

Submittal Guide

EST3 Life Safety and Security Platform

Intelligent control for large and
medium sized applications



EST3
Network

Initiating
Devices

Notification
Appliances

Hazardous Location
Devices

Door Holders
& Relays



imagination at work

Project: _____

Contact: _____

Date: _____

It is with great pleasure that we provide this submittal for an EST3 Unified Control Platform. This guide includes a comprehensive presentation of related system components and devices. Products we are submitting for your consideration are indicated by a checkmark in the margins of the pages that follow.

More detailed information can be found in individual catalog sheets dedicated to each product. All these sheets, along with guide specifications and other useful product information, are available electronically on our *LifeLines* CD-ROM. This exhaustive collection of life safety related literature is fully searchable and includes a utility for printing multiple catalog sheets.

Thank you for giving us the opportunity to provide this submittal. Please do not hesitate to contact us should you require further information.

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Wiring diagrams provided herein are for information and reference only and are not to be used for installation purposes. Consult the appropriate installation documents for wiring and configuration details.

This guidebook is for information only and is not intended as a substitute for verbatim legislated requirements. For authoritative specifications regarding the application of life safety, security, and access control systems, consult current editions of applicable codes and standards. For authoritative interpretation of those codes and standards, consult your local authority having jurisdiction.

While every effort has been made to ensure the accuracy and completeness of this guidebook, the authors and publishers assume no responsibility for errors, inaccuracies, omissions, or any inconsistencies herein.

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Also from GE Security:

Security and Access Control Handbook

A practical guide to application and system design

Handbook of Visual Notification Appliances for Fire Alarm Applications

A practical guide to regulatory compliance

Glossary of Fire Alarm and Security Terminology

A desk reference for life safety and security professionals

Remote Booster Power Supply

A summary of typical wiring and configuration for everyday and advanced applications

Installer's Wire Guide

A concise pocket reference to wire and cable requirements for GE Security products and systems

QuickStart Submittal Guide

Intelligent/conventional life safety for small to mid-sized applications

EST2 Submittal Guide

Networkable intelligent life safety with voice audio

Quality and reliability built into every system



A lot can be said about EST3, but when it comes to performance, price, installation ease and flexibility, this remarkable life safety system speaks for itself.

For example, a glance at the contents on this page reveals just how few components are needed to configure even the most sophisticated and elaborate life safety, security, and access control network. EST3's modular design means you only get the features you need, and its simple configuration ensures trouble-free installation every time.

And when it comes to connected devices, nothing beats EST3. In fact, the *Signature Series* line of intelligent analog detectors has been singled out by Underwriters Laboratories as the first such devices on the market that do not require a calibration sensitivity test in order to comply with NFPA72.

Quality and reliability are built into every EST3 component, from the simplest control switch to the system's main processor. And that's not just a corporate mandate: it's a proven fact supported by GE Security's commitment to ISO 9000 international quality standards. EST3 is certified under ISO, not only for manufacturing, but for design, training, customer service, and technical support as well. This ensures that your EST3 network will provide extremely reliable service the day it's brought on-line and well into the future.

Foreword: Redefining Life Safety vi

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EST3 Network

Initiating Devices

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Redefining Life Safety

Life safety used to mean the protection of buildings and occupants against the threat of fire. From this grew an industry that has undergone quantum leaps from relay logic, to microprocessor-based technology, to peer-to-peer networks with integrated audio annunciation – all in the span of just a few years.

While the protection of people and property has always been, and will continue to be, the primary focus of life safety efforts, few would argue that standards haven't played a major role in propelling the industry forward. Agencies such as NFPA and UL have established life safety as among the most stringently regulated and most closely scrutinized industries in the world. And for good reason: with lives and assets at stake, nothing can be left to chance.

Today the life safety industry is in the midst of yet another quantum leap forward. Expanding into the arenas of security, access control, and CCTV, many life safety manufacturers are seeking ways to extend the life safety function. But listing fire alarm functions in the same system with security and access control has been regarded as a Pandora's Box of regulatory obstacles and resistance. As a result, efforts in the past have concentrated on combining separately listed systems by means of a user interface that gives the illusion of total building control. To reinforce the illusion, this patchwork approach has been referred to as "integration."

From the interfaced system point of view there is good reason for keeping life safety separate from security functions. To do otherwise would require an unprecedented effort in terms of securing approvals and listings. It would mean venturing into uncharted territory.

At GE Security we're used to blazing trails. With the introduction of the Synergy concept, we've managed to accomplish what many said couldn't be done: we've combined for the first time fire alarm, security, and access control *on a single, fully-listed network backbone*. EST3 is the platform used to carry this effort through, proving once again that this exquisitely engineered system has both the power and the flexibility to jump through all the regulatory hoops, to negotiate all the listing minefields – and still have lots left over for system expansion.

Was all this effort worth it? You bet. Operating over

the EST3 network, security and access control not only enjoy the speed and versatility of this proven life safety performer, they also have the opportunity to share system resources such as wiring, power supplies and off-premise communication. And that saves material, labor, and maintenance costs. Big time.

Synergy promotes the sharing of resources. It makes a simpler system. One that's easier to service and less trouble to program than several separate systems. EST3 has always been an event-driven system that orchestrates all fire alarm functions with extreme efficiency. With added security and access control functions, the possibilities are endless: unlock access controlled doors when there's a fire alarm; use integrated audio to issue audible intruder alert messages – all through software, no extra relays or wiring required!

EST3 also elevates the reliability and survivability of security functions to a level found previously only in dedicated fire alarm systems. And when it comes to the marriage between existing systems, nothing beats EST3. In fact, the system is even backward compatible with BACnet, the open-source communications protocol commonly used to bridge interfaced systems together.

How does Synergy fit into this picture? Synergy is the name used to describe GE Security's method of combining fire, access control, and security functions into one seamless system. Synergy is not a new system, but rather the logical extension of EST3 architecture into security and access control.

In addition to traditional fire alarm devices, products used to create Synergy include motion detectors, security input modules and access controllers. These connect on network wiring and draw power from the same sources supplying fire alarm components. Now, with EST3, dozens of Signature Series multisensor detectors can co-exist with dozens of Signature Series motion detectors – *on the same pair of wires*. This degree of system unity is simply unprecedented.

EST3 is the first UL 864-listed fire and security platform ever engineered. We've accomplished this by tackling listing challenges head-on, not avoiding them. And we've negotiated all the regulatory hurdles so you don't have to. The result is a whole that is much greater than the sum of its parts: true Synergy.

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EST3 Network

EST3 is a modular system uniquely designed to easily meet the needs of standalone single node systems or multi-node networks. Fire alarm, security, access control and audio functions use the same fundamental components, simplifying system layouts. A powerful System Definition Utility program helps define system operations in a fraction of the time required by previous methods. Virtually all EST3 operating features are software controlled. This gives EST3 great site flexibility and ensures operational changes and upgrades will be possible years after the initial installation.

Highly Flexible Applications

EST3 is a superbly adaptable life safety system, lending itself to medium and large building applications. Cabinets are available with room for system batteries up to 65 Amp hours. With EST3, one 24-volt battery supports up to four power supplies. Each supply will support up to 7 Amp load. With four supplies, 28 Amps of current is available — all backed up by a common battery.

Fully-listed User Interfaces

The user interface layer is made up of a Liquid Crystal Display module and a system of generic modules designed to maximize design flexibility for custom systems.

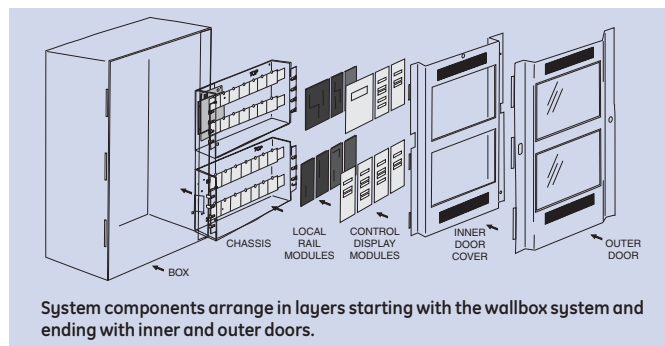
In addition to front panel control and annunciation, EST3's powerful *FireWorks* color graphics package provides desktop control and messaging in the familiar Windows environment. *Fireworks*' unique four-quadrant display gives the user access to all EST3 functions including fire alarm, security, access control, and CCTV — in one simple and intuitive interface. And because *FireWorks* is an integral part of the EST3 network, it is listed by UL not only under fire alarm standards, but under access control, local burglar, and proprietary monitoring standards as well. In fact, EST3 panels and *FireWorks* are the only such systems with this range of qualifications.

Powerful Networking

EST3 operates on a multi priority peer-to-peer token ring network. The multi-priority token ring gives EST3 exceptional response. Response time for all functions, including fire, security, and access control, is less than three seconds across the network regardless of the total number of nodes. EST3 token ring network configuration also permits vast distances between nodes. The allowable distance between nodes on #18AWG (0.75mm²) is 5,000ft (1,523m). With 64 nodes supported on a network, the total network length is in excess of 300,000 ft (91,400m), or nearly 60 miles! A single node supports up to 10 Signature loop controllers with 250 devices per loop, (2,500 points total per node).

EST3 also makes field wiring easy with building wiring terminations that use removable terminal blocks on local rail modules.

Panel design allows for the required separation of high voltage and power-limited wiring.



System components arrange in layers starting with the wallbox system and ending with inner and outer doors.

Eight-channel Audio

EST3 audio design provides the emergency user with a communication package that minimizes switch selections. This facilitates simple, accurate and fast evacuation control announcements. EST3 provides simple paging controls. Pressing All Call selects all paging zones for message delivery. Pressing Page To Evacuation automatically selects all areas in evacuation. Similarly, the user can Page To Alert. Zoned paging requires the user to simply select zone paging switches.

Taking full advantage of digital technology, up to eight channels of audio sources can be sent over a single twisted pair of wires between nodes. Coupling the inherent reliability and performance of zoned amplifiers with EST3 simplified user interfaces makes audio system design and operation both easy and dependable.

EST3 is the right choice for any medium to large application. Its multiplex functions are second to none in the industry today.

Survival of the fittest

Multiplex fire, security, and access control

Whether for fire alarm only, or for total life safety protection including security and access control, the EST3 network is the most survivable system available.

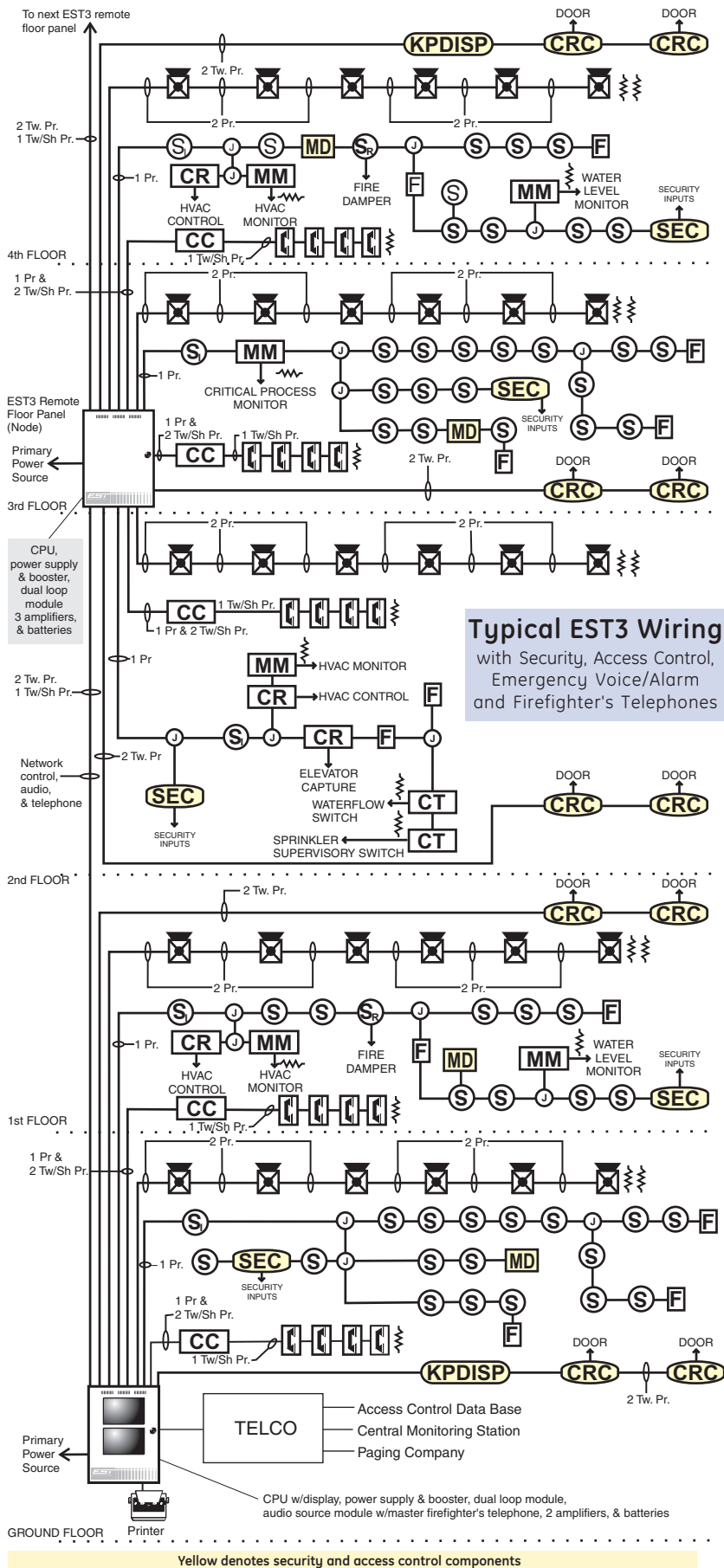
EST3 uses distributed database technology, designed to survive the rigors of fire and firefighting. In Class B configuration a single break on the network wiring will isolate the system into two groups of one or more nodes. Each group of nodes continues functioning as a peer-to-peer network, working with their combined databases.

In Class A configurations a single break or short on the network wiring causes the system to isolate the fault. Network communication continues uninterrupted. If multiple faults occur, the network re-configures into multiple networks. This means a system continues to respond to activations from every node that can transmit and receive network messages. Local responses always execute because the local database resides at each node.

Exceptional survivability extends to every EST3 function, including security and access control. These devices (highlighted in yellow) reside on the network alongside fire alarm components. They share wiring, power sources and the inherent stability of a fire alarm network engineered to meet standards far beyond those of ordinary security systems.

LEGEND

Symbol	Description	Page
F	Manual Pull Station	34
S _r	Smoke detector with relay base	26
S _i	Smoke detector with isolator base	26
S	Smoke detector with standard base	26
MD	Motion detector	27
⊠	Combination speaker/strobe	39
Ⓜ	Firefighter's telephone	42
SEC	Security module	33
KPDISP	Keypad Display	15
CRC	Card Reader Controller	16
CC	Signal module	30
CR	Control relay module	30
CT	Input module	29
MM	Monitor module	31
⋮	End-of-line resistor	
⊙	Junction box	



Typical EST3 Wiring with Security, Access Control, Emergency Voice/Alarm and Firefighter's Telephones

Yellow denotes security and access control components

SUBMIT

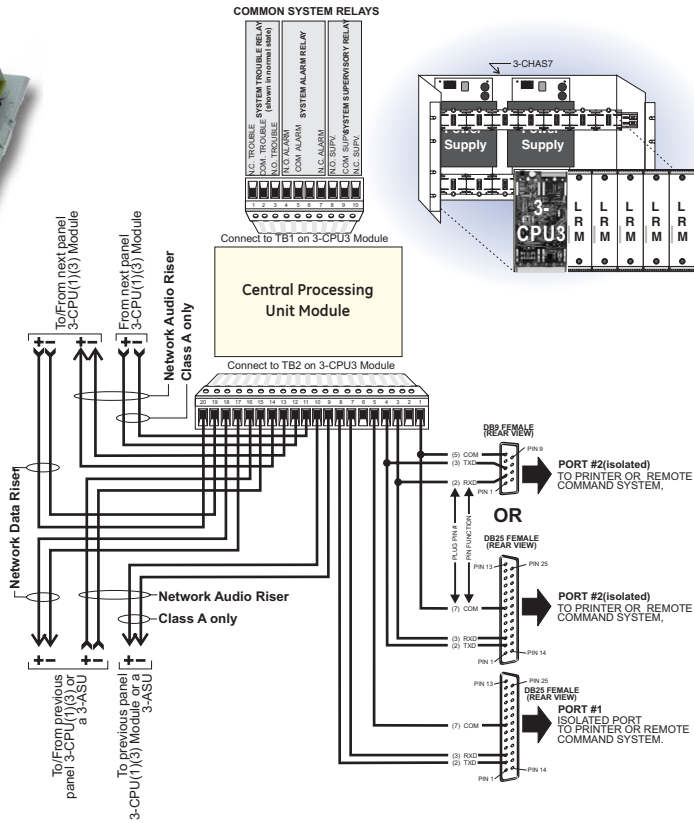
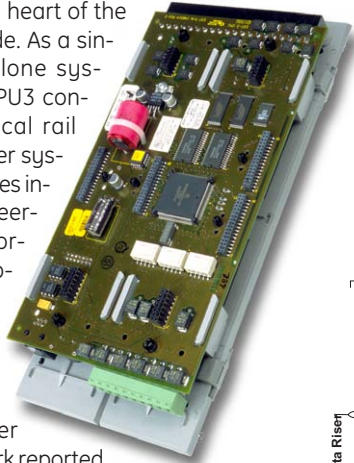


Central Processor Unit

The 3-CPU3 is the heart of the EST3 network node. As a single node standalone system, a single 3-CPU3 controls up to 19 local rail modules. For larger systems, up to 64 nodes interconnect on a peer-to-peer multi-priority token ring protocol network.

The 3-CPU3 controls all local panel responses to automatic, user initiated, or network reported events. As a network node, it is an equal among peers: there is no master on the network. Multi-priority token ring means that a node with a new alarm has priority on the network. This gives exceptional response times over the network – less than three seconds.

Each 3-CPU3 provides connectors for mounting network, RS-232, and memory expansion cards. Removable terminal blocks on the 3-CPU3 support connection of network and audio data wiring. On-board common relays also terminate at the 3-CPU3 terminals. To aid in troubleshooting and service, status LEDs monitor local rail, network, RS232 and audio data communications.



3-CPU3	Central Processor Unit Module	Catalog Sheet: 85010-0133	<input type="checkbox"/>
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Network Communication Card

The Network Communications card mounts to the back of the Central Processor Unit. The 3-RS485A card provides a Class A (Style 7) or Class B (Style 4) circuit for network communications signals and two additional circuits for Class A (Style 7) digitized audio signals. The 3-RS485B card provides a Class B (Style 4) circuit for network communications signals and a second Class B (Style 4) circuit for the digitized audio signals. Network messages received by the Network Communications card are re-transmitted to the next network node.

3-RS485A	Network Communication Card Class A (Style 7)	Catalog Sheet: 85010-0133	<input type="checkbox"/>
3-RS485B	Network Communication Card Class B (Style 4)	Catalog Sheet: 85010-0133	<input type="checkbox"/>

RS-232 Communication Card

The 3-RS232 Communication Card mounts to the back of the 3-CPU3. The 3-RS232 has two optically-isolated RS-232 ports. The ports support connection of a printer and/or an external command center.

3-RS232	RS-232 Communication Card	Catalog Sheet: 85010-0133	<input type="checkbox"/>
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EST3 Network

Initiating Devices

Notification Appliances

Hazardous Location Devices

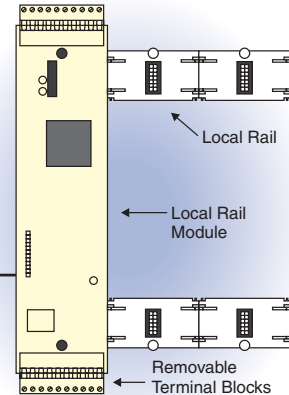
Door Holders & Relays

SUBMIT



Local Rail Modules

Local Rail Modules (LRMs) conveniently mount to the EST3 inner chassis, away from high voltages. Each module features removable terminal blocks and simple plug-in connectors. LRMs include Zoned Amplifiers, Signature Loop Controllers, Conventional Hardwired Modules, Off Premise Signaling Modules, as well as the main CPU module. Control Display Modules can be mounted on any LRM.



Signature Driver Controller Modules

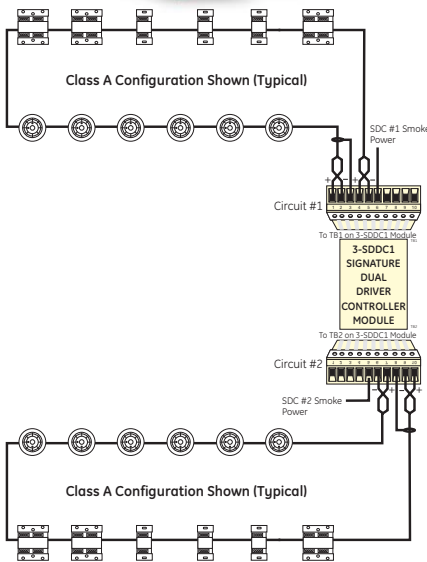


The 3-SSDC1 and 3-SDDC1 Signature Driver Controller modules provide an intelligent interface between the 3-CPU(1.3) module and Signature Series devices. Each module contains its own microprocessor used to coordinate, process and interpret information received from and sent to Signature devices. Power and communications is received directly from the control panel rail assembly. The 3-SSDC1 Single Signature Driver Controller module supports one Signature Data circuit, while the 3-SDDC1 Signature Dual Driver Controller module supports two Signature circuits. Both modules occupy one rail space in the fire alarm control cabinet and provide removable field wiring terminals to aid installation.

Innovative design gives the 3-SSDC1/3-SDDC1 and Signature devices truly "distributed intelligence". Signature detectors and modules have their own on-board microprocessor communicating with the loop controller in a fully digital communication format. This increases the accuracy of the information coming to and from the loop controller by reducing the effects of capacitance and noise.

With decentralized intelligence much of the decision making moves from the loop controller to the devices. Advanced fire detection algorithms processed within the Signature devices effectively end unwanted alarms. Environmental compensation and multiple sensing element decision making operations are resident in the devices. Intelligent devices allow the Signature Controllers to execute communication and system functions with greater speed and low baud rates, increasing the accuracy of information transmitted between the loop controller and devices.

To enhance survivability of the system the 3-SSDC1/3-SDDC1 supports a standalone mode for Signature devices. Two catastrophic failure modes are supported. If the 3-CPU(1/3) fails, the loop controller will continue to poll its devices. If an alarm is detected it will be sent on the local rail communication bus and received by other local rail modules. A common alarm condition throughout the panel will result. If the local rail module (3-SSDC1/3-SDDC1) fails, and a device (smoke or module) detects an alarm, specialized circuitry will make the node aware of the alarm condition. The 3-CPU(1/3) will communicate the alarm condition to the rest of the network. Having multiple redundant modes is paramount in a life safety system.



<input type="checkbox"/>	3-SSDC1	Single Signature Driver Controller, c/w one 3-SDC1	Catalog Sheet: 85010-0129
<input type="checkbox"/>	3-SDDC1	Dual Signature Driver Controller, c/w two 3-SDC1s	Catalog Sheet: 85010-0129
<input type="checkbox"/>	3-SDC1	Signature Device Card - upgrades a 3-SSDC1 to a 3-SDDC1	Catalog Sheet: 85010-0129
<input type="checkbox"/>	3-SSDC1-MB	Driver Controller Motherboard (no 3-SDC1 device cards)	Catalog Sheet: 85010-0129

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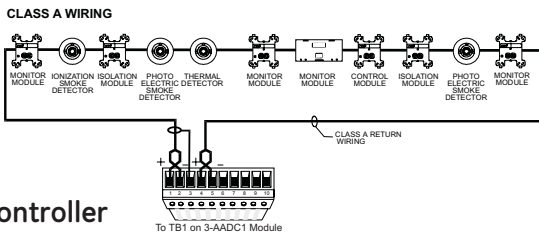


EST3 Network



Addressable Analog Device Controller

The 3-AADC1 Addressable Analog Circuit Module is a local rail module used on the EST3 system. The module requires one connection on the rail chassis. The module can support 99 addressable analog sensors and 99 addressable modules. The controller also features a hinged front panel for a Control Display Module, available in a variety of LED and/or switch configurations.



3-AADC1	Addressable Analog Module	Catalog Sheet: 85010-0128
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Initiating Devices

Initiating Device Circuit (Hardwired) Module



The 3-IDC8/4 is ideal for retrofit projects where existing wiring, smoke detectors and signals may not need replacing.

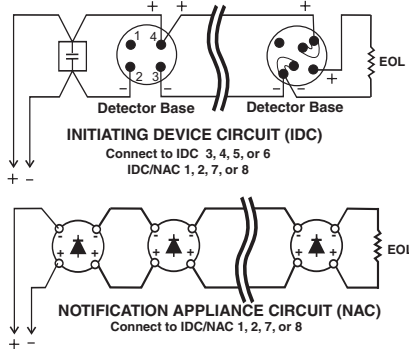
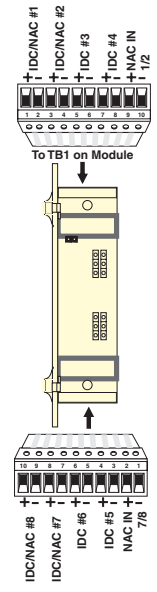
Flexibility built right into the IDC module allows connection of normally open contact devices, and traditional 2-wire smoke detectors.

The 3-IDC8/4 also configures for use with N.O. contacts and supports supervised supervisory and monitor circuits with latching or non-latching operations. When the monitor operation is used with the non-latching function, the circuit serves as a supervised event follower. This efficiently covers critical fan and damper operations. Circuits can annunciate on the 3-LCD, control display modules, or at any other display device on the network.

Up to 30 photoelectric or 50 ionization smoke detectors are supported per circuit. All circuits may be programmed for non-verified or verified smoke operation. Ranges include open circuit, shorted condition, and high and low impedance (relative to the main impedance setting). This allows the use of various detectors of similar impedance, as well as 4-state European alarm circuit operation.

Four of the eight 3-IDC8/4 circuits are convertible to Class B notification appliance circuits. The circuits employ traditional reversing polarity operation for polarized bells, horns, and strobes.

Notification appliance circuits are arranged in pairs. Each pair distributes 3.5 Amps at 24 Vdc from the local rail or a single riser. Riser sources supported include 24 V @ 3.5 A, which can be pulsed (temporal pattern) for audible signals, or up to 70 Vrms @ 100W audio source for speakers.



3-IDC8/4	Initiating Device Circuit Module	Catalog Sheet: 85010-0061
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Notification Appliances

Hazardous Location Devices

Door Holders & Relays

SUBMIT



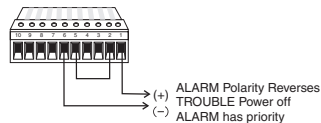
EST3 Network

Off Premise Signaling Module

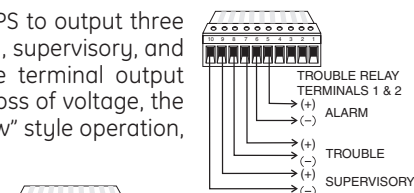
The 3-OPS supports three separate off premises signaling modes of operation:



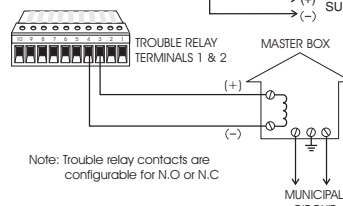
'Old' style reverse polarity operation has only a single reversed polarity output. In the normal state the output is 24 Vdc current limited to 6 mA. In the alarm state the polarity reverses. Should the EST3 panel go into trouble from the normal state, the voltage is removed from the output terminals of the 3-OPS. This change will be detected by the central station as a trouble. Alarm always has priority over trouble. Trouble relay contacts must be configured for normally-closed operation.



'New' style reverse polarity operation allows the 3-OPS to output three independent reversing polarity signals. These are alarm, supervisory, and trouble. In each case an active condition causes the terminal output voltage to reverse. Should the central station detect a loss of voltage, the condition is due to line failure. When configured for "new" style operation, a set of trouble contacts is available.



City Tie connection. In this configuration the 3-OPS has terminals for a local energy master fire alarm box. The module operates into a 14 ohm coil and supervises the city tie connection for open conditions. Trouble relay contacts are configurable for normally-open or normally-closed.

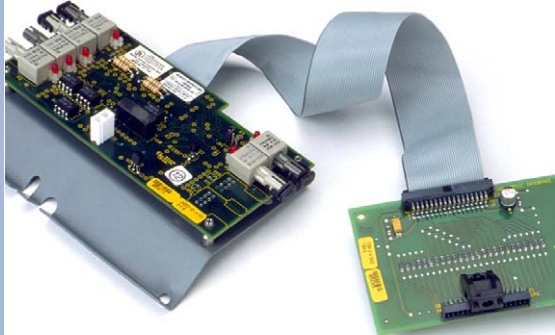


3-OPS

Off Premise Signaling Module

Catalog Sheet 85010-0075

Fiber Optics Communications Interface



Fiber optic communications provide a high level of immunity from electrical noise. Circuits are power limited and suitable for use through hazardous atmospheres. Fiber optic circuits also provide a high level of security and are resistant to the effects of moisture.

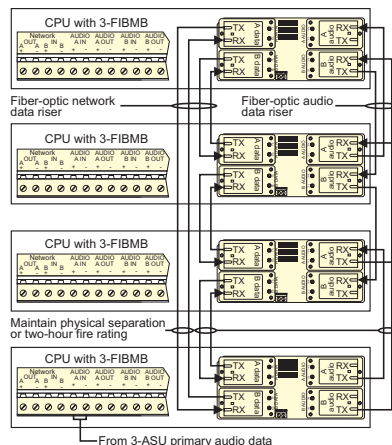
EST3 networks easily configure to single or multi mode fiber optic or combination fiber optic/copper networks using the 3-FIBMB Fiber Optic

Communications Interface and the appropriate fiber optic transceivers.

The 3-FIBMB electronics card plugs right into the CPU. A ribbon cable connects the 3-CPU directly to the 3-FIBMB fiber interface card. The interface card mounts in the 1/2 footprint space in a 3-CHAS7 chassis or 3-CAB5 enclosure.

The 3-FIBMB supports from one to four single or multi mode transceivers. The SMXLO standard output single mode transceiver is suitable for distances up to approximately 8.7 miles (14km). The SMXHI high output single mode transceiver is available to span distances up to approximately 24 miles (40km). For multi mode applications, the MMXVR transceiver is suitable for distances up to approximately 8,000ft (2,400m).

3-CPU Class A network and audio fiber-optic connections



3-FIBMB Fiber Optic Communications Interface c/w 3-CHAS7/3-CAB5 mounting brackets Catalog Sheet: 85010-0131

SMXLO Plug-In standard output single mode transceiver for 3-FIBMB Catalog Sheet: 85010-0131

SMXHI Plug-In high output single mode transceiver for 3-FIBMB Catalog Sheet: 85010-0131

MMXVR Plug-In standard output multi mode transceiver for 3-FIBMB Catalog Sheet: 85010-0131



Modem Communicator



The Modem Communicator is a two-way local rail module that performs a variety of off-premise communications functions for the EST3 system unavailable on any other system. The module has provisions for supervising two loop-start telephone lines. It features a modular jack for telephone line connections, as well as database download from a PC. The Modcom's configuration and firmware can also be updated from any network node.

Modcom series modules occupy a single local rail space and can be mounted in any node on the network. Any EST3 Control/Display module can be mounted on the face of a Modcom series module. Power for the Modcom is supplied by the EST3 system supply.

The Modcom provides an enhanced level of survivability in the event of a network CPU failure by notifying the Central Monitoring Station of the failure and entering a degraded mode of operation. In degraded mode, the Modcom can transmit a default fire alarm message during a fire alarm condition.

Two versions of the Modcom are available:

3-MODCOM - This internal modem is a V.32bis 14.4K baud full duplex modem. The modem permits the remote upload and download of system data via a telephone line.

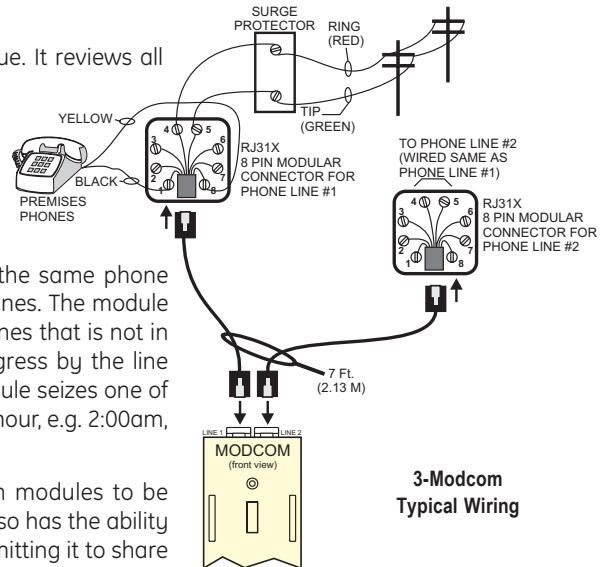
3-MODCOMP - In addition to all modem and dialer (DACT) functions of the 3-MODCOM, the 3-MODCOMP can dial directly into paging systems using Telelocator Alphanumeric Protocol (TAP). Alphanumeric system data can be sent to a single pager or groups of pagers. Some pager services can

forward messages via e-mail and Fax.

Each Modcom can buffer up to 500 events in its event queue. It reviews all active events in the queue and identifies the highest priority event and dials the associated receiver. The Modcom then identifies all other events in the queue that are destined to the same receiver as the highest priority event. All event information for that receiver is then transmitted. The next high priority event is identified and the process repeated.

The Modcom series has been designed for installation on the same phone lines with other devices such as faxes and answering machines. The module makes its first dial out attempt on either of the two phone lines that is not in use. This prevents unnecessary interruption of calls in progress by the line seizure relays. In the event that both lines are busy, the module seizes one of the busy lines. A fixed DACT testing time can be set at an off-hour, e.g. 2:00am, again minimizing interruptions.

The answering machine override feature permits Modcom modules to be installed on a standard telephone line. The Modcom series also has the ability to detect Type 2 and Type 3 distinctive ringing patterns, permitting it to share its phone lines with other devices and still have a unique phone number for incoming calls.

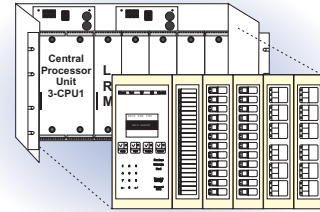


3-MODCOM	Modem/Dialer (DACT) version	Catalog Sheet: 85010-0107	<input type="checkbox"/>
3-MODCOMP	Modem/Dialer (DACT) w/TAP Protocol	Catalog Sheet: 85010-0107	<input type="checkbox"/>

SUBMIT



Control, Display & Annunciation



Liquid Crystal Display Modules



LCD display modules provide system control and annunciation from any network node location at which they are installed. Modules feature backlit high-contrast supertwist graphical displays and mount to the local rail over the node's central processing unit (3-CPU3). Simple-to-understand LEDs and switches help the emergency user display information and execute system commands with confidence.

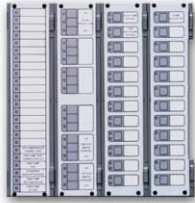
3-LCDXL modules feature large screens that support 24 lines of text 40 characters in length – enough space to display eight events simultaneously. It occupies four local rail module spaces.

3-LCD modules support eight lines of text 21 characters in length. They occupy two local rail module spaces.

EST3 networks can support any combination of 3-LCDXL and 3-LCD display modules.

<input type="checkbox"/>	3-LCDXL	21 Line Liquid Crystal Display Module	Catalog Sheet: 85010-0135
<input type="checkbox"/>	3-LCD	8 Line Liquid Crystal Display Module	Catalog Sheet: 85010-0071

Control Display Modules



EST3 Control Display modules provide the emergency user with the simplest of interfaces: lights and switch controls. Control Display Modules install over local rail modules. There are five types of modules available.

The first module supports simple zone annunciation; the second, zone annunciation with zone disable; the third, alarm and trouble zone annunciation; the fourth, alarm and trouble zone annunciation with zone disable. Typically, alarm zone annunciation appears on any of these module types.

The fifth module is very adaptable to system requirements for audio or remote equipment control. Each contains 18 LEDs and 18 switches. And each group of three switches has a latching-interlock to support operations that must be kept separated. The interlock is under software control so only one switch is active at a given time.

<input type="checkbox"/>	3-LDSM	LED Display Support Module	Catalog Sheet: 85010-0055
<input type="checkbox"/>	3-24R	Display Module: 24 red LED	Catalog Sheet: 85010-0055
<input type="checkbox"/>	3-24Y	Display Module: 24 yellow LED	Catalog Sheet: 85010-0055
<input type="checkbox"/>	3-24G	Display Module: 24 green LED	Catalog Sheet: 85010-0055
<input type="checkbox"/>	3-12SR	Display/Control Module: 12 switches with 12 red LEDs	Catalog Sheet: 85010-0055
<input type="checkbox"/>	3-12SY	Display/Control Module: 12 switches with 12 yellow LEDs	Catalog Sheet: 85010-0055
<input type="checkbox"/>	3-12SG	Display/Control Module: 12 switches with 12 green LEDs	Catalog Sheet: 85010-0055
<input type="checkbox"/>	3-12RY	Display Module: 12 red LEDs and 12 yellow LEDs	Catalog Sheet: 85010-0055
<input type="checkbox"/>	3-12/2Y	Display Module: 12 groups of 2 yellow LEDs	Catalog Sheet: 85010-0055
<input type="checkbox"/>	3-12/R1Y	Display Module: 12 groups of 1 red and 1 yellow LED	Catalog Sheet: 85010-0055
<input type="checkbox"/>	3-12/S1GY	Display/Control Module: 12 switches with 1 green and 1 yellow LED per switch	Catalog Sheet: 85010-0055
<input type="checkbox"/>	3-12/S1RY	Display/Control Module: 12 switches with 1 red and 1 yellow LED per switch	Catalog Sheet: 85010-0055
<input type="checkbox"/>	3-12/S2Y	Display/Control Module: 12 switches with 2 yellow LEDs per switch	Catalog Sheet: 85010-0055
<input type="checkbox"/>	3-6/3S1G2Y	Display/Control Module: 6 groups of 3 switches, 1 LED each: green, yellow, yellow	Catalog Sheet: 85010-0055
<input type="checkbox"/>	3-6/3S1GYR	Display/Control Module: 6 groups of 3 switches, one LED each: green, yellow, red	Catalog Sheet: 85010-0055



FireWorks™



The FireWorks four-quadrant display provides easy access to fire, security, access control, and CCTV functions. FireWorks operates with Windows 2000 or Windows XP operating systems.

For FireWorks specifications and ordering information, please refer to catalog sheet 85006-0048.

For FireWorks operation and application, please refer to catalog sheet 85006-0047.

FireWorks is a family of software and hardware options designed to work in concert with GE Security life safety and property protection systems.

FireWorks provides a simple user interface, taking what could be an overwhelmingly large amount of information and presenting it in an easy-to-understand format. It does this by dividing major system functions into easy-to-manage quadrants that make the system very intuitive to use because information is presented logically.

To further enhance usability, FireWorks is event driven. This greatly increases the user's ability to deal with system events by eliminating the confusion sometimes experienced when systems present all information at once. FireWorks automatically prioritizes the events for the user in an Event Quadrant. Here the highest priority event is displayed first, and the lowest priority event is displayed last. This allows the user to quickly determine which events warrant the most immediate attention.

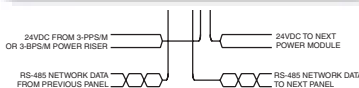
Each of the other three quadrants provides one specific piece of information that relates to the event highlighted in the Event Quadrant. Related information may include event action information (specific tasks the user may need to perform in response to the event), or information about the area where the event has taken place (any hazardous materials present in the area, etc.). Still images, CCTV, video, audio messages and graphical maps may also be presented to aid in the understanding of an event and how it should be managed.

Standalone workstations	<input type="checkbox"/> FW3UL3 (3 Port)	<input type="checkbox"/> FW5UL3 (5 Port)	<input type="checkbox"/>
UL 864 listed 19" LCD Monitors, black, touch screen, rack mountable	<input type="checkbox"/> FW-19LCDTS		<input type="checkbox"/>
UL 864 listed CRT Monitors, beige	<input type="checkbox"/> FW-19MN (19")	<input type="checkbox"/> FW-21MN (21")	<input type="checkbox"/>
RKU-61-24	19" Rack mount enclosure - 35 EIA panel Spaces available		<input type="checkbox"/>
FW-RACKMN	Monitor Rack mount kit - 10 EIA panel spaces required. For FW-19MN monitors		<input type="checkbox"/>
FW-RACKLCD19	Monitor Rack mount kit - 10 EIA panel spaces required. For FW-19LCD(TS) monitors		<input type="checkbox"/>
FW-RACKPC	Computer Rack mount - Hardware - 4 EIA panel spaces required. Order FW-RACKSD slides separately		<input type="checkbox"/>
FW-RACKKB	Keyboard Rack mount kit - Black - 2 EIA panel spaces required. Order FW-RACKSD slides separately		<input type="checkbox"/>
FW-RACKSD	Rack mount slides		<input type="checkbox"/>
Blank EIA panel plates	<input type="checkbox"/> BP1 (one space)	<input type="checkbox"/> BP2 (2 spaces)	<input type="checkbox"/> BP3 (3 spaces)
MFC-A	Accessory Enclosure for mounting Mini-Mux at FireWorks workstation		
PCCA	PC Conduit Adapter - Used for desk or tower mounting PC (See Note 4)		
PC options for UL/ULC systems	<input type="checkbox"/> FW-MOD (56k bd. V.90 modem)	<input type="checkbox"/> FW-SND (Sound card)	<input type="checkbox"/> FW-SNDSP (speakers, black)
FW-SP2	Provides 2 serial ports for UL/ULC Listed FW3UL3 or FW2UL2 or FW2 workstations		
FW-VIDTVC	Card for UL/ULC listed systems. Required when using SV+ software with FW3UL3 or FW5UL3		
FW-VIDVC2	Video card for dual monitors (FW3UL3 and FW5UL3)		
Mini-Mux	Communication Interface Board - UL listed for extending FireWorks to Fire Panel Communications		
FCOM-FIB	Fiber Optic data line card used with Mini-Mux		
FW-XPC	RS-232 extender. Allows FireWorks with no common controls to communicate to Fire Panels		
FW-XPL	RS-232 extender. Allows Fire Panel to communicate with FireWorks		
Color Graphics Software	<input type="checkbox"/> FW-CGS (no cmn. ctl., not for UL-listed PCs)	<input type="checkbox"/> FW-CGSUL (c/w cmn. ctl., requires UL-listed PC)	<input type="checkbox"/>
Access Control Database	<input type="checkbox"/> ACDB8 (controls up to eight doors)	<input type="checkbox"/> ACDB8+ (controls more than eight doors)	<input type="checkbox"/>
SiteVision - Provides on-screen annunciation of CCTV at FireWorks PC.	<input type="checkbox"/> SV	<input type="checkbox"/> SV+ (with on-screen control)	<input type="checkbox"/>

SUBMIT



Envoy Graphic Annunciator



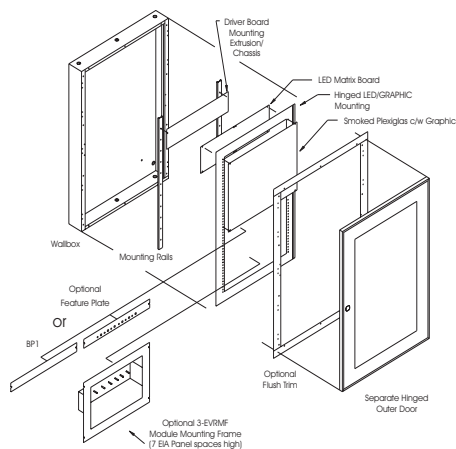
ENVOY graphic annunciators and smoke control panels are designed to present complex status and control information in an easy to understand package. The design of ENVOY products permits users to rapidly determine system status and easily operate associated system controls. The addition of system LCD annunciators and remote microphones can turn ENVOY into a complete fire command station.

ENVOY graphic annunciators display system information using high intensity LEDs mounted behind the smoked Plexiglas panel that displays the artwork. The Envoy EST3 FACS Smoke Control Series replaces the Plexiglas graphic panel with a gloss black finished steel panel. High contrast white graphics are placed on the panel along with the required switches and LED indicators, integrating the element of control directly “into the picture.” Switches and LEDs can be mounted virtually anywhere on the graphic display itself. White artwork and text on a dark background is standard. Colored artwork is available as an option, to enhance building areas or individual zones. A variety of LEDs and switches are available to meet any display and control requirement.

Power ON, Trouble, and Signal Silenced LEDs; System Reset, Silence, Trouble Silence, and Drill

push button switches are available as panel feature options. Other panel options include system LCD displays and remote microphones.

ENVOY graphic panels are available in three standard sizes to fit the needs of most installations. Wall boxes are manufactured from 16-gauge cold rolled steel and finished with a textured black baked enamel. Panels can be surface mount or semi-flush mount. When semi-flush mounting, optional trim kits provide a finished look to the installation.



<input type="checkbox"/>	EV1	Envoy Graphic Annunciator (maximum 96 LEDs)	Catalog Sheet: 85006-0037
<input type="checkbox"/>	EV1B	EV1 Wallbox: textured black finish	Catalog Sheet: 85006-0037
<input type="checkbox"/>	EV1T	EV1 Semi-Flush Trim: textured black finish	Catalog Sheet: 85006-0037
<input type="checkbox"/>	EV2	Envoy Graphic Annunciator (maximum 160 LEDs)	Catalog Sheet: 85006-0037
<input type="checkbox"/>	EV2B	EV2 Wallbox: textured black finish	Catalog Sheet: 85006-0037
<input type="checkbox"/>	EV2T	EV2 Semi-Flush Trim: textured black finish	Catalog Sheet: 85006-0037
<input type="checkbox"/>	EV3	Envoy Graphic Annunciator (maximum 256 LEDs)	Catalog Sheet: 85006-0037
<input type="checkbox"/>	EV3B	EV3 Wallbox: textured black finish	Catalog Sheet: 85006-0037
<input type="checkbox"/>	EV3T	EV3 Semi-Flush Trim: textured black finish	Catalog Sheet: 85006-0037
<input type="checkbox"/>	FSCS-1	Envoy Smoke Control Graphic Panel	Catalog Sheet: 85006-0037
<input type="checkbox"/>	FSCS-2	Envoy Smoke Control Graphic Panel	Catalog Sheet: 85006-0037
<input type="checkbox"/>	FSCS-3	Envoy Smoke Control Graphic Panel	Catalog Sheet: 85006-0037
<input type="checkbox"/>	FSCS-4	Envoy Smoke Control Graphic Panel	Catalog Sheet: 85006-0037

See Page 8 for Control Display modules. See Page 14 for Remote Microphones.

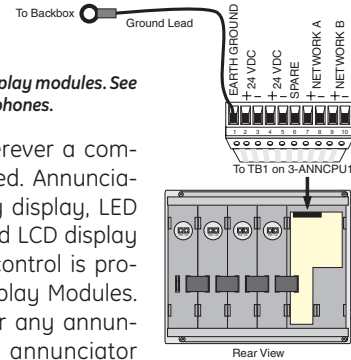


Remote Annunciators



See Page 8 for Control Display modules. See Page 14 for Remote Microphones.

Use EST3 remote annunciators wherever a compact system status display is needed. Annunciator configurations include: LCD only display, LED only display, or combination LED and LCD display in a single enclosure. Display and control is provided by the 3-LCD and Control Display Modules. Control/Display modules install over any annunciator support module, maximizing annunciator design flexibility. A lamp test feature can program to any spare control switch. If a 3-LCD display is installed in the annunciator, simply operate the Alarm Silence and Trouble Silence switches simultaneously to lamp test all LEDs. 3-REMICA remote microphones can also be installed in annunciator cabinets.



3-LCDANN	Remote LCD Command Module Annunciator	Catalog Sheet: 85010-0069	<input type="checkbox"/>
3-6ANN	Six-position Base Annunciator	Catalog Sheet: 85010-0069	<input type="checkbox"/>
3-10ANN	Ten-position Base Annunciator	Catalog Sheet: 85010-0069	<input type="checkbox"/>
3-ANNCPU3	Annunciator CPU	Catalog Sheet: 85010-0069	<input type="checkbox"/>
3-ANNSM	Annunciator Support Module	Catalog Sheet: 85010-0069	<input type="checkbox"/>
3-LCD	Liquid Crystal Display Module	Catalog Sheet: 85010-0069	<input type="checkbox"/>
3-ANNBF	Blank Filler Plate	Catalog Sheet: 85010-0069	<input type="checkbox"/>
3-EVDVRA	LED/Switch Driver Module Assembly for Third-party Graphics	Catalog Sheet: 85010-0069	<input type="checkbox"/>
3-EVPWRA	Power Supply Assembly with 19" rail mounting chassis assembly	Catalog Sheet: 85010-0069	<input type="checkbox"/>
3-EVDVRX	Plastic mounting extrusion 19-inch mounting	Catalog Sheet: 85010-0069	<input type="checkbox"/>

Remote Annunciator Cabinets

Annunciator cabinets are constructed from 16-gauge cold rolled steel. The gray textured enamel finish of the annunciators complements any decor. Both surface and semi-flush mounting cabinet configurations maximize mounting flexibility and aesthetic appeal. Cabinet arrangements allow both LED and LCD annunciation to easily combine in a single enclosure.

RLCM/B	Remote LCD Command module flush mount LCD wallbox	Catalog Sheet: 85010-0069	<input type="checkbox"/>
RLCM/B-S	Remote LCD Command module surface mount LCD wallbox	Catalog Sheet: 85010-0069	<input type="checkbox"/>
6ANN/B	Six-position LED/LCD flush wallbox	Catalog Sheet: 85010-0069	<input type="checkbox"/>
6ANN/B-S	Six-position LED/LCD surface wallbox	Catalog Sheet: 85010-0069	<input type="checkbox"/>
10ANN/B	Ten-position LED/LCD flush wallbox	Catalog Sheet: 85010-0069	<input type="checkbox"/>
10ANN/B-S	Ten-position LED/LCD surface wallbox	Catalog Sheet: 85010-0069	<input type="checkbox"/>



Video Display Utility for Text Annunciation

The 3-VDUT *Video Display Utility for Text* is a software package that runs on a personal computer, providing ancillary annunciation of EST3 system events in text format.

3-VDUT	Video Display Utility for Text Annunciation Software	Catalog Sheet: 85010-0117	<input type="checkbox"/>
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SUBMIT



Ethernet® Networking

Optional interface for monitoring applications.

See pages 8-11 for UL-listed equipment suitable for common control applications.



10/100 MB Ethernet® Switching Hub

The NETSW-EIS6-xM series switches are industrial grade six-port, 10/100 Mbps auto-negotiating switching hubs. Each switch provides four 10/100 Mbps shielded RJ-45 connectors for twisted pair (Ethernet) connections and two 100 Mbps fiber ports. The NETSW-EIS6-MM supports multi mode fiber and uses ST connectors while the NETSW-EIS6-SM supports single mode fiber and uses SC connectors. Both switches operate on a nominal 24 VDC that can be supplied from a fire alarm control panel or booster power supply ensuring power is always available. Connections are provided for redundant power supplies.



NETSW-EIS6-MM 10BASE-T/100BASE-TX/100BASE-FX 4 RJ-45 port, ST connectors Catalog Sheet: 85006-0057



NETSW-EIS6-SM 10BASE-T/100BASE-TX/100BASE-FX 4 port, SC connectors Catalog Sheet: 85006-0057



Ethernet® Fiber Optic Network Interface

The NETCOM-1F allows GE Security fire alarm panels to communicate with a PC running FireWorks or ACDB software or a serial printer over any multimode fiber optic Ethernet network. The NETCOM-1F is ruggedly constructed industrial grade unit that connects to the fire alarm control panel's RS-232 serial port. LEDs on the front of the unit make it easy to determine its status. Flash ROM memory permits upgraded versions of operating firmware to be easily downloaded via the serial port. Power is supplied directly from the Fire Alarm Control Panel, ensuring a reliable and monitored source. For remote printer applications, an external 120VAC wall mount transformer is supplied.



NETCOM-1F Ethernet Device Server Network Interface - 10Base-T, 10Base-FL Catalog Sheet: 85006-0058



Ethernet® Serial Network Interface

The NETCOM-1S allows GE Security fire alarm panels to communicate with a PC running FireWorks or ACDB software or a serial printer over Ethernet networks. The NETCOM-1S is ruggedly constructed industrial grade unit that connects to the fire alarm control panel's RS-232 serial port. LEDs on the front of the unit make it easy to determine its status. Flash ROM memory permits upgraded versions of operating firmware to be easily downloaded via the serial port. Power is supplied directly from the Fire Alarm Control Panel, ensuring a reliable and monitored source. For remote printer applications, an external 120VAC wall mount transformer is supplied.



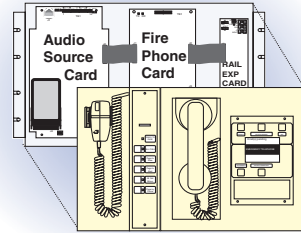
NETCOM-1S Ethernet Device Server Network Interface - 10/100BASE-T Catalog Sheet: 85006-0059

Note: Refer to the Network Application Manual (p/n 3100576) for detailed information on network application.



Network Audio

Configuring EST3 audio is a matter of selecting components for installation in standard fire alarm cabinet assemblies. EST3 uses zoned amplifiers. This reduces wire runs and space needs at a central location. Audio control equipment and zoned amplifiers use the same system power supplies as fire alarm components. All these components are supported by a common standby battery. Where multiple nodes make up the system, a single pair of wires carries eight channels of digital audio between nodes.



Audio and Telephone Masters



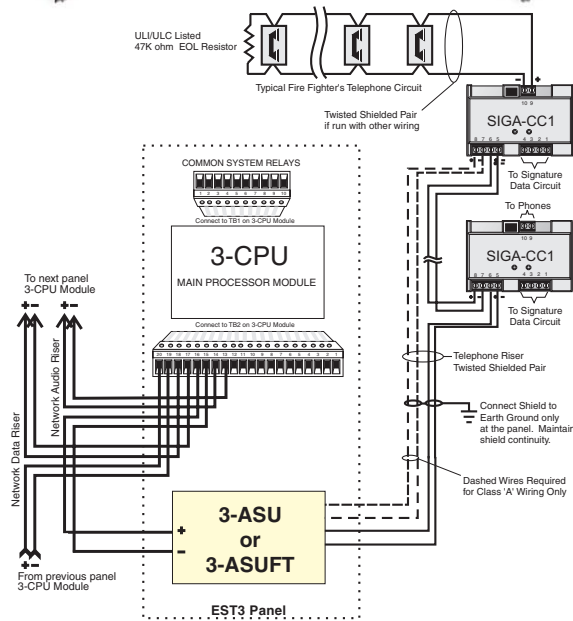
The Audio Source Unit converts analog signals to digital signals. Sampling the analog signal 9600 times per second provides high quality reproduction of audio sources. On-board audio memory stores signal tones and/or alarm-alert verbal messages. The ASU comes standard with two minutes of memory for tone and message storage. Available message memory expands easily to 32 minutes with the optional 3-ASUMX/32 memory expansion card.

Audio Source Units support connection of a local microphone, remote microphone, telephone voice line, and auxiliary audio input. With eight audio channels to choose from, combinations of paging, alert, evacuation signaling and automatic messages are available for simultaneous delivery to different parts of a building.

When the system requires paging, only the 3-ASU or 3-ASU/4 Audio Source Units provide a master paging microphone with common controls. Switch labeling makes the operation intuitive. Six LEDs and five switches cover paging operations.

Audio Source Units mount in one chassis space of a EST3 Lobby Enclosure. In addition to the paging microphone, the 3-ASU/4 has mounting space for up to four local rail modules, including 20, 40, and 90 watt zone amplifiers, and up to four Control Display modules. This increases layout flexibility. The 3-ASU provides the same functionality as the 3-ASU/4 but is supplied with an inner door filler plate and no local rail module spaces.

The 3-FTCU contains the master telephone handset that provides an analog telephone riser for two-way communications between the fire command station and firefighter's telephone stations installed in the facility. The 3-FTCU features an alpha-numeric display that indicates both incoming and connected calls. Up to five remote telephones may be connected to the riser simultaneously. The fire command center operator can also use the telephone circuit as a page source, permitting paging via the telephone system.



3-ASU/FT*	Audio Source Unit with local microphone and firefighters' telephone	Catalog Sheet: 85010-0063	<input type="checkbox"/>
3-ASU/4*	Audio Source Unit with local microphone (provides four local rail spaces)	Catalog Sheet: 85010-0063	<input type="checkbox"/>
3-ASU*	Audio Source Unit with local microphone and inner door filler plate	Catalog Sheet: 85010-0063	<input type="checkbox"/>
3-FTCU*	Firefighters' Telephone Control Unit with inner door filler plate	Catalog Sheet: 85010-0063	<input type="checkbox"/>
3-ASUMX/32*	Audio Source Unit Memory Expansion (provides 32 minutes of message time)	Catalog Sheet: 85010-0063	<input type="checkbox"/>
3-CCI	City of Chicago Interface		<input type="checkbox"/>

* Add "-CC" for City of Chicago approved equipment

SUBMIT

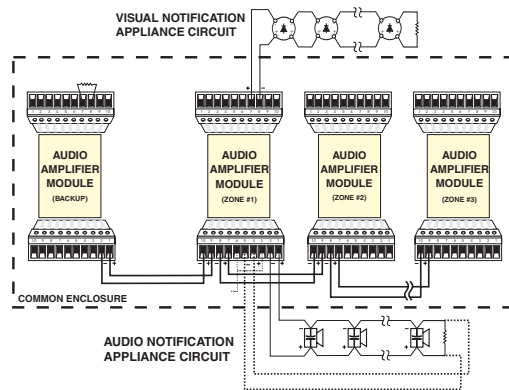


Audio Amplifiers (Zoned)



EST3 audio amplifiers decode and re-expand the eight multiplexed audio signals on the network audio riser. Under command of the network, one of the available eight signals is selected to be distributed over the speaker circuit. Command and control signals for the amplifier are sent and received via the network data riser in response to network programming.

Amplifiers are available in 20, 40 or 95 watt versions, with supervised, power limited 25 Vrms or 70V_{RMS} outputs. The amplifier output is wired to a single speaker zone. Each amplifier has a 1 KHz temporal tone generator used as evacuation signal in the event of a fault with the network audio circuit. In the event of an on-line amplifier failure, a standby amplifier may be configured for automatic replacement of any on-line amplifier configuration. 20 and 40 watt amplifiers also provide an independently controlled supervised, power limited 24 Vdc notification appliance circuit rated at 3.5 amps. All field wiring connections are made via plug-in connectors.



<input type="checkbox"/>	3-ZA20A	20 Watt Zoned Amplifier w/Class A/B (Style Z/Y)	Audio & Class A/B 24 VDC outputs	Catalog Sheet: 85010-0057
<input type="checkbox"/>	3-ZA20B	20 Watt Zoned Amplifier w/Class B (Style Y)	Audio & Class B 24 VDC outputs	Catalog Sheet: 85010-0057
<input type="checkbox"/>	3-ZA40A	40 Watt Zoned Amplifier w/Class A/B (Style Z/Y)	Audio & Class A/B 24 VDC outputs	Catalog Sheet: 85010-0057
<input type="checkbox"/>	3-ZA40B	40 Watt Zoned Amplifier w/Class B (Style Y)	Audio & Class B 24 VDC outputs	Catalog Sheet: 85010-0057
<input type="checkbox"/>	3-ZA95	95 Watt Zoned Amplifier w/Class A/B (Style Z/Y)	Audio output	Catalog Sheet: 85010-0057

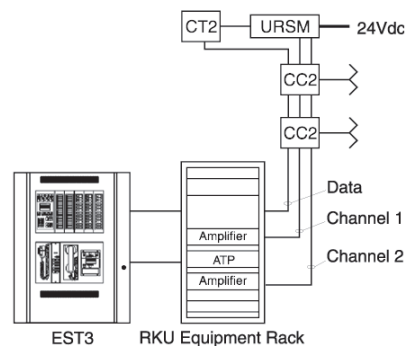
Audio Amplifiers (Banked)



Banked Amplifiers provide EST3 with economy audio configurations for single and some dual channel applications. Model 3-ZA20A/B Zoned Amplifiers at the EST3 control panel provide channel sources for banked amplifiers. 3-ZA20A/B amplifiers can select any of EST3's eight audio channels as a signal source.

A special interface module, the 3-ATPINT, accepts analog audio signals at 25 or 70V_{RMS} from EST3's Zoned Amplifiers and passes these signals to the 1B3125 and 1B3250 Audio Power Amplifiers via an Amplifier Terminal Panel (ATP). The 3-ATPINT mounts in the ATP.

The ATP Audio Terminal Panel interfaces one or two audio power amplifiers and monitors utility power, charges and supervises standby batteries, and provides switch-over to standby. The amplifier bank is monitored and controlled through Signature Series modules.



<input type="checkbox"/>	1B3125	Audio Power Amplifier — 125 Watts	Catalog Sheet: 85010-0011
<input type="checkbox"/>	1B3250	Audio Power Amplifier — 250 Watts	Catalog Sheet: 85010-0085
<input type="checkbox"/>	ATP	Amplifier Terminal Panel	Catalog Sheet: 270041
<input type="checkbox"/>	3-ATPINT	ATP Interface Module	Catalog Sheet: 85010-0085
<input type="checkbox"/>	URSM	Universal Riser Supervisory Module	Catalog Sheet: 270038
<input type="checkbox"/>	RKU	19-inch Equipment Rack	

Remote Microphones

The remote microphone panel is a supervised remote microphone, used with the 3-ASU Audio Source Unit's remote microphone input. The front panel provides Local Page Active, Remote Page Active, and Trouble LED indicators as well as an integral VU (Volume Unit) meter to indicate page volume level. All panels use a 24 Vdc power source and all wiring is supervised. One form C trouble contact is provided.

<input type="checkbox"/>	3-REMICP	Remote Microphone — Chassis Mount	Catalog Sheet: 85010-0105
<input type="checkbox"/>	3-REMICA	Remote Microphone — Annunciator Mounted	Catalog Sheet: 85010-0105

Signature Series Audio Amplifiers, p.35



Security & Access Control

As a true multiplex life safety system, EST3 supports fire alarm as well as security and access control functions. The capacity for this additional functionality is built right into every EST3 panel. All that's needed to take advantage of it is a handful of specialized components.



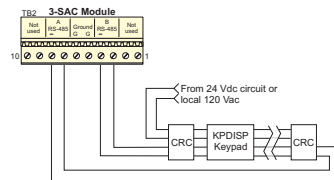
Security/Access Control Module

The 3-SAC Security/Access Control Module is a key component that blends the security and access control functions into the EST3 multiplex life safety system. The 3-SAC is the demarcation point between fire and security functions. For jurisdictions requiring independent wiring of fire and security devices, the 3-SAC offers two independent circuits. Where fire and security devices are permitted to be connected to the same circuit, both circuits can support fire and security functions. All security devices that connect to a 3-SAC are designed, tested and listed to strict fire alarm standards.

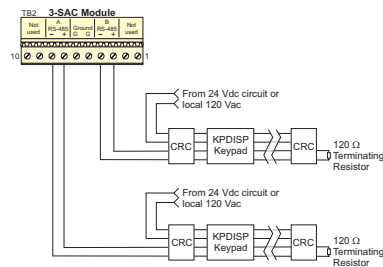
The 3-SAC is used in combination with the Modcom Modem Communicator. The Modcom's dialer (DACT) function transmits alarms to one or more central monitoring stations and/or paging terminals. Additionally, information received by the Modcom can be downloaded through the 3-SAC to individual security devices.

The EST3 network ensures that fire alarm events always receive the highest priority over routine signal processing. Power for the 3-SAC comes from the same highly-reliable power supply/battery combination used to power fire alarm components. Any Control Display module will mount in front of the 3-SAC, allowing great flexibility of the system user interface layout.

Class A wiring



Class B wiring



3-SAC

Security/Access Control Module

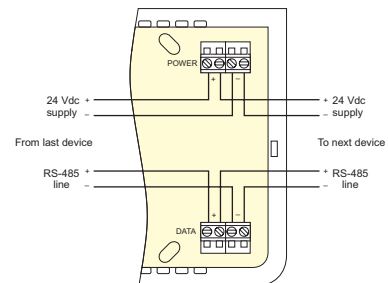
Catalog Sheet 85010-0109



Keypad/Display

The KPDISP is a combination keypad and dot-matrix display designed for use with the EST3 fire alarm/security/access control systems. The unit features a large LCD display and telephone-style keypad housed in an attractive Cyclopedia® case. A removable cover is provided to prevent accidental keypad activation and for protect against dirt.

The KPDISP transmits and receives information from/to the 3-SAC security access control module installed in the EST3 system. Communication between the KPDISP and the 3-SAC is supervised, providing unprecedented reliability. Credential holder information is encrypted to provide an additional level of security. KPDISP data is stored in non-volatile memory. Power to the KPDISP is provided by the EST3, ensuring a reliable, supervised and backed-up power source.



KPDISP

Keypad/Display

Catalog Sheet 85006-0046

SUBMIT



Card Reader Controller



The Card Reader Controller (CRC) provides the power and electronics required to monitor and control a single door with both entry and exit readers. The unit is designed to mount in close proximity to the door it controls, however it can be located remotely from the readers in retrofit applications. The unit is housed in an off-white Cyclopol® housing. Its attractive design allows for surface mounting in exposed areas.

All access decisions are made locally in the CRC. The CRC's non-volatile memory can hold schedules and holiday information for up to 8,000 cardholders. The CRCXM has additional memory, and supports 36,000 cardholders. The memory also retains the last 5,000/20,000 events for logging purposes. This history information is uploaded at the request of the access control database for use in a variety of reports.

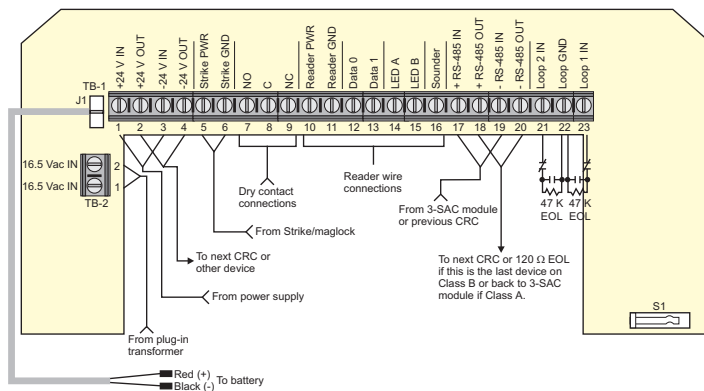
The unit provides 12 Vdc @ ½ amp for door strike or magnetic lock requirements. An integral standby battery can provide up to four hours of service for applications that use electric door strikes. An integral tamper switch is also provided.

Two input circuits are provided for security devices. These are typically used to monitor door position and request-to-exit devices. Input circuits can also be configured as a "buzz in" switch to manually unlock the door, or as security input points.

A handicapped feature output is provided to operate mechanical door openers with extended door-open times. This output is activated when a cardholder with the disabled option activated presents his card to the reader.

Each CRC(XM) contains the entire access control database within its memory. This distribution of intelligence minimizes traffic on the network. Cardholder data is created and stored in the Access Control Database (ACDB) software program that runs on any compatible PC. This information is then encrypted and sent to the CRCs by a hardwire or dial-up connection.

In a life safety network environment, the PC is simply equipped with a conventional modem. The ACDB program then dials up the network and sends the encrypted database information via the network to the individual CRCs. This allows an ACDB to serve multiple sites. Dial-up data entry also permits multiple tenants to share a common access control system without sharing a common database. PCs may also be connected directly to the system using a direct serial connection.



<input type="checkbox"/>	CRC	Card Reader Controller w/memory for 8,000 cardholders	Catalog Sheet: 85001-0528
<input type="checkbox"/>	CRCXM	Card Reader Controller w/memory for 36,000 cardholders	Catalog Sheet: 85001-0528
<input type="checkbox"/>	CRCXND	CRC Sounder Module	Catalog Sheet: 85001-0528
<input type="checkbox"/>	12V1A2	12V @1.2AH Standby Battery	Catalog Sheet: 85001-0528
<input type="checkbox"/>	CRCXF	Class 2, 16 Vac Plug in Transformer	Catalog Sheet: 85001-0528
<input type="checkbox"/>	DLSM	Data Line Supervisory Monitor	Catalog Sheet: 85001-0528
<input type="checkbox"/>	ACDB8	Access Control Software - eight doors	Catalog Sheet: 85010-0098
<input type="checkbox"/>	ACDB8+	Access Control Software - eight-plus doors	Catalog Sheet: 85010-0098
<input type="checkbox"/>	ACDB-SVR	Access Control Database Server Application Software	Catalog Sheet: 85010-0098
<input type="checkbox"/>	ACDB-CLNT	Access Control Database Client Application Software	Catalog Sheet: 85010-0098

SUBMIT



EST3
Network

Initiating
Devices

Notification
Appliances

Hazardous Location
Devices

Door Holders
& Relays

Proximity Card Readers

EST3 card readers feature the latest proximity technology that allows cards to be read when they are held in the vicinity of the reader. This eliminates the need for reader adjustments required by swipe-type readers. Readers are rated for both indoor and outdoor applications and are constructed of rugged sealed polycarbonate, which provides a high degree of vandal resistance as well as protection from harsh environments.



5355AGK0009 Shown

CR-5355 Proximity Card Reader

The CR-5355 proximity card reader is available with or without a keypad. The keypad option provides the additional security offered by a Personal Identification Number (PIN). The CR-5355 mounts on a one-gang electrical box. Dimensions (HWD): 5.0" x 5.0" x 1.0" (12.7 cm x 12.7 cm x 2.54 cm).

CR-5355	Standard Proximity Card Reader, Charcoal Gray	Catalog Sheet 85001-0520	<input type="checkbox"/>
5355AGK0009	HID Brand Proximity Card Reader with Keypad, Charcoal Gray	Catalog Sheet 85001-0520	<input type="checkbox"/>

CR-5365 Proximity Card Reader

The CR-5365 is a narrow proximity card reader designed for mounting on doorframes or mullions. The CR-5365 mounts on any sturdy surface. Dimensions (HWD): 6.0" x 1.7" x 1.0" (15.2 cm x 4.36 cm x 2.54 cm).



CR-5365	Proximity Card Reader, Charcoal Gray	Catalog Sheet 85001-0521	<input type="checkbox"/>
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CR-5395 Proximity Card Reader

The CR-5395 is an aesthetically pleasing proximity card reader that is available with a variety of different color covers. It mounts on a one-gang electrical box. Dimensions (HWD): 4.7" x 3.00" x 0.68" (11.9 cm x 7.6 cm x 1.7 cm).

CR-5395	Proximity Card Reader, Charcoal Gray	Catalog Sheet 85001-0522	<input type="checkbox"/>
C-5395G	Gray Cover for CR-5395	Catalog Sheet 85001-0522	<input type="checkbox"/>
C-5395B	Beige Cover	Catalog Sheet 85001-0522	<input type="checkbox"/>
C-5394BL	Black Cover	Catalog Sheet 85001-0522	<input type="checkbox"/>
C-5394W	White Cover	Catalog Sheet 85001-0522	<input type="checkbox"/>

CR-6005 Proximity Card Reader

The CR-6005 offers the smallest footprint of any GE Security proximity card reader. It mounts on any sturdy surface. Dimensions (HWD): 3.14" x 1.70" x 0.51" (7.98 cm x 4.32 cm x 1.3 cm).



CR-6005	Proximity Card Reader, Charcoal Gray	Catalog Sheet 85001-0523	<input type="checkbox"/>
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SUBMIT



EST3 Network



Proximity Access Cards

GE Security proximity access control cards offer the most convenient access credential available. To request access, the user simply holds the card in the vicinity of the card reader. There is no need to remove the card from a wallet or unclip it when worn as a badge. Cards are not affected by body shielding or environmental conditions, even when kept near keys and coins.

Proximity cards feature a highly reliable passive design that requires no batteries. Over 100,000,000 unique codes are available in a package the size of a standard credit card. Each card has an external ID number printed on the card for ease of entry into any system database.

<input type="checkbox"/>	PC-1326	Molded proximity card, with EST logo	Catalog Sheet: 85001-0524
<input type="checkbox"/>	PC-1386	ISO format proximity card, with EST logo	Catalog Sheet: 85001-0524
<input type="checkbox"/>	PC-1386B	ISO format proximity card, no logo	Catalog Sheet: 85001-0524
<input type="checkbox"/>	EST-PC	Molded proximity construction card with EST logo	Catalog Sheet: 85001-0524



Key Fob Proximity Access Credential

The PK-1346 incorporates a proximity access credential in the form of an ordinary key fob. The small convenient size is designed to hang on a key ring, so it's always accessible. Packaged in an ultrasonically-welded charcoal gray polycarbonate shell, this lightweight credential is virtually unbreakable and works in a wide range of environmental conditions. The fob's passive design requires no batteries, and the read range is not affected by body shielding or environmental conditions, even when close to keys or coins.

<input type="checkbox"/>	PK-1346	Key Fob Proximity Access Credential	Catalog Sheet: 85001-0525
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Proximity Tag Access Credential

The PT-1391 proximity tag is a paper-thin self-adhesive transponder that can be fixed to any non-metallic surface. The small black disk may be affixed to existing identification badges, or magnetic stripe and barium ferrite (Wiegand) access credentials, permitting a seamless migration path to proximity technology, without the need for multiple cards during the transition period. The proximity tag may also be used on personal objects such as cell phones and PDAs, instantly turning these devices into access credentials.

<input type="checkbox"/>	PT-1391	Proximity Tag Access Credential	Catalog Sheet: 85001-0525
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12V DC Regulator with Security Interface

The 24DC12 is a multi-function module used to convert 24 Vdc to 12 Vdc. This makes it possible to use 24 Vdc fire alarm power supplies to provide power for 12-volt security devices. The 24DC12 also provides electrical isolation for UL609/ULC-S303 Local Burglar alarm bell housings.

<input type="checkbox"/>	24DC12	12V DC Voltage Regulator with Security Bell Interface	Catalog Sheet 85005-0111
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Cabinets & Chassis

EST3 offers a wide selection of cabinets allowing the greatest use of its flexible modular design. From the elegant contoured door design of the Lobby Enclosure through to the standard design of Remote Closet Cabinets, both aesthetics and function are easily addressed.



SUBMIT



EST3 Network

Lobby Enclosures

EST3 lobby enclosures provide space for control, monitoring and display modules. Ideal for mounting in lobbies where appearance is important, maximum mounting flexibility is provided with doors that will mount for right- or left-hand opening. Lobby enclosures come in several sizes housing one to three chassis and batteries. Lobby enclosure doors have viewing windows and are available in gray baked enamel or red baked enamel finishes.

3-CAB5(R)	Cabinet with Wallbox and door — five LRM spaces	Catalog Sheet: 85010-0067	<input type="checkbox"/>
3-CAB7B	Wallbox only — one chassis	Catalog Sheet: 85010-0067	<input type="checkbox"/>
3-CAB7D(R)	Inner and outer doors for 3-CAB7B	Catalog Sheet: 85010-0067	<input type="checkbox"/>
3-CAB14B	Wallbox only — two chassis	Catalog Sheet: 85010-0067	<input type="checkbox"/>
3-CAB14D(R)	Inner and outer doors for 3-CAB14B	Catalog Sheet: 85010-0067	<input type="checkbox"/>
3-CAB21B	Wallbox only — three chassis	Catalog Sheet: 85010-0067	<input type="checkbox"/>
3-CAB21D(R)	Inner and outer doors for 3-CAB21B	Catalog Sheet: 85010-0067	<input type="checkbox"/>

Remote Closet Enclosures

Remote Closet Cabinets provide an economical way of installing equipment in locations where aesthetics are not paramount, such as electrical closets. Optional display modules used for system diagnostics display can be mounted behind the front door. Remote Closet Cabinets are surface mounted and come in sizes providing space for one to three chassis, with room for standby batteries. Remote Closet Cabinets have left hand hinged doors and are available with red finish only. RCC cabinets can also be used as remote battery cabinets.



3-RCC7R	Red wallbox and door (one chassis)	Catalog Sheet: 85010-0067	<input type="checkbox"/>
3-RCC14R	Red wallbox and door (two chassis)	Catalog Sheet: 85010-0067	<input type="checkbox"/>
3-RCC21R	Red wallbox and door (three chassis)	Catalog Sheet: 85010-0067	<input type="checkbox"/>

Chassis Assemblies

3-CHASS4	Provides space for 3-REMICA and four local rail modules	Catalog Sheet: 85010-0067	<input type="checkbox"/>
3-CHAS7	Provides space for seven local rail modules	Catalog Sheet: 85010-0067	<input type="checkbox"/>

Cabinet Accessories

3-BATS	Battery Shelf for RCC Enclosures. Room for up to one 65 AH battery	Catalog Sheet: 85010-0067	<input type="checkbox"/>
3-TAMP	Tamper switch for 3-CAB7, 3-CAB14 and 3-CAB21 cabinets	Catalog Sheet: 85010-0067	<input type="checkbox"/>
3-TAMP5	Tamper switch for 3-CAB5	Catalog Sheet: 85010-0067	<input type="checkbox"/>
3-TAMPGCC	3-TAMPGCC Tamper Switch for RCC series cabinets. Mounts to side of cabinet	Catalog Sheet: 85010-0067	<input type="checkbox"/>
ATCK	Attack rated door for 3-RCC7R	Catalog Sheet: 85010-0067	<input type="checkbox"/>

Initiating Devices

Notification Appliances

Hazardous Location Devices

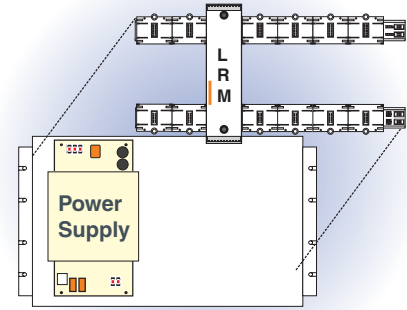
Door Holders & Relays

SUBMIT

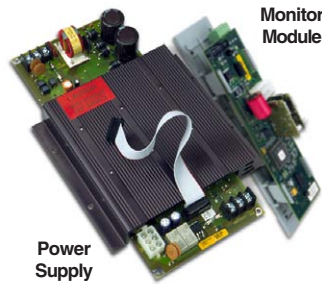


Power Supplies

EST3 power supplies use a unique paralleling arrangement that ensures optimization of each supply's full capacity. Each power supply supports up to a 7 amp load. With four supplies, 28 Amps of current is available per cabinet as is battery charging capacity of up to 260 Amp-Hours.



Main Panel Power Supplies

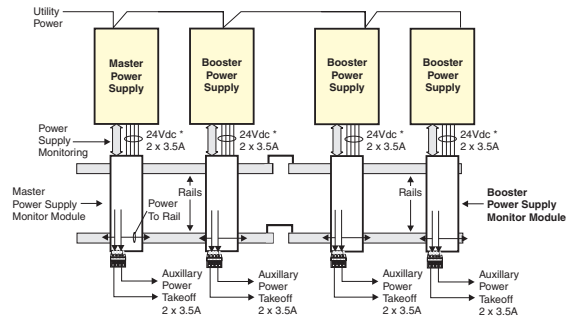


EST3 Power supplies consist of two assemblies, a high efficiency switch mode power supply card and a power supply monitor module. Up to four power supplies may be combined in a single enclosure to provide up to 28 amps of available current. Battery backup is provided using from one to four sets of batteries, depending on standby power requirements to support up to 260 AH batteries

The power supply comes in two styles: a primary supply and a booster supply. Each power supply produces 7 amps of filtered and regulated 24 VDC. The primary power supply provides the system with battery charging and voltage regulation. The booster supplies work in concert with the primary

supply are available with or without battery charging capability. Software configuration configures the battery changing circuits for either 10-24 AH batteries or 30 – 65 AH batteries and controls the high/low charge rate.

EST3 power supplies individually monitor batteries for load deficiencies, short circuits, and insufficient voltage levels and report trouble back to the 3-CPU3. The 3-LCD displays any troubles and the power supply's address, a specific trouble code, and a text message describing the specific trouble.

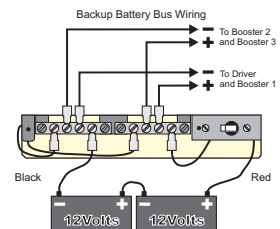


<input type="checkbox"/>	3-PPS/M	Primary Power Supply w/ local rail module	120V 50/60 Hz	Catalog Sheet: 85010-0059
<input type="checkbox"/>	3-BPS/M	Booster Power Supply w/ local rail module	120V 50/60 Hz	Catalog Sheet: 85010-0059
<input type="checkbox"/>	3-PPS/M-230	Primary Power Supply w/ local rail module	230V 50/60 Hz	Catalog Sheet: 85010-0059
<input type="checkbox"/>	3-BPS/M-230	Booster Power Supply w/ local rail module	230V 50/60 Hz	Catalog Sheet: 85010-0059
<input type="checkbox"/>	3-PPS/M-230-E	Primary Power Supply w/local rail module	230V 50 Hz, EN-54 Cert., CE	Catalog Sheet: 85010-0059
<input type="checkbox"/>	3-BPS/M-230-E	Booster Power Supply w/local rail module	230V 50 Hz, EN-54 Cert., CE	Catalog Sheet: 85010-0059
<input type="checkbox"/>	3-BBC/M	Booster/Charger Supply w/local rail module	120V 50/60Hz	Catalog Sheet: 85010-0059
<input type="checkbox"/>	3-BBC/M-230	Booster/Charger Supply w/local rail module	230V 50/60Hz	Catalog Sheet: 85010-0059
<input type="checkbox"/>	3-BBCMON	Booster/Charger Monitor Module	with charger capability	Catalog Sheet: 85010-0059



Battery Distribution Unit

The 3-BTSEN consists of a circuit breaker and copper bus bars mounted on a sheet metal bracket. The unit provides a backup battery bus for supplying backup power to multiple power supplies fed by a common battery. The 3-BTSEN features a 50 Amp circuit breaker to protect the backup battery. The 3-BTSEN mounts in the BC-1 Battery cabinet or any EST3 "RCC" series enclosure.



<input type="checkbox"/>	3-BTSEN	Battery Distribution Unit	Catalog Sheet: 85010-0111
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Signature Series power supply, p.35



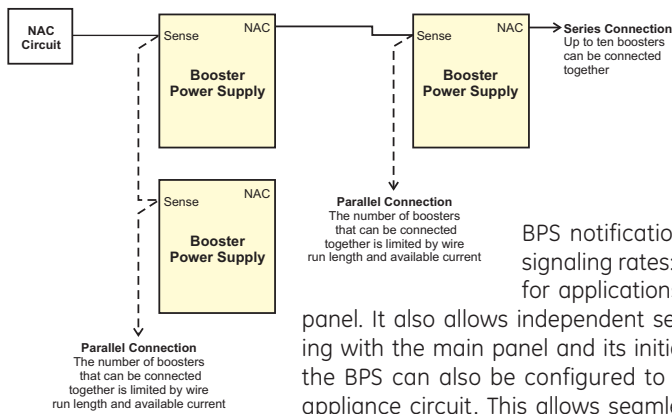
Remote Booster Power Supply



The Remote Booster Power Supply is a self-contained 24 Vdc power supply designed to augment fire alarm audible and visual power requirements as well as provide power for auxiliary, access control and security applications. The booster contains all of the necessary circuits to monitor and charge batteries, control and supervise four Class B or two Class A NAC circuits and monitor two controlling inputs from external sources.

Simple switch selection provides a wide variety of operational configurations. Each remote booster power supply is supplied with its own enclosure providing ample space for additional interface modules and battery compartment.

For security applications, space is provided to mount a tamper switch in the cabinet. When used for Fire Alarm notification with Genesis Notification appliances, the booster provides the ability to synchronize strobes as well as horn signals. The booster flexibility allows synchronization with upstream devices, or, the booster may be used to synchronize downstream devices, as well as other boosters and their connected devices. Up to 10 boosters deep may be configured while maintaining strobe synchronization.



BPS notification appliance circuits easily configure for either of two signaling rates: 3-3-3 temporal or continuous. This makes the BPS ideal for applications requiring signaling rates not available from the main panel. It also allows independent setup of a notification appliance circuit without interfering with the main panel and its initiating circuits. In addition to the generated signal rates, the BPS can also be configured to follow the signal rate of the main panel's notification appliance circuit. This allows seamless expansion of existing NACs.

For comprehensive configuration and wiring details, refer to the BPS Application Guide, 85001-0582.

BPS6A	6.5 Amp Booster Power Supply	Catalog Sheet 85005-0125	<input type="checkbox"/>
BPS6A/230	6.5 Amp Booster Power Supply (220V)	Catalog Sheet 85005-0125	<input type="checkbox"/>
BPS6CAA	6.5 Amp Booster Power Supply with California rate	Catalog Sheet 85005-0125	<input type="checkbox"/>
BPS10A	10 Amp Booster Power Supply	Catalog Sheet 85005-0125	<input type="checkbox"/>
BPS10A/230	10 Amp Booster Power Supply (220V)	Catalog Sheet 85005-0125	<input type="checkbox"/>
BPS10CAA	10 Amp Booster Power Supply with California rate	Catalog Sheet 85005-0125	<input type="checkbox"/>
3-TAMP	Tamper switch	Catalog Sheet 85005-0125	<input type="checkbox"/>

Batteries and Battery Cabinets

Catalog Sheet 85010-0127



12 Volt Batteries	<input type="checkbox"/> 12V4A (4.5 Ah)	<input type="checkbox"/> 12V6A5 (7.2 Ah)	<input type="checkbox"/> 12V10A (11 Ah)	<input type="checkbox"/> 12V17A (18 Ah)	<input type="checkbox"/>
	<input type="checkbox"/> 12V1A2 (1.2 Ah)	<input type="checkbox"/> 12V24A (26 Ah)	<input type="checkbox"/> 12V40A (40 Ah)	<input type="checkbox"/> 12V50A (50 Ah)	<input type="checkbox"/> 12V65A (65 Ah)
6 Volt Batteries	<input type="checkbox"/> 6V8A (8 Ah)	<input type="checkbox"/> 6V10A (12 Ah)			<input type="checkbox"/>
Battery Cabinets	<input type="checkbox"/> BC-1 (holds up to two 40 Ah batteries)	<input type="checkbox"/> BC-2 (holds up to two 17 Ah batteries)			<input type="checkbox"/>
	<input type="checkbox"/> 3-RCC used as large battery enclosure.				<input type="checkbox"/>

SUBMIT



Network Accessories

Remote Diagnostic Utility



The Remote Diagnostic Utility (RDU) is a Windows®-based communications program used to remotely access and download status and sensitivity information from EST3 fire alarm systems. The RDU can accommodate over 1,000 individual sites in its database.

The RDU is ideal for multiple system owners and those responsible for systems located over a large geographic area. In the event of Trouble, system status can be quickly determined with a single phone call, before dispatching service personnel.

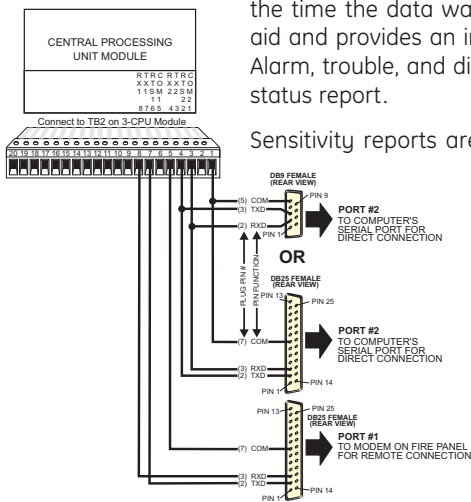
The RDU computer communicates with the panel over telephone lines. At the remote panel location, a modem is connected to one of the panel's serial ports and a conventional dial-up telephone line. Alternately, the RDU computer can be directly connected to the panel when visiting the panel site.

System Status reports provide a detailed listing of the state of all devices at the time the data was downloaded. This information becomes a valuable troubleshooting aid and provides an insight into a panel's condition, even before the panel door is opened. Alarm, trouble, and disabled/test filters are available to customize the data appearing on a status report.

Sensitivity reports are available for both Signature Series and GE Security analog smoke detectors. Dirty and not clean filters are provided to customize sensitivity reports for ease of readability.

After a system's information has been downloaded a few times, the trend analysis function can be used to identify the rates at which individual detectors are becoming dirty. A trend analysis report can be exported into spreadsheet software such as Microsoft Excel®, where it can be easily converted into sensitivity versus time graphs.

All system reports can be viewed on the screen, sent to a printer, or saved as a file for archive purposes.



RDUEU-E

Remote Diagnostic Utility for End Users – CD-ROM

Catalog Sheet: 85010-0101

Serial Printer

The PT-1 series printers are high-speed, nine-pin dot matrix type. They use standard, continuous tractor feed computer paper. The PT-1 is used to permanently record life safety system changes of state. All printed entries contain the date, time, event type and a user-defined message for each printed event. The printer is required in proprietary systems and requires a backup UPS power source. In auxiliary, local, or remote station systems, the printer is optional. Printer paper may be fed from the rear or bottom of the printer.



PT-1S

Serial Printer

Catalog Sheet: 270020



PT-1S/220

Serial Printer – 220/240 Vac

Catalog Sheet: 270020

SUBMIT



EST3
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Initiating
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& Relays

RS-232 Optical Isolator Card



The IOP3A is an optically isolated RS-232 card that electrically isolates the power between the CM1(N), CM2N, FCC, and 3-CPU(1). The IOP3A also provides power for use with short haul modems and fiber optic drivers. The IOP3A is a 1/2 size footprint card that is mounted in an enclosure adjacent to the CM1(N), CM2N, FCC, or 3-CPU(1). The module is powered by the system power supply

that provides battery back up. The IOP3A, through its on-card regulator, generates isolated power for the RS-232 drivers. The on-card regulator also provides isolated 12 Vdc power for use with external modems and drivers. Two RS-232 ports are provided that operate parallel with each other. A DB-9 connector is available for a convenient point of connection for a system program download cable.

IOP3A	Isolated RS-232 card	Catalog Sheet: 270039	<input type="checkbox"/>
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CDR-3 Coder



The CDR-3 Coder is an auxiliary circuit option module that provides two audio outputs, March Time and PSNI, (Positive, successive, non-interfering). Dry relay contacts are provided for PSNI code, march time and duration. For the PSNI code, the RS-232C input provides communications, between EST3's RS-232 communications card and the CDR-3. The RS-232 port is actively supervised by the CDR-3. If the coder senses a loss of communication,

the CDR-3 begins operating in a fail safe mode. When the fail safe mode is active all outputs, (tone and dry contact) activate with a march time code. The CDR-3 provides buffering for up to fifty active codes. The mode and baud rates are dipswitch selectable. The coder outputs four rounds of code and then, through DIP switch selected options, will either: 1) stop and wait for next code; 2) continue; or, 3) change to march time code until reset.

CDR-3	PSNI Coder Module	Catalog Sheet: 270009	<input type="checkbox"/>
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MTM March Time Module



The March Time Coder provides March Time, Morse "S", or Morse "U" codes. The code, generated on-board, is selected by contact closure or terminal block jumper configurations. The output is provided through Form C dry contacts. The MTM is activated by applying power through a contact closure.

MTM-1	March Time Coder Module	Catalog Sheet: 270009	<input type="checkbox"/>
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Network Short Haul Modem

EST3 networks easily configure for use over existing copper telephone lines using the 3-NSHM Short Haul Modem Communications Interface. The 3-NSHM electronics card, plugs right into the 3-CPU3. A ribbon cable connects the 3-CPU3 directly to the modem interface card. The interface card mounts on the right rear of a 3-CHAS7 chassis. No local rail space is used. The 3-NSHMs the 3-MPFIB mounting bracket for 3-CAB5 enclosure mounting.

3-NSHM1	Network Short Haul Modem, single modem connection	Catalog Sheet: 85010-0113	<input type="checkbox"/>
3-NSHM2	Network Short Haul Modem, two modem connections	Catalog Sheet: 85010-0113	<input type="checkbox"/>

SUBMIT

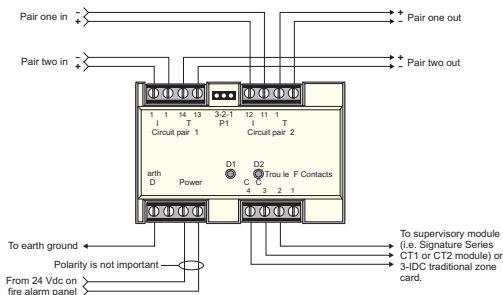


EST3 Network



Ground Fault Detection Module

The GFD module is designed to detect ground fault conditions on either of two independent power or data circuits. Each circuit must be balanced with respect to ground. The module will detect when the resistance between any of the monitored conductors and earth ground drops below 10 K Ohms. Two LEDs are provided to indicate the conductor with the ground condition. A normally energized Trouble/ Ground Fault relay is provided with NO/NC relay contacts for interfacing with monitoring systems.



GFD

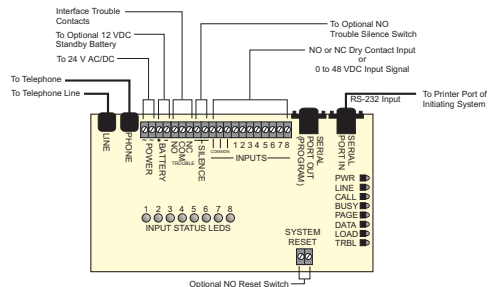
Ground Fault Detection Module

Catalog Sheet 85010-0115



Alphanumeric Pager Interface

The API-8/232ME is an interface between alarm and monitoring equipment and personal pager systems or PCS messaging services. The interface ensures that key personnel, regardless of their location, are notified of EST3 status changes. The unit can monitor an ASCII text string from a serial printer port for eight different event types. Each event type is defined by one or two programmable keywords up to 20 characters in length.



API-8/232ME

Paging System Interface with programming software

Catalog Sheet: 85006-0045



Communications Bridge

The 3-SM8051-0139 Communication Bridge converts the EST3 External Communications Protocol (ECP) to a variety of commercial protocols that facilitate one-way and two-way communications between EST3 and other in-building systems and sensors using a common protocol via an Ethernet LAN.



3-SM8051-0139

Communications Bridge

Catalog Sheet: 85010-0119



3-SM8700-07

BacNet® Driver - ArcNet (Includes ArcNet Card)

Catalog Sheet: 85010-0119



3-SM8700-19

Driver, Metsys N2

Catalog Sheet: 85010-0119



3-SM8704-02

BacNet Driver - Ethernet Dedicated

Catalog Sheet: 85010-0119



3-SM8700-39

EST Driver

Catalog Sheet: 85010-0119



8051-01-ESTPROG

Custom Programming

Catalog Sheet: 85010-0119

Signature Series

Intelligent Analog Initiating Devices

EST3's Signature Series intelligent analog-addressable system is an entire family of fire alarm and security detectors as well as mounting bases, multiple-function input and output modules, and user-friendly maintenance and service tools.

Analog information from equipment connected to Signature devices is gathered and converted into digital signals. At the heart of each Signature Series device is an on-board micro-processor that analyses these signals and decides whether or not to input an alarm. The power of this approach, known as distributed intelligence, provides four important benefits: self-diagnostics and history logging; automatic device mapping; stand-alone operation; and, fast, stable communication.

Self-diagnostics and History Log – Signature Series devices constantly run self-checks to provide important maintenance information. The results of these checks are automatically updated and permanently stored in the device's non-volatile memory. This information is accessible for review using the System Definition Utility and/or the SIGA-PRO Signature Program/Service Tool. The information stored in device memory includes:

- device serial number, address, and type;
- date of manufacture, hours of operation, and last maintenance date;
- number of recorded alarms and troubles; and,
- up to 32 possible trouble codes which may be used to specifically diagnose faults.

Automatic Device Mapping – The Signature Loop Controller learns where each device's serial number address is installed relative to other devices on the circuit. The controller keeps a map of all Signature Series devices connected to it. The System Definition Utility program also uses this mapping feature. With interactive menus and graphic support, the wired circuits between each device can be examined. Layout or As-Built drawing information showing branch wiring (T-taps), device types and their addresses are stored on disk. This takes much of the mystery out of the installation and makes the preparation of As-Built drawings fast and very efficient.

Device mapping allows the Signature Loop Controller to discover:

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

Most Signature modules use a personality code selected by the installer to determine their actual function. Personality codes are downloaded from the controller during system configuration and are indicated during device mapping.

Fast Stable Communication – Built-in intelligence means less information needs to be sent between the device and the Signature Loop Controller. Other than routine supervisory polling responses, Signature devices only need to communicate with the controller when they have something new to report. This provides very fast control panel response and allows a lower baud rate (speed) to be used for communication on the circuit. The lower baud rate offers several advantages including:

- less sensitivity to circuit wire characteristics;
- less sensitivity to noise glitches on the cable;
- less emitted noise from the analog wiring; and,
- twisted or shielded wiring is not required.

Testing & Maintenance – Automatic self-diagnosis identifies when a Signature device is defective and issues a trouble message. The user-friendly maintenance program shows the current state of each device and other pertinent information. Single devices may be turned off temporarily, directly from the control panel.

Test Fire	Type of Detector				
	SIGA-IS Ion	SIGA-PS Photo	SIGA-HRS, SIGA-HFS Heat	SIGA-PHS Photo/Heat	SIGA-IPHS Ion/Photo/Heat
Open Wood	optimum	unsuitable	optimum	very suitable	optimum
Wood Pyrolysis	suitable	optimum	unsuitable	optimum	optimum
Smoldering Cotton	very suitable	optimum	unsuitable	optimum	optimum
Poly Urethane Foam	very suitable	very suitable	suitable	very suitable	optimum
n Heptane	optimum	very suitable	suitable	optimum	optimum
Liquid Fire, no Smoke	unsuitable	unsuitable	optimum	very suitable	optimum

True multisensor technology means that a single device can perform optimally under a wider range of conditions than any single-sensor detector.

Seamless Security – The SIGA-MD Motion Detector and the SIGA-SEC2 Security Module bring all the features and performance benefits of the Signature line of analog addressable devices into any application that has a security function. These devices share the same wiring and

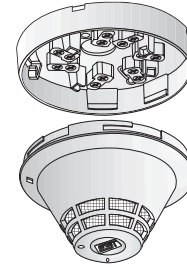
loop controller as fire alarm devices, and do so without the need for extra risers and associated wiring from the control panel. In fact, EST3 is the only system that offers this kind of total co-existence among fire and security devices.

SUBMIT



Signature Series

Detectors and Bases



EST's Signature series products are intelligent devices. Intelligent devices have drastically lower communications requirements than those of sensor type devices. Because of the low Signature communications rate there are no special wiring requirements for Signature circuits. This permits Signature devices to use existing wiring, as long as the wiring is in good shape, free of electrical noise. When existing wiring is used, the Signature devices will properly map the circuit, function as designed, and provide overall network response time of less than three seconds. For new installations, twisted-pair wiring is all that is recommended.

Intelligent 4D Multisensor Detector

Integrates three sensing technologies — Ionization, Photoelectric, and Heat — into one detector. Select alarm point for any one of five sensitivity settings between 0.67 to 3.70% per foot. Heat detector alarms when it sees a 65° F (35° C) increase in ambient temperature. Mounts to separate Standard, Relay, Isolator, or Sounder detector base.

<input type="checkbox"/>	SIGA-IPHS	Intelligent 4D Multisensor Detector, White	Catalog Sheet: 85001-0245
<input type="checkbox"/>	SIGA-IPHSB	Intelligent 4D Multisensor Detector, Black	Catalog Sheet: 85001-0245

Intelligent 3D Multisensor Detector

Integrates two sensing technologies — Photoelectric and Heat — into one detector. Select alarm point for any one of five sensitivity settings between 0.67 to 3.77% per foot. Heat detector alarms at 135° F (57° C) ambient temperature. Mounts to separate Standard, Relay, Isolator, or Sounder detector base.

<input type="checkbox"/>	SIGA-PHS	Intelligent 3D Multisensor Detector, White	Catalog Sheet: 85001-0247
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Intelligent Photoelectric Detector

Select alarm point for any one of five sensitivity settings between 0.67 to 3.77% per foot. Mounts to separate Standard, Relay, Isolator, or Sounder detector base.

<input type="checkbox"/>	SIGA-PS	Intelligent Photoelectric Detector, White	Catalog Sheet: 85001-0269
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Intelligent Ionization Detector

Select alarm point for any one of five sensitivity settings between 0.61 to 1.91% per foot. Mounts to separate Standard, Relay, Isolator, or Sounder detector base.

<input type="checkbox"/>	SIGA-IS	Intelligent Ionization Detector, White	Catalog Sheet: 85001-0291
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Intelligent Rate-of-Rise/Fixed Temperature Heat Detector

Includes 15° F (9° C) per minute rate-of-rise and 135° F (57° C) fixed temperature sensor. Mounts to separate Standard, Relay, Isolator, or Sounder detector base.

<input type="checkbox"/>	SIGA-HRS	Intelligent Rate-of-Rise/Fixed Temperature Heat Detector, White	Catalog Sheet: 85001-0243
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Intelligent Fixed Temperature Heat Detector

Includes 135° F (57° C) fixed temperature sensor. Mounts to separate Standard, Relay, Isolator, or Sounder base.

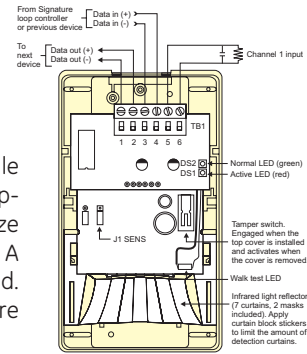
<input type="checkbox"/>	SIGA-HFS	Intelligent Fixed Temperature Heat Detector, White	Catalog Sheet: 85001-0243
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Signature Loop Controller, p.4; Initiating Device Circuit Module, p.5; Hazardous Location Detectors, p. 46



Intelligent PIR Motion Detector

The SIGA-MD is a Passive Infrared (PIR) motion detection module that connects directly to the Signature loop. The module uses adaptive signal processing with gliding focus mirror optics to analyze the size, speed and shape to determine the alarm threshold. A tamper switch notifies the host system when the cover is removed. The unit is designed for wall mounting. Curtains and masks are provided.



SUBMIT

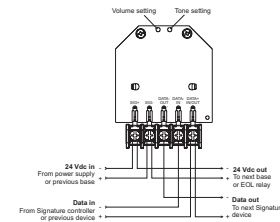


SIGA-MD	Passive Infrared Motion Detector	Catalog Sheet: 85001-0526	<input type="checkbox"/>
SIGA-MDS	Passive Infrared Motion Detector, swivel mount for 1-gang boxes	Catalog Sheet: 85001-0526	<input type="checkbox"/>

Audible (Sounder) Detector Base



The Signature Series AB4G sounder base adds an audible output function to any Signature Series detector. The base can operate as an independent local alarm, or as part of a zone or system alarm with synchronized audible output. The AB4G may be configured in the field for either steady or temporal output and either high or low dB output.

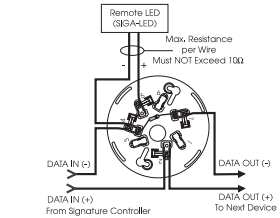


SIGA-AB4G	Audible (Sounder) Base	Catalog Sheet: 85001-0581	<input type="checkbox"/>
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Standard Detector Base



Signature detector base provides room-side wiring terminals. Mounts to North American one-gang box, 3½ or 4-inch octagon boxes, or 4-inch square electric box. Bases for 4-inch square boxes include the SIGA-TS4 Trim Skirt to conceal the electric box and provide a finished appearance.

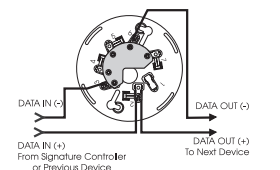


<input type="checkbox"/> SIGA-SB	<input type="checkbox"/> SIGA-SB4 (with trim skirt)	Standard Detector Base	Catalog Sheet: 85001-0245	<input type="checkbox"/>
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Isolator Detector Base



Signature detector base provides room-side wiring terminals and includes a built-in line fault isolator. Models with integral switches allow the detector to be removed from its base without causing the isolator to operate. Mounts to North American one-gang box, 3½ or 4-inch octagon boxes, or 4-inch square electrical boxes. Bases for 4-inch square boxes include the SIGA-TS4 Trim Skirt to conceal the electrical box and provide a finished appearance.

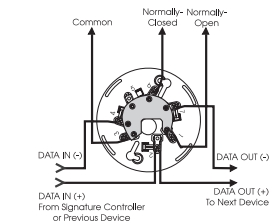


<input type="checkbox"/> SIGA-IB	<input type="checkbox"/> SIGA-IB4 (with trim skirt)	Isolator Detector Base	Catalog Sheet: 85001-0245	<input type="checkbox"/>
<input type="checkbox"/> SIGI-IBS	Isolator Detector Base with Switch (Europe only)		Catalog Sheet: 85001-0245	<input type="checkbox"/>

Relay Detector Base



This base includes a relay. Normally-open or closed operation is selected during installation. The dry contact is rated for 1 amp (pilot duty) @ 30 Vdc. The relay's position is supervised to avoid accidentally jarring it out of position. The relay base does not support the SIGA-LED remote LED. It mounts to North American one-gang boxes, 3½ or 4-inch octagon boxes, or 4-inch square electrical boxes. Bases for 4-inch square boxes include the SIGA-TS4 Trim Skirt to conceal the electrical box and provide a finished appearance.



<input type="checkbox"/> SIGA-RB	<input type="checkbox"/> SIGA-RB4 (with trim skirt)	Relay Detector Base	Catalog Sheet: 85001-0245	<input type="checkbox"/>
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Initiating Devices

Notification Appliances

Hazardous Location Devices

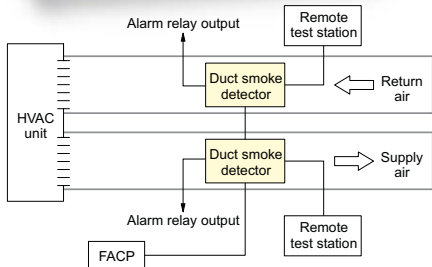
Door Holders & Relays



SuperDuct Duct Detectors

Less than two inches deep, *SuperDuct* intelligent smoke detectors are ideal for installation in ductwork, where space is always at a premium. Offering the most advanced and most reliable performance in its class, *SuperDuct* represents the perfect balance of practical design and advanced technology.

SuperDuct detectors feature a unique design that speeds installation and simplifies maintenance. Removable dust filters, conformally coated circuit boards, and optional water-resistant gaskets keep contaminants away from components, ensuring years of trouble-free service. When cleaning is required, the assemblies come apart easily and snap back together in seconds.



<input type="checkbox"/>	SIGA-SD	Intelligent SuperDuct Detector			Catalog Sheet: 85001-0584
<input type="checkbox"/>	Sampling Tubes	<input type="checkbox"/> SD-T8 (8")	<input type="checkbox"/> SD-T18 (18")	<input type="checkbox"/> SD-T24 (24")	<input type="checkbox"/> SD-T36 (36")
		<input type="checkbox"/> SD-T42 (42")	<input type="checkbox"/> SD-T60 (60")	<input type="checkbox"/> SD-T78 (78")	<input type="checkbox"/> SD-T120 (120")
<input type="checkbox"/>	Remote Test Stations	<input type="checkbox"/> SD-TRM (magnetic)	<input type="checkbox"/> SD-TRM (keyed)	<input type="checkbox"/> SIGA-LED (Remote alarm LED))	
<input type="checkbox"/>	Accessories	<input type="checkbox"/> SD-GSK (cover gasket kit)		<input type="checkbox"/> SD-MAG (Test magnet kit)	
		<input type="checkbox"/> SD-VTK (Air velocity test kit, stoppers only)		<input type="checkbox"/> SIGA-SDPCB (PCB/Signature sensor kit)	

Signature Series

Input/Output Modules

Signature Series input/output modules are extremely flexible and powerful devices that gather analog information from the slave devices connected to them and convert this data into digital signals. They are available in models that mount in standard one- or two-gang electrical boxes, as well as versions that plug into UIO motherboards.

The actual function of each module is determined by its installer-selected personality code. This is downloaded to the module from the Signature Loop Controller during system configuration. Because they are intelligent devices, all decisions are made at the module. This allows lower communication speed but very fast control panel response time and less sensitivity to line noise and loop wiring properties. As a result, twisted or shielded wire is not required.



Signature Series intelligent input/output modules feature multiple user-set personality codes that define the module's behavior.

Application	Module
Voice messages	Digital Messaging Module
Waterflow Switches	Waterflow/Tamper Module
Class A indicating and initiating circuits, 2-wire smoke detectors	Universal Class A/B Module
Class B Initiating Circuits: Door Closers, Fans, Dampers	Class B Input Module
	Monitor Module
	Control Relay Module
	Programmable I/O Module
Telephone Power and Audible/Visual Signal Power Selector, Strobe Synchronization	Signal Module
Sounder Base power	Reversal Relay Module
Supervision of Telephone and Signal Power	Riser Monitor Module
Fire Suppression	Releasing Module
Fault detection	Isolator Module

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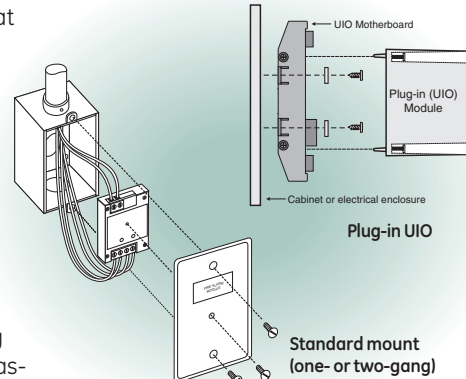
Door Holders
& Relays

Module mounting and installation options

Signature Series input/output modules are available in models that feature two mounting options: standard mount and plug-in.

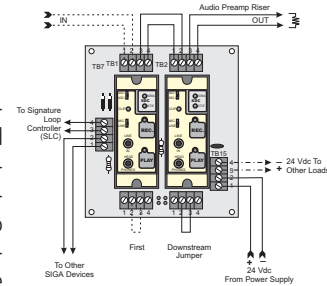
Standard mount models are installed to North American two-gang or one-gang electrical boxes, making them ideal for locations where only one module is required. Separate I/O and data loop connections are made to each module.

Plug-in UIO modules mount to UIO motherboards. Two- and six-module UIO motherboards are available, making them ideal for installations where more than one module is required. Motherboards can accommodate individual risers for each on-board module, or shared risers in any combination with their UIO modules. All wiring connections are made to terminal blocks on the motherboard. UIO assemblies may be mounted in either cabinets, or standard electrical enclosures.



Digital Message Module

The SIGA-MDM Digital Message Module provides custom pre-recorded voice messaging. Two standard factory pre-recorded messages are included. Each module can store two 30 second messages in its non-volatile EEPROM memory. A microphone/line-level audio input stereo jack and output stereo jack, as well as record and playback switches are conveniently located on top of the module. Programming in the Signature Data Controller provides all control instructions; extra wiring for monitoring or controlling circuits is not required. Up to 47 modules can be cascaded together. The SIGA-MDM is available as a plug-in module only.



SIGA-MDM

Intelligent Digital Message Module

Catalog Sheet: 85001-0363



Universal Class A/B Module

The Universal Class A/B Module is used to connect initiating, appliance, or two-wire smoke circuits in either Class A or Class B configurations. The plug-in version can also be used as a Class A dry contact initiating device circuit. The actual function of this module is determined by the "personality code" selected by the installer. Up to fifteen personalities are available.



SIGA-UM

Universal Class A/B Module (Two-gang standard mount)

Catalog Sheet: 85001-0275



SIGA-MAB

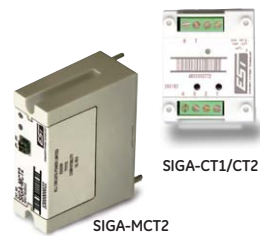
Universal Class A/B UIO (Plug-in) Module

Catalog Sheet: 85001-0275



Class B Input Module

The Class B Input Module is used to connect Class B normally-open Alarm, Supervisory, or Monitor type dry contact initiating device circuits. The standard-mount version is available with either one or two input connections. The plug-in version accepts two input connections. The actual function of this module is determined by the "personality code" selected by the installer. A total of four personalities are available.



SIGA-CT1

Single Input Module (One-gang standard mount)

Catalog Sheet: 85001-0241



SIGA-CT2

Dual Input Module (One-gang standard mount)

Catalog Sheet: 85001-0241



SIGA-MCT2

Dual Input UIO (Plug-in) Module

Catalog Sheet: 85001-0241



SUBMIT



Signal Module

The Signal Module is used to connect, upon command from the loop controller, supervised Class B signal or telephone circuits to their respective power inputs. Models are available with one or two power inputs. These may be either polarized 24 Vdc to operate audible and visual signal appliances, or 25 and 70V_{RMS} to operate audio evacuation speakers and firefighter's telephones. The actual function of this module is determined by the "personality code" selected by the installer. A total of three personalities are available.



<input type="checkbox"/>	SIGA-CC1	Single Input Signal Module (Two-gang standard mount)	Catalog Sheet: 85001-0237
<input type="checkbox"/>	SIGA-MCC1	Single Input Signal UIO (Plug-in) Module	Catalog Sheet: 85001-0237
<input type="checkbox"/>	SIGA-CC2	Dual Input Signal Module (Two-gang standard mount)	Catalog Sheet: 85001-0237
<input type="checkbox"/>	SIGA-MCC2	Dual Input Signal UIO (Plug-in) Module	Catalog Sheet: 85001-0237

Control Relay Module

The Control Relay Module provides a Form C dry relay contact to control external appliances such as door closers, fans, dampers etc. This device does not provide supervision of the state of the relay contact. Instead, the on-board microprocessor ensures that the relay is in the proper ON/OFF state. Upon command from the loop controller, the relay activates the normally open or normally-closed contact. This module supports only one personality: no user configuration is required.



<input type="checkbox"/>	SIGA-CR	Control Relay Module (One-gang standard mount)	Catalog Sheet: 85001-0239
<input type="checkbox"/>	SIGA-MCR	Control Relay UIO (Plug-in) Module	Catalog Sheet: 85001-0239

Polarity Reversal Relay Module

The Polarity Reversal Relay Module provides a Form C dry relay contact to power and activate a series of SIGA-AB4 Audible Sounder Bases. Upon command from the Signature loop controller, the SIGA-CRR reverses the polarity of its 24 Vdc output, thus activating all Sounder Bases on the data loop. This module supports only one personality: no user configuration is required.



<input type="checkbox"/>	SIGA-CRR	Polarity Reversal Relay Module (One-gang standard mount)	Catalog Sheet: 85001-0239
<input type="checkbox"/>	SIGA-MCRR	Polarity Reversal Relay UIO (Plug-in) Module	Catalog Sheet: 85001-0239

Riser Monitor Module

The SIGA-RM1 Riser Monitor Module is an intelligent device that monitors the integrity of 24 Vdc, 25 Vac, and 70 Vac circuits, as well as telephone riser signals. Upon the loss of a signal, the Riser Monitor Module causes the fire alarm control panel to indicate an alert status. Personality codes downloaded to the Riser Monitor Module during system configuration determine its function.



<input type="checkbox"/>	SIGA-RM1	Riser Monitor Module (One-gang standard mount)	Catalog Sheet: 85001-0535
<input type="checkbox"/>	SIGA-MRM1	Riser UIO (Plug-in) Module	Catalog Sheet: 85001-0535

SUBMIT



Synchronization Output Module

The Synchronization Output Module is an intelligent device that connects a supervised output circuit to a 24 Vdc riser. The output wiring is monitored for open circuits and short circuits. A short circuit will cause the fire alarm control panel to inhibit the activation of the audible/visual signal circuit so the riser is not connected to the wiring fault. Upon command from the Signature loop controller, the Auto-Sync Output Module connects the output circuit to the riser input. The output circuit operates polarized audible and visual appliances that have an adjustable resynchronizing feature.



SIGA-CC1S	Synchronization Output Module (One-gang standard mount)	Catalog Sheet: 85001-0543	<input type="checkbox"/>
SIGA-MCC1S	Synchronization Output UIO (Plug-in) Module	Catalog Sheet: 85001-0543	<input type="checkbox"/>

Input/Output Module

The Input/Output Module is an intelligent device that provides the following modes of operation:

- Output with monitor input
- Input/programmable output
- Input/direct output



SIGA-IO	Input/Output Module (One-gang standard mount)	Catalog Sheet: 85001-0533	<input type="checkbox"/>
SIGA-MIO	Input/Output UIO (Plug-in) Module	Catalog Sheet: 85001-0533	<input type="checkbox"/>

Waterflow/Tamper Module

The SIGA-WTM Waterflow/Tamper Module is a two circuit intelligent module. Circuit 1 is for Class B normally-open waterflow alarm switches. When the input contact is closed for approximately 16 seconds, an “alarm” signal is sent to the loop controller. Circuit 2 is for Class B normally open dry contact supervisory and tamper switches. When the input contact is closed, an “active” signal is sent to the loop controller. Conditions on both circuits are latched at the module.



SIGA-WTM	Waterflow/Tamper Module (One-gang standard mount)	Catalog Sheet: 85001-0297	<input type="checkbox"/>
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Isolator Module

The SIGA-IM Isolator Module is an intelligent device that allows part of the Signature data loop to continue operating in the event of a short circuit. The module can be wired into a Class A data loop at any point. A maximum of 96 isolator modules can be installed on one circuit. If a fault occurs, the isolator cuts power to all devices beyond the isolator on the loop. Once activated, the line fault isolator continuously checks the faulted side of the loop to determine if the short still exists. When the fault is cleared, the module automatically restores the entire data loop to its normal condition.



SIGA-IM	Fault Isolator Module (Two-gang standard mount)	Catalog Sheet: 85001-0271	<input type="checkbox"/>
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Monitor Module

The SIGA-MM1 is a single-circuit intelligent module that includes a Class B normally-open dry contact. This is used for monitoring input from devices such as fans, dampers, and doors. When the input contact is closed, an “active” signal is sent to the loop controller. The active condition is not latched at the module.



SIGA-MM1	Monitor Module (One-gang standard mount)	Catalog Sheet: 85001-0297	<input type="checkbox"/>
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Universal Input/Output (UIO) Motherboards



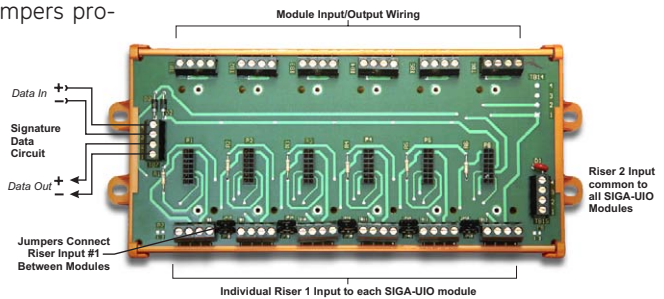
Signature Series Universal Input/Output Module Motherboards provide mounting and wiring terminations for up to six Signature Series plug-in UIO (SIGA-“M” series) modules. UIO motherboards snap into a rigid extruded track (included) with mounting pads for convenient mounting into a variety of equipment enclosures. UIO modules plug into the board and are held securely in place with captive machine screws. All field wiring connects to terminal blocks on the motherboard, which permits rapid removal and replacement of modules for troubleshooting.

The SIGA-UIO2R provides mounting and wiring terminations for up to two UIO modules, and the SIGA-UIO6R provides mounting and wiring terminations for up to six UIO modules. Both motherboards feature a riser #1 input and a riser #2 input bus. Jumpers on riser #1 input (between modules), facilitate sharing a single riser among more than one module. This significantly reduces wiring requirements. Removing the jumpers pro-

vides separate riser inputs to each adjacent module. Riser #2 input is fixed to each module position and cannot be split.

The SIGA-UIO6 provides mounting and wiring terminations for up to six UIO modules. This motherboard provides two riser inputs that are common to all modules.

UIO motherboards mount inside the MFC-A cabinet or other suitable UL-listed electrical enclosure. Each MFC-A will hold one UIO2R motherboard or one UIO6 or UIO6R motherboard complete with their full complement of modules.



<input type="checkbox"/>	SIGA-UIO2R	Universal Input/Output Module Board with Riser Inputs — 2 Module Positions	Catalog Sheet: 85001-0365
<input type="checkbox"/>	SIGA-UIO6R	Universal Input/Output Module Board with Riser Inputs — 6 Module Positions	Catalog Sheet: 85001-0365
<input type="checkbox"/>	SIGA-UIO6	Universal Input/Output Module Board — 6 Module Positions	Catalog Sheet: 85001-0365

Related Equipment

<input type="checkbox"/>	MFC-A	Multi-function Cabinet (for UIO and Releasing modules)
<input type="checkbox"/>	27193-11	Surface Mount Box - Red, One-gang
<input type="checkbox"/>	27193-16	Surface Mount Box - White, One-gang
<input type="checkbox"/>	27193-21	Surface Mount Box - Red, Two-gang
<input type="checkbox"/>	27193-26	Surface Mount Box - White, Two-gang
<input type="checkbox"/>	235196P	Bi-polar Transient Protector (use with all Signal Modules)
<input type="checkbox"/>	SIGA-MP1	Signature Module Mounting Plate, 1 footprint
<input type="checkbox"/>	SIGA-MP2	Signature Module Mounting Plate, 1/2 footprint
<input type="checkbox"/>	SIGA-MP2L	Signature Module Mounting Plate, 1/2 extended footprint



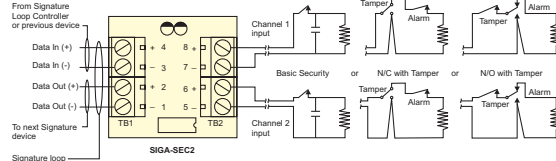
SUBMIT



Dual Input Security Module

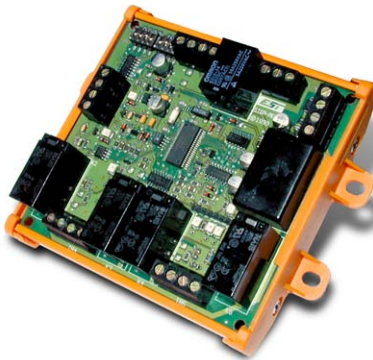


The SIGA-SEC2 is an intelligent analog addressable device used to connect one or two normally-open or normally-closed dry contact security circuits. The actual function of this module is determined by the "personality code" selected by the installer. This code is downloaded to the module from the Signature loop controller during system configuration. The input module gathers data from the devices connected to it and converts them into digital signals. The module's on-board microprocessor analyzes the signal and decides whether or not to input an alarm, tamper, or maintenance condition. The module is housed in a small thermo-plastic enclosure designed for surface mounting.



SIGA-SEC2 **Dual Input Security Module** **Catalog Sheet: 85001-0527**

Releasing Module



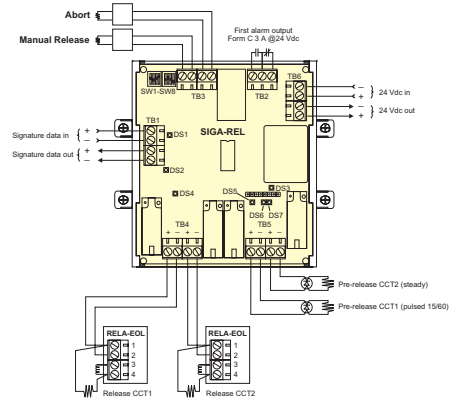
The Signature Series Releasing Module (SIGA-REL) is an analog addressable module that works with fire suppression systems designed to release extinguishing gas such as Halon. Its primary function is the control of sprinkler pre-action routines and the initiation of suppression system deluge functions. The module is easily configured in the field and offers a wide range of options that prevent the unnecessary release of extinguishing agent.

The SIGA-REL is a network component consisting of:

- Two supervised release circuits
- Two supervised pre-release circuits
- One supervised manual release input circuit
- One supervised abort circuit for N/O abort switch
- One first alarm output relay (Form C Contact)

The releasing module includes a built-in timer that inhibits the deluge function during the pre-action routine. One of four pre-action routines, may be selected by means of dip-switches on the module. The duration of automatic and manual time delays, as well as the abort time settings are also selectable with dip-switches. The SIGA-REL mounts inside an MFC-A cabinet or other suitable UL-listed electrical enclosure. Each MFC-A will hold one SIGA-REL.

Available releasing module accessories include dedicated pull stations, abort switches and service switches. Together with the SIGA-REL, they comprise a complete fire suppression package.



SIGA-REL	Analog addressable releasing module	Catalog Sheet: 85001-0531
RELA-ABT	Abort station	Catalog Sheet: 85001-0531
RELA-SRV	Service disconnect station	Catalog Sheet: 85001-0531
276A-REL	Manual releasing station (single-action)	Catalog Sheet: 85001-0531
278A-REL	Manual releasing station (double-action)	Catalog Sheet: 85001-0531
RELA-EOL	Polarized end-of-line relay	Catalog Sheet: 85001-0531

SUBMIT

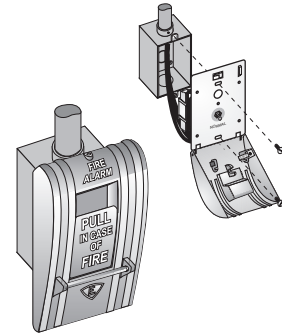


EST3
Network

Signature Series

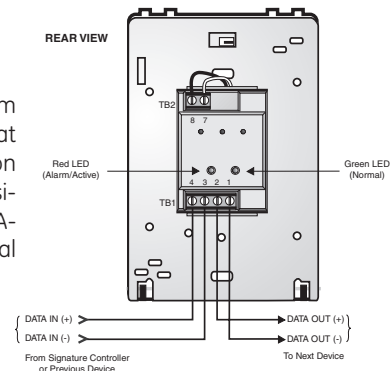
Manual Pull Stations

Signature Series manual pull stations are configured for Class B IDC operation. When the station's pull lever is operated, an alarm signal is sent to the loop controller. The alarm condition is latched at the station.



Single Action Pull Stations

SIGA-270 series manual pull stations are made from die-cast zinc and finished with red epoxy powder-coat paint. With positive pull-lever operation, one pull on the station handle breaks the rod and turns in a positive alarm. Where two-stage operation is required, SIGA-270P pre-signal models are equipped with a general alarm (GA) keyswitch.

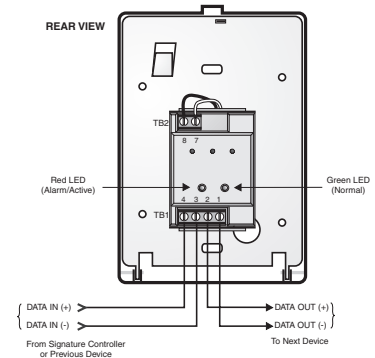


<input type="checkbox"/>	SIGA-270	One Stage Fire Alarm Station, English Markings	Catalog Sheet: 85001-0279
<input type="checkbox"/>	SIGA-270P	Two Stage (Pre-signal) Fire Alarm Station, English Markings	Catalog Sheet: 85001-0279
<input type="checkbox"/>	SIGI-271	Single Station Call Point (Europe only)	Catalog Sheet: 85001-0349
<input type="checkbox"/>	276-K2	GA Key — for pre-signal station	Catalog Sheet: 85001-0279
<input type="checkbox"/>	270-GLR	20 Break-rods — for SIGA-270 series	Catalog Sheet: 85001-0279
<input type="checkbox"/>	276B-RSB	Surface Mount Box, Red — for SIGA-270 series	Catalog Sheet: 85001-0279



Double Action Pull Stations

The double action, single stage SIGA-278 station is a contemporary style manual station made from durable red LEXAN. To initiate an alarm, first lift the upper door, then pull the alarm handle.



<input type="checkbox"/>	SIGA-278	Double Action (One Stage) Fire Alarm Station, English Markings	Catalog Sheet: 85001-0279
<input type="checkbox"/>	276B-RSB	Surface Mount Box, Red — for SIGA-278 series	Catalog Sheet: 85001-0279
<input type="checkbox"/>	276-GLR	20 Break-rods — for SIGA-278 series	Catalog Sheet: 85001-0279

Initiating
Devices

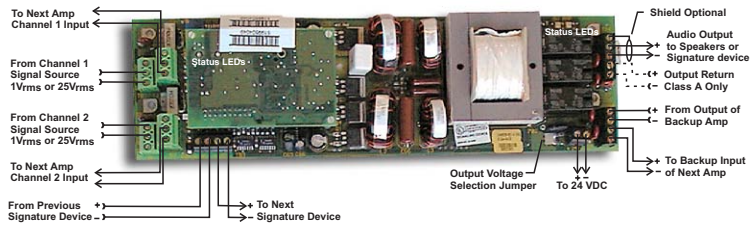


Signature Series

Amplifiers & Power Supplies

Audio Amplifiers

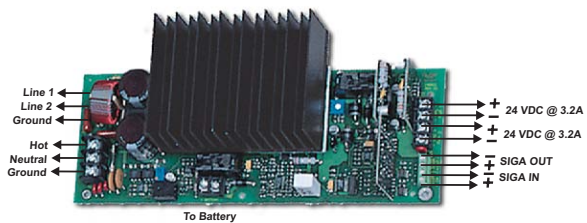
Signature Series amplifiers are high-efficiency switch mode audio amplifiers available in 30 and 50 watt sizes. Amplifiers have two input channels supporting dual channel or single channel audio applications. Signature amplifiers are ideally suited for distributed audio applications and small centrally banked applications. The audio output is configurable as 25V_{RMS} or 70V_{RMS} in Class B or Class A wiring configurations. Speakers can connect directly to the output of the amplifier or the amplifier output can run as an audio riser to Signature modules where speaker zone selection is made. Each amplifier has a built-in 1kHz tone generator and provision for a back up amplifier. On-board status LEDs provide quick visual indication of amplifier status.



SIGA-AA30	30 Watt Intelligent Audio Amplifier	Catalog Sheet: 85010-0089	<input type="checkbox"/>
SIGA-AA50	50 Watt Intelligent Audio Amplifier	Catalog Sheet: 85010-0089	<input type="checkbox"/>

Auxiliary Power Supplies

The SIGA-APS is a switch-mode power supply that provides additional power for any fire alarm control panel that includes a Signature Data Circuit. The SIGA-APS mounts with local fire alarm equipment or may be mounted remotely to supply power to signaling devices, amplifiers or system equipment. The power supply communicates with the main control panel over the Signature Data Circuit. This eliminates the need to mount additional monitoring equipment when the power supply is mounted remote from the main control panel.



SIGA-APS	Intelligent Auxiliary Power Supply – 120Vac 50/60Hz	Catalog Sheet: 85010-0087	<input type="checkbox"/>
SIGA-APS-220	Intelligent Auxiliary Power Supply – 220Vac 50/60Hz	Catalog Sheet: 85010-0087	<input type="checkbox"/>

SUBMIT



Signature Series

Accessories



Signature Detector Guard

Constructed of sturdy 16-gauge steel, the SIGA-DG Smoke Detector Guard is designed to protect SIGA-IPHS 4D and SIGA-PS smoke detectors from damage or tampering. The advanced computer-designed louver system allows smoke detectors to be installed at their listed spacing and has no effect on operating sensitivity.

<input type="checkbox"/>	SIGA-DG	Smoke Detector Guard	Catalog Sheet: 85001-0359
<input type="checkbox"/>	SIGA-DGSA	Detector Guard Surface Mount Accessory	Catalog Sheet: 85001-0359

Detector Mounting Plate

The SIGA-DMP Detector Mounting Plate is a 7-inch (178mm) square mounting plate designed to provide convenient mounting of Signature Series intelligent smoke detectors in raised floor or plenum applications. The detector mounting plate may also be installed in low velocity ducts that have a maximum width of up to 36-inches (915mm) and a maximum height of up to 36-inches (915mm).



<input type="checkbox"/>	SIGA-DMP	Detector Mounting Plate	Catalog Sheet: 85001-0255
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Remote LED

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

<input type="checkbox"/>	SIGA-LED	Remote Alarm LED	Catalog Sheet: 85001-0245
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Trim Skirt

Use the SIGA-TS Trim Skirt to give Signature detectors a finished look and hide surface imperfections around the detector's base. Supplied with all four-inch detector bases, the SIGA-TS4 can also be ordered separately. Use the black model with SIGA-IPHSB.



<input type="checkbox"/>	SIGA-TS	Detector Trim Skirt (white)	Catalog Sheet: 85001-0245
<input type="checkbox"/>	SIGA-TSB	Detector Trim Skirt (black)	Catalog Sheet: 85001-0245
<input type="checkbox"/>	SIGA-TS4	Detector Trim Skirt (white) – for 4-inch box	Catalog Sheet: 85001-0245

SUBMIT



Manual Station Relocator

The Manual Station Relocator is designed to lower the height of a fire alarm pull station to meet ADA requirements. Most existing pull stations are mounted 60 inches (1524mm) or higher above the floor. The Relocator lowers the height to 48 inches (1220mm) without the need for pulling new wires or moving the existing electrical box.



RR-32RL	Pull Station Relocator	Catalog Sheet: 85001-0351	<input type="checkbox"/>
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Stopper II

This unique device helps prevent false alarms without restricting legitimate ones. It consists of a tamper-proof clear LEXAN polycarbonate shield and frame that fits easily over manual pull stations. When lifted, it sounds a piercing warning horn.

<input type="checkbox"/> STI-1100 (Flush)	<input type="checkbox"/> STI-1130 (Surface)	Stopper II with Horn	Catalog Sheet: 85001-0491	<input type="checkbox"/>
<input type="checkbox"/> STI-1200 (Flush)	<input type="checkbox"/> STI-1230 (Surface)	Stopper II without Horn	Catalog Sheet: 85001-0491	<input type="checkbox"/>
<input type="checkbox"/> STI-3100 (2" Spacer)	<input type="checkbox"/> STI-3004 (Conduit Insert)	Spacers	Catalog Sheet: 85001-0491	<input type="checkbox"/>
<input type="checkbox"/> STI-3002 (Gasket)	<input type="checkbox"/> STI-3003 (Conduit Gasket)	Weatherproofing	Catalog Sheet: 85001-0491	<input type="checkbox"/>

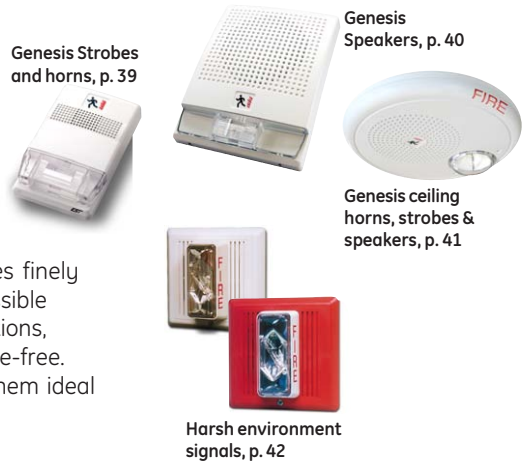
Initiating
Devices

Notification
Appliances

Hazardous Location
Devices

Door Holders
& Relays

Notification Appliances



GE Security notification appliances are high-performance devices finely tuned to deliver maximum output in exchange for the lowest possible current draw. Covering the entire spectrum of life safety applications, these devices are durable, dependable, and virtually maintenance-free. And they support a wide range of mounting options that make them ideal for new construction and retrofit applications alike.

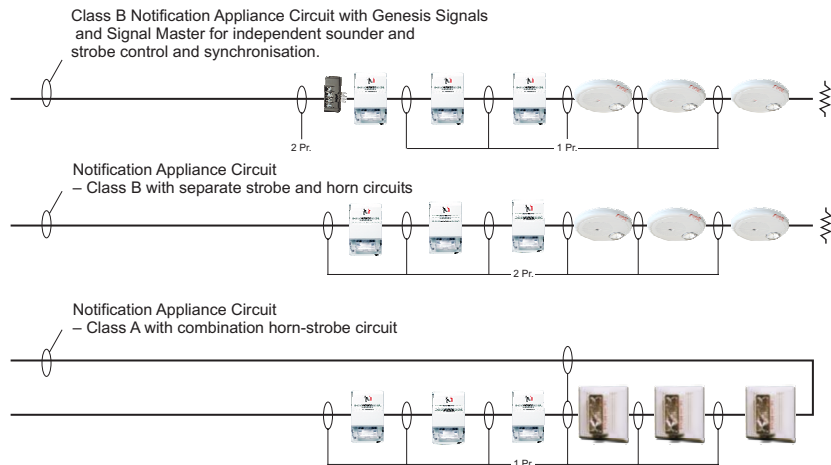
Visual/Audible Signals

EST3 visual/audible signals include a wide range of exquisitely engineered strobes in combination with horns, speakers, and chimes. The Genesis and Enhanced Integrity families of visual/audible signals feature UL 1971 listed strobes that exceed *Americans with Disabilities Act* (ADA) requirements. All GE Security strobes are UL 1971 listed as visual signaling devices for the hearing impaired and surpass the latest UL synchronization requirements when used with a Signal Master accessory (see page 41) or the Signature Series Synchronization Output Module (see page 31).

Genesis strobes represent a breakthrough in visual signaling technology that provides outstanding light distribution characteristics in a sleek low-profile design. Enhanced Integrity devices offer a full range of indoor and outdoor, and wall and ceiling rated options, including strobes in combination with horns, speakers and chimes.

Typical Wiring

All notification appliances may be configured for Class A or Class B wiring. Genesis combination horn-strobes, when used with the innovative Signal Master Module, support independent horn control over a single pair of wires and precision synchronization that exceeds UL requirements. This reduces wiring time while meeting the requirements of even the most demanding application.



A visual signal for every application...

Room size	Up to 20' x 20' or corridors				Up to 30' x 30'				Up to 50' x 50'				Up to 54' x 54'				Up to 60' x 60'							
	Strobe Intensity		15/75 cd		15 cd		30 cd		75 cd		95 cd		110 cd		115 cd		150 cd		177 cd					
Application*	Wall	Ceiling	Indoor	Outdoor	Wall	Ceiling	Indoor	Wall	Ceiling	Indoor	Outdoor	Wall	Ceiling	Indoor	Wall	Ceiling	Indoor	Outdoor	Wall	Ceiling	Wall	Ceiling	Wall	Ceiling
Genesis Strobe	✓		✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
Genesis Horn-Strobe	✓		✓		✓		✓	✓		✓		✓		✓		✓		✓	✓	✓	✓	✓	✓	✓
Integrity Strobe	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Integrity Horn-Strobe	✓	✓	✓	✓	✓		✓	✓		✓	✓	✓		✓		✓		✓	✓					
Integrity Bell-Strobe	✓		✓		✓	✓	✓	✓		✓		✓		✓		✓		✓						

*For general guidance only. Signals must be installed in accordance with applicable codes, standards and local authority having jurisdiction.

Genesis Series

Wall Strobes, Horns & Chimes

The Genesis line of signals are among the smallest, most compact audible-visible emergency signaling devices in the world. About the size of a deck of playing cards, these devices are designed to blend with any decor.

Genesis signals feature textured housings in architecturally neutral white or traditional fire red. An ingenious iconographic symbol indicates the purpose of the device. This universal symbol is code-compliant and is easily recognized by all building occupants regardless of what language they speak. Models with "FIRE" markings are also available.

Genesis strobes offer 15 to 110 candela output, which is selectable with a conveniently-located switch on the side of the device. The candela output setting remains clearly visible even after final installation, yet it stays locked in place to prevent unauthorized tampering.

G1-VM	Strobe (selectable 15, 30, 75, or 110 cd output), white	Catalog Sheet: 85001-0573	<input type="checkbox"/>
G1R-VM	Strobe (selectable 15, 30, 75, or 110 cd output), red	Catalog Sheet: 85001-0573	<input type="checkbox"/>
G1F-V1575	Strobe (fixed 15/75 cd output), white	Catalog Sheet: 85001-0573	<input type="checkbox"/>
G1RF-V1575	Strobe (fixed 15/75 cd output), red	Catalog Sheet: 85001-0573	<input type="checkbox"/>

Genesis Horns and Horn-strobes reach output levels as high as 99 dB and features a unique multiple frequency tone that results in excellent wall penetration and an unmistakable warning of danger. Horns may be configured for either coded or non-coded signal circuits. They can also be set for low dB output with a jumper cut that reduces horn output by about 5 dB.

G1-HDVM	Horn-Strobe (15, 30, 75, or 110 cd output, high or low dB), white	Catalog Sheet: 85001-0573	<input type="checkbox"/>
G1R-HDVM	Horn-Strobe (15, 30, 75, or 110 cd output, high or low dB), white	Catalog Sheet: 85001-0573	<input type="checkbox"/>
G1F-HDV1575	Horn-Strobe (fixed 15/75 cd output, high or low dB), white	Catalog Sheet: 85001-0573	<input type="checkbox"/>
G1RF-HDV1575	Horn-Strobe (fixed 15/75 cd output, high or low dB), red	Catalog Sheet: 85001-0573	<input type="checkbox"/>
G1-HD	Temporal Horn (high or low dB output), white	Catalog Sheet: 85001-0573	<input type="checkbox"/>
G1R-HD	Temporal Horn (selectable high or low dB output), red	Catalog Sheet: 85001-0573	<input type="checkbox"/>
G1-P	Steady Horn (not compatible with Genesis Signal Master), white	Catalog Sheet: 85001-0573	<input type="checkbox"/>
G1R-P	Steady Horn (not compatible with Genesis Signal Master), red	Catalog Sheet: 85001-0573	<input type="checkbox"/>

Genesis chimes and chime-strobes produce a pleasing mellow tone. When steady (non-stroked) voltage is applied, the chime automatically pulses at 60 strokes per minute, or may be field-configured for temporal output. When installed with a GIM Signal Master Module, the chime may also be field-configured for coded operation, which enables the chime output to match the rate that voltage is applied to the circuit. The chime's 79 dBA (peak) output level makes this device suitable for many applications. Chimes may be set for low dB output with a jumper cut that reduces sound output by about 5 dB.

G1-CVM	Genesis Chime-Strobe (15, 30, 75, or 110 cd output, high or low dB), white	Catalog Sheet: 85001-0574	<input type="checkbox"/>
G1R-CVM	Genesis Chime-Strobe (15, 30, 75, or 110 cd output, high or low dB), red	Catalog Sheet: 85001-0574	<input type="checkbox"/>
G1-C	Genesis Chime (selectable high or low dB output), white	Catalog Sheet: 85001-0574	<input type="checkbox"/>
G1R-C	Genesis Chime (selectable high or low dB output), red	Catalog Sheet: 85001-0574	<input type="checkbox"/>



Optional trim plates available in red and white



Housings with optional "FIRE" markings

To specify housings with "FIRE" markings, insert an "F" before the hyphen in the model number. For submittal purposes, write an "F" in the Submit box instead of placing a checkmark there.

G1T-FIRE	Genesis Trim Plate (for 2-gang or 4" square boxes) with "FIRE" markings, white	Catalog Sheet: 85001-0573	<input type="checkbox"/>
G1RT-FIRE	Genesis Trim Plate (for 2-gang or 4" square boxes) with "FIRE" markings, red	Catalog Sheet: 85001-0573	<input type="checkbox"/>



Notification Appliances

Hazardous Location Devices

Door Holders & Relays

SUBMIT

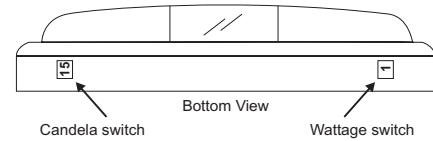


Genesis Series

Wall Speakers and Speaker-strobes

Genesis speakers include a DC blocking capacitor to allow electrical supervision of the audio distribution circuit. Models for 25 V_{RMS} and 70 V_{RMS} circuits are available. The mylar speaker with its sealed back construction provides extra durability and improved audibility. ¼ W to 2 W operation is selectable with a conveniently-located switch on the bottom of the device.

Speaker-strobes feature 15, 30, 75 or 110 candela output, selectable with a conveniently-located switch on the bottom of the device.

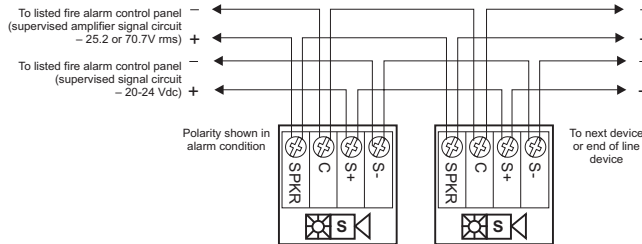


Candela and wattage settings remain clearly visible even after final installation.



Genesis speakers are available with white or red housings and with FIRE markings.

#18 - #12 AWG terminals - ideal for long runs, existing wiring



Genesis Speakers and speaker-strobes ...

<input type="checkbox"/>	<input type="checkbox"/> G4-S2 (white)	<input type="checkbox"/> G4R-S2 (red)	Multi-wattage 25 Volt Speaker	Catalog Sheet: 85001-0549
<input type="checkbox"/>	<input type="checkbox"/> G4-S2VM (white)	<input type="checkbox"/> G4R-S2VM (red)	Multi-candela/wattage 25 Volt Speaker-strobe	Catalog Sheet: 85001-0549
<input type="checkbox"/>	<input type="checkbox"/> G4-S7 (white)	<input type="checkbox"/> G4R-S7 (red)	Multi-wattage 70 Volt Speaker	Catalog Sheet: 85001-0549
<input type="checkbox"/>	<input type="checkbox"/> G4-S7VM (white)	<input type="checkbox"/> G4R-S7VM (red)	Multi-candela/wattage 70 Volt Speaker-strobe	Catalog Sheet: 85001-0549
<input type="checkbox"/>	<input type="checkbox"/> G4B (white)	<input type="checkbox"/> G4RB (red)	Surface mount box	Catalog Sheet: 85001-0549

All speakers feature selectable ¼, ½, 1, or 2 watt operation. Strobes feature 15, 30, 75, or 110 candela output

Genesis Series

Ceiling Speakers, Horns, and Strobes

The new Genesis line of multi-candela and multi-wattage ceiling signals feature all the hallmarks that have made Genesis products a big hit with designers, engineers, building owners, and installers everywhere. EST's exclusive FullLight technology, precision timing electronics, and low current draw bring the benefits of the popular Genesis wall-mount models to ceiling applications. These signals are 30 per cent slimmer than comparable signals on the market. They are compatible with standard 4-inch (10 cm) square electrical boxes and don't require extension rings or trim plates. No mounting screws are visible when the unit is installed, providing a clean, finished, unobtrusive appearance that blends with any decor. These signals are also listed for wall mount applications.



177
Select 15/30/75/95 and 95/115/150/177 candela output!

2
Select ¼, ½, 1, or 2 watt operation!

SUBMIT



<input type="checkbox"/>	GC-S2	<input type="checkbox"/>	GCF-S2 (marked "FIRE")	Multi-wattage 25 V Speaker	Catalog Sheet: 85001-0558	<input type="checkbox"/>
<input type="checkbox"/>	GC-S7	<input type="checkbox"/>	GCF-S7 (marked "FIRE")	Multi-wattage 70 V Speaker	Catalog Sheet: 85001-0558	<input type="checkbox"/>
<input type="checkbox"/>	GC-S2VM	<input type="checkbox"/>	GCF-S2VM (marked "FIRE")	Multi-cd/wattage 25 V Spkr-strobe	Catalog Sheet: 85001-0556	<input type="checkbox"/>
<input type="checkbox"/>	GC-S2VMH	<input type="checkbox"/>	GCF-S2VMH (marked "FIRE")	Multi High-cd/wattage 25 V Spkr-strobe	Catalog Sheet: 85001-0556	<input type="checkbox"/>
<input type="checkbox"/>	GC-S7VM	<input type="checkbox"/>	GCF-S7VM (marked "FIRE")	Multi-cd/wattage 70 V Spkr-strobe	Catalog Sheet: 85001-0556	<input type="checkbox"/>
<input type="checkbox"/>	GC-S7VMH	<input type="checkbox"/>	GCF-S7VMH (marked "FIRE")	Multi High-cd/wattage 70 V Spkr-strobe	Catalog Sheet: 85001-0556	<input type="checkbox"/>
<input type="checkbox"/>	GC-VM	<input type="checkbox"/>	GCF-VM (marked "FIRE")	Multi-cdStrobe	Catalog Sheet: 85001-0557	<input type="checkbox"/>
<input type="checkbox"/>	GC-VMH	<input type="checkbox"/>	GCF-VMH (marked "FIRE")	Multi High-cdStrobe	Catalog Sheet: 85001-0557	<input type="checkbox"/>
<input type="checkbox"/>	GC-HDVM	<input type="checkbox"/>	GCF-HDVM (marked "FIRE")	Multi-cdHorn-Strobe	Catalog Sheet: 85001-0559	<input type="checkbox"/>
<input type="checkbox"/>	GC-HDVMH	<input type="checkbox"/>	GCF-HDVMH (marked "FIRE")	Multi High-cdHorn-Strobe	Catalog Sheet: 85001-0559	<input type="checkbox"/>

All speakers feature selectable ¼, ½, 1, or 2 watt operation. All horns feature high or low dB output. Multi-Candela Strobes feature 15, 30, 75, or 95 candela output. Multi High-Candela Strobes feature 95, 115, 150, or 177 candela output.

Signal Master

The Signal Master is a simple-to-use accessory that adds enhanced features to Genesis and Integrity strobes and Horn-Strobes. It is a dual-purpose module that provides UL 1971 required precision synchronization for connected Integrity and Genesis strobes, and independent control for connected Genesis Horns over a single pair of wires. Two methods of Horn control are available: traditional Horn silence; or, normally-closed contact. Both methods may be used to silence Horns without turning off strobes on the same circuit. Two models are available. The Genesis "piggyback" model doesn't require a separate electrical box. It simply snaps to the back of the first G1 signal on the circuit. The remote mount model mounts in a North American 2½ inch (64 mm) deep one-gang box.



Snap-on (piggyback) model



Remote 1-gang mount model

<input type="checkbox"/>	G1M	Genesis Signal Master – Snap-on (piggyback)	Catalog Sheet: 85001-0545	<input type="checkbox"/>
<input type="checkbox"/>	G1M-RM	Genesis Signal Master – Remote 1-Gang Mount	Catalog Sheet: 85001-0545	<input type="checkbox"/>

Notification Appliances

Hazardous Location Devices

Door Holders & Relays

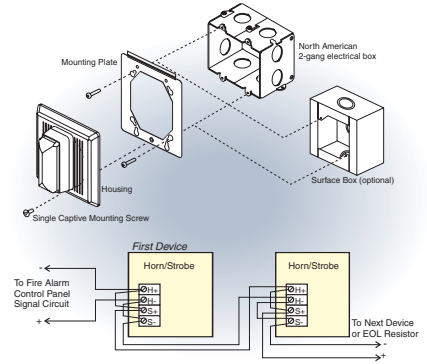
SUBMIT



Enhanced Integrity Series

Harsh Environment Signals

All Enhanced Integrity devices are UL 1971 listed for both wall and ceiling orientation. Enhanced Integrity strobes meet the latest UL1971 synchronization requirements when used with the G1M Signal Master (see page 40). Integrity devices are shipped with wall mount style "FIRE" lens markings. Other lens markings are available (see page 44).



Temporal Horns and Horn-Strobes

During installation, the Horn is configured for steady or temporal tone signal. When temporal output is selected, all Horns on a common two-wire circuit are self-synchronized. Integrity Series Horns emit a low frequency "growling" tone that demands attention. Horns can be configured for either high output (98 dBA) or low output (94 dBA); and are listed for outdoor use.

<input type="checkbox"/>	<input type="checkbox"/> 757-1A-T (Red)	<input type="checkbox"/> 757-1A-TW (White)	Temporal Horn	Catalog Sheet: 85001-0341
<input type="checkbox"/>	<input type="checkbox"/> 757-7A-T (Red)	<input type="checkbox"/> 757-7A-TW (White)	Temporal Horn-Strobe, 15/75cd	Catalog Sheet: 85001-0341
<input type="checkbox"/>	<input type="checkbox"/> 757-8A-T (Red)	<input type="checkbox"/> 757-8A-TW (White)	Temporal Horn-Strobe, 110cd	Catalog Sheet: 85001-0341



4" Square Box Mount Strobes

405 Series strobes are self-synchronized to flash at one fps across their full operating voltage range. UL 1971 synchronization requirements are achieved when used with the G1M Signal Master (see page 38). Strobes must be connected to signal circuits that output a constant (not pulsed) voltage. A diode is used to allow full signal circuit supervision. 405 Series strobes are suitable for outdoor use and installed to a standard four-inch square electrical box.

<input type="checkbox"/>	<input type="checkbox"/> 405-5A-T (Red)	<input type="checkbox"/> 405-5A-TW (White)	Strobe - 15 cd	Catalog Sheet: 85001-0305
<input type="checkbox"/>	<input type="checkbox"/> 405-7A-T (Red)	<input type="checkbox"/> 405-7A-TW (White)	Strobe - 15/75	Catalog Sheet: 85001-0305
<input type="checkbox"/>	<input type="checkbox"/> 405-3A-T (Red)	<input type="checkbox"/> 405-3A-TW (White)	Strobe - 30 cd	Catalog Sheet: 85001-0305
<input type="checkbox"/>	<input type="checkbox"/> 405-6A-T (Red)	<input type="checkbox"/> 405-6A-TW (White)	Strobe - 60 cd	Catalog Sheet: 85001-0305
<input type="checkbox"/>	<input type="checkbox"/> 405-8A-T (Red)	<input type="checkbox"/> 405-8A-TW (White)	Strobe - 110 cd	Catalog Sheet: 85001-0305
<input type="checkbox"/>	<input type="checkbox"/> CS-405-7A-T (15/75 cd)	<input type="checkbox"/> CS-405-8A-T (110 cd)	Strobe - Weatherproof (red)	Catalog Sheet: 85001-0305

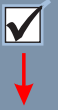


Re-Entrant Speakers and Speaker-Strobes

Re-entrant speakers feature a sealed, high efficiency compression driver that's both weatherproof and vermin proof. This makes them ideal for public places and outdoor areas such as parking garages and transport terminals. All Integrity speakers include a DC Blocking Capacitor that permits electrical supervision of the audio distribution circuit. Models for 25V_{RMS} and 70V_{RMS} circuits are available.

<input type="checkbox"/>	<input type="checkbox"/> 757-1A-R25 (Red)	<input type="checkbox"/> 757-1A-R25W (White)	25 V Re-entrant Speaker	Catalog Sheet: 85001-0317
<input type="checkbox"/>	<input type="checkbox"/> 757-7A-RS25 (Red)	<input type="checkbox"/> 757-7A-RS25W (White)	25 V Re-entrant Speaker-Strobe, 15/75cd	Catalog Sheet: 85001-0317
<input type="checkbox"/>	<input type="checkbox"/> 757-3A-RS25 (Red)	<input type="checkbox"/> 757-3A-RS25W (White)	25 V Re-entrant Speaker-Strobe, 30cd	Catalog Sheet: 85001-0317
<input type="checkbox"/>	<input type="checkbox"/> 757-8A-RS25 (Red)	<input type="checkbox"/> 757-8A-RS25W (White)	25 V Re-entrant Speaker-Strobe, 110cd	Catalog Sheet: 85001-0317
<input type="checkbox"/>	<input type="checkbox"/> 757-1A-R70 (Red)	<input type="checkbox"/> 757-1A-R70W (White)	70 V Re-entrant Speaker	Catalog Sheet: 85001-0317
<input type="checkbox"/>	<input type="checkbox"/> 757-7A-RS70 (Red)	<input type="checkbox"/> 757-7A-RS70W (White)	75 V Re-entrant Speaker-Strobe, 15/75cd	Catalog Sheet: 85001-0317
<input type="checkbox"/>	<input type="checkbox"/> 757-3A-RS70 (Red)	<input type="checkbox"/> 757-3A-RS70W (White)	75 V Re-entrant Speaker-Strobe, 30cd	Catalog Sheet: 85001-0317
<input type="checkbox"/>	<input type="checkbox"/> 757-8A-RS70 (Red)	<input type="checkbox"/> 757-8A-RS70W (White)	75 V Re-entrant Speaker-Strobe, 110cd	Catalog Sheet: 85001-0317

SUBMIT



Audible Signals



Fire Alarm Bells

GE Security fire alarm bells are of the underdome type with heavy-duty mechanisms. Gongs are made of selected alloy steel to generate the loud, resonant tones. For weatherproof application, optional surface weatherproof backboxes are available.

<input type="checkbox"/>	323D-10AW (Grey)	<input type="checkbox"/>	323D-10AR (Red)	10-inch Single Stroke, Diode — 20-24Vdc	Catalog Sheet: 85001-0333	<input type="checkbox"/>
<input type="checkbox"/>	439D-6AW (Grey)	<input type="checkbox"/>	439D-6AR (Red)	6-inch Vibrating, Diode — 20-24Vdc	Catalog Sheet: 85001-0333	<input type="checkbox"/>
<input type="checkbox"/>	439D-10AW (Grey)	<input type="checkbox"/>	439D-10AR (Red)	10-inch Vibrating, Diode — 20-24Vdc	Catalog Sheet: 85001-0333	<input type="checkbox"/>



Single Stroke Chimes

Model 329D Single Stroke Chimes are specially designed for indoor private mode fire alarm applications. These chimes use heavy duty mechanisms and operate with a single stroke solid plunger, which strikes against an aluminum resonating chamber.

	329D-AW	Fire Alarm Chime — Single Stroke, 24Vdc	Catalog Sheet: 85001-0413	<input type="checkbox"/>
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Multiple Tone Signal

The Edwards 5530MD-24AW is a weatherproof heavy-duty industrial, tone-selectable, signaling device capable of producing volume-controlled, high-decibel tones. It uses a microprocessor circuit to create 27 distinctive tones. A single tone may be selected by setting a miniature dip switch within the unit.

	5530MD-24AW	27-Tone Selectable Signal — 24Vdc	Catalog Sheet: 85001-0415	<input type="checkbox"/>
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Firefighters' Telephones

Catalog Sheet: 85001-0423

Firefighters' telephones are typically installed in corridors, lobbies, mechanical rooms, stairways, or other strategic locations. When lifted from its cradle, or plugged into a suitable wall jack, the handset activates audible and visible signals at the EST3 control panel.

6833-1	Portable Handset Receptacle	1-gang Stainless-steel Faceplate for use with 6830-3	<input type="checkbox"/>		
<input type="checkbox"/>	6830-3 (black)	<input type="checkbox"/>	6700-0061 (red)	Portable Firefighters' Telephone	<input type="checkbox"/>
6830-1	Handset Assembly - Red			<input type="checkbox"/>	
6830-5A	Handset Assembly - Red, 3-state operation,	Push to Talk button		<input type="checkbox"/>	
6830-6A	Handset Assembly - Red, 3-state operation,	Push to Talk button, Armoured cable		<input type="checkbox"/>	
<input type="checkbox"/>	6831-1 (break-glass)	<input type="checkbox"/>	6831-2 (non-break glass)	Frontplate — Flush, Red finish, c/w 2 keys	<input type="checkbox"/>
<input type="checkbox"/>	6831-3 (break-glass)	<input type="checkbox"/>	6831-4 (non-break glass)	Frontplate — Surface, Red finish, c/w 2 keys	<input type="checkbox"/>
6830-NY-F	Warden Station - Flush.			<input type="checkbox"/>	
6830-NY-S	Warden Station - Surface			<input type="checkbox"/>	
6832-1	Universal wallbox - Compatible with all fixed telephone handsets.	Flush or Surface mount.		<input type="checkbox"/>	

Notification Appliances

Hazardous Location Devices

Door Holders & Relays

SUBMIT

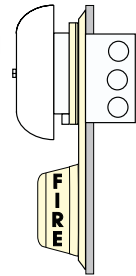


Accessories



Bell/Strobe Plate

The bell/strobe plate is ideal for renovation and retrofit projects, and new construction. It is equipped with an GE Security self-synchronizing strobe and is designed to allow on-site mounting of EST's 439 series Vibrating Bell, providing instant conversion to Bell/Strobe audible/visual signal appliances. The strobe is designed for 20 to 24Vdc operation and must be connected to signal circuits which output a constant (not pulsed) voltage. A diode is used to allow full signal circuit supervision.



- 403-5A-R (15 cd) 403-7A-R (15/75 cd) 403-3A-R (30 cd) 403-8A-R (110 cd)

Catalog Sheet: 85001-0441

Integrity Lens Marking Kits

Integrity strobes are shipped with wall mount style "FIRE" lens markings. Where ceiling mount, other languages or different lens markings are required, optional LKW and LKC series Lens Marking Kits are available. Lens marking sleeves snap right over the strobe lens providing a quick, easy, change.

- LKW-1R (Wall orientation) "FIRE" (Red)
- LKW-1 (Wall orientation) LKC-1 (Ceiling orientation) "FIRE"
- LKW-2 (Wall orientation) LKC-2 (Ceiling orientation) "FEU"
- LKW-3 (Wall orientation) LKC-3 (Ceiling orientation) "FIRE/FEU"
- LKW-4 (Wall orientation) LKC-4 (Ceiling orientation) "SMOKE"
- LKW-5 (Wall orientation) LKC-5 (Ceiling orientation) "HALON"
- LKW-6 (Wall orientation) LKC-6 (Ceiling orientation) "CO2"
- LKW-7 (Wall orientation) LKC-7 (Ceiling orientation) "EMERGENCY"
- LKW-8 (Wall orientation) LKC-8 (Ceiling orientation) "ALARM"
- LKW-9 (Wall orientation) LKC-9 (Ceiling orientation) "FUEGO"



Mounting Accessories

Integrity Temporal Horn, Horn/strobe

- 757A-SB Surface Box, Red, Indoor
- 757A-SBW Surface Box, White, Indoor
- 757A-WB Weatherproof Box, Red, Surface
- 757A-WBW Weatherproof Box, White, Surface
- 757A-BDF Bi-directional Frame, Red
- 757A-BDFW Bi-directional Frame, White
- 757A-RR2 Two-gang Retrofit Ring, Red
- 757A-RR2W Two-gang Retrofit Ring, White

Integrity Speakers, Speaker/strobes

- 960A-4SF Flush Box, Indoor
- 757A-SB Surface Box, Red, Indoor
- 757A-SBW Surface Box, White, Indoor
- 757A-BDF Bi-directional Mounting Frame, Red
- 757A-BDFW Bi-directional Mounting Frame, White
- 757A-RR Four-inch Retrofit Ring, Red
- 757A-RRW Four-inch Retrofit Ring, White

Integrity Re-entrant speakers, Speaker/strobes

- 960A-4SF Flush Box, Indoor
- 757A-SB Surface Box, Red, Indoor
- 757A-SBW Surface Box, White, Indoor
- 757A-WB Weatherproof Box, Red, Surface
- 757A-WBW Weatherproof Box, White, Surface
- 757A-BDF Bi-directional Mounting Frame, Red
- 757A-BDFW Bi-directional Mounting Frame, White

Integrity Chimes, Chime/strobes

- 757A-SB Surface Box, Red, Indoor
- 757A-SBW Surface Box, White, Indoor
- 757A-BDF Bi-directional Mounting Frame, Red
- 757A-BDFW Bi-directional Mounting Frame, White

Genesis® Signals

- 27193-11 Horn-strobe Surface Box, Red, Indoor
- 27193-16 Horn-strobe Surface Box, White, Indoor
- G4RB Speaker Surface Box, Red, Indoor
- G4B Speaker Surface Box, White, Indoor

8-inch Square Speakers

- 960A-8SF Square Flush Box, Indoor
- 960A-8SS Square Surface Box, Indoor

8-inch Round Speakers

- 960A-8RF Round Flush Box, Indoor

4-inch Round Speakers

- 960A-4RF Round Flush Box, Indoor

Horn/siren Combination

- 349 Weatherproof Backbox

Fire Alarm Bells and CS-405 Series

- 449 Weatherproof Backbox



Genesis G48 Speaker Surface Box

Hazardous Location Devices

GE Security hazardous location devices provide reliable life safety protection and emergency signaling in areas where atmospheres could become harsh or explosive. All hazardous location devices are UL rated under the full range of classifications set out in the National Electrical Code.

The following classification definitions are an interpretive summary based on the 1996 edition of the National Electrical Code (NEC, NFPA 70). Refer to the latest editions of NFPA 497M, NFPA 70 and the UL Hazardous Location Equipment Directory for current and more detailed information. For more information on NEMA classifications, refer to NEMA Standards Publication No. 250.

Hazardous Location Classifications

Classes

Class I - Hazardous Gases. Class I locations are areas in which flammable gases or vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures.

Typical Class I Hazardous Areas

- Spray painting and finishing areas
- Utility gas plants
- Petroleum refining production plants
- Petroleum dispensing locations
- Dry cleaning facilities
- Dip tanks containing combustibles or flammable liquids
- Plant facilities extracting solvents
- Inhalation anesthetics areas
- Process facilities manufacturing pyroxylin type plastics

Class II - Hazardous Dusts. Class II locations represent areas that are hazardous due to the presence of combustible dust.

Typical Class II Hazardous Areas

- Flour mills
- Feed mills
- Grain elevators and grain handling facilities
- Aluminum manufacturing and storage areas
- Magnesium manufacturing and storage areas
- Coal preparation and handling facilities
- Starch manufacturing and storage areas
- Confectionery plants
- Pulverizer sugar and cocoa manufacturing, and storage plants
- Spice grinding and storage plants

Class III - Hazardous Fibers. Class III locations have easily ignitable fibers or flyings present, but not likely to be suspended in air in quantities sufficient to produce ignitable mixtures in the atmosphere.

Typical Class III Hazardous Areas

- Textile mills
 - Woodworking plants*
 - Furniture manufacturers*
 - Cotton gins
 - Cotton seed milling plants
 - Flax plants
 - Carpet manufacturers
- *Except if wood flour (dust), which is Class II Group G, is present

Divisions

The Location Classes are broken down by the NFPA into Divisions 1 and 2, defining different levels of risk. In general, the risk of there being a hazardous presence of flammable/combustible/ignitable materials is higher for Division 1 than for Division 2. The specifics differ between the three classes (I, II and III). Equipment suitable for Division 1 is also suitable for Division 2 locations.

Groups

Class I and II locations are divided by the NFPA into Group designations identifying specific gases, vapors and dusts by characteristic similarities that relate to specific equipment construction requirements. Class III locations are not divided into separate group designations.

Class I Groups

Group A. Atmospheres containing acetylene.

Group B. Atmospheres containing hydrogen, fuel and combustible process gases containing more than 30 percent hydrogen by volume, or gases or vapors of equivalent hazard such as butadiene, ethylene oxide, propylene oxide, and acrolein.

Group C. Atmospheres such as ethyl ether, ethylene, or other gases or vapors of equivalent hazard.

Group D. Atmospheres containing acetone, ammonia, benzene, butane, cyclopropane, ethanol, gasoline, hexane, methanol, methane, natural gas, naphtha (petroleum), propane, or gases or vapors of equivalent hazard.

Class II Groups

Group E. Atmospheres containing combustible metal dusts, including aluminum, magnesium, and their commercial alloys, or other combustible dusts whose particle size, abrasiveness and conductivity present similar hazards in the use of electrical equipment.

Group F. Atmospheres containing combustible carbonaceous dusts, including carbon black, charcoal, coal, or dusts that have been sensitized by other materials so that they present an explosion hazard.

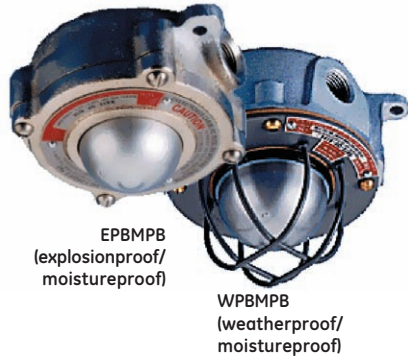
Group G. Atmospheres containing combustible dusts not included in Group E or F, including flour, grain, wood, plastic, and chemicals.

SUBMIT



Initiating Devices

Weather/Explosion proof heat detectors



Series 500 heat sensors are designed for use in applications requiring protection against weather, moisture (internal condensation), and explosive atmospheres. Heat sensors are normally-open devices designed to close an electrical circuit upon activation. Sensors use dual action, electric fire detection thermostats that employ two independent methods of detection: rate-of-rise and fixed temperature.

Weather/Moisture Proof Models (WPBMPB) consist of a cast metal box, gasket and special steel cover plate integrated with the sensor. A crossed wire guard is added for extra protection. The emerging wire points are sealed with epoxy, increasing resistance to moisture. The cast metal box has four wire entrances for ½-inch rigid conduit. The unit offers combined protection against weather and condensation in the conduit.

Explosion/Moisture Proof Models (EPBMPB) consist of a cast metal box, cover plate and modified 500 Series sensor. The backbox has two opposing wire entrances threaded for ½-inch rigid conduit. The box, cover and base are precision machined for extremely close tolerance fit. Explosion proof models are available in a moisture proof version, which includes a moisture-resistant gasket.

<input type="checkbox"/>	WPBMPB501	Weather/Moistureproof rate-of-rise and fixed temp. sensors (136°F/58°C)	Catalog Sheet: 85001-0393
<input type="checkbox"/>	EPBMPB501	Explosion/Moistureproof rate-of-rise and fixed temp. sensors (136°F/58°C)	Catalog Sheet: 85001-0393
<input type="checkbox"/>	WPBMPB502	Weather/Moistureproof rate-of-rise and fixed temp. sensors (190°F/88°C)	Catalog Sheet: 85001-0393
<input type="checkbox"/>	EPBMPB502	Explosion/Moistureproof rate-of-rise and fixed temp. sensors (190°F/88°C)	Catalog Sheet: 85001-0393
<input type="checkbox"/>	WPBMPB503	Weather/Moistureproof fixed temperature sensor (136°F/58°C)	Catalog Sheet: 85001-0393
<input type="checkbox"/>	EPBMPB503	Explosion/Moistureproof fixed temperature sensor (136°F/58°C)	Catalog Sheet: 85001-0393
<input type="checkbox"/>	WPBMPB504	Weather/Moistureproof fixed temperature sensor (190°F/88°C)	Catalog Sheet: 85001-0393
<input type="checkbox"/>	EPBMPB504	Explosion/Moistureproof fixed temperature sensor (190°F/88°C)	Catalog Sheet: 85001-0393

Hazardous location fire alarm station

The XAL-53 is an extremely rugged double-action fire alarm station suitable for hazardous locations. The device is activated by lifting the front cover and pulling down the ring. This two-step process prevents unintentional operation.



<input type="checkbox"/>	XAL-53	Hazardous Location Fire Alarm Station	Catalog Sheet: 85001-0371
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Notification Appliances

Hazardous Location, weatherproof Strobes

- Class I, II, or III locations

106DEX hazardous location strobes are diode polarized life safety signaling appliances designed for use in hazardous environments. Rigid specifications and state-of-the-art technology provide for high output and low maintenance. Strobes are UL 1971 listed as visual signaling appliances for the hearing impaired in non-sleeping areas and may be used to meet ADA requirements.



106DEXPSTC-FJ	Hazardous Location/ Weatherproof Strobe – Pendant Mount	Catalog Sheet: 85001-0547	<input type="checkbox"/>
106DEXBSTC-FJ	Hazardous Location/ Weatherproof Strobe – Bracket Mount	Catalog Sheet: 85001-0547	<input type="checkbox"/>

Hazardous Location Multiple Tone Signals

- Class I hazardous locations, for Divisions 1 and 2, Groups B, C and D

5533BD signals are heavy-duty industrial, tone-selectable, signaling devices capable of producing volume-controlled, high-decibel tones. The signals accept up to two contact closures and deliver two audible output signals selected from the 19 available tones. The two tones may be selected by setting miniature switches within the units. One of the tones can be assigned a priority status to override the other tone.



5533BD-AW	Diode Polarized Hazardous Location Signal	Catalog Sheet: 85001-0387	<input type="checkbox"/>
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Hazardous Location Horns and Sirens

- Class I hazardous locations, for Divisions 1 and 2, Groups B, C and D

GE Security hazardous location horns and sirens are extremely high decibel, high-performance diode-polarized appliances intended for fire alarm and life safety applications. Signals are solid-state with no moving parts or contacts to wear out. They require no maintenance or lubrication. The signals operate with very low current consumption and do not require extra current on start-up.



<input type="checkbox"/> 5522D-AW (Horn)	<input type="checkbox"/> 5523D-AW (Siren)	Horn or siren – 24 Vdc	Catalog Sheet: 85001-0385	<input type="checkbox"/>
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Hazardous Location Bells

- Class I groups B, C and D locations
- Class II groups E, F and G locations
- Class III hazardous locations, for Divisions 1 and 2

430D series of hazardous location bells are diode-polarized, heavy duty fire bells for use in life safety applications where a diode supervised signal is required. They can be mounted to any solid surface using two 3/8 inch (10 mm) bolts and the supplied mounting brackets or to a rigid conduit. The integral explosion-proof housing is mechanically terminated to accept a standard 3/4 inch -14 National Pipe Taper (NPT) nipple.

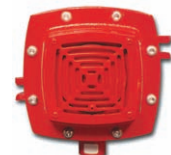


<input type="checkbox"/> 439DEX-6AW (6")	<input type="checkbox"/> 439DEX-8AW (8")	<input type="checkbox"/> 439DEX-10AW (10")	Bell – 24 Vdc	Catalog Sheet: 85001-0399	<input type="checkbox"/>
<input type="checkbox"/> 438DEX-6N5 (6")	<input type="checkbox"/> 438DEX-8N5 (8")	<input type="checkbox"/> 438DEX-10N5 (10")	Bell – 120 Vac	Catalog Sheet: 85001-0399	<input type="checkbox"/>

Hazardous Location Horns

- Class I groups B, C and D locations
- Class II groups E, F and G locations
- Class III hazardous locations, for Divisions 1 and 2

888D and 889D hazardous location horns are diode-polarized, heavy duty, high decibel vibrating horns intended for use in life safety systems in hazardous (classified) locations. These horns may be mounted to any solid surface using two bolts. Each unit is supplied with a sealing fitting for a 3/4 inch -14 National Pipe Taper (NPT) nipple, and wire leads for the electrical connection to the life safety system notification appliance circuit.



<input type="checkbox"/> 888D-N5 (120 Vac)	<input type="checkbox"/> 889D-AW (24 Vdc)	Horn – 120 Vac	Catalog Sheet: 85001-0397	<input type="checkbox"/>
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SUBMIT



Door Holders



24 Vac 60 Hz
24 Vdc
120 Vac 60 Hz

Electromagnetic Door Holders

GE Security electromagnetic door holders keep doors open until signaled by the fire alarm system, a heat detector, a smoke detector, or an electrical switch. Door holders should be installed wherever doors may be effectively used to confine smoke and fire, or where the release of a self-closing door from a remote location is required. Fail-safe operation is an inherent feature of these door holders. If power fails, doors are released automatically, but may be opened or closed manually at any time. All units are free of moving parts, are self-contained, and require no maintenance. Door holders have a holding force of approximately 15-25 Lbf (66-111N).

<input type="checkbox"/>	<input type="checkbox"/> 1501-AQN5 (Single Door)	<input type="checkbox"/> 1502-AQN5 (Double Door)	Floor Mounted	Catalog Sheet: 85001-0421
<input type="checkbox"/>	<input type="checkbox"/> 1504-AQN5 (Long Catch Plate)	<input type="checkbox"/> 1505-AQN5 (Short Catch Plate)	Flush Wall Mounted	Catalog Sheet: 85001-0421
<input type="checkbox"/>	<input type="checkbox"/> 1508-AQN5 (Surface)	<input type="checkbox"/> 1505-AQN9 (Completely flush)	Wall Mounted	Catalog Sheet: 85001-0421
<input type="checkbox"/>	<input type="checkbox"/> 1500-1 (1.5" Extension)	<input type="checkbox"/> 1500-2 (2.5" Extension)	Catch Plate	Catalog Sheet: 85001-0421
<input type="checkbox"/>	<input type="checkbox"/> 1500-7 (5.25 to 7.5" Extension)	<input type="checkbox"/> 1500-12 (7.5 to 12" Extension)	Catch Plate	Catalog Sheet: 85001-0421
<input type="checkbox"/>	<input type="checkbox"/> CS2595-5 (short)	<input type="checkbox"/> CS2598-5 (long)	Replacement Armature	Catalog Sheet: 85001-0421

Relays



Four-Voltage SPDT/DPDT Control Relays

MR Series multi-voltage control relays are ideal for applications where local contacts are required for system status, remote contacts, or 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. Relays provide 10-Amp contacts, which may be operated by one of four input control voltages. Each relay position contains a red LED that indicates the relay coil is energized. Relays may be snapped apart from a standard four-module assembly and used independently.

<input type="checkbox"/>	<input type="checkbox"/> MR-101/T (with mounting hardware)	<input type="checkbox"/> MR-101/C (in metal enclosure)	Single SPDT relay	Catalog Sheet: 270062
<input type="checkbox"/>	<input type="checkbox"/> MR-104/T (with mounting hardware)	<input type="checkbox"/> MR-104/C (in metal enclosure)	4-position SPDT relay	Catalog Sheet: 270062
<input type="checkbox"/>	<input type="checkbox"/> MR-201/T (with mounting hardware)	<input type="checkbox"/> MR-201/C (in metal enclosure)	Single DPDT relay	Catalog Sheet: 270062
<input type="checkbox"/>	<input type="checkbox"/> MR-204/T (with mounting hardware)	<input type="checkbox"/> MR-204/C (in metal enclosure)	4-position DPDT relay	Catalog Sheet: 270062



Heavy Duty DPDT Power Relays

MR-199 heavy duty power relays are designed for control applications where 30-Amp DPDT contacts are required. Two models are available: a 115Vac coil and a 24Vdc coil, each of which may be mounted in a rugged steel enclosure.

<input type="checkbox"/>	<input type="checkbox"/> MR-199X-13 (relay only)	<input type="checkbox"/> MR-199X-13/C (in metal enclosure)	Power Relay — 24 VDC	Catalog Sheet: 270065
<input type="checkbox"/>	<input type="checkbox"/> MR-199AX-14 (relay only)	<input type="checkbox"/> MR-199AX-14/C (in metal enclosure)	Power Relay — 120 VDC	Catalog Sheet: 270065



SPDT Relays

Single-pull/double-throw relays are ideal for applications where local or remote contacts are required for control of electrical loads. They are suitable for use with HVAC, temperature control, fire alarm, security, energy management, and lighting control systems. Each relay position contains a high-intensity LED which, when illuminated, indicates the relay coil is energized. Individual relay circuits may be snapped apart from standard four- or eight-position modules, and are also available in a single-circuit configuration. The common power to each relay position is bussed on the printed wiring board, which permits power to be connected only once per multi-position module.



Single-Voltage Manual Override Relays

MR-600 series relays provide SPDT, 10-Amp contacts with manual override capability by means of an ON-AUTO-OFF switch. The relay requires a 24Vac or 24Vdc power source supplied by the controlling system. With the switch in the ON position the power relay is energized. With the switch in the AUTO position the relay is allowed to operate as signaled by the controlling system. With the switch in the OFF position the relay cannot be energized.

- MR-601/T (with mounting track) MR-601/S (with mounting spacers) Single SPDT relay Catalog Sheet: 270061
- MR-604/T (with mounting track) MR-604/S (with mounting spacers) 4-position SPDT relay Catalog Sheet: 270061
- MR-608/T (with mounting track) MR-608/S (with mounting spacers) 8-position SPDT relay Catalog Sheet: 270061

Three-Voltage Control Relays

MR-800 Series relays provide SPDT 10-Amp contacts that may be operated by one of three input control voltages: 24Vdc, 24Vac or 115Vac.

- MR-801/T (with mounting track) MR-801/S (with mounting spacers) Single SPDT relay Catalog Sheet: 270063
- MR-804/T (with mounting track) MR-804/S (with mounting spacers) 4-position SPDT relay Catalog Sheet: 270063
- MR-808/T (with mounting track) MR-808/S (with mounting spacers) 8-position SPDT relay Catalog Sheet: 270063

Four-Voltage Control Relays

MR-700 Series relays provide SPDT 10-Amp contacts that may be operated by one of four input control voltages: 12Vdc, 12Vac, 24Vdc, or 24Vac.

- MR-701/T (with mounting track) MR-701/S (with mounting spacers) Single SPDT relay Catalog Sheet: 270064
- MR-704/T (with mounting track) MR-704/S (with mounting spacers) 4-position SPDT relay Catalog Sheet: 270064
- MR-708/T (with mounting track) MR-708/S (with mounting spacers) 8-position SPDT relay Catalog Sheet: 270064



Three-Voltage Encapsulated Control Relays

PAM-1 relays provide 10-Amp Form C contacts. The relay may be energized by one of three input voltages: 24Vac, 24Vdc, or 115Vac. The PAM-1 may be mounted with double-sided adhesive tape, a self-tapping screw, or loosely placed in a backbox.

- PAM-1** Encapsulated SPDT relay Catalog Sheet: 270066

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EST3 SUBMITTAL GUIDE

This EST3 Submittal Guide has been designed to make your job as easy as possible. The guide includes concise descriptions and relevant drawings for all EST3-related components. Adjacent to each component entry is a place for you to indicate that it is to be included in the submittal. Four simple steps now accomplish what used to be a tedious task...

Step One

On the reverse of this flap, rough out your submittal by indicating on the list which products are to be included.

Step Two

With the flap open, turn to each entry indicated on the "rough-out" and choose the specific components that are to be included by placing checkmarks in the boxes provided.

Step Three

Attach your business card to the outside front cover of the guide and sign and date the cover letter on page i.

Step Four

Fill out the bottom portion of this card, remove it from the back cover, and file it with your notes on the project for future reference.

Project _____

Date _____

Firm _____

Contact _____

Phone _____

Submitted by _____

Notes

GE Security wishes you the best of luck
with all your submittal plans!

SUBMITTAL PLANNER

Rough out your submittal by indicating here the basic components of the package. Then, with this flap open, turn to the corresponding page and indicate the specific products to include.

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Detach before submitting this guide.

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If you would like to discuss your life safety plans with individuals that have a proven track record with GE Security's systems and products, please contact your local Strategic Partner.

