EST3X Life Safety Control System

Description

EST3X represents the latest generation of life safety control panels for mid to large sized applications. With large multi-message displays and innovative controls, intuitive interfaces, and bold colored cabinets — these systems capture the imagination, and catch the eye. But behind the LCD display is where they really shine.

New microprocessors and chipsets take full advantage of the latest advances in computing technology, leading to smarter, faster, higher-capacity processing and more efficient designs. EST3X’s patented Voltage Boost™ technology, for example, delivers consistent voltage — even at low battery power — resulting in lighter cable requirements and/or longer runs. That saves time and money.

High performance processing also leads to powerful networking features and versatile digital audio functionality. The wide range of EST3X configurations include standalone operation, networking with up to eight nodes, or integration with an EST3 network comprising as many as 64 nodes — complete with EST3-Sixty mass notification capabilities and display of security events.

EST3X sets a new standard in front-panel life safety control interfaces. Its exclusive SpeedTouch™ rotary control offers nimble forward and back scrolling through events and options, while a mere tap of the control selects items with an unprecedented fluidity of motion. Its extra-large backlit display reveals up to eight concurrent messages, and switch/LED strips provide ample space for meaningful custom labels. And for end users, large tactile control buttons instill confidence and promote quick response when time is of the essence.

Standard Features

- Up to six intelligent analog loops hosting as many as 1,500 Signature Series devices per panel
- Optional integrated eight-channel digital audio
- 10 amp power supply with universal 94 to 264 Vac input voltage
- Patented Voltage Boost™ technology delivers consistent voltage — even at low battery power
- Four built-in 3-amp notification/auxiliary circuits
- Large 24-line by 40-character backlit LCD
- Simplified operation with the SpeedTouch™ rotary control
- 65 amp hour battery charger
- Eight- or 64-node network nodes using copper and/or fiber
- Supports up to 30 R-Series remote annunciators
- Removable terminals on all low voltage wiring
- Space for up to three additional option cards such as extra SLC loops, amplifiers, or dialer/modem
- Optional Ethernet interface
- 1,100 event history log
Application

Application flexibility is where EST3X’s leading edge computing power is put to best use. This generation of control panels is equally at home as the center of a simple single-building standalone system as it is when part of a sophisticated life safety network serving thousands of points across multiple buildings. Optional voice evacuation bridges the gap left by other mid-range systems, and makes these panels a cost-effective solution for most applications.

Strong Networking

Networking is among EST3X’s strong suits. Highly efficient RS485 connectivity, plus fiber-optic communications deliver faster response times and more sophisticated diagnostic capabilities, while cost-effective remote annunciation solutions keep basic monitoring and control always within reach.

A simple EST3X network can comprise up to eight nodes – enough to serve the needs of most campuses and larger buildings. Its ability to join an EST3 network with as many as 64 nodes extends EST3X’s reach into mass notification applications, security reporting, as well as making it an ideal candidate for retrofits.

High Capacity Audio

EST3X features a full eight channels of integrated digital audio with up to two minutes of on-board programmable message storage. An optional high quality paging microphone gives live access to local, as well as remote, audio functions. Auxiliary inputs are available for mass notification operations, andZA Series amplifiers may be mounted directly on the EST3X rail assembly.

Seamless System Integration

EST3X borrows much from its larger sibling, the venerable EST3 Life Safety Platform. And for good reason: by integrating with the EST3 networking and computing environment, an EST3X control panel can serve as a cost-effective remote node for extinguishing, smoke control, or even mass notification functions — all within the same compliance framework.

Retrofits and expansions benefit enormously from this arrangement, but programming and equipment management for new installations is equally efficient as a result of these shared resources. EST3X will accommodate up to three EST3 modules on its own rail assembly, giving it access to such proven EST3 successes as zoned amplifiers, conventional device circuits, modem communicators, and RS-485 functions. Meanwhile, installers familiar with EST3 configuration will find that the two systems share many of the same programming and diagnostic conventions.

Local and Remote Annunciation

Up to 30 R-Series LCD, LED annunciators and driver interface cards may be configured for each node on the EST3X network. No additional nodes are required for annunciation purposes. In addition, EST3X supports EST3 network annunciators, while GCI and GGIIX driver interface cards provide cost-effective graphic annunciation solutions. And all annunciator inputs and outputs are easily programmable through the rules and labels function of EST3X’s Software Definition Utility.

Power to Count On

Edwards’ patented Voltage Boost™ technology delivers a consistent 22.5 Vdc – even at low battery power. This means lighter gauge cable can be used for equivalent distances compared with conventional power supplies, or longer wire runs on the same gauge cable. Either way, this breakthrough technology saves time and equipment costs, making EST3X not only a high-performance solution — but a cost-effective one as well.

EST3X’s four on-board Notification Appliance Circuits are fully synchronized to UL 1971 standards — without the need for external modules or other electronics. It’s ample 10-amp power supply is finely tuned to get the most out of Edwards’ widely-acclaimed low profile Genesis notification appliances.

Dimensions

The backbox is designed for semiflush or surface mounting. Conduit and nail knockouts, keyhole style mounting holes, and wide wiring troughs facilitate efficiency during installation.

Note: Add 0.25 in (0.64 cm). to height and width dimensions to allow for knockouts when framing in the backbox for semiflush mounting.
System Layout

Up to six intelligent analog loops hosting as many as 250 devices each.

Four 3-amp Class B NACs. Four Class A NACs with CLA-PS10.

Wiring

Signature (initiating) Data Circuit

- To two-wire smoke detector
- Auxiliary power, +24 V
- Auxiliary power, common

If shielding is used, it must be continuous and free from earth ground.
All wiring is power limited.

Notification Appliance Circuits

- Wiring is supervised and power limited.
- TB2 terminal marking indicates signal polarity when the circuit is not active. Polarity reverses when the circuit is active.
- For proper circuit supervision, break the wire run at each notification appliance and install the EOL resistor at the end of the circuit.
- Do not loop wires around notification appliance terminals.

Network data circuit

- Ethernet (3X-ETH)
- RS-232
- Relays: 3 Form C
- Aux. Power: 24 VDC, 1.0 A total

Network data circuit, Class B audio

- To next network node

Network data circuit, Class A audio

- To next network node

Up to six intelligent analog loops hosting as many as 250 devices each.

Or...

UL Listed Signaling
UL Listed Life Safety Detection
UL Listed Security
UL Listed Mass Notification

EST3 Network... up to 64 nodes

Or...

UL Listed Signaling
UL Listed Life Safety Detection

EST3X Network... up to eight nodes
Main Component Assembly

EST3X systems are designed for quick assembly and easy access in the field. Components are modular and require no special tools to service or replace.

The 3-SFS1 Electronics Chassis provides the mounting, internal power, and data distribution for the SFS1-CPU main board and up to three local rail modules. It installs over the PS10-4B Power Supply.

SFS1-CPU Main Board

The SFS1-CPU main board processes all information from modules installed within the cabinet as well as data received from other panels over the network data riser. When a network card is installed, the CPU employs a command set to determine its type.

SFS1-CPU Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>24 VDC</td>
</tr>
<tr>
<td>Current</td>
<td></td>
</tr>
<tr>
<td>Standby</td>
<td>115 mA at 24 VDC</td>
</tr>
<tr>
<td>Alarm</td>
<td>115 mA at 24 VDC</td>
</tr>
<tr>
<td>Relay outputs</td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>3 (alarm, supervisory, and trouble)</td>
</tr>
<tr>
<td>UL type</td>
<td>Common</td>
</tr>
<tr>
<td>Contact arrangement</td>
<td>Form C</td>
</tr>
<tr>
<td>Rating</td>
<td>30 VDC at 1 A</td>
</tr>
<tr>
<td>AUX power outputs</td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>2</td>
</tr>
<tr>
<td>Voltage</td>
<td>24 VDC, resettable or continuous</td>
</tr>
<tr>
<td>Current</td>
<td>1.0 A each circuit, 1.0 A total</td>
</tr>
<tr>
<td>Data network (RS-485)</td>
<td></td>
</tr>
<tr>
<td>Nodes</td>
<td>2 to 64 (requires optional network card)</td>
</tr>
<tr>
<td>Performance class</td>
<td>Class A or Class B</td>
</tr>
<tr>
<td>Wire type</td>
<td>Twisted pair, 6 twists per foot, min.</td>
</tr>
<tr>
<td>Circuit length</td>
<td>5,000 ft. (1,524 m) between any three panels</td>
</tr>
<tr>
<td>Circuit resistance</td>
<td>90 Ω, max.</td>
</tr>
<tr>
<td>Circuit capacitance</td>
<td>0.3 μF, max.</td>
</tr>
<tr>
<td>Serial Port (RS-232)</td>
<td></td>
</tr>
<tr>
<td>Circuit length</td>
<td>20 ft. (6 m) max.</td>
</tr>
<tr>
<td>Circuit resistance</td>
<td>13 Ω, max.</td>
</tr>
<tr>
<td>Circuit capacitance</td>
<td>0.7 μF, max.</td>
</tr>
<tr>
<td>Annunciator port (RS-485)</td>
<td></td>
</tr>
<tr>
<td>Performance class</td>
<td>Class B and Redundant Class B</td>
</tr>
<tr>
<td>Baud rate</td>
<td>9600 and 38400</td>
</tr>
<tr>
<td>Wire type</td>
<td>Twisted pair, 6 twists per foot, min.</td>
</tr>
<tr>
<td>Circuit length</td>
<td>4,000 ft. (1,219 m)</td>
</tr>
<tr>
<td>Circuit resistance</td>
<td>90 Ω, max.</td>
</tr>
<tr>
<td>Circuit capacitance</td>
<td>0.3 μF, max.</td>
</tr>
<tr>
<td>Signaling line circuit</td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>2 (second SLC requires optional 3-SDC1 card)</td>
</tr>
<tr>
<td>Performance class</td>
<td>Class A or Class B</td>
</tr>
<tr>
<td>Circuit capacity</td>
<td>125 detectors, 125 single address modules</td>
</tr>
<tr>
<td>Circuit resistance</td>
<td>100 Ω, max.</td>
</tr>
<tr>
<td>Circuit capacitance</td>
<td>0.5 μF, max.</td>
</tr>
<tr>
<td>Wire size</td>
<td>18 to 12 AWG (0.75 mm² to 2.50 mm²)</td>
</tr>
<tr>
<td>Ground fault impedance</td>
<td>10 kΩ</td>
</tr>
<tr>
<td>Operating environment</td>
<td></td>
</tr>
<tr>
<td>Temperature</td>
<td>32 to 120°F (0 to 49°C)</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>0 to 93% noncondensing</td>
</tr>
</tbody>
</table>

Notes:
- For battery calculations, standby and alarm currents include all listed primary power supplies.
- The common trouble relay operation does not include AC trouble delay functionality and cannot be used for reporting troubles off premises per UL 864 9th edition.
PS10-4B Power Supply Card

The PS10-4B Power Supply Card provides the required power and related supervision functions for the control panel, as well as filtered, regulated power to the rail chassis modules. It also provides 24 VDC for operating ancillary equipment.

PS10-4B Specifications

Mains voltage 94 to 264 VAC, 50/60 Hz
AC Input Current
- Standby 1.5 amps
- Alarm 3.0 amps
Brownout level 93 VRMS
Battery charging capacity 65 Ah max.
Total Power Supply Ratings
- Voltage 24vdc
- Current 10 amps (UL), 9.0amps (ULC)
Notification appliance/Auxiliary power circuits
- UL rating Quantity 4
- Circuit configuration Class B
Output voltage Special: 24 Vdc
Regulated: 24 Vdc
Output current Special: 3 amps
Regulated: 1.5 amps
EOLR 15 kΩ (UL P/N EOL-15, ULC P/N EOL-P1)

4X-LCD User Interface

Included in the EST3X basic package, the 4X-LCD provides the user interface for the EST3X system. It connects to the SFS1-CPU main board with a ribbon cable, and attaches to the CPU via hinges. Only one display module is required to provide a point of control for the entire network. Additional displays can be added to any EST3X panel in the network to provide additional points of control.

4X-LCD Specifications

Operating current
- Standby 38 mA
- Alarm 50 mA
LCD display Backlit liquid crystal display 240 x 320 pixels 24 lines of 40 characters
Operating environment
- Temperature 32 to 120 °F (0 to 49 °C)
- Relative humidity 0 to 93% noncondensing

3-SDC1 Signature Data Circuit Card

Each 3-SDC1 Signature Data Circuit Card provides one Class A or Class B signaling line circuit (SLC1) that supports up to 125 Signature Series detectors and 125 Signature Series module addresses. These modules also provide connection for powering conventional two-wire smoke detector circuits on Signature Series modules.

EST3X comes standard with one 3-SDC1 card installed as SLC1. An optional second 3-SDC1 card may be installed to provide SLC2, thus doubling system signaling line capacity.

3-SDC1 Specifications

Voltage 24 VDC
Operating Current
- Standby 3-SSDC1 144 mA; 3-SDDC1 264 mA
- Alarm 3-SSDC1 204 mA; 3-SDDC1 336 mA
Smoke power 19.95 VDC max.¹
Circuit Configuration
- Class B, Style 4, DCLB; Class A, Style 6, DCLA
Capacity 125 Signature Series detectors and 125 Signature Series modules per SLC
Resistance 100 Ω with 250 devices
Capacitance 0.5 μF max.
Wire size 12 AWG (1.5 mm²) max.
Termination Removable plug-in terminal strips on the SFS1-CPU main board and Signature module
Operating environment
- Temperature 32 to 120 °F (0 to 49 °C)
- Relative humidity 0 to 93% noncondensing

¹For special applications, refer to EST3 ULI/ULC Compatibility Lists (P/N 3100427)

SFS1 LED Control/Display Module

The SFS1 LED Control/Display Module provides additional operator interface capability for the SFS1 system. It can be mounted on any of the three right-most local rail modules on the 3-SFS1 electronics chassis. Inserts are provided for labeling switches and LEDs.

SFS1 Specifications

Voltage 24 VDC
Operating current
- Standby 2.0 mA plus 1.5 mA for each active LED
- Alarm 2.0 mA plus 1.5 mA for each active LED
Operating environment
- Temperature 32 to 120 °F (0 to 49 °C)
- Relative humidity 0 to 93% noncondensing
3X-FIB8 fiber optic network module

The 3X-FIB8 fiber optic network module gives an EST3X panel the ability to network up to eight panels. Both Class A and Class B connections are supported. The module consists of the adapter card and electronics card.

The 3-FIBMB2 supports the following fiber optic transceivers:

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMXLO2</td>
<td>Standard output single mode fiber optic transceiver</td>
</tr>
<tr>
<td>SMXHI2</td>
<td>High output single mode fiber optic transceiver</td>
</tr>
<tr>
<td>MMXVR</td>
<td>Standard output multimode fiber optic transceiver</td>
</tr>
</tbody>
</table>

The 3X-FIB8 provides terminals for connecting a 24 VDC backup power source to maintain data transmissions in the event the panel is powered down.

Note: All networked panels must have the 3X-FIB8 network card installed.

3X-FIB8 Specifications

- **Voltage**: 19.2 to 27.6 VDC (24 VDC nominal)
- **Fiber optics network and audio Budget**
  - SMXLO2: 15 dBm between two interfaces
  - SMXHI2: 25 dBm max. and 8 dBm min. 10 dBm between two interfaces
  - MMXVR: 50/125, 62.5/125, or 100/140 for MMXVR
- **Network data circuit**
  - **Circuit configuration**: Class B (style 4) or Class A (style 7)
  - **Data rate**: 19.2 K, 38.4 kbps
  - **Isolation**: Isolated from previous panel CPU when using copper. Total isolation when using fiber optics.
- **Digitized audio data circuit**
  - **Circuit configuration**: Class B (style 4) or Class A (style 7)
  - **Data rate**: 327 kbps
  - **Isolation**: Isolated from previous panel CPU when using copper. Total isolation when using fiber optics.
- **Copper wired network data circuit segment**
  - **Length**: 5,000 ft. (1,524 m) max. between any three panels
  - **Resistance**: 90 Ω max.
  - **Capacitance**: 0.3 μF max.¹
  - **Wire type**: Twisted Pair, 18 AWG (0.75 mm²) min.
- **Copper wired audio data circuit**
  - **Length**: 5,000 ft. (1,524 m) max. between any 3 panels
  - **Resistance**: 90 Ω max.
  - **Capacitance**: 0.09 μF, max¹
  - **Wire type**: Twisted pair, 18 AWG (0.75 sq²) min.
- **Wire runs**
  - **Distance**: 200 ft. (60 m) max.¹
  - **Type Connector**: Cat 5
  - **Category**: RJ-45
  - **Operating environment**
    - **Temperature**: 32 to 120 °F (0 to 49 °C)
    - **Relative humidity**: 0 to 93% noncondensing
  ¹Include shield capacitance, if shielding is used.

3X-ETH1 Ethernet Adapter Card

The 3X-ETH1 adapter card provides a standard 10/100 Base-T Ethernet network connection for panel programming, diagnostics, and status monitoring. Four LEDs on the adapter card indicate card and network status.

3X-ETH1 Specifications

- **Ethernet**: 10/100 Base-T
- **Voltage**: 24 VDC
- **Operating current**
  - **Standby**: 44 mA at 24 VDC (54 mA when connected to an active Ethernet connection)
  - **Alarm**: 44 mA at 24 VDC
- **Connection mode**: Auto negotiation
- **Copper wired network data circuit segment**
  - **Length**: 5,000 ft. (1,524 m) max. between any three panels
  - **Resistance**: 90 Ω max.
  - **Capacitance**: 0.3 μF max.¹
  - **Wire type**: Twisted Pair, 18 AWG (0.75 mm²) min.
- **Copper wired audio data circuit**
  - **Length**: 5,000 ft. (1,524 m) max. between any 3 panels
  - **Resistance**: 90 Ω max.
  - **Capacitance**: 0.09 μF, max¹
  - **Wire type**: Twisted pair, 18 AWG (0.75 sq²) min.
- **Wire runs**
  - **Distance**: 200 ft. (60 m) max.¹
  - **Type Connector**: Cat 5
  - **Category**: RJ-45
  - **Operating environment**
    - **Temperature**: 32 to 120 °F (0 to 49 °C)
    - **Relative humidity**: 0 to 93% noncondensing
  ¹Panel to communication equipment

CLA-PS10 Class A Adapter Card

The CLA-PS10 Class A Adapter Card is an optional card used to convert the four Class B notification appliance/auxiliary power circuits on the power supply card to Class A.

CLA-PS10 Specifications

- **Voltage**: 24 VDC
- **Notification appliance/Auxiliary power circuits**
  - **UL rating**: Special application or Regulated
  - **Quantity**: 4
  - **Performance class**: Class A
  - **Output current**: Special 3.0 A; Regulated: 1.5 A each circuit
  - **EOLR**: 15 kΩ (UL P/N EOL-15, ULC P/N EOL-P1)
  - **Wiring**: Supervised, power-limited
  - **Wire size**: 18 to 12 AWG (0.75 mm² to 2.50 mm²)
  - **Operating environment**
    - **Temperature**: 32 to 120 °F (0 to 49 °C)
    - **Relative humidity**: 0 to 93% noncondensing
3X-NET Network Adapter Card

The 3X-NET network adapter card gives an SFS1-CPU main board the ability to network up to 64 nodes on an EST3 network. The card supports Class B and Class A wiring.

The 3X-NET adapter card provides two independent RS 485 circuits: one for network data communications and one for digital audio communications.

**3X-NET Specifications**

<table>
<thead>
<tr>
<th>Voltage</th>
<th>24 VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Current</td>
<td></td>
</tr>
<tr>
<td>Standby</td>
<td>98 mA at 24 VDC</td>
</tr>
<tr>
<td>Alarm</td>
<td>98 mA at 24 VDC</td>
</tr>
</tbody>
</table>
| Circuit configuration
| Network data | Class A, Style 6 & Class B, Style 4 |
| Network audio | Class A, Style 6 & Class B, Style 4 |
| Isolation
| Network data | Network A port not isolated; Network B port isolated |
| Network audio | Audio A IN and Audio B IN isolated; Audio A OUT and Audio B OUT not isolated |
| Wire size | Twisted pair 18 AWG (0.75 mm) min. |
| Circuit length | 5,000 ft. (1,524 m) between any three panels |
| Circuit resistance | 90 Ω max. |
| Circuit capacitance | Data: 0.3 μF max.; Audio: 0.09 μF max. |
| Operating environment
| Temperature | 32 to 120 °F (0 to 49 °C) |
| Relative humidity | 0 to 93% noncondensing |

*Six twists per foot minimum.

3X-NET8 network card

The 3X-NET8 RS-485 network card gives an SFS1-CPU main board the ability to network through dedicated copper wire up to eight EST3X control panels. The card supports Class B and Class A wiring.

**Note:** All networked panels must have a 3X-NET8 network card installed.

**3X-NET8 Specifications**

<table>
<thead>
<tr>
<th>Voltage</th>
<th>24 VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Current</td>
<td></td>
</tr>
<tr>
<td>Standby</td>
<td>98 mA at 24 VDC</td>
</tr>
<tr>
<td>Alarm</td>
<td>98 mA at 24 VDC</td>
</tr>
</tbody>
</table>
| Circuit configuration
| Network data | Class A, Style 6 & Class B, Style 4 |
| Isolation
| Network data | Network A port not isolated; Network B port isolated |
| Wire size | Twisted pair 18 AWG (0.75 mm) min. |
| Circuit length | 5,000 ft. (1,524 m) between any three panels |
| Circuit resistance | 90 Ω max. |
| Circuit capacitance | 0.3 μF max. |
| Operating environment
| Temperature | 32 to 120 °F (0 to 49 °C) |
| Relative humidity | 0 to 93% noncondensing |

*Six twists per foot minimum.

3X-PMI Paging Microphone Interface

The 3X-PMI Paging Microphone Interface provides controls for emergency voice/alarm communications. It consists of an audio mounting bracket, EAEC Emergency Audio Evacuation Controller card, audio enclosure, and paging microphone.

**3X-PMI Paging Microphone Interface Specifications**

<table>
<thead>
<tr>
<th>Voltage</th>
<th>24 VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Current</td>
<td></td>
</tr>
<tr>
<td>Standby</td>
<td>15.5 mA</td>
</tr>
<tr>
<td>Alarm</td>
<td>16.6 mA</td>
</tr>
<tr>
<td>Ground fault impedance</td>
<td>10 kΩ</td>
</tr>
<tr>
<td>Wire size</td>
<td>18 to 12 AWG (0.75 to 2.50 mm²)</td>
</tr>
<tr>
<td>Audio channels</td>
<td>8 simultaneous</td>
</tr>
</tbody>
</table>
| Audio inputs
| Local microphone | Isolated and supervised |
| Remote microphone | Isolated and supervised |
| Remote audio | Isolated and supervised |
| EAEC communication | See the EAEC Emergency Audio Evacuation Control Installation Sheet (P/N 3101789) |
| Messages
| Storage Length | 2 min. total |
| Controls and indicators
| Common
| Paging Volume | Indicates relative signal strength during active page |
| Ready To Page | Flashes during preannouncement tone, steady when ready to page |
| Paging Microphone
| All Call | Activates/deactivates page to all areas |
| All Call Minus | Activates/deactivates page to areas not receiving EVAC or Alert message |
| Page To Evac | Activates/deactivates page to areas currently receiving the EVAC message |
| Page To Alert | Activates/deactivates page to areas currently receiving the Alert message |
| Operating environment
| Temperature | 32 to 120°F (0 to 49°C) |
| Relative humidity | 0 to 93% noncondensing |

*Six twists per foot minimum.*
### Ordering Information

#### Intelligent Analog Control Panels

<table>
<thead>
<tr>
<th>Model</th>
<th>Door Color</th>
<th>Language</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3X-SFS1B</td>
<td>Bronze</td>
<td>English</td>
<td>FACP, complete system with user interface, CPU, one loop with second loop expansion, three option card slots, four Class B NAC, universal 110/220V 10 amp power supply. Order 3-SDC1 for second loop.</td>
</tr>
<tr>
<td>3X-SFS1R</td>
<td>Red</td>
<td>Selectable</td>
<td></td>
</tr>
<tr>
<td>3X-SFS1Bi</td>
<td>Bronze</td>
<td>English</td>
<td></td>
</tr>
<tr>
<td>3X-SFS1Ri</td>
<td>Red</td>
<td>Selectable</td>
<td></td>
</tr>
</tbody>
</table>

#### Network communication option cards

- **3X-NET8**: RS485, eight node max. Class B wiring. Use on 3-SFS systems only.
- **3X-FIB8**: Fiber, 8 node max. Uses MMXVR, SMXHI2, SMXLO2. Use on 3-SFS systems only.
- **3X-NET**: RS485, Class B wiring. For connection to EST3 systems.
- **3-FIBMB2**: Fiber Optic Communications Interface (requires one or more transceivers).

#### Communication Options

- **3X-ETH1**: Ethernet Adapter, 10/100. Provides Ethernet connection from system to 3-SDU for programming and diagnostics remotely. Uses standard Ethernet cable (not supplied).

#### Front Panel LED/Switch display modules

- **4X-12/S1GY**: LED Display/Control Module - 12 Switches, 1 Green, 1 YELLOW LED per switch.
- **4X-12/S1RY**: LED Display/Control Module - 12 Switches, 1 RED, 1 YELLOW LED per switch.
- **4X-12SR**: LED Display/Control Module - 12 Switches with 12 RED LEDs.
- **4X-24R**: LED Display Module - 24 RED.
- **4X-6/3S1G2Y**: LED/Switch Module - six groups of three switches with one LED each.
- **4X-6/3S1GYR**: LED/Switch Module - six groups of three switches with one LED each.
- **4X-4/3SGYWR**: LED/Switch Module, four groups of three switches and four LEDs. LED colors: Green, Red, Yellow and White.

#### Option Cards and Interfaces

- **3X-PMI**: Paging Microphone Interface
- **3-SSDC1**: Single Signature Driver Controller, c/w one 3-SDC1
- **3-SDDC1**: Dual Signature Driver Controller, c/w two 3-SDC1s
- **3-ZA20A**: 20 Watt Zoned Amplifier w/Class A/B Audio & Class A/B 24 VDC outputs
- **3-ZA20B**: 20 Watt Zoned Amplifier w/Class B Audio & Class B 24 VDC outputs
- **3-ZAM40A**: 40 Watt Zoned Amplifier w/Class A/B Audio & Class A/B 24 VDC outputs
- **3-ZAM40B**: 40 Watt Zoned Amplifier w/Class B Audio & Class B 24 VDC outputs
- **3-MODCOM**: Modem/Dialer (DACT)
- **3-MODCOMP**: Modem/Dialer (DACT) w/TAP Pager Protocol
- **3-AADC1**: Addressable Analog Module
- **3-IDCB/4**: Initiating Device Circuit Module
- **3-OPS**: Off Premises Signaling module
- **CDR-3**: PSNI Coder Module

#### Accessories

- **CLA-PS10**: Class A Adapter, PS10 NAC’s
- **PS10-4B**: Power Supply, Replacement
- **SFS1-ELEC**: Base Electronics, replacement
- **4X-LCD**: Main user interface assembly, monochrome. Eight line 1/4 VGA LCD, four controls plus rotary knob. English language.
- **4X-LCD-LC**: Main user interface assembly, monochrome. Eight Line 1/4 VGA LCD, four controls plus Rotary knob. Insertable language, shipped with English inserts. Order alternate languages separately.
- **4X-CAB6D**: Replacement door, gray
- **4X-CAB6DR**: Replacement door, red
- **4X-CAB6B**: Backbox, black
- **TRIM6**: Flush trim ring

### Related Data Sheets

- 85001-0129 -- Signature Driver Controller Modules
- 85001-0057 -- EST3 Zoned Audio Amplifiers
- 85001-0107 -- EST3 Modern Communicator
- 85010-0131 -- Fiber Optic Communications Interface
- 85010-0113 -- Network Short Haul Modem
- 85005-0128 -- R-Series Remote Annunciators

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