

LIFE SAFETY \mathcal{G} INCIDENT MANAGEMENT

Submittal Guide

EST4 Life Safety Control Platform

Life Safety and Incident Management Solutions





LIFE SAFETY \mathscr{G} INCIDENT MANAGEMENT

Project:	
Contact:	
Date:	

EST4 Life Safety Control Platform. EST4 represents some of the most technologically advanced innovations the life safety industry has ever seen —innovations that will make your building and its occupants safe and secure. This guide provides a summary of these innovations and includes a presentation of related system components and devices. Products we are submitting for your consideration are indicated by a check mark in the margins of the pages that follow.

Thank you for giving us the opportunity to provide this submittal for an

More detailed information can be found in individual data sheets dedicated to each product. All these sheets, along with guide specifications and other useful product information, are available online at www.edwardsfiresafety.com. Thank you for giving us the opportunity to provide this submittal. Please do not hesitate to contact us should you require further information.

Submittal Guide

EST Life Safety Control Platform

Life Safety and Incident Management Solutions



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Life Safety Control Platform

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E85014-0019-V1

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.

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EST4: Innovation geared to your needs.









A lot can be said about EST4, 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 control network. EST4'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 EST4. 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 EST4 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 our commitment to ISO 9000 international quality standards. EST4 is certified under ISO for manufacturing. This ensures that your EST4 network will provide extremely reliable service the day it's brought on-line and well into the future.

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See what's possible now.



Detection & Alarm Since 1872.

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EST4 Network

EST4 is a modular system uniquely designed to easily meet the needs of standalone single panel systems or multi-panel networks. Life safety functions including Fire alarm, audio, mass notification all use the same fundamental components, simplifying system layouts. A powerful Configuration Utility program helps define system operations and thanks to higher speeds download times are a fraction of the time required by previous methods. Virtually all EST4 operating features are software

controlled. This gives EST4 great site flexibility and ensures operational changes and upgrades will be possible years after the initial installation.

Highly Flexible Applications

EST4 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 EST4, 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 Color Touch Screen Display module and a system of generic control and display modules designed to maximize design flexibility for custom systems. EST4 Control-Display Modules provide first responders and emergency users with easy-to-operate controls and at-a-glance indication when time is of the essence and event information is critical.

Powerful Networking

EST4 life safety platform is built on a self-configuring IPv6 network providing network speeds up to 100Mbps. The EST4 life safety network enables the full support for cybersecurity tested to meet FIPS publication 197. Salted Hashing of passwords,

authentication and encryption of sensitive data (user PINs, node authentication) are all standard features. This security applies to a single panel or the full complement of EST4 panels and network annunciators.

EST4 IPv6 network configuration also permits vast distances between panels. Physical interconnections facilitate a range of network capacities. Twisted pair copper at 2 Mbps supports distances of up to 5,000 ft. (1.5 km) between any two panels; up to

50,000 ft. (15 km) at 0.2 Mbps when used with the 4-NET-XT. Singlemode, multimode, and even CAT 5 (or better) cable solutions are also available.

A single network cable carries all panel-to-panel services: data, voice audio, and firefighters' telephone. No separate interconnections are

Outer Door
Control Display
Modules Inner Door
Chassis
Wall Box

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

needed. This powerful feature reduces cable costs and installation time.

Audio

Nothing informs building occupants better than the spoken word. EST4 audio design provides the emergency user with a communication package that minimizes switch selections. This facilitates simple, accurate and fast evacuation control announcements. This high fidelity messaging, across EST4's impressive capacity of 200 channels, provides the flexibility that responders need to get messages out clearly and concisely.

EST4 live paging capabilities ensure that those messages reach the right people at the right time. In addition to standard paging functions (Page to Evacuation, Page to Alert, All Call, and All Call Minus), EST4 introduces Page to Other and Page to Emergency. Page to Other is a quick way to reach people in stairwells and elevators, while Page to Emergency is for Mass Notification



purposes. This added live paging capability allows responders to reach occupants based not only on their proximity to danger, but also based on their potential to move inadvertently towards specific danger points.

EST4 live paging also lets responders select individual paging groups as well as combinations of groups. This allows them to reach people in Alert and Evacuation zones simultaneously without having to page one group, and then page the other.

Taking full advantage of digital technology all audio is sent over the same panel to panel cabling as network data removing the need for a separate audio riser. Coupling the inherent reliability and performance of zoned amplifiers with EST4 simplified user interfaces makes audio system design and operation both easy and dependable.

EST4 is the right choice for any medium large application. Its multiplex functions are second to none in the industry today.

Cybersecurity

The security and integrity of the EST4 network is paramount to its ability to maintain systems operations in the face of outside threats. The most vulnerable point of contact for any integrated building system is where it meets the facility owner's existing TCP/IP network. Ironically it is this gateway, which enhances and expands system capability beyond the communications network, that also exposes the system to some of its most critical vulnerabilities.

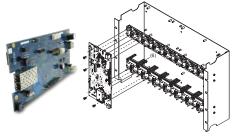
To combat outside threats, every EST4 panel can deploy proxy firewalls that effectively insulate the internal fire network from external Intranet or internet connections and the malware, ransom ware, and denial-of-services attacks that may be raging beyond. The EST4 proxy firewall uses Advanced Encryption Standard (AES) encryption and secure protocols making it FIPS Pub 197 certified. The FIPS, Federal Information Processing Standards, are the most current and most advanced encryption protocols administered by the National Institute of Standards and Technology (NIST).

EDWARDS recommends the installation of robust commercial firewall between the facilities intra-net and the Internet. To further enhance network security, an optional tamper switch may be installed on EST4 cabinet doors. This alerts the system when equipment enclosures are accessed.

Network

Central Processor Unit

EST4's Central Processing Unit, the 4-CPU, is a control panel module that manages data generated by local rail modules and acts as a nexus for system-wide network communications. The 4-CPU is the controller of audio data; event logs; the link to central monitoring facilities and controller of the system network.



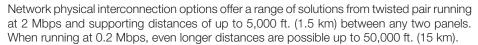
The 4-CPU's eight gigabytes of on-board memory storage holds nearly two hours of pre-recorded audio messaging, as well as an expansive project database. It also holds a large on-board history - large enough to handle more than 10,000 alarm events – and room to store up to 10,000 locked or frozen events held for investigative purposes.

Thanks to its self-configuring network, EST4 easily deploys and configures without intervention by network administration personnel. They adapt to a wide range of network configurations, including rings, stars, redundant segment, and full mesh topology. The 4-CPU even allows changes in the panel to panel physical layer from copper to fiber, and employs hot-swappable network connections. All this improves network reliability and saves money at installation time and throughout the equipment's life cycle.

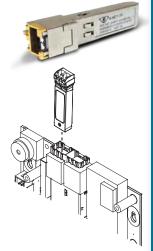
4-CPU Central Processor Unit Data Sheet E85014-0010

Network Controllers

Each 4-CPU provides two Small Form factor Pluggable (SFP) slots supporting hot-swappable modules that determine the media type in use at the panel. The network connection supports panel-to-panel data, voice audio, and firefighters telephone all on the same cabling no separate interconnections needed. Should the application call for it, cabling can be installed that allows all inter-panel network data including panel data, voice audio, and firefighters telephone to be transmitted on a single twisted pair or single fiber optic fiber. This helps speed setup time and cuts installation costs.



Single-mode, multimode, and even CAT5 cabling options are possible with EST4. The 4-CPU also meets redundancy and survivability requirements of many cabling needs, including Class A, Class B, Class X, and Class N. CAT5 installations are not limited to Class N wiring style: the network can be engineered to meet Class A, Class B, and Class X configuration when the project requires distances of up to 3,280 ft.



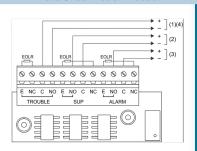
	4-NET-TP	SFP, 2Mbps Shared TX/RX, Twisted Pair or Cat 5.	Data Sheet E85014-0008
	4-NET-TP-HC	SFP, 0.3Mbps Shared TX/RX, High Capacitance Twisted Pair	Data Sheet E85014-0008
	4-NET-MM	SFP Multimode, Dual-Fiber, 100Base-FX, 1310nm	Data Sheet E85014-0008
	4-NET-SM	SFP, Single-Mode, Dual-Fiber, 100Base-LX10, 1310nm	Data Sheet E85014-0008
	4-NET-SMD	SFP, Single-Mode, Single-Fiber, Downlink, 100Base-BX10-D 1550nm/1310nm Tx/Rx, works with 4-NETSMU	Data Sheet E85014-0008
	4-NET-SMU	SFP, Single-Mode, Single-Fiber, Uplink, 100Base-BX10-U 1310nm/1550nm Tx/Rx, works with 4-NETSMD	Data Sheet E85014-0008
Ì	4-NET-SMH	SFP, Single-Mode, Dual-Fiber, 100Base-High Output 1310nm	Data Sheet E85014-0008
	4-NET-CAT	SFP, CAT5 UTP Copper, 100Base-TX, 100Mbps	Data Sheet E85014-0008

Common Relays Card

Mounting to the back of the 4-CPU the optional 4-COMREL provides form C common alarm, common trouble, and common supervisory relay outputs rated at 30Vdc at 1A. It also provides connections for end-of-line resistors and supports 18 to 12 AWG wire.



- To external trouble input circuit To external supervisory input circuit To external alarm input circuit Shown in the powered state (trouble contact is energized at system startup)

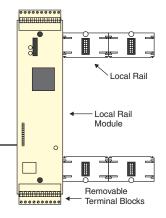


4-COMREL Common Relay Module

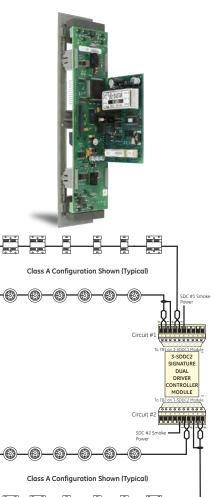
V

Local Rail Modules

Local Rail Modules (LRMs) conveniently mount to the EST4 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 4-CPU module. Control Display Modules can be mounted on the inner door of the EST4 away from LRMs.



Signature Driver Controller Modules



The 3-SSDC2 and 3-SDDC2 Signature Driver Controller modules provide an intelligent interface between the 4-CPU 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-SSDC2 Single Signature Driver Controller module supports one Signature Data circuit, while the 3-SDDC2 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-SSDC2/3-SDDC2 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-SSDC2/3-SDDC2 supports a standalone mode for Signature devices. Two catastrophic failure modes are supported. If the 4-CPU 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-SSDC2/3-SD-DC2) fails, and a device (smoke or module) detects an alarm, specialized circuitry will make the node aware of the alarm condition. The 4-CPU will communicate the alarm condition to the rest of the network. Having multiple redundant modes is paramount in a life safety system.

3-SSDC2	Single Signature Driver Controller, c/w one 3-SDC1	Data Sheet E85010-0129
3-SDDC2	Dual Signature Driver Controller, c/w two 3-SDC1s	Data Sheet E85010-0129
3-SDC1	Signature Device Card - upgrades a 3-SSDC2 to a 3-SDDC2	Data Sheet E85010-0129

Initiating Device Circuit (Hardwired) Module



Detector Base Detector Base

INITIATING DEVICE CIRCUIT (IDC)

Connect to IDC 3, 4, 5, or 6

IDC/NAC 1, 2, 7, or 8

NOTIFICATION APPLIANCE CIRCUIT (NAC)
Connect to IDC/NAC 1, 2, 7, or 8

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 4-LCD, control display modules, or at any other display device on the network.

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.

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. For Regulated signals, the IDC supports one NAC pair to distribute up to 1 Amp from the 3-PPS primary power supply through the local rail.



3-IDC8/4

Initiating Device Circuit Module

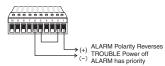


Off Premise Signaling Module

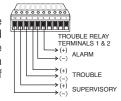
The 3-OPS supports three separate off premises signaling modes of operation:



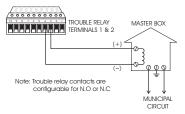
'Old' style reverse polarity operation has only a single reversed polarity output. In the normal state the output is 24 Vdc current limited to 6 mA. In the alarm state the polarity reverses. Should the EST4 panel go into trouble from the normal state, the voltage is removed from the output terminals 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

Modem Communicator



The Modem Communicator is a two-way local rail module that performs a variety of off-premise communications functions for the EST4 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 panel on the network. Power for the Modcom is supplied by the EST4 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:

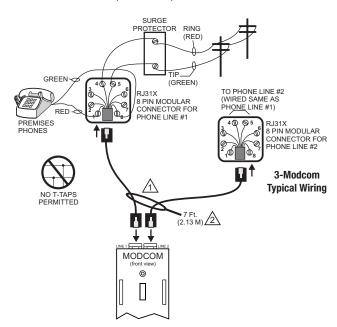
3-MODCOM – Provides a dialer (DACT) function.

3-MODCOMP – In addition to the dialer (DACT) functions of the 3-MODCOM, the 3-MODCOMP can dial directly into paging systems. 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 trans¬mitted. 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

Data Sheet E85010-0107

3-MODCOMP Modem/Dialer (DACT) w/TAP Protocol



Control, Display & Annunciation

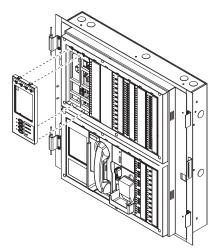
Color Touch Screen Display Modules



EST4's LCD large color touch-screen display is the window into system operation and maintenance functions. It is large enough to support a graphical tree view of the system. The tree closely matches the system's physical layout, so there's no need for lookup tables to find specific devices.

The EST4 LCD screen will display eight events without scrolling. In addition to touch-screen capability, the display assembly includes four dedicated easy-access rubber buttons for main control functions.

On the display, device events automatically sort into classification queues with event counts for easy identification and response. When new events are present that have yet to be reviewed, each queue is highlighted with a visual marking. An optional custom image may be uploaded to display while no active events are present.

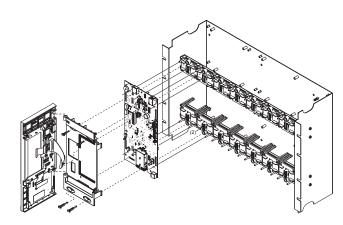


4-LCDLE	Color LCD display for 3-CAB5B, 7B, 14B, 21B, 4-8ANN,	
	16ANN and 24ANN mounting	Data Sheet E85014-0007
4-LCDANN	Color LCD display for Annunciator enclosure 4-4ANN, 4-6ANN mounting	Data Sheet E85014-0007

Retrofit color touch screen LCD display



The 4-3LCD display mounts into EST3 enclosures that do not contain audio control components. This allows reuse of EST3 user interface layers in retrofit applications. The 4-3LCD mounts onto the top of the 4-CPU in EST3 retrofit applications, providing all the benefits of the 4-LCD, while matching closely the EST3 look. The 4-3LCD can be mounted in remote closet cabinets where an LCD display is needed. The display mounts on the 4-CPU module.



4-3LCD Color LCD display Data Sheet E85014-0007

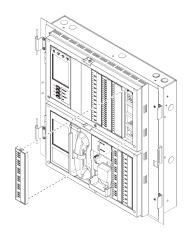
8



Control Display Modules

EST4 Control-Display Modules provide first responders and emergency users with easy-to-operate controls and at-a-glance indication when time is of the essence and event information is critical. Control-Display Modules come with 24 LED indicators and are available with 0, 12, 18, or 24 control buttons. LED indicators are actually comprised of five individual LEDs, each of a different color (red, green, blue, yellow and white).

Programmers configure indicators to display their preselected color according to the type of information conveyed by the indicator. This offers a level of design efficiency that can reduce the number of display strips necessary for an application. In addition to color selection, the flash rate of the LED may be programmed to provide even more information. Examples include: damper and fan status, or audio zone notification status, alert, evaluation or paging.



Printable slide-in label inserts give control-display modules context with color-coded shading and other effects. They can be localized for regional language requirements, and printed on-the-fly to accommodate system changes as they are implemented.

4-24L	24 Indicator Display Module	Data Sheet E85014-0006
4-24L12S	24 Indicator 12 Control Display Module	Data Sheet E85014-0006
4-24L18S	24 Indicator 18 Control Display Module	Data Sheet E85014-0006
4-24L24S	24 Indicator 24 Control Display Module	Data Sheet E85014-0006
4-FIL	Blank Filler Plate	Data Sheet E85014-0006



Printer/CDR-3 External Connection

The 4-USBHUB is used to connect printers, and coders to the EST4 network. It may be installed in any network control panels or annunciator enclosures.

4-USBHUB	USB Hub module	Data Sheet E85014-0016
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Graphic Annunciation



Graphic annunciators and smoke control panels are custom designed to present complex status and control information in an easy to understand package. The design of the annunciator permits users to rapidly determine system status and easily operate associated system controls.

3-EVDVRA driver module assemblies connect the EST4 control panel to the display panel of an LED based graphic annunciator. Each driver card supports up to 24 LEDs and 12 switches on the graphic panel display. Attached to a plastic mounting rail, the driver boards fit easily into custom Graphic annunciators. The annunciator driver communicates with the EST4 control panel on any network supported media, twisted pair, CAT5, fiber optic cable. This can be configured for Class A Class B or Class X communication.

National and local installation and approvals should always be adhered to when selecting a graphic panel supplier.

	4-CPUGRPH	Graphic Annunciator Central Processor Module	Data Sheet E85014-0003
	3-EVDVRA	LED/SWITCH Driver Module Assembly for Third-party Graphics	Data Sheet E85014-0003
	3-EVPWRA	Power Supply Assembly c/w 19 inch rail mounting chassis assembly	
		space for one 4-CPUGRPH for Third-party Graphics.	Data Sheet E85014-0003
	3-EVDVRX	Plastic mounting extrusion 19" mounting - for up to 3 3-EVDVRAs	Data Sheet E85014-0003





Color touchscreen annunciator

Four position base annunciator

See Page 8 for Control Display modules.
See Page 12 for Audio Accessories, Paging Microphones, Firefighter Telephones
See Page 3 for Network Controllers
See Page 8 for Color touchscreen displays

Data Sheet 85014-0003 Data Sheet 85014-0003

Remote Annunciators

4-2ANN

4-4ANN

Use EST4 remote annunciators wherever a system status display or control point 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 4-LCD and Control Display Modules. Control/ Display modules install onto the annunciator inner door, maximizing annunciator design flexibility. Annunciators use the same SFP network controllers as other EST4 cabinets which give the same flexibility of supporting twisted pair, CAT5 or better and fiber optic cable options, simply pick the SFP to match the cable installed.

Annunciators communicate on the EST4 IPv6 network and can support microphone and telephone operations.

4-6ANN	Six position base annunciator	Data Sheet 85014-0003	
4-8ANN	Eight position base annunciator	Data Sheet 85014-0003	
4-16ANN	Sixteen position base annunciator	Data Sheet 85014-0003	
4-24ANN	Twenty-four position base annunciator	Data Sheet 85014-0003	
Remote Annunci	ator Cabinete		
4-2ANNMT	4-2ANN, two wide annunciator mounting enclosure, supports surface		
1 27 4 41 41 41	or semi-flush mounting	Data Sheet 85014-0003	
4-4ANNMT	4-4ANN, two wide annunciator mounting enclosure, supports surface		
	or semi-flush mounting	Data Sheet 85014-0003	
4-6ANNMT	4-6ANN, two wide annunciator mounting enclosure, supports surface		
	or semi-flush mounting	Data Sheet 85014-0003	
4-8ANNMT	4-8ANN, two wide annunciator mounting enclosure,		
	supports surface mounting	Data Sheet 85014-0003	
3-CAB5B	4-8ANN, two wide annunciator mounting enclosure,		
	supports semi-flush mounting	Data Sheet 85014-0003	
4-16ANNMT	4-16ANN, two wide annunciator mounting enclosure,	5 . 6	
	supports surface mounting	Data Sheet 85014-0003	
3-CAB7B	4-16ANN, two wide annunciator mounting enclosure,	D + 01 + 05044 0000	_
	supports semi-flush mounting	Data Sheet 85014-0003	
4-24ANNMT	4-24ANN, two wide annunciator mounting enclosure,	D-t- Cht 05014 0000	_
0.048448	supports surface mounting	Data Sheet 85014-0003	
3-CAB14B	4-24ANN, two wide annunciator mounting enclosure, supports semi-flush mounting	Data Sheet 85014-0003	
	supports semi-masminounting	Data Street 65014-0005	

Network Audio

Configuring EST4 audio is a matter of selecting components for installation in standard fire alarm cabinet assemblies. EST4 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 panels and annunciators make up the system, a single pair of wires or single fiber cable carries all system data between panels. EST4's voice audio function is built modularly. System designers can specify an ideal voice audio system by selecting only equipment needed to get the job done. EST4 microphones and telephone handsets, along with their controllers, are used to create Notification Control Areas (NCAs) that can contain one or more Command Centers. Where multiple command centers are deployed, EST4 easily configures for request-grant-deny operation, ensuring that one command center is in control at one time, but allowing for changes in control if required.

EST4 allows both mass notification and emergency communications to be addressed, delivering live paging and pre-recorded messaging where it's needed. EST4 supports configurations with Central Control Stations (CCSs), Autonomous Control Units (ACUs), and Local Operations Consoles (LOCs). Together, these options provide the opportunity to find an efficient yet economical Emergency Communications audio solution.



4-MIC—Paging Microphone

The 4-MIC paging microphone mounts to the inner door of cabinets and annunciators, taking only two spaces. It provides a hand-held microphone with push-to-talk switch and a multi-color amber-green-red volume meter on the assembly. The 4-MIC is used in conjunction with the 4-AUDTELS or 4-ANNAUDTEL interface modules. Use an LED-Switch Module or 4-LCDAUDTEL color touchscreen interface where zoning or specific messaging operations are needed.



4-FT—Firefighter Master Handset

The 4-FT firefighter master handset mounts to the inner door of cabinets and annunciators, taking only two spaces. The 4-FT is used in conjunction with the 4-AUDTELS or 4-ANNAUDTEL interface modules. Telephone call-in selection may be annunciated at the control center via standard EST4 LED-Switch modules or the 4-LCDAUDTEL color touch-screen.



4-LCDAUDTEL LCD Display Module

The optional 4-LCDAUDTEL LCD module provides a dedicated color touch-screen user interface for selecting page circuits and for placing and receiving calls over the Firefighters' Telephone Handset.





4-AUDTELS Audio-Telephone module

The 4-AUDTELS mounts to the 4-CPU module and enables and processes information from connected microphone or telephone units mounted directly to the right of the CPU. The 4-AUDTELS provides audio input-output, and is the source for a telephone riser that supports remote handsets. Up to four line-level balanced audio input/output connections are available each rated for 1 Vrms nominal signal level.

Field wiring is to removable field wiring terminal blocks



4-ANNAUDTEL Annunciator, Audio Telephone module

The 4-ANNAUDTEL mounts to the top of the 4-ANNCPU. The 4-ANNAUDTEL enables and processes information from connected microphone or telephone units. The module mounts in remote annunciators as well as in lobby cabinets.

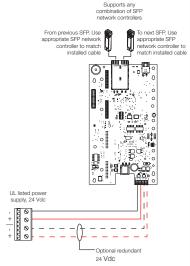


4-ANNCPU

The 4-ANNCPU Annunciator Central Processor Module is used in Fire Alarm Control Unit (FACU) and remote annunciator enclosures. The 4-ANNCPU is the control element for the LCD and control display modules connected to it. The 4-ANNCPU processes all control information from switches on the displays, as well as processing the data received from the network for display. For systems using audio, the 4-ANNCPU to control audio functions for a firefighter telephone and a paging microphone.

The 4-ANNCPU provides: One USB host port

One USB device port
Connections for two SFP (small form-factor pluggable) network adapters

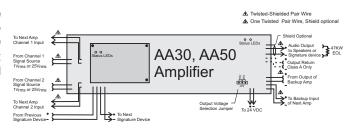


4-MIC	Paging Microphone	Data Sheet 85014-0002	
4-FT	Firefighter Master Handset	Data Sheet 85014-0002	
4-LCDAUTELANN	Audio LCD Module for Audio/Telephone Control		
	Annunciator mounting	Data Sheet 85014-0002	
4-LCDAUDTELCAB-CB	Audio LCD Module for Audio/Telephone Control includes		
	4-BRKT-CB - 3-CAB7B, 3-CAB14B and 3-CAB21B mounting	Data Sheet 85014-0002	
4-LCDAUDTELCAB-MPLT	Audio LCD Module for Audio/Telephone Control includes		
	4-MPLT - 3-CAB7B, 3-CAB14B. 3-CAB21B, 4-16ANNMT		
	and 4-24ANNMT mounting	Data Sheet 85014-0002	
4-ANNCPU	Annunciator Central Processor Unit (CPU), provides mounting for		
	up to two network controllers device port, one USB host port and		
	one 4-ANNAUDTEL module.	Data Sheet 85014-0003	
4-AUDTELS	Audio and Telephone Interface/Riser Module	Data Sheet 85014-0002	
4-ANNAUDTEL	Annunciator, Audio and Telephone Interface Module	Data Sheet 85014-0002	



Intelligent 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 25VRMS or 70VRMS in Class B or Class A wiring configurations.



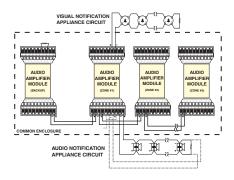
SIGA-AA30	30 Watt Intelligent Audio Amplifier	Data Sheet E85010-0089
SIGA-AA50	50 Watt Intelligent Audio Amplifier	Data Sheet E85010-0089



Audio Amplifiers (Zoned)

EST4 audio amplifiers take full advantage of proven digital technology to deliver highly intelligible voice audio for evacuation and Mass Notification purposes. Pre-Recorded digital messages and live paging messages are multiplexed into separate channels. Each zoned amplifier contains integrated de-multiplexing circuitry that allows eight digital audio channels, designated from the 100 system-supported channels, to be placed on the amplifier's built-in speaker circuit.

Amplifiers are available in 20, 40 or 95 watt versions, with supervised, power limited 25 Vrms or 70Vrms 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 local or network audio.



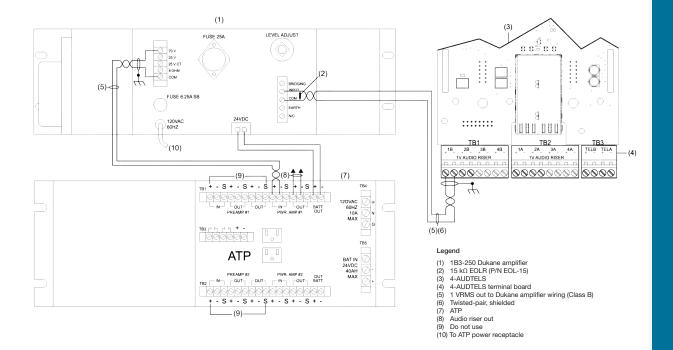
	3-ZA20A	20 Watt Zoned Amplifier w/Class A/B Audio & Class A/B 24 VDC outputs	Data Sheet E85010-0017
	3-ZA40A	40 Watt Zoned Amplifier w/Class A/B Audio & Class A/B 24 VDC outputs	Data Sheet E85010-0017
	3-ZA95	95 Watt Zoned Amplifier w/Class A/B Audio output	Data Sheet E85010-0017

Audio Amplifiers (Banked)



Banked Amplifiers provide EST4 with economy audio configurations for single and some dual channel applications. Model 4-AUDTELS Audio and Telephone source module at the EST4 control panel provide channel sources for banked amplifiers. One of the 1Vrms outputs of the 4-AUDTELS provides a signal to the 1B3-125 and 1B3-250 Audio Power Amplifiers. The ATP Audio Terminal Panel interfaces one or two audio power

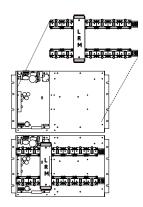
amplifiers and monitors utility power, charges and supervises standby batteries, and provides switch-over to standby. The amplifier bank is monitored and controlled through Signature Series modules.



4-AUDTELS	Audio and Telephone Interface/Riser Module	Data Sheet 85014-0002
1B3-125	Audio Power Amplifier — 125 Watts	Data Sheet E85010-0011
1B3-250	Audio Power Amplifier — 250 Watts	Data Sheet E85010-0013
ATP	Amplifier Terminal Panel	Data Sheet E85300-02741

Power Supplies

EST4 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



Power Supply

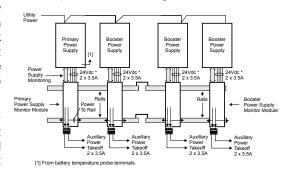
EST4 Power supplies consist of two assemblies, a high efficiency switch mode power supply card and a power supply monitor module. Up to four power supplies may be combined in a single enclosure to provide up to 28 amps of available current. Battery backup is provided using from one to four sets of batteries, 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.

EST4 power supplies individually monitor batteries for load deficiencies, short circuits, and insufficient voltage levels and report trouble back to the 4-CPU. The 4-LCD displays any troubles and the power supply's address, a specific trouble code, and a text message describing the specific trouble.

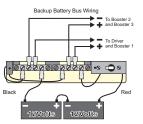


4-PPS/M	Primary Power Supply w/ local rail module 120-240V 50/60 Hz	Data Sheet E85010-0060
3-BTSEN	Distribution Module required when battery installed in remote cabinet	Data Sheet E85010-0060
4-FIL	Blank EST4 filler plate (order separately when no LED or	
	LED/ Switch module is installed on the inner door)	Data Sheet E85010-0060
3-FP	Filler Plate, order separately when no LED or LED/Switch module installed	Data Sheet E85010-0060



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 EST4 "RCC" series enclosure.



3-BTSEN Battery Distribution Unit

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 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. It also provides the ability to synchronize Genesis series strobes to UL 1971 requirements, and offers independent horn control over two wires.

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

	BPS6A	6.5 Amp Booster Power Supply	Data Sheet E85005-0125
	BPS6A/230	6.5 Amp Booster Power Supply (220V)	Data Sheet E85005-0125
	BPS10A	10 Amp Booster Power Supply	Data Sheet E85005-0125
	BPS10A/230	10 Amp Booster Power Supply (220V)	Data Sheet E85005-0125
	3-TAMP	Tamper switch	Data Sheet E85005-0125
	BPSEQ	Seismic battery hold-down. Supports up to two 6.5 or 10 Ah batteries	Data Sheet E85005-0125



Auxiliary Power Supplies

The Auxiliary Power Supply offers the same advantages as the BPS above, but is supplied with its own extra large enclosure providing space for up to two 24 Ah batteries and additional option modules in a number of mounting configurations. Option modules can be installed on the mounting brackets inside the enclosure or on an MP2L mounting plate at the top of the enclosure. The SIGA-REL, and SIGA-UIO2/6/6R can also be mounted at the top of the enclosure.

			_
APS6A	6.5 Amp Auxiliary Power Supply	Data Sheet E85005-0127	
APS6A/230	6.5 Amp Auxiliary Power Supply (220V)	Data Sheet E85005-0127	
APS10A	10 Amp Auxiliary Power Supply	Data Sheet E85005-0127	
APS10A/230	10 Amp Auxiliary Power Supply (220V)	Data Sheet E85005-0127	
APSEQ	Seismic battery hold-down. Supports up to two 10 - 24 Ah batteries.	Data Sheet E85005-0127	
			7



Network Accessories

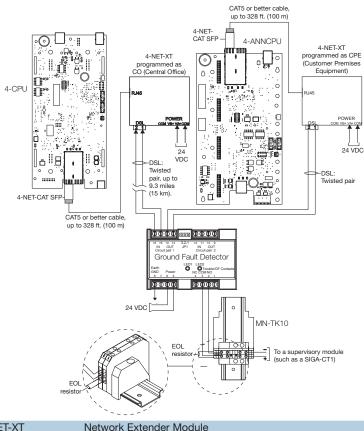


Network Extender

The 4-NET-XT network extender provides long distance network data among EST4 nodes or to third-party systems. It typically uses existing unshielded telephone single-pair wires or CAT5 or better cables. The expander allows connections of up to nine miles (14.5 km).

The 4-NET-XT has on-board status LEDs that provide quick visual indication of Power, DSL status, Ethernet status, and link trouble indication. Terminals are provided for 24Vdc from the panel, which provides full battery standby capability from the EST4 system.

The 4-NET-XT is DIN rail mounted. Up to two extenders can mount on a 4-MPLT mounting plate.



The 4-NET-XT extenders are compatible with EST4 systems using digitized audio, and can support voice paging between panels.

4-NET-XT	Network Extender Module	Data Sheet E85014-0009
4-MPLT	Mounting Plate, mounts in Chassis or Battery Space	Data Sheet E85014-0009
GFD	Ground Fault Detection Module	Data Sheet E85010-0115





Communications Bridge

The FSB-PC4 and FSB-PC4LW communication bridges are devices that provide protocol translation between EST4 control panel data and the serial RS-485 or Ethernet input of an external device controller. Communication bridges may be configured for one-way ancillary purposes (monitor-only) or, where approved for the purpose, two-way between EST4 and other critical building systems such as building management systems (BMS).

FSB-PC4(LW)

Communications Bridge Data Sheet



Firewall

The 4-FWAL series mitigate vulnerabilities by providing a barrier between the EST4 life safety platform and the external connections necessary in today's networked building

Each 4-FWAL firewall also has two small form-factor pluggable (SFP) slots that support its network adapters. These are used to connect to external networks, and provide physical layer options for connections between outside equipment and EST4. 4-FWAL firewalls support both IPv4 and IPv6 networks, thus removing concern over network addressing compatibility.

EST4 firewalls are mounted inside the control panel. All firewalls provide engineered cyberse-curity measures, including hashing of passwords, authentication, and encryption. EDWARDS recommends the installation of robust commercial firewall between the facilities intranet and the Internet. To further enhance network security, an optional tamper switch may be installed on EST4 cabinet doors. This alerts the system when equipment enclosures accessed.

4-FWAL1	Firewall - Provides secure connection to external systems	
	Supports up to eight concurrent IP connections.	Data Sheet E85014-0012
4-FWAL2	Firewall W/DACT	Data Sheet E85014-0012
4-FWAL3	Firewall W/EMAIL	Data Sheet E85014-0012
4-FWAL4	Firewall W/DACT/ EMAIL/DIAG	Data Sheet E85014-0012
4-FWAL-MM	SFP Network Firewall Adapter, Multimode, Dual-Fiber, 100Base-FX	
	1310nm	Data Sheet E85014-0012
4-FWAL-SM	SFP Network Firewall Adapter, Single-Mode, Dual-Fiber,	
	100Base-LX10 1310nm	Data Sheet E85014-0012
4-FWAL-SMD	SFP Network Firewall Adapter, Single-Mode, Single-Fiber, Downlink,	
	100Base-BX10-D 1550nm/1310nm Tx/Rx, works with 4-FWAL-SMU	Data Sheet E85014-0012
4-FWAL-SMU	SFP Network Firewall Adapter, Single-Mode, Single-Fiber, Uplink,	
	100Base-BX10-U 1310nm/1550nm Tx/Rx works with 4-FWAL-SMD	Data Sheet E85014-0012
4-FWAL-SMH	SFP Network Firewall Adapter, Single-Mode, Dual-Fiber,	
	100Base-High Output 1310nm,	Data Sheet E85014-0012
4-FWAL-CAT	SFP Network Firewall Adapter, CAT5 UTP Copper, 100Base- TX, 100Mbps	Data Sheet E85014-0012
4-MPLT	Mounting Plate, mounts in a chassis or battery space	Data Sheet E85014-0012
4-BRKT-CB	Mounting bracket for 4-FWAL series, allows mounting	
	to the back of a 3-CHAS7.	Data Sheet E85014-0012
4-BRKT-CS	Mounting bracket for 4-FWAL series, allows mounting	
	to the right side of a 3-CHAS7.	Data Sheet E85014-0012

Note: Reference page 25 for tamper switches.



Network Adder Module

EST4's 4-NET-AD Network Adder Module resides on EST4's self-configuring IPv6 network. It provides two supplementary Small Form Factor Pluggable (SFP) network ports and two USB connectors. The SFP ports allow wiring to branch out of an EST4 cabinet to create star or mesh network configurations. The USB ports connect the adder module to the node's 4-CPU board, establishing a communications link between the SFP ports and the life safety network. The USB interconnect may also act as an interface for local printers.

Adding SFP and USB capacity to the EST4 network provides the system designer with significant flexibility when it comes to engineering a network that matches the needs of the project. The 4-NET-AD may be mounted in a number of locations including the back or side of a 3-CHAS7 chassis, on the 4-MPLT mounting plate, or within an annunciator enclosure.

4-NET-AD Network Adder Module Data Sheet E85014-0015

FireWorks

FireWorks is an incident management command and control platform that comprises hardware, software, and networking components that together provide a powerful and cohesive Mass Notification and Life Safety solution. Sophisticated networking technology allows it to integrate seamlessly with EDWARDS life safety solutions, yet FireWorks remains fully interoperable with third-party equipment, making it ideal for system upgrades or new installations alike.

FireWorks can automatically trigger programmed responses to facility events, or it can act as an operator interface for manual control. The FireWorks user interface provides a clear, concise, and coordinated view of any situation by presenting information strategically.

Five configurable graphical viewports offer simultaneous insight into different aspects of an incident, while the underlying software dynamically manages content in each viewport based on real-time events and user interaction. Facility maps, live video feeds, audio channels, protocol information, and fingertip control over vital equipment all come together instantly within view of an operator facing events that require solid information and split second timing.



Servers and Workstations

	FW-UL6SW10	Server/ Workstation, Xeon processor, 128 GB RAM, RAID1 1TB SSD, dual power supplies.
	FW-UL6WW10	Workstation. i7 Intel processor, 32 GB RAM, RAID1 1TB SSD. Single power supply.
	Software	
	FW-CGS	Standalone package. Allows full 5 viewport display. Includes FW-FIREKEYUSB. No common control.
	FW-CGSUL	Standalone package. Allows full 5 viewport display. Includes FW-FIREKEYUSB. With common control.
	Non-Redundant S	Servers: □FW-NSZ5FP, 5 seat. □FW-NS15FP, 15 seat.
	Redundant Serve	rs: □FW-RSZ5FP, 5 seat. □FW-RS15FP, 15 seat. □FW-RS25FP, 25 seat. □FW-RS50FP, 50 seat.
	Software options	
	WebClients:	□FW-1S, One seat. □FW-4S, Four seats (Requires FW-1S). □FW-10S, (Requires FW-1S & FW-4S).
	FW-FAST	FAST AutoCAD® reader and panel building software for FireWorks Server or Standalone system.
	FW-HSSD5	VESDA HLI Interface for up to 5 nodes. Each server must have its own FW-HSSX1.
	FW-HSSD20	VESDA HLI Interface for up to 20 nodes. Each server must have its own FW-HSSX1.
	Monitors	
	FW-22LCDWTS	22-inch 16:9 LCD 115 Vac 1680x1050 resolution capacitive touch screen with integral speakers.
	FW-42LCDWTS	42-inch 16:9 LCD 115 Vac 1920x1080 resolution surface acoustic wave touch screen.

See Data Sheet E85006-0068 for complete FireWorks ordering information.

Cabinets & Chassis

EST4 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.



Lobby Enclosures

EST4 lobby enclosures provide space for control, monitoring and display modules. Ideal for mounting in lobbies where appearance is important, their modern design maximizes mounting flexibility providing 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 metallic bronze: (Pantone Coated PMS# 171-61C, Pantone RGB# 81 75 67, and RAL Classic/RAL Design# 7022) or red baked enamel finishes.

3-CAB5B	Backbox, black. Supports five Local Rail Modules.	Data Sheet E85014-0004
4-CAB8D	Door Assembly - Metallic bronze outer door and black inner door with 8 u	user
	interface spaces, mounts to 3-CAB5B backbox	Data Sheet E85014-0004
4-CAB8DR	Door Assembly - Red outer door and black inner door with 8 user	
	interface spaces, mounts to 3-CAB5B backbox	Data Sheet E85014-0004
3-CAB7B	Backbox, black. One chassis space	Data Sheet E85014-0004
4-CAB16D	Door Assembly - Metallic bronze, comes with 16 User Interface spaces,	
	mounts to 3-CAB7B backbox	Data Sheet E85014-0004
4-CAB16DR	Door Assembly – Red, comes with 16 User Interface spaces,	
	mounts to 3-CAB7B backbox	Data Sheet E85014-0004
3-CAB14B	Backbox, blackTwo chassis spaces	Data Sheet E85014-0004
4-CAB24D	Door Assembly – Metallic bronze outer door and black inner door with 24	user
	interface spaces, mounts to 3-CAB14B backbox.	Data Sheet E85014-0004
4-CAB24DR	Door Assembly – Red outer door and black inner door with 24 user	
	interface spaces, mounts to 3-CAB14B backbox	Data Sheet E85014-0004
3-CAB21B	Backbox, black. Three chassis spaces	Data Sheet E85014-0004
4-CAB24DL	Door Assembly – Metallic bronze outer door and black inner door with 24	user
	interface spaces, mounts to 3-CAB21B backbox	Data Sheet E85014-0004
4-CAB24DRL	Door Assembly – Red outer door and black inner door with 24 user	
	interface spaces, mounts to 3-CAB21B backbox.	Data Sheet E85014-0004

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 door and Black backbox. One chassis space	Data Sheet E85014-0004	
3-RCC14R	Red door and Black backbox. Two chassis spaces	Data Sheet E85014-0004	Г
3-RCC21R	Red door and Black backbox. Three chassis spaces	Data Sheet E85014-0004	

Chassis Assembly

0.011407	Describes and the formation of the selection of the selection	Data Ob and E0504.4 000.4
3-CHAS7	Provides space for seven local rail modules	Data Sheet E85014-0004



Cabinet Accessories

3-TAMP5	Tamper switch (3-CAB5B)	Data sheet E85014-0004
4-TAMP	Use with 3-CAB7B backbox 3-CAB14B backbox 3-CAB21B backbox	Data sheet E85014-0004
3-TAMPRCC	Tamper switch (3-RCC7R 3-RCC14R 3-RCC21R)	Data sheet E85014-0004
4-MPLT	Mounting Plate	Data sheet E85014-0004
4-BRKT-CB	Mounting	Data sheet E85014-0004
4-BRKT-CS	Mounting Bracket	Data sheet E85014-0004



Batteries

EST4 uses rechargeable sealed lead-acid batteries as its secondary (standby) power source as defined by NFPA 72. Battery size is determined by the load that the system installation demands and the standby time that is required.

12V10A	12 Amp hour Battery	Data Sheet E85010-0127
12V17A	18 Amp hour Battery	Data Sheet E85010-0127
12V24A	26 Amp hour Battery	Data Sheet E85010-0127
12V40A	40 Amp hour Battery	Data Sheet E85010-0127
12V50A	50 Amp hour Battery	Data Sheet E85010-0127
12V65A	65 Amp hour Battery	Data Sheet E85010-0127



Battery Cabinets

Battery cabinets provide mounting of standby batteries outside the fire panel where the battery size needed for the application is outside what the fire panel can support. Battery cabinets of steel construction.

The BC-1 series of cabinets support battery sizes from 24 Amp hours to 40 Amp hours. BC-1 series come with black backbox and are available with red or metallic bronze: (Pantone Coated PMS# 171-61C, Pantone RGB# 81 75 67, and RAL Classic/RAL Design# 7022) outer doors to match the color of the fire panel door.

The 3-RCC series cabinets support multiple sets of batteries up to 65Amp hours and come with black backbox and red outer door. (see page 20 for list of 3-RCC series cabinets)

	BC-1	Battery cabinet - Metallic bronze door	Data Sheet E85014-0004
	BC-1R	Battery cabinet – Red door	Data Sheet E85014-0004
	3-BATS	Battery Shelf for 3-RCC series cabinet mounting	Data Sheet E85010-0067

CO, Smoke and Heat Detectors p. 24

Fire Detectors p. 25

Duct Detectors p. 25

Detector Bases p. 26

Detector Accessories p. 27

Input/Output Modules p. 28

Pull Stations p. 34

Signature Series

Intelligent Analog Initiating Devices

EST4's Signature Series intelligent analogaddressable system is an entire family of life safety detectors as well as mounting bases, multiple-function input and output modules, and user-friendly maintenance and service tools.

Signature Series detectors continually monitor the protected space with their on-board sensors, which are finely tuned to detect the characteristic properties of combustion. Detection data is gathered and run through sophisticated algorithms that track the sensor readings over time to known signatures of fires. Only when a match is found will an alarm condition occur. This means that a Signature Series detector can distinguish between a harmless puff of dust and a wisp of smoke; between hot, humid weather and a serious life safety condition.

On-board processing and distributed intelligence also results in advanced features that save time and money...

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.

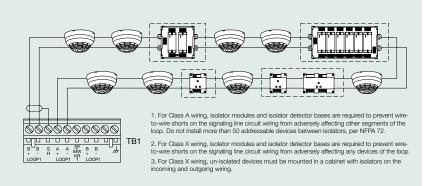
Automatic Device Mapping - The Signature Loop Controller learns where each device's serial number address is installed relative to other devices on the circuit. This mapping function is invaluable for tracking down unexpected or missing device addresses, or finding changes to wiring. The System Definition Utility program also uses this mapping feature to produce system layout or As-Built drawings showing such details as branch wiring (T-taps), device types and their addresses.

Fast Stable Communication - Built-in intelligence means less information needs to be sent between the device and the Signature Loop Controller, making the circuit less sensitive to noise and wire characteristics. This renders shielded wiring unnecessary. In fact, existing wiring can be used by Signature Series devices in most retrofit situations.

Testing & Maintenance – Each detector automatically identifies when it is dirty or defective and causes a "dirty detector" message. The detector's sensitivity measurement can also be transmitted to the loop controller. A sensitivity report may be printed to satisfy NFPA sensitivity measurements. The user-friendly maintenance program shows the current state of each detector and other pertinent messages. When the CO sensor's electrochemical cell reaches its end of life, the detector signals a trouble condition to the control panel.

Signature Driver Controllers

3-SSDC2 and 3-SDDC2 Signature Driver Controller modules provide an intelligent interface between the 4-CPU module and Signature Series devices. The 3-SSDC2 Single Signature Driver Controller module supports one Signature Data circuit, while the 3-SDDC2 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. Class B, Class A and Class X wiring are supported. Loop distances over 11,000 feet (3300m) are possible.









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

Intelligent Carbon Monoxide (CO) Detector

The SIGA-COD detects carbon monoxide from any source of combustion and analyzes the sensor data to determine when to initiate a CO-related life safety event.

SIGA-COD Intelligent Carbon Monoxide Detector Data Sheet E85001-0648

Intelligent Multi-criteria Optical Smoke Detector with CO Sensor

Includes an a multi-criteria optical smoke sensor and a carbon monoxide sensor. The detector analyzes the smoke sensor independently from the CO sensor, and can report a smoke/fire alarm separate from a CO-related life safety alarm.

SIGA-OSCD Intelligent Multi-criteria Smoke and CO Detector Data Sheet E85001-1002

Intelligent Multi-criteria Optical Smoke Detector with Heat and CO Sensors

Includes a multi-criteria optical smoke sensor, a fixed-temperature heat sensor, and a carbon monoxide sensor. The detector analyzes the smoke and heat sensors independently from the CO sensor, and can report a smoke/fire alarm separate from a CO-related life safety alarm.

SIGA-OSHCD	Intelligent Multi-criteria Smoke, Heat, and CO Detector	Data Sheet E85001-1004
SIGA-OSHCDB	Intelligent Multi-criteria smoke, heat and CO detector (Black)	Data Sheet E85001-1004

Fire Detectors

Intelligent Multi-criteria Optical Smoke Detector

The workhorse of modern fire alarm systems, this devices includes a multi-criteria optical smoke sensor to detect smoke.

SIGA-OSD	Intelligent Optical Smoke Detector	Data Sheet E85001-1001

Intelligent Rate-of-rise and Fixed Temperature Heat Detector

Includes a rate-of-rise and a fixed-temperature sensor to detect heat from fire.

SIGA-HRD	Intelligent fixed temperature/Rate-of-rise heat detector	Data Sheet E85001-0647
SIGA-HFD	Intelligent fixed temperature heat detector	Data Sheet E85001-0647
SIGA-HCD	Intelligent ROR/fixed heat and CO detector	Data Sheet E85001-0647

Intelligent Multi-criteria Optical Smoke and Heat Detector

Contains a fixed-temperature heat sensor to detect heat from fire and a multi-criteria optical smoke sensor to detect smoke. Unlike simple multi-criteria detectors, the SIGA-OSHD can report the heat and photo elements as separate event types — or together. This permits the photo element of the detector to report, for example, a supervisory event during the day, and an alarm event at night - while the heat element always reports an alarm.

SIGA-OSHD	Intelligent Multi-criteria Smoke and Heat Detector	Data Sheet E85001-1003
SIGA-OSHDB	Intelligent Multi-criteria Smoke and Heat Detector	Data Sheet F85001-1003

Duct Smoke Detectors Alarm relay output Duct smoke

Alarm relay outpu

FACP

Duct smoke

Supply

HVAC

SuperDuct 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.

SIGA-SD	Intelligent SuperDuct Detector		D	ata Sheet E85001-0584
SD-PH	Protective housing for high hu	midity environments	D	ata Sheet E85001-0584
Sampling Tubes	□SD-T8 (8") □SD-T42 (42")	□SD-T18 (18") □SD-T60 (60")	□SD-T24 (24") □SD-T78 (78")	□SD-T36 (36") □SD-T120 (120")
Remote Test Stations	□SD-TRM (magnetic)	□SD-TRM (keyed)	□SIGA-LED (Remo	te alarm LED)
Accessories	□SD-GSK (cover gasket kit)	□SD-MAG (Test mag	net kit)	
	□SD-VTK (Air velocity test kit, stoppers only)		□SIGA-SDPCB (PC	CB/Signature sensor kit)





Detector Bases

Audible (Sounder) Bases



Signature Series Sounder Bases add audible output functions to Signature Series smoke and CO detectors. Bases can operate as independent local alarms,

Sounder Base UL Sounder Base U

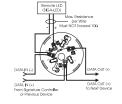
or as part of a zone or system alarm with synchronized audible output. The SIGA-AB4G-LF is UL listed for sleeping areas and other applications requiring 520 Hz low frequency audible tones.

SIGA-AB4G-LF	Low Frequency Audible (Sounder) Base for CO and Fire Detectors	Data Sheet E85001-0640
SIGA-AB4GT	Audible (Sounder) Base for CO and Fire Detectors	Data Sheet E85001-0640
SIGA-TCDR	Temporal Pattern Generator for SIGA-AB4GT, SIGA-AB4G-LF	Data Sheet E85001-0640
SIGA-AB4G	Audible (Sounder) Base	Data Sheet E85001-0640
AB4G-SB	Surface Box for Audible Bases	Data Sheet E85001-0640

Standard Detector Bases



Standard detector bases provide roomside wiring terminals. They mount 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.

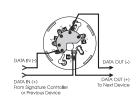


□SIGA-SB □SIGA-SB4 (with trim skirt) Standard Detector Base Data Sheet E85001-0245

Isolator Detector Base



Isolator detector bases provide 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.

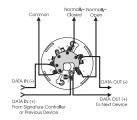


□SIGA-IB □SIGA-IB4 (with trim skirt) Isolator Detector Base Data Sheet E85001-0245

Relay Detector Base

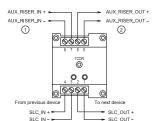


This base includes a relay. Normally-open or closed operation is selected during installation. The dry contact is rated for 1 amp (pilot duty) @ 30 Vdc. The relay's position is supervised to avoid accidentally jarring it out of position. The relay base does not support the SIGA-LED remote LED. It mounts to North American one-gang boxes, $3\frac{1}{2}$ 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.



□SIGA-RB □SIGA-RB4 (with trim skirt) Relay Detector Base Data Sheet E85001-0245

Detector Accessories





SIGA-TCDR Temporal Pattern Generator

The SIGA-TCDR Temporal Pattern Generator is an addressable device that generates sound patterns for carbon monoxide (CO) and fire signals for the AB4GT and AB4G-LF sounder base. The control panel sends synchronization and channel commands to the SIGA-TCDR; the channel selection determines the pattern.

SIGA-TCDR

Temporal Pattern Generator for AB4GT Sounder Base

Data Sheet E85001-0623



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).

SIGA-DMP

Detector Mounting Plate

Data Sheet E85001-0255



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.

SIGA-LED

Remote Alarm LED

Data Sheet E85001-0245



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.

SIGA-TS	Detector Trim Skirt (white)	Data Sheet E85001-0245
SIGA-TSB	Detector Trim Skirt (black)	Data Sheet E85001-0245
SIGA-TS4	Detector Trim Skirt (white) – for 4-inch box	Data Sheet E85001-0245



Detector Guard

Constructed of sturdy 16-guage steel, the SIGA-GRD Smoke Detector Guard is designed for preventing smoke detectors from damage or tampering. The advanced louver system allows smoke detectors to be installed at their listed spacing and has no effect on operating sensitivity.

SIGA-GRD	Smoke Detector Guard	Data Sheet E85001-1005
SIGA-DGSB	Detector Guard Surface Mount Accessory	Data Sheet F85001-1005



Duct Housing

The SDH(R) series housings provide the ability to use Signature detectors in duct applications utilizing SD-Txx sampling tubes in lengths of 8" to 10ft.

SIGA-SDH	Duct detector housing with standard base	Data Sheet E85001-0326
SIGA-SDHR	Duct detector housing with relay base	Data Sheet E85001-0326

SUBMIT



SUBMIT V

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 installerselected personality code. This is downloaded to the module from the



Standard two-gang mount

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.

Application	Module
Voice messages	Digital Messaging Module
Waterflow Switches	Waterflow/Tamper Module
Class A indicating and initiating circuits, two-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
Telephone Power and Audible/Visual Signal Power Selector, Strobe Synchronization	Signal Module
Sounder Base power	Reversal Relay Module
Fire Suppression	Releasing Module
Fault detection	Isolator Module

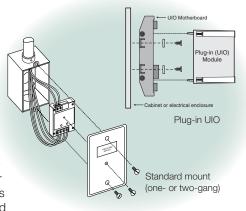
Signature Series intelligent input/output modules feature multiple user-set personality codes that define the module's behavior.

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 instal-lations 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.



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-MAB

SIGA-UM	Universal Class A/B Module (Two-gang standard mount)	Data Sheet E85001-0275
SIGA-MAB	Universal Class A/B UIO (Plug-in) Module	Data Sheet E85001-0275

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/CT2

SIGA-CT1	Single Input Module (One-gang standard mount)	Data Sheet E85001-0241
SIGA-CT1HT	Single Input Module, high temperature rating (One-gang standard	I mount) Data Sheet E85001-02/1
SIGA-CTTTT	Single input Module, high temperature rating (One-gang Standard	Thount) Data Sheet L65001-0241
SIGA-CT2	Dual Input Module (One-gang standard mount)	Data Sheet E85001-0241
	,	
SIGA-MCT2	Dual Input UIO (Plug-in) Module	Data Sheet E85001-0241



SUBMIT V

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 70VRMs 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.



SIGA-CC1	Single Input Signal Module (Two-gang standard mount)	Data Sheet E85001-0237
SIGA-MCC1	Single Input Signal UIO (Plug-in) Module	Data Sheet E85001-0237
SIGA-CC2	Dual Input Signal Module (Two-gang standard mount)	Data Sheet E85001-0237
SIGA-MCC2	Dual Input Signal UIO (Plug-in) Module	Data Sheet E85001-0237
SIGA-CC2A	Dual Input Signal Module with Class A Operation (Two-gang mount)	Data Sheet E85001-0609
SIGA-MCC2A	Dual Input Signal UIO with Class A Operation (Plug-in) Module	Data Sheet E85001-0609

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.



SIGA-CR	Control Relay Module (One-gang standard mount)	Data Sheet E85001-0239
SIGA-MCR	Control Relay UIO (Plug-in) Module	Data Sheet E85001-0239
SIGA-CRH	High Power Control Relay Module	Data Sheet E85001-0644

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.



SIGA-CRR	Polarity Reversal Relay Module (One-gang standard mount)	Data Sheet E85001-0239
SIGA-MCRR	Polarity Reversal Relay UIO (Plug-in) Module	Data Sheet E85001-0239

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.



П	SIGA-RM1	Riser Monitor Module (One-gang standard mount)	Data Sheet E85001-0535
П	SIGA-MRM1	Riser UIO (Plug-in) Module	Data Sheet E85001-0535



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)	Data Sheet E85001-0543
SIGA-MCC1S	Synchronization Output UIO (Plug-in) Module	Data Sheet E85001-0543

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)	Data Sheet E85001-0533
SIGA-MIO	Input/Output UIO (Plug-in) Module	Data Sheet E85001-0533

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) Data Sheet E85001-0297

Isolator Module

The SIGA-IM2 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-IM2 Fault Isolator Module (Two-gang standard mount) Data Sheet E85001-0272

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) Data Sheet E85001-0297





Universal Input/Output (UIO) Motherboards



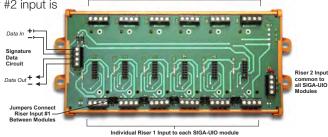
Signature Series Universal Input/Output Module Motherboards provide mounting and wiring terminations for up to six Signature Series plug-in UIO (SIGA-"M" series) modules. UIO motherboards snap into a rigid extruded track (included) with mounting pads for convenient mounting into a variety of equipment 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 provides

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

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.



SIGA-UIO2R	Universal Input/Output Module Board with Riser Inputs — 2 Module Positions	Data Sheet E85001-0365
SIGA-UIO6R	Universal Input/Output Module Board with Riser Inputs — 6 Module Positions	Data Sheet E85001-0365
SIGA-UIO6	Universal Input/Output Module Board — 6 Module Positions	Data Sheet E85001-0365

Related Equipment

to all modules.

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



Releasing Module



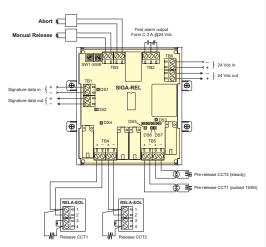
The Signature Series Releasing Module (SIGA-REL) is an analog addressable module that works with fire suppression systems designed to release extinguishing gas. Its primary function is the control of sprinkler pre-action routines and the initiation of suppression system deluge functions. The module is 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	Data Sheet E85001-0531
RELA-ABT	Abort station	Data Sheet E85001-0531
RELA-SRV	Service disconnect station	Data Sheet E85001-0531
276A-REL	Manual releasing station (single-action)	Data Sheet E85001-0531
278A-REL	Manual releasing station (double-action)	Data Sheet E85001-0531
RELA-EOL	Polarized end-of-line relay	Data Sheet E85001-0531



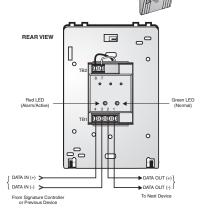


Manual Pull Stations



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.

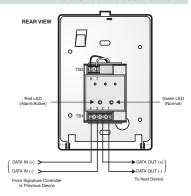


SIGA-270	One Stage Fire Alarm Station, English Markings	Data Sheet E85001-0279
SIGA-270P	Two Stage (Pre-signal) Fire Alarm Station, English Markings	Data Sheet E85001-0279
276-K2	GA Key — for pre-signal station	Data Sheet E85001-0279
270-GLR	20 Break-rods — for SIGA-270 series	Data Sheet E85001-0279
276B-RSB	Surface Mount Box, Red — for SIGA-270 series	Data Sheet E85001-0279



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.



	SIGA-278	Double Action (One Stage) Fire Alarm Station, English Markings	Data Sheet E85001-0279
	276B-RSB	Surface Mount Box, Red — for SIGA-278 series	Data Sheet E85001-0279
Г	276-GLR	20 Break-rods — for SIGA-278 series	Data Sheet E85001-0279

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 Data Sheet E85001-0351



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.

☐ STI-1100 (Flush)	☐ STI-1130 (Surface)	Stopper II with Horn	Data Sheet E85001-0491
☐ STI-1200 (Flush)	☐ STI-1230 (Surface)	Stopper II without Horn	Data Sheet E85001-0491
☐ STI-3100 (2" Spacer)	☐ STI-3004 (Conduit Insert)	Spacers	Data Sheet E85001-0491
☐ STI-3002 (Gasket)	☐ STI-3003 (Conduit Gasket)	Weatherproofing	Data Sheet E85001-0491

EDWARDS 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

Notification Appliances

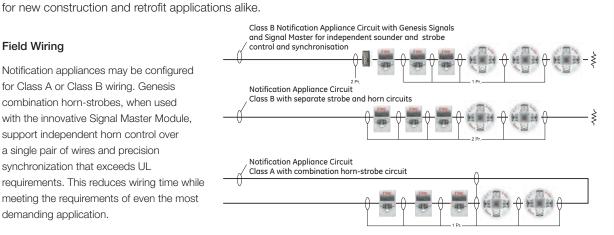
- LED Compact, Horns & Horn-Strobes p. 37
- LED Wall Strobes, Horns, Horn-Strobes p. 38
- LED Ceiling Strobes, Horns, Horn-Strobes p. 39
 - LED Wall Speakers & Speaker-Strobes p. 40
 - LED Ceiling Speakers, Horns & Strobes p. 41
- Low Frequency Horns and Horn-Strobes p. 42
 - Outdoor Horns & Strobes p. 43
 - Outdoor Speakers & Strobes p. 44
 - High Power Speaker Arrays p. 45
 - Medium Power Speaker Arrays p. 46
 - Firefighters' Telephones p. 49
 - Harsh Environment Signals p. 50
 - Audible Signals p. 51
 - Accessories p. 52

Field Wiring

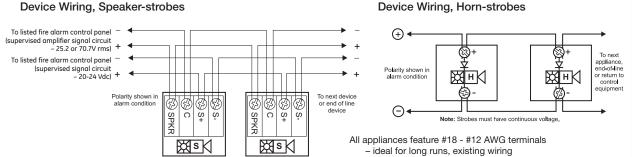
Notification appliances may be configured for Class A or Class B wiring. Genesis combination horn-strobes, when used with the innovative Signal Master Module, support independent horn control over a single pair of wires and precision synchronization that exceeds UL requirements. This reduces wiring time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

Notification

Appliances



Device Wiring, Speaker-strobes



Strobe Synchronization

On a common circuit, strobes flash once per second (1 fps) within 10 milliseconds over a two-hour time period. A synchronization source is required to comply with UL 1971 synchronization standards. Temporal setting (private mode only): synchronized to temporal output on the same circuit. Genesis LED strobes are synchronized, backwards compatible, and can be used in the same field of view as Genesis xenon strobes.

Synchronization Sources

The following power supplies, and modules provide synchronization sources that enable Genesis strobe devices to comply with UL 1971 synchronization standards: SIGA-CC1S, SIGA-MCC1S, SIGA-CC2A, SIGA-MCC2A, G1M-RM, BPS6A, BPS10A, APS6A, APS10A.

Genesis Visual & Audible Signals

A complete line engineered to deliver innovative features and superb output.



LED Compact, Horns, Horn-Strobes, p. 37



LED Wall Strobes, Horns, Horn-Strobes p.38



LED Ceiling Strobes, Horns, Horn-Strobes p. 39



LED Wall Speakers and Speaker-strobes, p. 40



LED Ceiling Speakers, Speaker-strobes, p. 41



Low Frequency Horns and Horn-Strobes, p. 42



Outdoor Horns, Horn-Strobes, p. 43



Outdoor Speakers, Speaker-Strobes, p. 44

The award-winning Genesis line of products represents excellence in fire alarm notification with looks, features, and performance benefits designed with your project in mind. Wall strobes, horns, and chimes about the size of a deck of playing cards offer a discreet alternative to bulky devices, while speakers and ceiling models with clean modern lines blend inconspicuously with their surroundings.

Signaling on-demand

Though designed for discretion, Genesis signals are also engineered to command attention. Wall-penetrating high dB output and patented strobe technology immerse the protected area with levels of light and sound that simply can't be ignored – all in exchange for the lowest current demands of any device in their class.

Genesis brings on-demand signaling to every application with an unparalleled range of field-configurable options: horns and chimes with high/low dB output settings; speakers with multiple wattage tap selections; and strobes with selectable candela output and flash rate – options that put you in the driver's seat when time is short, budgets slim, and manpower at a premium. It also means fewer parts to stock, less inventory to worry about, and the flexibility to meet changing demands – on the fly – without having to reinstall equipment or order more parts!

Application flexibility

Whether you're designing for a new landmark structure, or simply retrofitting a local strip mall, competitively-priced Genesis signals bring value, good looks, and installation flexibility to every application. Contact Edwards today to learn how your signal solutions can be the model of discretion.

Genesis LED Series Compact Wall Models

LED Strobes, Horns & Horn-Strobes

Genesis LED G1 Series horns and LED strobes feature a sleek, low-profile design and energy-efficient technology that makes them less expensive to install and operate by reducing overhead. High-performance LEDs and patented electronics allow for more devices per loop and fewer booster power supplies.



Genesis strobes offer 15 to 75 candela output, which is selectable with a conveniently located switch on the side of the device. The current is only 24mA VDC and 32mA VFWR for all light output settings. The candela output setting remains clearly visible even after final installation, yet it stays locked in place to prevent unauthorized tampering. (Data Sheet E85001-0667)

White housing	White housing ▼ with "FIRE"	Red housing	Red housing	White housing	DAMAS (S. C.)
☐ G1VWN	☐ G1VWF	☐ G1VRN	☐ G1VRF	□ G1VWA	

Genesis Horns reach output levels as high as 92 dB and feature a unique multiple-frequency tone that results in excellent wall penetration and an unmistakable warning of danger. Horns may be configured for either constant or temporal 3 output and high or low dB output with a conveniently located switch under the cover. No more cutting jumpers. Horns operate at 13mA VDC and 15mA VFWR on Low dB output and 23mA VDC and 29mA VFWR on High dB output. (Data Sheet E85001-0667)

White housing	White housing	Red housing	Red housing	FIRE
☐ G1AWN	☐ G1AWF	☐ G1ARN	☐ G1ARF	

Genesis Horn-strobes provide a low-profile design with horn output reaching as high as 92 dBA and as low as 80 dBA and have strobes that offer 15 to 75 candela output. Both the horn and strobe can be field configured with a switch, which is conveniently located 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. Horns may be configured for either constant or temporal 3 output and high or low dB output. Horn-Strobes operate at 35mA VDC and 43mA VFWR on Low dB output and 45mA VDC and 55mA VFWR on High dB output for all light output settings. (*Data Sheet E85001-0667*)

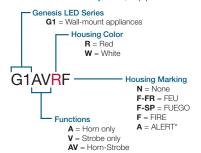
White housing	White housing	Red housing	Red housing ▼ with "FIRE"	FIRE	FIRE
☐ G1AVWN	☐ G1AVWF	☐ G1AVRN	☐ G1AVRF	4	Al Silver

Trim plates for wall horns, horn-strobes, and strobes are ideal for covering openings left behind during retrofits.

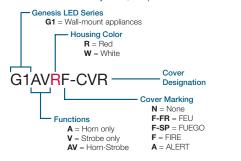
White plate	Red plate	Trim Plates	***	FIRE
□ G1TW	□G1TR	Trim plate for 2-gang or 4" boxes		1

Replacement covers are available for all models. When ordering add -CVR to the model number.

Model Number Syntax, Appliances



* ALERT marking available on white strobe model with clear lens only. See replacement covers for more options.





Genesis LED Series Wall Models

LED Strobes, Horns & Horn-Strobes

Genesis LED G4 Series horns and LED strobes feature a sleek, low-profile design and energy-efficient technology that makes them less expensive to install and operate by reducing overhead. High-performance LEDs and patented electronics allow for more devices per loop and fewer booster power supplies. Genesis LED G4 devices mount to the required GP10 room side wiring plate for installation. The GP10 mounting plate is ordered separately from the G4 device in packs of 10 for convenient pre-installing and pre-wiring.



Genesis strobes offer 15 to 110 candela output, which is selectable with a conveniently located switch on the side of the device. The current is only 28mA VDC and 36mA VFWR for all light output settings. The candela output setting remains clearly visible even after final installation, yet it stays locked in place to prevent unauthorized tampering. (Data Sheet E85001-0668)

White housing	White housing	Red housing	Red housing	White housing	
☐ G4VWN	☐ G4VWF	☐ G4VRN	☐ G4VRF	☐ G4VWA	100

Genesis Horns reach output levels as high as 92 dB and feature a unique multiple-frequency tone that results in excellent wall penetration and an unmistakable warning of danger. Horns may be configured for either constant or temporal 3 output and high or low dB output with a conveniently located switch under the cover. No more cutting jumpers. Horns operate at 18mA VDC and 22mA VFWR on Low dB output and 28mA VDC and 38mA VFWR on High dB output. (Data Sheet E85001-0668)

White housing	White housing	Red housing	Red housing	
☐ G4AWN	☐ G4AWF	☐ G4ARN	☐ G4ARF	

Genesis Horn-strobes provide a low-profile design with horn output reaching as high as 92 dBA and as low as 80 dBA and have strobes that offer 15 to 110 candela output. Both the horn and strobe can be field configured with a switch, which is conveniently located 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. Horns may be configured for either constant or temporal 3 output and high or low dB output. Horn-Strobes operate at 40mA VDC and 48mA VFWR on Low dB output and 50mA VDC and 60mA VFWR on High dB output for all light output settings. (*Data Sheet E85001-0668*)

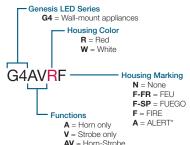
White housing	White housing	Red housing	Red housing	F	
☐ G4AVWN	☐ G4AVWF	☐ G4AVRN	☐ G4AVRF	₩- E	00840 11.39

Accessories including required room side wiring plate and trim plates ideal for openings left behind during retrofits.

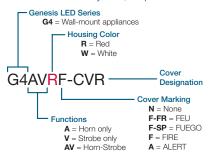
White plate	Red plate	Room Side Wiring Plate			
□ G4TW	□ G4TR	☐ GRSW-10		2 _ 0	ı

Replacement covers are available for all models. When ordering add -CVR to the model number.

Model Number Syntax, Appliances



* ALERT marking available on white strobe model with clear lens only. See replacement covers for more options.



LED Strobes, Horns & Horn-Strobes

Genesis LED GC Series horns and LED strobes feature a sleek, low-profile design and energy-efficient technology that makes them less expensive to install and operate by reducing overhead. High-performance LEDs and patented electronics allow for more devices per loop and fewer booster power supplies. Genesis LED GC devices mount to the required GP10 room side wiring plate for installation. The GP10 mounting plate is ordered separately from the GC device in packs of 10 for convenient pre-installing and pre-wiring.



Genesis strobes offer 15 to 115 candela output, which is selectable with a conveniently located switch on the side of the device. The current is only 35mA VDC and 45mA VFWR for all light output settings. The candela output setting remains clearly visible even after final installation, yet it stays locked in place to prevent unauthorized tampering. (Data Sheet E85001-1021)

White hou		Red housing	Red housing	
GCVWN	I □ GCVWF	□GCVRN	□GCVRF	N. O

Genesis Horns reach output levels as high as 92 dB and feature a unique multiple-frequency tone that results in excellent wall penetration and an unmistakable warning of danger. Horns may be configured for either constant or temporal 3 output and high or low dB output with a conveniently located switch under the cover. No more cutting jumpers. Horns operate at 20mA VDC and 25mA VFWR on Low dB output and 30mA VDC and 40mA VFWR on High dB output. (Data Sheet E85001-1021)

White housing	White housing	Red housing	Red housing	
			▼ with "FIRE"	
□GCAWN	□GCAWF	□GCARN	□GCARF	S. S

Genesis Horn-strobes provide a low-profile design with horn output reaching as high as 92 dBA and as low as 80 dBA and have strobes that offer 15 to 115 candela output. Both the horn and strobe can be field configured with a switch, which is conveniently located 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. Horns may be configured for either constant or temporal 3 output and high or low dB output. Horn-Strobes operate at 50mA VDC and 60mA VFWR on Low dB output and 60mA VDC and 75mA VFWR on High dB output for all light output settings. (*Data Sheet E85001-1021*)

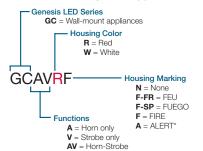
White housing	White housing	Red housing	Red housing	
	▼ with "FIRE"		▼ with "FIRE"	
□GCAVWN	□GCAVWF	□GCAVRN	□GCAVRF	

Accessories including required room side wiring plate and trim plates ideal for openings left behind during retrofits.

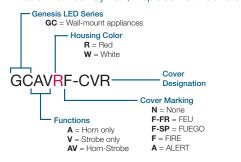
White plate	Red plate	Room Side Wiring Plate		4 8.	
□GCTW	□GCTR	☐ GRSW-10	2. n		

Replacement covers are available for all models. When ordering add -CVR to the model number.

Model Number Syntax, Appliances



Note: GC devices are designed for ceiling applications but are UL listed to be wall or ceiling mounted.





Genesis LED Series Wall Models

LED Speakers & Speaker-Strobes

Genesis LED G4S Series speakers and speaker-strobes combine high performance output with a sleek low profile design and energy-efficient technology that makes them less expensive to install and operate. High performance LEDs require fewer power supplies, backup power, and batteries. These new appliances are designed with energy-efficiency, and life safety in mind.



Understanding the content of the message is as important as knowing there is an emergency. Intelligibility is measured in Speech Transmission Index and anything above .76 is considered excellent. G4S Series speakers deliver audio with an STI of .81 ensuring the message is clear. They also meet NFPA and UL 520Hz requirements for sleeping areas making them ideal for new construction or retrofits. Genesis LED G4S appliances mount to the required GRSW-10 room side wiring plate for installation. The GRSW-10 mounting plate is ordered separately from the G4S device in packs of 10 for convenient pre-installing and pre-wiring.

Genesis Speakers feature selectable wattage taps that are visible after installation. Speakers are also capable of both 25V and 70V and voltage in a single model with a field selectable switch. Speakers meet NFPA and UL 520Hz requirements for sleeping areas and have an STI rating of .81 ensuring speakers deliver a clear, highly intelligible message. (Data Sheet E85001-1026)

White housing	White housing	Red housing	Red housing	White housing	
				▼ with "ALERT"	
☐ G4SWN	☐ G4SWF	☐ G4SRN	☐ G4SRF	□ G4SWA	(Consequence)

Genesis Speaker-strobes feature selectable wattage taps, and allow for both wattage and light output levels to be configured in the field. Both settings remain clearly visible — even after final installation. Speakers are also capable of both 25V and 70V and voltage in a single model with a field selectable switch. Speakers meet NFPA and UL 520Hz requirements for sleeping areas and have an STI rating of .81 ensuring speakers deliver a clear, highly intelligible message. Speaker-strobes feature field-selectable 15, 30,75, or 110 cd light output and have a constant current draw for all light output settings of 28mA for VDC and 36mA for VFWR. (Data Sheet E85001-1026)

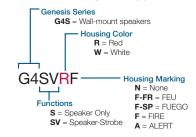
White housing	White housing	Red housing	Red housing	White housing ▼ with "ALERT"	F	
☐ G4SVWN	☐ G4SVWF	☐ G4SVRN	☐ G4SVRF	☐ G4SVWA	-	1000

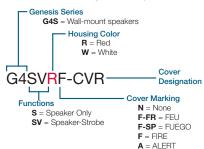
Accessories including required room side wiring plate and trim plates ideal for openings left behind during retrofits.

White plate	Red plate	Room Side Wiring Plate		
☐ G4TW	☐ G4TR	☐ GRSW-10	C-0-2	

Replacement covers are available for all models. When ordering add -CVR to the model number.

Model Number Syntax, Appliances







Genesis LED Series Ceiling Models

LED Speakers & Speaker-Strobes

Genesis LED GCS Series speakers and speaker-strobes combine high performance output with a sleek low profile design and energy-efficient technology that makes them less expensive to install and operate. High performance LEDs require fewer power supplies, backup power, and batteries. These new appliances are designed with energy-efficiency, and life safety in mind. Understanding the content of the message is as important as knowing there is an emergency. Intelligibility is measured in Speech Transmission Index and anything above .76 is considered excellent. G4S Series speakers deliver audio with an STI of .81 ensuring the message is clear. They also meet NFPA and UL 520Hz requirements for sleeping areas making them ideal for new construction or retrofits.

Genesis LED GCS appliances mount to the required GRSW-10 room side wiring plate for installation. The GRSW-10 mounting plate is ordered separately from the GCS device in packs of 10 for convenient pre-installing and pre-wiring.

Genesis Speakers feature selectable wattage taps that are visible after installation. Speakers are also capable of both 25V and 70V and voltage in a single model with a field selectable switch. Speakers meet NFPA and UL 520Hz requirements for sleeping areas and have an STI rating of .81 ensuring speakers deliver a clear, highly intelligible message (Data Sheet E85001-1025)

White housing	White housing	Red housing	Red housing	White housing		
□GCSWN	□GCSWF	□GCSRN	□GCSRF	□GCSWA	NANA TO SERVICE	

Genesis Speaker-strobes feature selectable wattage taps, and allow for both wattage and light output levels to be configured in the field. Both settings remain clearly visible — even after final installation. Speakers are also capable of both 25V and 70V and voltage in a single model with a field selectable switch. Speakers meet NFPA and UL 520Hz requirements for sleeping areas and have an STI rating of .81 ensuring speakers deliver a clear, highly intelligible message. Speaker-strobes feature field-selectable 15, 30,75, or 115 cd light output and have a constant current draw for all light output settings of 35mA for VDC and 45mA for VFWR. (Data Sheet E85001-1025)

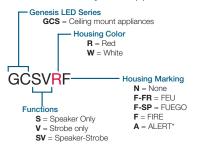
White housing	White housing	Red housing	Red housing	White housing	
□GCSVWN	□GCSVWF	□GCSVRN	□GCSVRF	□GCSVWA	VE

Accessories including required room side wiring plate and trim plates ideal for openings left behind during retrofits.

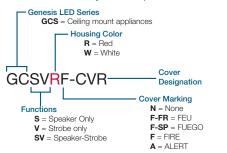
White plate	Red plate	Room Side Wiring Plate		A - A - A - A	
□GCTW	□GCTR	☐ GRSW-10	· · · ·		1

Replacement covers are available for all models. When ordering add -CVR to the model number.

Model Number Syntax, Appliances



*ALERT Marking available on white strobe model only. See replacment covers for more options.



Genesis G4LF Series Wall Models



Low Frequency (520 Hz) **Horns and Horn-Strobes**

G4LF Series notification appliances provide the benefits of Genesis life safety signals with output suitable for sleeping areas and other applications requiring low frequency audible tones. These high-performance appliances generate a crisp 520 Hz tone in the standard 3-3 temporal pattern. An optional setting configures the appliance for continuous audible output - a critical feature for notification appliance circuits that are coded with a CDR-3 coder module. All G4LF appliances feature field-configurable high and low dB output settings. Horn-Strobe models feature field-selectable 15, 30, 75 or 110 cd output settings.

G4LFWN-HVM	Horn-Strobe, 520 Hz, White Housing, No Marking, 15/30/75 /110 cd	Data Sheet E85001-0639
G4LFWF-HVM	Horn-Strobe, 520 Hz, White Housing, FIRE Marking, 15/30/75 /110 cd	Data Sheet E85001-0639
G4LFRN-HVM	Horn-Strobe, 520 Hz, Red Housing, No Marking, 15/30/75 /110 cd	Data Sheet E85001-0639
G4LFRF-HVM	Horn-Strobe, 520 Hz, Red Housing, FIRE Marking, 15/30/75 /110 cd	Data Sheet E85001-0639
G4LFWN-H	Horn, 520 Hz, White Housing, No Marking	Data Sheet E85001-0639
G4LFWF-H	Horn, 520 Hz, White Housing, FIRE Marking	Data Sheet E85001-0639
G4LFRN-H	Horn, 520 Hz, Red Housing, No Marking	Data Sheet E85001-0639
G4LFRF-H	Horn, 520 Hz, Red Housing, FIRE Marking	Data Sheet E85001-0639

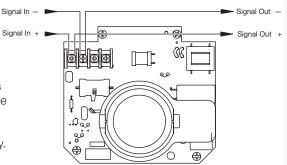
Weatherproof Horns and Horn-Strobes

Genesis WG4 Series horns and horn-strobes are among the most versatile emergency signals of their kind. Rated for indoor or outdoor use, they are suitable for a wide range of wet and harsh environments with a listed operating temperature range of as low as -31°F to as high as 151°F (-35°C to 66°C).

Refer to Data Sheet E85001-0628 -- Genesis Outdoor Horns and Strobes for details.

Field Configuration

Genesis WG4 strobes feature four selectable light output settings. Cd selections are changed by removing the cover and simply sliding the switches to the desired setting, which remains visible through a small window on the front of the device after the cover is replaced. Genesis Horn-strobes may also be configured for high or low dB output and temporal flash. This battery-saving feature is intended for private mode signaling only.



—/+ designations indicate the signal polarity required to activate the device











Light Output

Standard Candela Horn-strobes

Α
87 cd
35 cd
10 cd

High Candela Horn-strobes

	Standard/rating		Strobe Switch Position				
Stand		ru/rating	D	С	В	Α	
	UL 1971	Indoor	102cd	123cd	147cd	161cd	
	UL 1638	Outdoor @ -35°C	41cd	50 cd	60 cd	65 cd	
	CAN/ULC-S526	Outdoor @ -40°C	11 cd	14 cd	17 cd	18 cd	

White housing	White housing	Red housing	Red housing with "FIRE"	Outdoor Fire Alarm Appliances
□WG4WN-H	□WG4WF-H	□WG4RN-H	□WG4RF-H	Horn Only
□ WG4WN-HVMC	□ WG4WF-HVMC	□ WG4RN-HVMC	□ WG4RF-HVMC	Horn-Strobe, standard cd output
□ WG4WN-HVMHC	□ WG4WF-HVMHC	□ WG4RN-HVMHC	□ WG4RF-HVMHC	Horn Only, high cd output

WG4 Mounting Accessories

☐ WG4WTS (white)	☐ WG4RTS (red)	Surface Skirt for Genesis WG4 Appliances	
☐ 74347U (white)	☐ 449 (red)	Surface mount box, outdoor rated	
WG4GSKT		Genesis WG4 Full Body Mounting Gasket for Smooth Surfaces	

For Audible Sounder Bases, see Intelligent Initiating Devices.





Genesis WG4 Series Wall Models

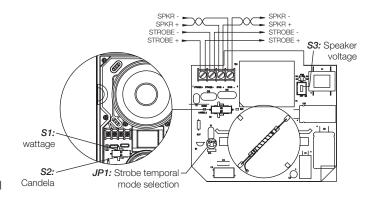
Weatherproof Speakers and Speaker-Strobes

Genesis WG4 Series speakers and speaker-strobes are among the most versatile emergency signals of their kind. Rated for indoor or outdoor use, they are suitable for a wide range of wet and harsh environments with a listed operating temperature range of as low as -31°F to as high as 151°F (-35°C to 66°C).

Refer to Data Sheet E85001-0626 -- Genesis Outdoor Speakers and Strobes for details.

Field Configuration

Genesis WG4 speakers may be set 70- or 25-Volt operation, and for 1/4, 1/2, 1, or 2 watt operation. Strobe models feature four selectable light output settings. Wattage and cd selections are changed by removing the cover and simply sliding the switches to the desired settings, which remain visible through a small window on the front of the device after the cover is replaced. Genesis speakerstrobes may also be configured for temporal flash. This battery-saving feature is intended for private mode signaling only. To set the device for temporal flash, snip the jumper at JP1.

























White housing	White housing ▼ with "FIRE"	Red housing no marking	Red housing ▼ with "FIRE"	Fire Alarm Speakers
□WG4WN-S	□WG4WF-S	□WG4RN-S	□WG4RF-S	25/70 V Speaker
□WG4WN-SVMC	□WG4WF-SVMC	□WG4RN-SVMC	□WG4RF-SVMC	25/70 V Speaker-strobe (15/29/70/87 cd)
	□WG4WF-SVMHC	□WG4RN-SVMHC	□WG4RF-SVMHC	25/70 V Speaker-strobe (102/123/147/161 cd)

Genesis mass notification speakers and speaker-strobes bring the same high-performance fire alarm features and unobtrusive design to mass notification applications. Available with amber lenses and optional "ALERT" lettering, they are ideal for applications that require differentiation between fire alarm and mass notification alerts.

White housing	White housing	Mass Notification Speakers — white housing, no "Running Man" icon
□ WG4WN-SVMA	□ WG4WA-SVMA	25/70 V Speaker-strobe, amber lens (13/25/5962 cd output)
□ WG4WN-SVMHA	□ WG4WA-SVMHA	25/70 V Speaker-strobe, amber lens (84/101/125/130 cd output)
	□ WG4WA-SVMC	25/70 V Speaker-strobe, clear lens (15/29/70/87 cd output)
□ WG4WN-SVMHC	□ WG4WA-SVMHC	25/70 V Speaker-strobe, clear lens (102/123/147/161 cd output)
	□ WG4WA-S	25/70 V Speaker

Trim skirts

	☐ WG4WTS (white)	☐ WG4RTS (red)	Surface Skirt for Genesis WG4 appliance family.

High Power Speaker Arrays



Hyperspike High Power Speaker Arrays (HPSA) employ exclusive technology that delivers lightweight and acoustically sophisticated solutions for outdoor mass notification installations. These rugged units are among the industry's smallest in physical size, yet they reproduce some of the clearest (up to 0.91 STI, source-dependant) and loudest (up to 126 dBA Fast @ 1m) audio signals available. Loudspeaker heads are as small as 13.2" (33.5 cm) in diameter and 24.7" (62.7 cm) in height. A single panel unit weighs as little as 16 lb (7.3 kg).

Hyperspike assemblies are AC powered with DC backup. They come with a lockable NEMA 4 Electronics Control Cabinet (ECC) that holds the amplifier and battery charger, and a lockable NEMA 4 battery enclosure. Loudspeakers come pre-assembled with an eight foot (2.4 meter) 3/4-inch liquid-tight flexible conduit whip and wire leads. Batteries and battery enclosures are ordered separately.

	▼ Color: Tan	▼ Color: Gray	HPSA Assemblies			
1600 Watt Class						
	□ 90223A-801-02-L	□ 90223A-801-04-L	1600 Watts, 360° Dispersion, 5 Active Panels	Data Sheet E85001-0637		
	□ 90223A-802-02-L	□ 90223A-802-04-L	960 Watts, 230° Dispersion, 3 Active Panels	Data Sheet E85001-0637		
	□ 90223A-803-02-L	□ 90223A-803-04-L	640 Watts, 185° Dispersion, 2 Active Panels	Data Sheet E85001-0637		
	□ 90223A-804-02-L	□ 90223A-803-04-L	320 Watts, 120° Dispersion, 1 Active Panel	Data Sheet E85001-0637		
;	3200 Watt Class					
	□ 90224A-801-02-L	□ 90224A-801-04-L	3200 Watts, 360° Dispersion, 5 Active Panels	Data Sheet E85001-0637		
	□ 90224A-802-02-L	□ 90224A-802-04-L	1920 Watts, 230° Dispersion, 3 Active Panels	Data Sheet E85001-0637		
	□ 90224A-803-02-L	□ 90224A-803-04-L	1280 Watts, 185° Dispersion, 2 Active Panels	Data Sheet E85001-0637		
	□ 90224A-804-02-L	□ 90224A-804-04-L	640 Watts, 120° Dispersion, 1 Active Panel	Data Sheet E85001-0637		
(6400 Watt Class					
	☐ MN-HSHT64P5N	☐ MN-HSHG64P5N	6400 Watts, 360° Dispersion, 5 Active Panels	Data Sheet E85001-0637		
	☐ MN-HSHT64P3N	☐ MN-HSHG64P3N	3840 Watts, 230° Dispersion, 3 Active Panels	Data Sheet E85001-0637		
	☐ MN-HSHT64P2N	☐ MN-HSHG64P2N	2560 Watts, 185° Dispersion, 2 Active Panels	Data Sheet E85001-0637		
	□ MN-HSHT64P1N	□ MN-HSHG64P1N	1280 Watts 120° Dispersion 1 Active Panel	Data Sheet F85001-0637		





Mass Notification

Medium Power Speaker Arrays



The EDWARDS HyperSpike® Series TCPA-10 is intended for indoor and outdoor audio signaling and notification. Its best-in-class acoustic coverage allows for fewer units to be installed in large indoor and outdoor areas, lowering installation and long-term maintenance costs, while also improving intelligibility and aesthetics.

₩	▼ Color:	MPSA Assemblies	
□ 90215A-801-01-L	□Black	UL 1480 listed C1D2 certified TCPA-10 Distributed Audio Speaker with 5 selectable power taps that run off of 25V, 70V and 100 VRMS audio systems	Data Sheet E85001-0669
□ 90215A-801-04-L	□ Gray	UL 1480 listed C1D2 certified TCPA-10 Distributed Audio Speaker with 5 selectable power taps that run off of 25V, 70V and 100 VRMS audio systems	Data Sheet E85001-0669
□ 90215A-801-05-L	□Red	UL 1480 listed C1D2 certified TCPA-10 Distributed Audio Speaker with 5 selectable power taps that run off of 25V, 70V and 100 VRMS audio systems	Data Sheet E85001-0669
□ 90215A-801-06-L	□ White	UL 1480 listed C1D2 certified TCPA-10 Distributed Audio Speaker with 5 selectable power taps that run off of 25V, 70V and 100 VRMS audio systems	Data Sheet E85001-0669

EDWARDS brand Hyperspike Series Medium Power loudspeakers employ exclusive HyperSpike technology to deliver lightweight and acoustically sophisticated solutions for large indoor and smaller outdoor mass notification installations.



UL Listed 250-Watt Medium Power Speaker Arrays

EDWARDS brand Model 250 Hyperspike Series UL Listed Medium Power loudspeakers employ HyperSpike® technology to deliver lightweight and acoustically sophisticated solutions for large indoor and smaller outdoor mass notification installations. These UL Listed units are omni-directional loudspeakers that produce 360 degrees of acoustic energy. The high fidelity output remains intelligible over up to a quarter mile from the device. It is rated for indoor or outdoor use. The include four wattage taps: 40 W, 90 W, 125 W, and 250 W.

MN-HSMT25P5N	250-Watt Medium Power Speaker Array, tan housing.	Data Sheet E85001-0652
MN-HSMG25P5N	250-Watt Medium Power Speaker Array, gray housing.	Data Sheet E85001-0652
MN-HSMR25P5N	250-Watt Medium Power Speaker Array, red housing.	Data Sheet E85001-0652





Omnidirectional 650-Watt Loudspeakers

The MN-HSMP650 Series has a 360° omnidirectional sound dispersion pattern and can handle 650 Watts of crystal-clear audio power. It is rated for indoor and outdoor use and hangs from eyebolts or is mounted to a two-inch OD mast.

MN-HSMP650G	Loudspeaker assembly, 650 Watt, Gray Housing.	Data Sheet E85001-0638
MN-HSMP650P5T	Loudspeaker assembly, 650 Watt, Tan Housing.	Data Sheet E85001-0638



Omnidirectional Indoor-rated 300-Watt Loudspeakers

The MN-HSMP300DF is a grey indoor-rated omnidirectional unit rated for 300 Watts of continuous audio power. These units are eyebolt-mounted.

MN-HSMP300DF1	Omnidirectional Loudspeaker, 300 Watt.	Data Sheet E85001-0638	ш
MN-HSMP300DF170	Omnidirectional Loudspeaker, 300 Watt with 70.7 VRMS transformer.	Data Sheet E85001-0638	



Directional 200-Watt Loudspeakers

The MN-HSMP200D is a directional loudspeaker that handles 200 Watts of continuous audio. Units feature 60° x 30° sound dispersion and are suitable for indoor or outdoor applications. They come complete with mounting bracket.

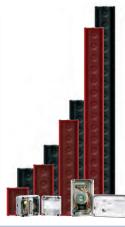
MN-HSMP200D1	Directional Loudspeaker, 200 Watt.	Data Sheet E85001-0638	L
MN-HSMP200D170	Directional Loudspeaker, 200 Watt with 70.7 VRMS transformer.	Data Sheet E85001-0638	



Portable Loudspeaker System

The MN-HSPB is a self-contained, portable loudspeaker system that weighs a mere 15 lbs. Despite its light weight, the MN-HSPB packs a peak acoustic output of 144dB for an intelligible communication range of more than 2,450 feet (750 m).

MN-HSPB-S	HS Series Portable Handheld Speaker - Standard Output	Data Sheet E85001-0653	Ш
MN-HSPB-H	HS Series Portable Handheld Speaker - High Output	Data Sheet E85001-0653	П



UL Listed HyperSpike LineWave Loudspeakers

Designed with the latest technology in line array speaker systems, the EDWARDS HyperSpike® LineWave loudspeaker is optimized to produce clear and authoritative voice commands and powerful tones never before possible within reverberant environments. The beam forming capability of the LineWave loudspeaker allows even coverage across the listening plane while focusing the acoustic pattern away from surfaces that cause unwanted reflections. This technology is essential for achieving optimum levels of speech intelligibility within reverberant spaces. The result is clear and intelligible direct sound that ensures critical messages are heard and understood.

90243A-801-01-L	LineWave line array speaker 2 Black	Data sheet E85001-0659
90243A-802-01-L	LineWave line array speaker 4 Black	Data sheet E85001-0659
90243A-803-01-L	LineWave line array speaker 8 Black	Data sheet E85001-0659
90243A-804-01-L	LineWave line array speaker 16 Black	Data sheet E85001-0659
90243A-801-05-L	LineWave line array speaker 2 Red	Data sheet E85001-0659
90243A-802-05-L	LineWave line array speaker 4 Red	Data sheet E85001-0659
90243A-803-05-L	LineWave line array speaker 8 Red	Data sheet E85001-0659
90243A-804-05-L	LineWave line array speaker 16 Red	Data sheet E85001-0659
90243A-801-06-L	LineWave line array speaker 2 White	Data sheet E85001-0659
90243A-802-06-L	LineWave line array speaker 4 White	Data sheet E85001-0659
90243A-803-06-L	LineWave line array speaker 8 White	Data sheet E85001-0659
90243A-804-06-L	LineWave line array speaker 16 White	Data sheet E85001-0659
90243A-801-07-L	LineWave line array speaker 2 Gray	Data sheet E85001-0659
90243A-802-07-L	LineWave line array speaker 4 Gray	Data sheet E85001-0659
90243A-803-07-L	LineWave line array speaker 8 Gray	Data sheet E85001-0659
90243A-804-07-L	LineWave line array speaker 16 Gray	Data sheet E85001-0659
72581B-801	LineWave line array speaker pole mount kit	Data sheet E85001-0659
72575B-801-L	LineWave 25V/70V/100V Transformer 2/4 speaker	Data sheet E85001-0659
72542B-801-L	LineWave 25V/70V/100V Transformer 8 speaker	Data sheet E85001-0659
72542B-802-L	LineWave 25V/70V/100V Transformer 16 speaker	Data sheet E85001-0659

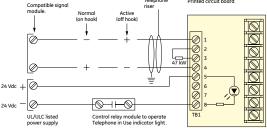
Firefighters' **Telephones**

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 EST4 control panel.

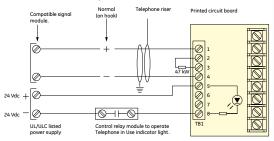
Edwards fire alarm telephones are rugged communications devices for emergency use. Enclosed keylocked telephone stations comprise three separately ordered components: the handset assembly, the front plate, and the wallbox. Depending on how the phones are wired, they are supervised for three or four state operation. Front plates are available with either metal or break glass inserts.

MEA approved warden stations feature doors with magnetic latches and one-state handsets with armored cords. Warden stations mount to 6832-1 wallboxes. Portable handsets plug into one-gang receptacles. Handsets are available in black or red. The TCS-6 cabinet provides storage for up to six handsets.

Four-state operation



Three-state operation









6831-1







Firefighters' Telephones

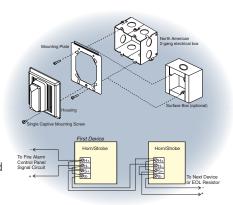
rirengillers	relephones
6830-NY-F4	Four-state Remote Telephone Warden Station - Flush. Armored armored cord.
6830-NY-S4	Four-state Remote Telephone Warden Station - Surface. Armored armored cord.
6830-5A-4	Four-state Telephone Handset Assembly - Red, 60" (1500mm) Coiled Cord, Push-to-talk button.
6830-6A-4	Four-state Telephone Handset Assembly - Red, 60" (1500mm) Armored Cord, Push-to-talk button.
6830-4	Four-state Telephone Handset Assembly - Red, 60" (1500mm) Coiled Cord.
6830-5A-4	Three-state Telephone Handset Assembly - Red, 60" (1500mm) Coiled Cord, Push-to-talk button.
6830-6A-4	Three-state Telephone Handset Assembly - Red, 60" (1500mm) Armored Cord, Push-to-talk button.
6833-4	Four-state Portable Telephone Handset Receptacle, 1-gang Stainless-steel Faceplate.
6830-3	Portable Telephone Handset - Black c/w 60" (1500mm) Coiled Cord.
6700-0061	Portable Telephone Handset - Red c/w 60" (1500mm) Coiled Cord.
6831-1	Frontplate - Flush Mount, Red Finish, Break Glass Type c/w 2 keys.
6831-2	Frontplate - Flush Mount, Red Finish, Non-Break Glass Type c/w 2 keys.
6831-3	Frontplate - Surface Mount Red Finish, Break Glass Type c/w 2 keys.
6831-4	Frontplate - Surface Mounting Red Finish, Non-Break Glass Type c/w 2 keys.
6832-1	Wallbox - Flush or Surface mount, Red finish. 14" (356mm) H x 8-1/2" (216mm) W x 3½" (89mm) D.
TCS-6	Portable handset storage cabinet. Surface mount c/w keylock. Red finish with white lettering.



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. Integrity devices are shipped with wall mount style "FIRE" lens markings. Other lens markings are available.





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 25VRMs and 70VRMs circuits are available.

Fire Alarm Appliances, clear lenses, Data Sheet E85001-0317

▼ 15/75 cd	√ 30 cd	▼ 110 cd	▼ Speaker only	
☐ 757-7A-RS25	☐ 757-3A-RS25	☐ 757-8A-RS25	□ 757-1A-R25	Speaker-strobe, 25 V, red housing
☐ 757-7A-RS25V	V □ 757-3A-RS25V	V □ 757-8A-RS25V	V □ 757-1A-R25W	Speaker-strobe, 25 V, white housing
☐ 757-7A-RS70	☐ 757-3A-RS70	☐ 757-8A-RS70	□ 757-1A-R70	Speaker-strobe, 70 V, red housing
☐ 757-7A-RS70V	V □ 757-3A-RS70V	V □ 757-8A-RS70V	V □ 757-1A-R70W	Speaker-strobe, 70 V, white housing
Mass Notificatio	n Appliances, amb	er lenses, Data Sh	neet E85001-0317	
☐ 757-7A-RS25V	VA (12/75 cd)	☐ 757-8A-RS25W	VA (88 cd)	Speaker-strobe, 25 V, white housing
☐ 757-7A-RS70V	VA (12/75 cd)	☐ 757-8A-RS70W	VA (88 cd)	Speaker-strobe, 70 V, white housing



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.

☐ 757-1A-T (Red)	☐ 757-1A-TW (White) Temporal Horn	Data Sheet E85001-0341
☐ 757-7A-T (Red)	☐ 757-7A-TW (White) Temporal Horn-Strobe, 15/75cd	Data Sheet E85001-0341
☐ 757-4A-T (Red)	☐ 757-4A-TW (White) Temporal Horn-Strobe, 75cd	Data Sheet E85001-0341
☐ 757-8A-T (Red)	☐ 757-8A-TW (White) Temporal Horn-Strobe, 110cd	Data Sheet E85001-0341



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. 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.

	☐ 405-5A-T (Red)	☐ 405-5A-TW (White)	Strobe - 15 cd	Data Sheet E85001-0305
	☐ 405-7A-T (Red)	☐ 405-7A-TW (White)	Strobe - 15/75	Data Sheet E85001-0305
	☐ 405-3A-T (Red)	☐ 405-3A-TW (White)	Strobe - 30 cd	Data Sheet E85001-0305
	☐ 405-6A-T (Red)	☐ 405-6A-TW (White)	Strobe - 60 cd	Data Sheet E85001-0305
	☐ 405-8A-T (Red)	☐ 405-8A-TW (White)	Strobe - 110 cd	Data Sheet E85001-0305
	☐ CS-405-7A-T (15/75 cd)	☐ CS-405-8A-T (110 cd)	Strobe - Weatherproof (red)	Data Sheet E85001-0305



Audible Signals





Fire Alarm Bells

Edwards 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.

☐323D-10AW (Grey)	□323D-10AW-R (Red)	10-inch Single Stroke, Diode — 20-24Vdc	Data Sheet E85001-0333
☐ 439D-6AW (Grey)	□439D-6AW-R (Red)	6-inch Vibrating, Diode — 20-24Vdc	Data Sheet E85001-0333
□439D-10AW (Grey)	□439D-10AW-R (Red)	10-inch Vibrating, Diode — 20-24Vdc	Data Sheet E85001-0333



Multiple Tone Signal

The 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 Data Sheet E85001-0415



Multi-purpose Loudspeaker

The HPSA15 loudspeaker is a high-efficiency double re-entrant loudspeaker that operates within a nominal frequency response range of 400-14,000 Hz, and provides audible output of 120 dB (peak at one meter) at the rated power level. It includes a versatile, three-way, 25/70.7 V line transformer that meets a variety of distributed system needs. The transformer is adjustable by means of a convenient seven-position, watts/impedance selection switch.

HPSA15R2570	15-watt loudspeaker, red	Data Sheet E85001-0591
HPSA15G2570	15-watt loudspeaker, grav	Data Sheet E85001-0591

Accessories

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

G1M	Genesis Signal Master – Snap-on (piggyback)	Data Sheet E85001-0545
G1M-RM	Genesis Signal Master - Remote 1-Gang Mount	Data Sheet E85001-0545

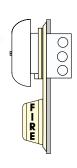


Accessories



Bell/Strobe Plate

The bell/strobe plate is ideal for renovation and retrofit projects, and new construction. It is equipped with an Edwards self-synchronizing strobe and is designed to allow on-site mounting of the 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) Data Sheet E85001-0441

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.

THOM 4D (Mall a dealar)	"FIDE" (DI)	
☐ 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"
☐ LKW-10 (Wall orientation)	☐ LKC-10 (Ceiling orientation)	"ALERT"



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

Integrity Speakers, Speaker/strobes

□ 960A-4SF Flush Box, Indoor □ 757A-SB Surface Box, Red, Indoor □ 757A-SBW Surface Box, White, Indoor

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

Integrity Chimes, Chime/strobes

Surface Box, Red, Indoor □ 757A-SB □ 757A-SBW Surface Box, White, Indoor

Genesis Signals

□ 27193-11 Horn-strobe Surface Box, Red, Indoor **2**7193-16 Horn-strobe Surface Box, White, Indoor ☐ G4RB Speaker Surface Box, Red, Indoor ☐ G4B Speaker Surface Box, White, Indoor ☐ G4ERB G4 Dual-strobe Format Surface box, Red ☐ G4EWB G4 Dual-strobe Format Surface box, White

Horn/siren Combination

□ 349 Weatherproof Backbox

Fire Alarm Bells and CS-405 Series

449 Weatherproof Backbox



Genesis G4B Speaker Surface Box



Initiating Devices p. 54

Notification Appliances p. 55

Hazardous Location Devices

Edwards 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 latest 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.

Initiating Devices

Rate Compensation Heat Detectors



Series 302 heat detectors are designed for use in normal environments as well as environments where the detectors are subject to weather, moisture (internal condensation), and explosive atmospheres. They are normally-open devices designed to close an electrical circuit upon activation. All models feature rate compensation and are available with either 135 °F (57.2 °C) or 194 °F (90 °C) ratings. They are self restoring, hermetically sealed, shock and corrosion resistant, and are tamperproof.

Sensor's Rated Temperature	Minimum Ambient Air Temperature	Maximum Ceiling Temperature
135 °F (57.2 °C)	-40 °F (-40 °C)	100 °F (38 °C)
194 °F (90 °C)	-40 °F (-40 °C)	150 °F (66 °C)

The sensor's aluminum tube acts as a heat collector when sources of heat radiate directly on the tube. Install these sensors out of direct sunlight and away from radiating heat sources including the direct flow from heaters and heat ducts.

302-AW-135	All-weather Heat Detector - Vertical Mounting FM & UL, 135 °F (57.2 °C)	Data Sheet E85001-0589
302-AW-194	All-weather Heat Detector - Vertical Mounting FM & UL, 194°F (90 °C)	Data Sheet E85001-0589
302-ET-135	All-weather Heat Detector - Vertical, Box Mount (1/2" NPT), FM & UL, 135 °F (57.2 °C)	Data Sheet E85001-0589
302-ET-194	All-weather Heat Detector - Vertical, Box Mount (1/2" NPT), FM & UL, 194°F (90 °C)	Data Sheet E85001-0589
302-EPM-135	Heat Detector - Explosionproof Mounting UL (Not FM approved), 135 °F (57.2 °C)	Data Sheet E85001-0589
302-EPM-194	Heat Detector - Explosionproof Mounting UL (not FM approved), 194°F (90 °C)	Data Sheet E85001-0589
AP-P	Adaptor plate for mounting 302 and 302-AW to any 3" box or 4" octagon outlet box	Data Sheet E85001-0589
JALX11	Explosion proof outlet body with cover - Killark	Data Sheet E85001-0589

Explosionproof/weatherproof Manual Stations

MPSR Series explosionproof/weatherproof manual pull stations are noncoded fire alarm stations solidly constructed of die-cast material. They are rated for Class I Group B (hydrogen) C & D, Class II Groups E. F, G, Class III environments, and are rated NEMA 4X for outdoor use. Key and screw reset models feature terminal connections and come complete with backbox.



▼ Hex Screw Reset	▼ Cat 45 Key Reset	Manual Stations	Data Sheet E85001-0588
☐ MPSR1-DHTWX-GE	☐ MPSR1-D45WX-GE	Explosionproof Single-action	n, SPST with backbox.
☐ MPSR1-SHTW-GE	☐ MPSR1-S45W-GE	Weatherproof Single-action	, SPST with backbox.
☐ MPSR1-DHTW-GE	☐ MPSR1-D45W-GE	Weatherproof Single-action	, DPDT with backbox.
☐ MPSR2-SHTW-GE	☐ MPSR2-S45W-GE	Weatherproof Double-action	n, SPST with backbox.
☐ MPSR2-DHTW-GE	☐ MPSR2-D45W-GE	Weatherproof Double-action	n, DPDT with backbox.
☐ MPSR2-SHTW-GE-NYW	☐ MPSR2-S45W-GE-NYW	Weatherproof Double-action	n, SPST with backbox, NYC white

For French markings add -F to the suffix of the model number. For bilinguial French/English markings add -B to the suffix of the model number.

	MPSR-LP	Double action cover for explosionproof manual stations
	MPSRGR10	Replacement glass rods for MPSR stations (10 pack).
П	276-K1	Cat 45 Key (each)







Explosionproof Smoke Detector

Model 30-3013 detectors are high performance smoke detectors built for use in hazardous locations. They are corrosion-resistant and feature a non-conducting aluminum alloy retaining ring that protects the detector sensor against the effects of explosions and other catastrophic events. The retaining ring mounts securely to a companion junction box, which offers several common port configurations for conduit connection. Together, the ring and box provide a sturdy protective shell for the detector head.

30-3013A1N12F

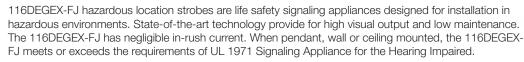
Explosionproof Smoke Detector

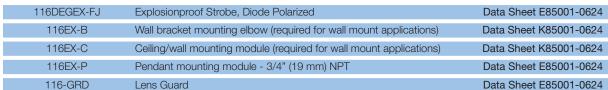
Data Sheet E85001-0645

Notification Appliances

Hazardous Location Strobes

• Class I, II, or III locations





Hazardous Location Bells

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

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.

☐ 439DEX-6AW (6")	☐ 439DEX-8AW (8")	☐ 439DEX-10AW (10")	Bell – 24 Vdc, Red	Data Sheet K85001-0399
☐ 439DEX-6AW-R (6") □ 439DEX-8AW-R (8	") 439DEX-10AW-R (10")	Bell – 24 Vdc, Grey	Data Sheet K85001-0399

Hazardous Location Horns

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

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.







Door Holders



24 Vac 60 Hz 24 Vdc 120 Vac 60 Hz

Electromagnetic Door Holders

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).

□1501-AQN5 (Single Door)	□1502-AQN5 (Double Door)	Floor Mounted	Data Sheet E85001-0421
□1504-AQN5 (Long Catch Plate)	□1505-AQN5 (Short Catch Plate)	Flush Wall Mounted	Data Sheet E85001-0421
□1508-AQN5 (Surface)	□1505-AQN9 (Completely flush)	Wall Mounted	Data Sheet E85001-0421
□1500-1 (1.5" Extension)	□1500-2 (2.5" Extension)	Catch Plate	Data Sheet E85001-0421
□1500-7 (5.25 to 7.5" Extension)	□1500-12 (7.5 to 12" Extension)	Catch Plate	Data Sheet E85001-0421
□CS2595-5 (short)	□CS2598-5 (long) Replace	cement Armature	Data Sheet E85001-0421

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.

☐MR101/T (with mounting hardware)	☐MR101/C (in metal enclosure)	Single SPDT relay	Data Sheet E85300-02762
☐MR201/T (with mounting hardware)	☐MR201/C (in metal enclosure)	Single DPDT relay	Data Sheet E85300-02762
☐MR204/T (with mounting hardware)	☐MR204/C (in metal enclosure)	4-position DPDT relay	Data Sheet E85300-02762



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.

☐MR199X13 (relay only)	☐MR199X13/C (in metal enclosure)	Power Relay — 24 VDC	Data Sheet E85300-02765



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.

☐MR601/T (with mounting track)	Data Sheet E85300-02761
☐MR604/T (with mounting track)	Data Sheet E85300-02761
☐MR608/T (with mounting track)	Data Sheet E85300-02761

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.

☐MR801/T (with mounting track)	Data Sheet E85300-02763
☐MR804/T (with mounting track)	Data Sheet E85300-02763
☐MR808/T (with mounting track)	Data Sheet E85300-02763

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.

☐MR701/T (with mounting track)	Data Sheet E85300-02764
☐MR704/T (with mounting track)	Data Sheet E85300-02764
☐MR708/T (with mounting track)	Data Sheet E85300-02764



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 PAM1 may be mounted with double-sided adhesive tape, a self-tapping screw, or loosely placed in a backbox.

PAM1	Encapsulated SPDT relay	Data Sheet E85300-02766
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Proven leadership.
Proud heritage.
Shared vision.

In 1872 when Robert Edwards installed an electrically-operated gas lamp igniter in a New York
City church, he began a tradition of innovation that would chart the course of building safety and security for the next 150 years.
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Today EDWARDS meets this goal with quality products

and an exceptional sensitivity to
the needs of our customers. Now
we have access to the resources,
talent, and experience that is
already setting a coordinated plan
for excellence into action. The
result is a unique synergy sustained
by a strong organization with a
well-defined vision of the future.

That vision of excellence is why EDWARDS is among the fastest growing building systems providers today. It's also why, with more than a century of solid growth behind us, you can put your trust in EDWARDS.

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Innovation, leadership, and a rich tradition of excellence...

Whether EDWARDS life safety systems are protecting the lives and livelihoods of the people who make businesses run, or the lives entrusted to the care of public institutions; whether they're charged with protecting the guests of the world's finest hotels, or preserving irreplaceable artifacts that bring history to life; EDWARDS stands alone as the brand closely associated with some of the most important and far-reaching developments in the life safety industry today.

Our strength, in part, comes from the strategic relationships we have built with our partners - the people and organizations we entrust with the technology that has charted the course of life safety protection for decades. Our Partners are not middlemen or go-betweens. They are independent contractors who add value to the EDWARDS life safety solution. As insiders, they enjoy exclusive access to products, custom design innovations, and factory training. Yet as successful independent contractors, they are adept at ensuring that each submittal is strong and competitive, and that each bid is locally relevant to your installation. As local businesses they not only have to earn your trust — they have to keep it.

Together these strengths set EDWARDS installations apart, and have earned this brand a special place among life safety and security solutions available today. Perhaps that's why many of the world's most cherished landmarks are protected by EDWARDS products. From the Bibliotheca Alexandrina Museum in Egypt, to the modern-day sphinx at the Luxor Hotel in Las Vegas, professionals who design, own and occupy the world's most impressive structures have chosen the EDWARDS solution.

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