an integral built-in laser pointer to assist prism mounting. The beam detector shall feature automatic gain control which will compensate for gradual signal deterioration from dirt accumulation on the lenses. The beams detector heads shall include AutoOptimise Self-Correcting motorized head feature to ensure unit is always receiving maximum signal available, and shall automatically compensate for Building Shift. The unit shall include a low level remote display and control unit with LCD readout for set-up, reporting and testing of up to 4 separate detector heads. The system shall be capable of programming obscuration thresholds for 10% to 60% in 1% increments.

The system shall be capable of programming delay to fault and delay to alarm from 2 seconds to 30 seconds in 1 second increments. Test and acceptance of the system shall be carried out by using the UL approved internal electronic obscuration fire test. The projected beam type smoke detector shall be a 4-wire 24 VDC device to be used with a Nationally Recognized Testing Laboratory's Listed separately supplied 4-wire control panel. The Reflective beam type smoke detector shall be a Space Age Electronics Fireray 5000.

Electrical Specifications:

Primary Input Power: 14 to 28 VDC

Standby Current: Low Current Mode: 10mA to 16mA
@24 VDC depending on number
of detectorheads used

High Current Mode: 50mA @24VDC

Alarm Current: 10mA to 16mA @ 24 VDC depending
on number of detector heads used

Relay Contacts: 1A at 30 VDC Resistive

Reset Time: 5 Seconds maximum

Start Up Time: 45 Seconds

Optical Wavelength: 850nm.

Sensitivity: 10% - 60% (35% Default)

Temperature Rating: -22°F to 131°F (-20°C to 55°C)

For UL Listed Installations,

32°F to 100°F (0°C to 37.8°C).

Relative Humidity: 0% to 93% RH non-condensing

Range: 26.25ft. to 330ft. (8m to 100m)

Cableing: 24—14 AWG 1—Pair Shielded

Housing: Flame Retardant ABS

IP Rating: IP54

Finish: Light Grey/Black

Conduit Knock Outs Controller: 7— 1/2"/M-20

Detector Head—1 M-20

Weight: Head & Controller 3.24 lbs

Dimensions: Head:

Head: 5.28" H x 5.31" L x 5.28" W

Controller:

3.20" H x 9.25" L x 7.87" W

Prism:

0.37" H x 4.13" L x 3.94" W

Approvals:

UL	UROX.S3417
ULC	UROXC.S3417
MEA	22-08-E
CSFM	7260-1508:104

Ordering Information:

Part

FE-5000-103

Description

Reflective Auto Align beam smoke detector
27ft.. to 330ft. System includes 1 Detector
Head, 1 Controller and 1 Prism.

FE-5000-031

Additional Detector Head and 1 Prism,
Use up to 3 additional heads per 5000-103

Accessories:

Refreence Our Document LT10520.PDF

This Product Manufactured by
Fire Fighting Enterprises



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ED05019

LT10519

Rev.A

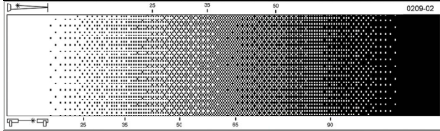
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**NO
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FE-5000

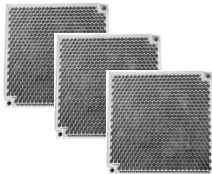
Reflective Beam Accessories



FE-0209

FE-0209 Obscuration Filter

Replacement Obscuration Filter for performing UL sensitivity test for both Projected and Reflected Beam Smoke Detectors 25% to 100% Obscuration.



FE-5000-004

FE-5000-004 Long Range Prism Kit

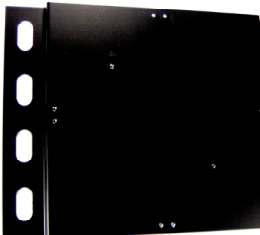
3 Additional Prisms for use with F-5000 when the Prism installation is between 160 Feet and 330 feet from the Detector Head.



FE-5000-005

FE-5000-005 Universal Mounting Bracket

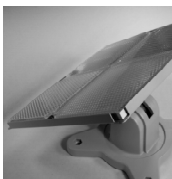
Universal Mounting Bracket for Firearay 5000 Reflective Beam Detector and Accessories. Bracket pivots for accurate alignment of Beam Detector and Prisms.



FE-5000-006

FE-5000-006 Prism Wall Bracket

Reflector Wall Bracket comes pre-drilled to mount 1 (Up to 160 Feet) or 4 (160 Feet to 330 Feet) prisms. Hole pattern on side mounting flange similar to Unistrut. Prisms are ordered separately.



FE-5000-007

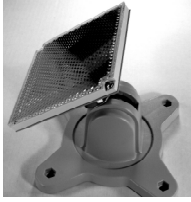
FE-5000-007 4 Prism Alignment Adaptor

Comes pre-drilled to mount 4 Prisms. Designed to mount on the Alignment Adaptor 5000-5005. Prisms and Alignment Adaptor 5000-5005 are ordered separately.



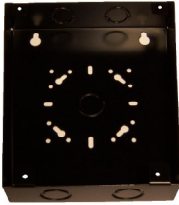
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FE-5000-008


FE-5000-008 Single Prism Alignment Adaptor

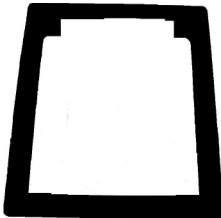
Comes pre-drilled to mount 1 Prism. Designed to mount on the Alignment Adaptor 5000-5005. Prisms and Alignment Adaptor 5000-5005 are ordered separately.

FE-5000-009


FE-5000-009 Controller Back Box

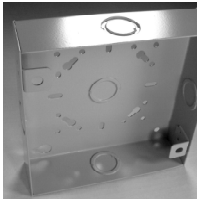
Includes conduit knock-outs on top and bottom. Surface or Flush Mount. Will mount to single gang, double gang or 4 square box.

FE-5000-010


FE-5000-010 Semi Flush Trim Plate

Mounts on the 5000-009 Controller Back Box for Semi Flush Installations.

FE-5000-011


FE-5000-011 Detector Back Box

Back box includes conduit knock-outs on all four sides. Will mount over single gang, double gang or 4 square box. Requires 5000-012 cover plate, ordered separately.

FE-5000-012


FE-5000-012 Detector Cover Plate

Use with the 5000-012 back box. Pre-drilled to mount the 5000 Detector Head. Order back box and cover plate separately.

FE-5000-014


FE-5000-014 Ceiling Pendant Mount Bracket

Comes pre-drilled to mount F-5000 Detector Head. Supplied with 1-2 1/2" long nipple. Other lengths by contractor. Can be used for Single or Bi-Directional Applications. Includes 2 mounting plates and 1 blank cover.

FE-5000-017


FE-5000-017 Wire Protective Cage

F-5000 Detector Wire Protective Cage. Made to mount to either the 5000-011/012 or to a flat surface. Includes 4 Philips Head screws and 4 plastic anchors.



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RT-3000

Nema 4X Duct Smoke Detectors Weathertight, Hi-Temp, Low Flow & No Tools

FEATURES

- 180° visibility for all visual indicators with cover in place
- Operating voltages: 230VAC, 115VAC, 24VAC, 24VDC
- Patented cover tether retains the one-piece cover at unit
- Flashing LED on detector head indicates normal operation, can be viewed with cover on
- Ionization and Photoelectric versions available
- Interconnect up to 30 units for common functions
- Works with the complete range of APC remote accessories to include all legacy duct detectors and sample tubes from APC
- Compatible with building automation and fire alarm systems

Installation - Mechanical

- Patented cover latch offers the industry's only no-tools single point cover assembly
- Patented cover tether keeps cover at unit for convenience
- Patented no-tools front or rear loading and removing sampling/exhaust tubes
- All gaskets are permanently attached and pre-installed

Installation - Electrical

- Patented no-tools terminal blocks for easier wiring with built-in test meter probe access
- Intuitively labeled terminal positions
- Dedicated and segregated terminal blocks for power input, FACU interface, relay control, remote accessories and detector interconnection
- No confusing "special programming" required
- Permanently attached wiring diagram on inside front cover
- Two sets of 10A form "C" alarm contacts
- One set of 10A form "C" trouble contacts
- One set of 1A form "A" alarm contacts and one set of 7A form "B" trouble contacts for FACU interface Testing
- Patented Maintenance Mode offers 3-minute interval for test and maintenance functions with no extra trouble reports to the system (auto shut-off upon cover latch engagement)
- Patented Test Port allows for aerosol smoke testing without cover removal
- Magnet test capability (magnet included)

Service

- Standard interchangeable "twist-in" UL268 photoelectric or ionization heads for easy cleaning and replacement
- Advanced detector head design yields internal dust filtering
- Front no-tools sampling tube removal and replacement
- provides for simple inspection of debris accumulation
- Compatible with all legacy APC remotes, duct detectors and sample tubes

Performance

- NEMA 4X watertight enclosure for non-hazardous indoor and outdoor applications, to include corrosive environments
- Listed for air velocities between 100-4000 ft./min
- Ion and Photo models listed for applications ranging from -4°F to 158°F (-20°C to 70°C)

The RT-3000 builds on our commitment to installer/servicer friendly products, and significantly reduces the total cost of ownership versus other comparable products. Attention to detail has yielded a host of "No-Tools Required" features, as well as a multi-application performance level as yet unmatched in the industry.

The weathertight NEMA 4X rated corrosion resistant enclosure coupled with extended temperature listings allow installation in the widest possible range of indoor/outdoor environments. The RT-3000 can be installed in both horizontal or vertical configurations to match installation preferences.

A simple flip of the cover latch releases or secures the NEMA 4X enclosure which houses:

- a next-generation control board with color-coded, trade-dedicated output terminals
- twist-in photo or ion sensor heads, providing a choice in matching technology to application
- a push-button timed Maintenance Mode that allows test and maintenance functions with no extra trouble reports to the system
- a uniquely constructed chassis that prevents accumulation of condensate commonly generated by the severe temperature changes these devices are typically exposed to



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Specifications:

Air duct smoke detectors shall be RT-3000 Series. For ionization detectors the model number is RT-3000-N. For photoelectric detectors the model number is RT-3000-P. The detectors shall be listed by Underwriters Laboratories per UL 268A. The detectors shall operate at air velocities from 100 feet per minute to 4,000 feet per minute and at high temperatures of no less than 158°F (70°C). Shall provide visual pilot, trouble and alarm indications; shall provide instantaneous cover removal notification with maintenance by-pass. The detector enclosure shall be NEMA 4X rated and shall prevent accumulation of condensate within the detection chamber. Visual indication of alarm, trouble and power must be provided on the detector front, as well as a manual test and reset switch. Detector head shall not require additional filters or screens which must be maintained, and shall include both a standby and alarm visual indication. The housing shall contain a detector base which will accept photoelectric or ionization detector heads. Terminal connections shall require no tools for wire installation and shall be compatible with wire gauges between #14 and #22 AWG. Terminals shall be provided for remote pilot, remote alarm indications, strobe/horn, and remote test/reset switch. All wiring must comply with local codes and regulations. A method of testing the alarm function at the detector with a magnet and a method of smoke testing the detector without removing the cover must be provided. All unit, remote accessory, and common function connection designations must be permanently affixed to the unit. Cover and sampling/exhaust tube installation or removal must not require the use of tools. Capability for interconnection of up to 30 units shall be provided for common functions. Sampling and exhaust tubes shall be capable of removal/installation from the front and/or rear of the detector for inspection/maintenance.

POWER REQUIREMENTS: (without accessories) 230VAC 17 mA

Standby:	115VAC	31	mA
	24VAC	122.6	mA
Alarm:	24VDC	45	mA
	230VAC	29	mA
	115VAC	50	mA
	24VAC	251	mA
	24VDC	100	mA

RELAY CONTACT RATING:

Alarm Contacts:	Resistive load: 2 sets form "C" rated at 10 Amps @ 125VAC
	Resistive load: 1 set form "A" rated at 1 Amp (FACP) @ 30VDC
Trouble Contacts:	Resistive load: 1 set form "C" rated at 10 Amps @ 125VAC
	Resistive load: 1 set form "B" rated at 7 Amps (FACP) @ 30VDC
	100 to 4,000 ft./min.

AIR VELOCITY:

AMBIENT TEMPERATURE:

HUMIDITY:

WIRING:

APPROVALS:

MATERIAL:

DIMENSIONS:

MAX. NET WT.:

RADIOACTIVE ELEMENT:

HARDWARE:

RT-3000-N 14°F58°F (-20°C to 70°C)
RT-3000-P 14°F40°F (-20°C to 60°C)
10% to 93% RH (@32°C) Non-Condensing / Non-Freezing
Solid or stranded: #14 to #24 AWG terminals
UL Listed (UL268A, UROX) File # S2829
CSFM Listed (3240-1004:105) (pending)
MEA Accepted (73-92-E; VOL. 27) (pending)
Grey plastic backbox, white plastic cover (Makrolon 94V-0)
13 1/2" L x 5 1/2" W x 2 1/4" H
3 1/2 lbs.
For RT-3000-N (Ionization) Americium 241; 0.9 Micro-Curie
7" exhaust tube, FAST Tube sectional sampling tube starter, sampling tube end cap, mounting template, test magnet, and mounting hardware included.

Ordering Information:

Part #	Description
RT-3000-N	Ionization: 230VAC, 115VAC, 24VAC, 24VDC 55000-225
RT-3000-P	Photoelectric: 230VAC, 115VAC, 24VAC, 24VDC 55000-328
SSU-55000-225	Replacement Ionization Detector
SSU-55000-328	Replacement Photoelectric Detector

SAMPLING TUBES:

FAST Tube	Sectional sampling tube, kit fits up to 90" duct width
STN-1.0	Metal sampling tube for 6" to 12" duct width
STN-2.5	Metal sampling tube for 12" to 3.0' duct width
STN-5.0	Metal sampling tube for 3.0' to 5.0' duct width
STN-10.0	Metal sampling tube for 5.0' to 10.0' duct width



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SL-2000

Duct Smoke Detector

Product Application:

The SL-2000 Series Smoke Duct Detector is the latest innovation for early detection of smoke and products of combustion present in air moving through HVAC ducts in Commercial, Industrial, and Residential applications. The unit is designed to prevent the recirculation or spread of smoke by air handling systems, fans, and blowers. Complete systems may be shut down in the event of smoke detection. The SL-2000 is designed and built to meet all local code requirements, as well as the NFPA and ICC standards regarding HVAC supply and return duct smoke detectors. Output terminals are provided for a wide range of remote accessories such as horns, strobes, remote status indicators, and test/reset key switches or push buttons.

The SL-2000 includes many features that represent true innovations from current generation duct smoke detectors. Our traditional installer/servicer-friendly approach has been closely followed and expanded throughout the SL-2000. Our attention to detail has yielded a host of "No-Tools Required" features. Innovative design combined with unsurpassed customer service equals the right combination for all of your projects. Our standard features detail many of the customer-driven innovations incorporated in the SL-2000 Series.

Standard Features:

- Low-Flow Technology: Listed for velocities between 100-4000 ft./min
- Both models listed for high-temperature applications
- Operating voltages: 230VAC, 115VAC, 24VAC, 24VDC
- Interconnect up to 30 units for common functions
- Patented "No-Tools Required" front or rear loading and removing sampling/exhaust tubes
- Patented "Test Port Valve" allows for aerosol smoke testing without cover removal
- Clear cover fitted with four captive "No-Tools Required" thumbscrews w/ cover removal trouble indication
- Magnet test capability (magnet included)
- Unit includes green pilot and red alarm visual indicators
- Four sets of Form "C" alarm contacts
- Standard interchangeable "plug-in" UL268 photoelectric or ionization heads
- Detector head design acts as an internal dust filter

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Engineers' & Architects' Specifications:

Air duct smoke detectors shall be Space Age Electronics, Inc. SL-2000 Series. The detectors shall be listed by UL per UL 268A. The detectors shall operate at air velocities from 100 feet per minute to 4,000 feet per minute and at temperatures of no greater than 140°F (60°C). Visual indication of alarm and power must be provided on the detector front. A manual reset switch shall be located on front of the device. Detector shall not require additional filters or screens which must be maintained. Terminal connections shall be of the screw type, a minimum of #6 screw (#12 to #22 AWG compatible). A method of testing the alarm function with a magnet must be provided. Cover and sampling/exhaust tube installation or removal must not require the use of tools. Capability for interconnection of up to 30 units shall be provided for common functions. Sample and exhaust tubes shall be capable of installation or removal from the front or rear of the detector for inspection and maintenance.

Product Specs:

SAE PN#

DETECTOR MODEL NUMBER:	SSU-SL-2000-N Ionization: 230VAC, 115VAC, 24VAC & 24VDC SSU-SL-2000-P Photoelectric: 230VAC, 115VAC, 24VAC & 24VDC
SAMPLING TUBES:	SSU-55000-225 Ionization replacement head only SSU-55000-328 Photoelectric replacement head only
ACCESSORIES:	STN - 1 Sampling Tube for 12" or less duct width STN - 2.5 Sampling Tube for 2.5" to 6" duct width STN - 5 Sampling Tube for 2.5' to 5' duct width STN - 10 Sampling Tube for 5' to 10' duct width
POWER REQUIREMENTS: (Without accessories) Stand By:	MS-Series and MSR-Series remote accessories, WP-2000 weatherproof enclosure, TG-2000 aerosol test gas and T-PB power supplies (available from Air Products and Controls, Inc.) 8mA @230VAC 14mA @ 115VAC 55mA @ 24 VAC 14mA @ 24VDC
Alarm Current:	18mA @230VAC 32mA @ 115VAC 190mA @ 24 VAC 68mA @ 24VDC
RELAY CONTACT RATING:	
Alarm Contacts:	Resistive load: 2 sets Form "C" rated 10 A @ 115VAC Resistive load: 1 set Form "A" rated 2 A
Trouble Contacts:	Resistive load: 1 set Form "C" rated 10A @ 115VAC
AIR VELOCITY:	100 to 4,000 Ft./min.
AMBIENT TEMPERATURE:	Model SSU-SL-2000-N 32°F to 155°F (0°C to 70°C) Model SSU-SL-2000-P 32°F to 100°F (0°C to 38°C)
HUMIDITY:	85 + 5% RH (@ 32° C or 86 + 3.6° F) non-condensing/non-freezing
WIRING:	#14 to #22 AWG terminals
APPROVALS:	UL & CUL Listed (UL268A, UROX & UROX7) File # S2829 CSFM Listed (3240-1004:105) MEA Accepted (73-92-E; VOL. 27)
MATERIAL:	Grey plastic back box, clear plastic cover (Makrolon 94V-0)
DIMENSIONS:	13.5" W x 4.5" H x 2.25" D
MAX. NET WT.:	2.5 lbs.
RADIOACTIVE ELEMENT:	For the SSU-SL-2000-N only (ionization) contains Americium 241; 0.9 micro-Curie. Do not expose to corrosive atmospheres!
HARDWARE	7" exhaust tube end cap, mounting template, test magnet and mounting hardware included.



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ED0316

LT10306

Rev.A

2/2

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SSU-SL-701-KIT



THE SL-701 DETECTOR SAMPLES THE AIR STREAM AT THE AHU SUPPLY AND/OR RETURN. IN THE EVENT DANGEROUS LEVELS OF CO ARE DETECTED, THE SL-701 SHUTS DOWN THE AHU TO PREVENT THE SPREAD OF HARMFUL GAS TO OCCUPIED SPACES.

FEATURES

- The detector directly CO presence/absence distribution throughout heated air space and triggers shutdown
- Hybrid-Style Sensor monitors at the National Standards set by (2004, 04Q) and (1.1, 2015/2014 Life Safety)
- "Snap-in" Sensor is easily replaced at end of life
- Indicator light on detector post status
- Detector Test Mode allows for aerosol CO Test using TCG-701
- Historical, retrievable reporting data stored at the unit
- Unit performs "hidden" self-test every 24 hours
- FAST Tube Sampling Tubes are lightweight, convenient installation and removal of tubes from front or rear
- No additional screens or filters to clean
- Compatible with Building Automation and Combination CO/Fire alarm systems

PROUD TO BE MADE IN THE USA BY
**AIR PRODUCTS
AND
CONTROLS**
100 ft. Control
www.ap-c.com • 888-332-2241

Duct Carbon Monoxide Detector Kit

The SSU-SL-701-KIT Duct Carbon Monoxide Detector Kit provides early detection of carbon monoxide in air moving through the HVAC duct supply, return, or both in commercial, industrial, or residential applications.

The SSU-SL-701-KIT is fitted with a UL Listed electrochemical sensor that notifies at for distinct levels of carbon monoxide PPM published hazardous by both OSHA and the NFPA, and has a life of approximately six years in normal environmental conditions. The specific alarm condition met is annunciated at the detector, and historical data can be retrieved from the unit to aid in resolving the source of contamination

The SSU-SL-701-KIT alerts building occupants of an AHU-circulated carbon monoxide contamination prior to its distribution of the "occupied" space. Output terminals are provided for the MSR-50/CO remote accessory, used to provide private mode (non-public) audible and visual alarm indication in a remote location. Combination CO / Fire Alarm Control Units can, and must, be notified of an alarm or trouble condition to provide Public Mode Notification and Remote Reporting.

Product Features:

- ❖ Hybrid-Style sensor monitors at the national standards set by OSHA (IAQ) and UL 2075/2034 (life safety)
- ❖ "Snap-in" Sensor is easily replaced at end of life
- ❖ Solid green LED on sensor head indicates normal operation
- ❖ Detector Test Mode allows for aerosol CO testing without cover removal using Test Port Value
- ❖ Historical, retrievable reporting data stored at the unit
- ❖ Unit performs "hidden" self-test every 24 hours
- ❖ Patented front or rear loading and removing sampling/exhaust tubes
- ❖ Interconnect up to 30 units for common functions
- ❖ Advanced sensor design yields internal dust filtering
- ❖ No additional screens or filters to clean
- ❖ Compatible with Building Automation and Combination CO/Fire alarm systems
- ❖ Complete wiring details permanently attached to unit



MSR-50/CO
Remote Accessory:
for private mode
audible and visual
alarm indication at
a remote location.

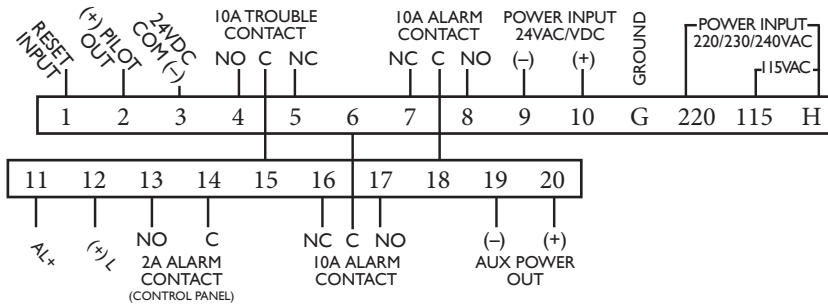


Designed to prevent the circulation of invisible, toxic CO by air handlers, fans and blowers. Complete systems may be shut down in an alarm state.

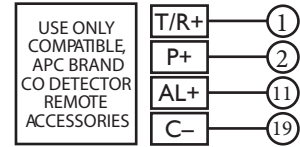


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WIRING



MSR-50/CO WIRING



PRODUCT SPECIFICATIONS

MODEL NUMBER:	SSU-SL-701-KIT		
SENSOR MODEL NUMBER:	SL-701 7-CO		
PACKAGE INCLUDES:	SL-701 CO Detector MSR-50/CO Remote Accessory Fast Tube Air Sampling Tubes 8" Fast Exhaust Tube Mounting Template Necessary Mounting Hardware Installation Instructions		
POWER REQUIREMENTS:	Input Power	Standby Current	Alarm Current
	24VAC	55mA	190mA
	24VDC	14mA	68mA
	115VAC	22mA	32mA
	230VAC	12mA	18mA
RELAY CONTACT RATING:			
Alarm Contacts:	Resistive load: 2 sets form "C" rated at 10 Amps @ 115VAC		
	Resistive load: 1 set form "A" rated at 2 Amps		
Trouble Contacts:	Resistive load: 1 set form "C" rated at 10 Amps @ 115VAC		
AIR VELOCITY:	100 to 4,000 ft./min.		
AMBIENT TEMPERATURE:	32°F to 158°F (0°C to 70°C)		
HUMIDITY:	10% to 85% RH Non-Condensing / Non-Freezing		
WIRING:	Solid or stranded: #12 to #22 AWG terminals		
MATERIAL:	Grey plastic backbox, clear plastic cover (Makrolon 94V-0)		
	Do not expose to corrosive atmospheres		
DIMENSIONS:	13 1/2" L x 4 1/2" W x 2 1/4" D		
MAX. NET WT.:	2 1/2 lbs.		



SSU-TG-701

CO Detector
Test Gas Sold
Separately

The SL-701 is a CO system detector, it is not a smoke detector or a CO alarm. It detects Carbon Monoxide as caused by fossil fuel fired appliances and/or as introduced from the outside in fresh air intakes in the HVAC system.

Ordering Information:

Part #	Description
SSU-SL-701-KIT	Duct Carbon Monoxide Detector
SSU-TG-701	CO Detector Test Gas Canister

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ED0573

LT10601

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SM5



SM-501 Series Duct Smoke Detectors

The SM-501 Series Duct Smoke Detector provides early detection of smoke and products of combustion present in air moving through HVAC ducts in commercial, industrial and residential applications. The SM-501 is designed to prevent the re-circulation of smoke by the air handling systems, fans, and blowers. Complete systems may be shut down in the event of smoke detection.

The SM-501 model will operate on any one of four input voltages (230VAC, 115VAC, 24VAC or 24VDC). The SM-501 allows up to 30 detectors to be interconnected for many common functions.

The SM-501 is enclosed in a compact housing. Each unit provides two sets of 10 Amp form "C" alarm contacts, along with one set of 10 Amp form "C" trouble contacts for monitoring head removal and supply voltage failure.

The green pilot and red alarm visual indicators provided on the front of the SM-501 duct unit signal the operating status of the device. The green pilot LED will be extinguished when the detector head is removed. A manual test/reset switch is located next to the visual indicators.

The SM-501 has been specially designed to allow common detector functions to be linked between up to 30 detectors. Specifically, 30 units may be wired to use a common test/reset function, and to alarm when a single unit alarms. Also, up to 15 units with signaling devices may be interconnected to operate with a single alarm. The SM-501 is designed and built to meet all local requirements, as well as the NFPA regulations regarding duct smoke detectors. Output terminals are provided for remote accessories such as horns, strobes, remote status indicators and test/reset key switches or push buttons.

The ionization and photoelectric detector heads are interchangeable. Air sampling is accomplished via two tubes which protrude into the duct. An exhaust tube of one standard length (7.0") is supplied in the installation kit with the duct smoke unit. Once the duct width had been determined, the air intake sampling tubes must be ordered. Sampling tubes are supplied in three standard lengths (2.5ft, 5.0ft and 10.0ft), and are cut to size to fit the duct. Mounting the duct smoke detector is accomplished by the use of a template and four sheet metal screws, as provided. Mounting can be achieved without the removal of the clear cover, which is secured by four captive screws.

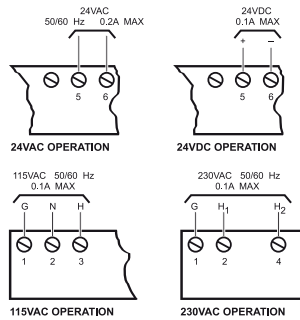
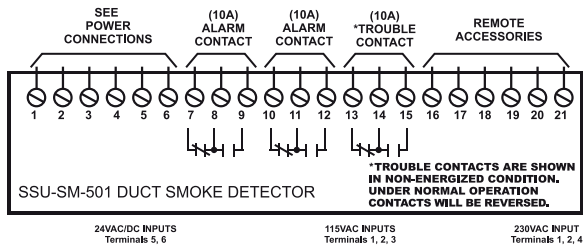
Standard Features:

- Operating voltages 230VAC, 115VAC, 24VAC, 24VDC
- Interconnect up to 30 units for common functions
- UL, CSFM and MEA Listed
- Compact Size
- 2 Sets of alarm contacts
- 1 set of trouble contacts
- Rugged steel back box with clear cover
- Compatible with the WP-1 weatherproof enclosure
- Easy retro-fit/upgrade of existing RW Series detectors
- Clear cover fitted with 4 captive screws
- Large terminal connection screws
- Interchangeable "Plug-In" photoelectric or ionization heads
- Easy Installation without cover removal (Mechanical)
- Dust filtering in detector head
- No additional screens or filters to clean
- Over 15 remote accessories available

MEA



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PRODUCT SPECIFICATIONS

SAE PN#

SSU-SM-501-N Ionization: 230VAC, 115VAC, 24VAC, 24VAC/DC
SSU-SM-501-P Photoelectric: 230VAC, 115VAC, 24VAC, 24VAC/DC

DETECTOR MODEL NUMBER:	S60 Ionization Detector Head 55000-250APO S60 Photoelectric Detector Head 55000-350APO
SAMPLING TUBES:	STS-2.5 Sampling tube for 6" to 2.5' duct width STS-5.0 Sampling tube for 2.5' to 5.0' duct width STS-10.0 Sampling tube for 5.0' to 10.0' duct width
ACCESSORIES:	MS-Series remote accessories, SSU-WP-1 weatherproof enclosures, and T-PB power supplies (Available from Air Products and Controls Inc.)
POWER REQUIREMENTS: (Without accessories)	230VAC 12.0 mA
Stand By:	115VAC 25.0 mA 24VAC 35.0 mA 24VDC 15.0 mA
Head in Alarm:	230VAC 16.0 mA 115VAC 32.0 mA 24VAC 74.0 mA 24VDC 56.0 mA
RELAY CONTACT RATING:	
Alarm Contacts:	2 sets form "C" rated at 10 Amps @ 115VAC Resistive
Trouble Contacts:	1 set form "C" rated at 10 Amps @ 115VAC Resistive
AIR VELOCITY:	500 to 4,000 ft./min.
AMBIENT TEMPERATURE:	SSU-SM-501-N 32°F to 155°F (0°C to 68°C) SSU-SM-501-P 32°F to 100°F (0°C to 38°C)
HUMIDITY:	10% to 85% R.H. No Condensation
WIRING:	#14 to #22 AWG terminals
APPROVALS:	Underwriters Laboratories Listed (UL268A;UROX.S2829) CSFM Listed (3240-1004:108) MEA Listed (73-92-EX;VOL.20)
MATERIAL:	18 Ga. Steel backbox, clear plastic cover
FINISH:	Grey Paint
DIMENSIONS:	L-9 1/8" X W-7 1/4" X H-2 1/4"
MAX. NET WT.:	3 1/2 lbs.
RADIOACTIVE ELEMENT:	For SSU-SM-501-N (Ionization) Americium 241; 0.9 Micro-Curie Do Not Expose to Corrosive Atmospheres
HARDWARE:	7" exhaust tube, sampling tube end cap, mounting template and mounting hardware included

ENGINEERS & ARCHITECTS SPECIFICATIONS

- Air duct smoke detectors shall be Space Age Electronics, Inc. SM-501 Series. For Ionization detectors the model number is SSU-SM-501-N. For photoelectric detectors the model number is SSU-SM-501-P. The detectors shall be listed by Underwriters Laboratories per UL 268A. The detectors shall operate at air velocities from 500 feet per minute to 4,000 feet per minute.
- The duct detector housings shall be of metal construction and complete mechanical installation may be performed without removal of detector cover.
- Visual indication of alarm and power must be provided on the detector front.
- A manual reset switch shall be located on front of the device.
- Detector head shall not require additional filters or screens which must be maintained.
- The housing shall contain a detector base which will accept photoelectric or ionization detector heads.
- Terminal connections shall be of the screw type and be a minimum of #6 screw. Terminals shall be provided for remote pilot, remote alarm indications, strobe/horn and remote reset switch. All wiring must comply with local codes and regulations.

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ED0317

LT10307

Rev.A

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SAE PN# SSU-WP-1
RW/SM Series detector not included



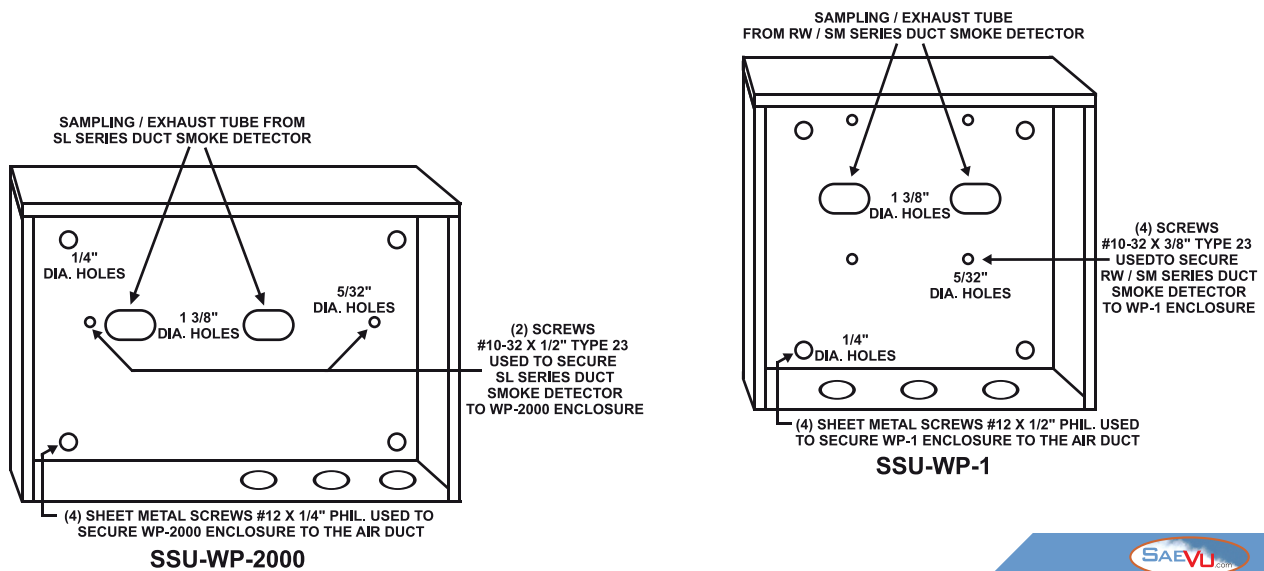
SAE PN# SSU-WP-2000
SL Series detector not included

WP Series Weatherproof Enclosures for Duct Smoke Detectors

The SSU-WP-1 enclosure provides protection for the RW and SM Series duct smoke detectors. The SSU-WP-2000 enclosure provides protection for the SL Series duct smoke detectors. These enclosures offer outdoor protection from rain, sleet and snow, or indoor protection from dripping water.

Standard Features:

- 16 gauge steel throughout
- Egg shell white painted finish throughout
- Drip shield top
- Slip-on removable cover
- Embossed mounting holes on back of enclosure
- 3 knockouts in bottom of enclosure
- UL 50 type 3R
- NEMA type 3R
- Foam gaskets for sampling/exhaust holes provided
- All hardware included



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PRODUCT SPECIFICATIONS

SAE PN#		SSU-WP-1	SSU-WP-2000
USE:		RW and SM Series	SL Series
DIMENSIONS:	H	12" (305mm)	11.063" (281mm)
	W	12" (305mm)	18.125" (460mm)
	D	4.25" (108mm)	4.375" (111mm)
CONDUIT KNOCKOUTS:		In bottom: 3 convertible 0.75" to 1.75"	
METAL WORK:		16ga CRS with white painted finish	
FRONT ACCESS:		Removable cover	
HARDWARE:		Enclosure and duct detector mounting included	
PROTECTION RATING:		3R – UL 50, NEMA and CSA	
AMBIENT TEMPERATURE:		Outdoor: Internal equipment protected from falling rain, etc.; undamaged by ice formation	
LISTINGS AND APPROVALS:		See appropriate RW, SM or SL Series detector specifications	
	UL:	NITW.E69392*	
	CUL:	NITW7.E69392*	

*NITW = Industrial Control Panel Enclosures; /7 = Certified for Canada



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LT10305

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DMS

MS Series Remote Accessories

The MS Series remote accessories are designed to be used with the Duct Smoke Detectors to provide audible and visual indication as well as remote test/reset functions. These devices are constructed of attractive, yet durable brushed stainless steel and mount on a standard single or double gang electrical backbox.



SSU-RA



SSU-RA/I



SSU-RA/R



SSU-RA/P/R



SSU-RA/P/T



SSU-RA/FT/P



SSU-KA/R



SSU-KA/P/R



SSU-KA/P/R/T



SSU-RD



SSU-F/T



SSU-RH/P/A



SSU-RH/KA/P/R



SSU-RH/KA/P/A/T



SSU-RH

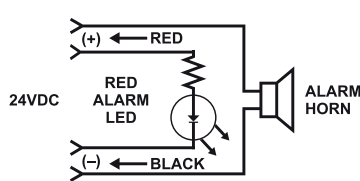
MEA

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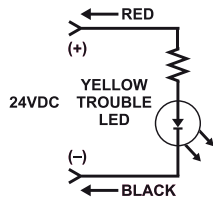


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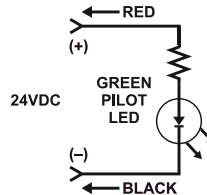
Wiring



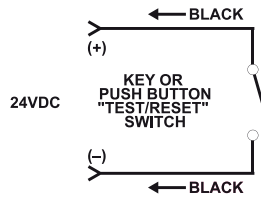
ALARM



FAULT/TROUBLE



PILOT



TEST/RESET

> FOR APPROPRIATE DUCT DETECTOR TERMINALS, PLEASE REFER TO DETECTOR INSTALLATION INSTRUCTIONS.

PRODUCT SPECIFICATIONS

SAE PN#	PILOT LED (GREEN)	ALARM LED (RED)	FAULT/ TROUBLE LED (YELLOW)	PUSH BUTTON TEST/ RESET	KEY OPERATED TEST/ RESET	HORN	SINGLE GANG	DOUBLE GANG
SSU-RA		•					•	
SSU-RA/P	•	•					•	
SSU-RA/R		•		•			•	
SSU-RA/P/R	•	•		•			•	
SSU-RA/P/T	•		•				•	
SSU-RA/FT/P	•		•	•			•	
SSU-KA/R		•			•		•	
SSU-KA/P/R	•	•			•		•	
SSU-KA/P/R/T	•		•		•		•	
SSU-RD		•					•	
SSU-F/T			•				•	
SSU-RH/P/A	•	•				•	•	
SSU-RH/KA/P/R	•	•			•	•		•
SSU-RH/KA/P/A/T	•	•	•		•	•		•
SSU-RH						•	•	

POWER REQUIREMENTS:

Alarm LED	15mA @ 24VDC
Pilot LED	15mA @ 24VDC
Alarm Horn	20mA @ 24VDC

SOUND PRESSURE:

Alarm Horn	78 db @ 10 ft
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DIMENSIONS:

Single Gang	4 1/2"(114.3mm)H x 2 3/4"(69.85mm)W
Double Gang	4 1/2"(114.3mm)H x 4 1/2"(114.3mm)W

WIRING:

LEDs/Horn	6" 24 AWG pigtails
Switches	6" 22 AWG pigtails

APPROVALS:

UL Listed for use with Air Products and Controls duct smoke detectors including all RW-Series, SM-Series and SL-Series duct smoke detectors.
 UL URRQ. S7425
 CSFM 7300-1004:107
 MEA 73-92-E VOL25



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