


# SIEMENS SXL-EX

Cerberus Division

## Conventional Zone Fire Alarm Control Panel

### ENGINEER AND ARCHITECT SPECIFICATIONS

- 4 Zones — Expandable to 8 Zones
- Series 3 and Series 11 Compatible Detectors and Accessories
- Microprocessor Based Control
- Factory Programmed — Field Configurable
- 2 Style Y Notification Appliance Circuits
- 3 Amps Notification and Auxiliary Power
- 24 and 60 Hour Battery Backup
- 8 Form 'C' Relay Output Option
- 220/240 VAC, 50 HZ Power Supply Option
- Remote Serial Annunciator Option
- Sprinkler Supervisory Service
- Non-Silenceable Bell Service
- Alarm Verification by Zone
- One Person Test Feature
- Zone/Output Bypass Feature
- Subsequent Alarm and Trouble with 24 Hour Reminders
- Alarm, Trouble and Supervisory Last Event Records
-  Listed, ULC Listed, CSFM Approved



### Introduction

The Cerberus Pyrotronics SXL-EX is the next member in a family of products designed to provide cost effective, reliable life safety equipment to the fire alarm market. The microprocessor based fire alarm control panel is supplied with four conventional zones and is expandable to eight. It has many features required by today's demanding market such as field programmability, power limited circuits, one person test, remote annunciation and sufficient power to meet ADA requirements for signaling.

The SXL-EX is designed to meet the varied fire alarm needs of small office buildings, apartment buildings, department stores, hotels, strip malls or anywhere a cost efficient, general purpose fire alarm control panel is required.

Additionally, the SXL-EX can be used to supply remote bell power for larger systems such as MXL.

### Description and Features

#### Initiating Circuits

The base SXL-EX has four conventional, Style B (Class B) zones which are typically compatible with the DI-3\* ionization detector, the PE-11\* photoelectric detector and PE-11T\* photo-thermal detector, Cerberus Pyrotronics' thermal, flame and beam detectors and the MS Series of manual stations. (Please refer to the detector compatibility list in the wiring diagram for specific compatibility questions).

Any combination of 30 compatible smoke detectors can be combined on a zone. Any number of thermal detectors, manual stations or other compatible direct shorting devices may be connected to each zone. All of these initiating devices can be mixed on the same zone providing the total power requirement of the zone does not exceed 9 mA supervisory current. The SXL-EX has the

(\*In Canada the DI-3C, PE-11C & PE-11TC, respectively)

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additional capacity to support detector accessories such as relays, remote alarm lamps and audible bases.

Initiating zones can be programmed for many functions. Alarm verification allows detector application in sensitive areas with or without manual stations mixed on the zone as allowed by code. Manual station operation shall not be delayed on verified zones. Generic zone function allows the NAC's in the SXL-EX to follow the action of a master fire alarm panel in the facility.

Initiating zones can also be bypassed as required for example during construction on the premises.

The system is expanded through the model SZE-4X expander which has an additional four initiating circuits in addition to relays and open collector outputs.

The system can alternately be expanded through the model SZE-8AX expander module which has an additional four Class A (Style D) initiating circuits. The SZE-8AX also converts the four initiating circuits and the two notification circuits on the main SXL-EX to Style D (Class A) and Style Z (Class A) respectively.

### **Notification Appliance Circuits**

The base SXL-EX has two Style Y (Class B) Notification Appliance Circuits, each rated at 1.5 Amps. The total power output of the panel, between the two notification circuits and the auxiliary output, is limited to 3 Amps. The SXL-EX notification circuits are power limited to reduce installation costs without the addition of any hardware. Three (3) Amps is sufficient to provide power for many applications requiring appliances designed to ADA specifications.

Notification Circuits can be programmed for various codes. These include temporal, march time, simplified zone code, and number of rounds. They can also be inhibited during test and programming functions.

The two circuits can be individually programmed as non-silenceable. This steady operation can be used for strobes which must continue operation after audible devices are silenced.

### **Relays and Outputs**

The base SXL-EX has four "C" relays for general alarm and trouble rated at 1 Amp., 30 VDC. The model SZE-4X optional expander module has an additional four general purpose, programmable relays rated at 2 Amps., 30 VDC, plus four programmable open collector outputs.

Additionally, the model SRC-8 relay module provides eight general purpose, programmable relays rated at 2 Amps., 30 VDC/120 VAC. All remote operations in the fire alarm system are controlled from the SZE-4X or the SRC-8, both of which are installed within the SXL-EX enclosure.

### **Visual and Audible Indicators**

The SXL-EX has visible LED annunciation by zone for alarm and trouble. Additionally, there is a system alarm LED and a system trouble LED. Supervisory zones utilize the zone trouble LED flashing in sync with a system supervisory LED to indicate an off normal situation.

Clustered with the system alarm, trouble and supervisory LEDs are also LEDs for AC power, bypass and test/program mode. A seven segment display reports a code for each system trouble and is also used during testing and programming functions. Trouble conditions are also annunciated by a piezo-electric sounder housed inside the SXL-EX.

Remote annunciation is accomplished through a serial connection with the model LED-3 or LED-4, eight zone LED annunciators. These units display alarm, supervisory and trouble conditions for 8 zones. A total of two modules can be attached to each system. The LED-3 comes with a black enclosure, the LED-4 with a white enclosure.

### **Auxiliary Power**

The SXL-EX contains a 1/2 Amp. auxiliary power circuit which is used to drive remote devices. The total power of the panel, between the auxiliary output and the two notification circuits, is 3 Amps.

### **Power Supply/Battery Charger**

The power supply accepts a 120 VAC/60 Hz input or, optionally, a 220/240 VAC 50 Hz input. On loss of AC power the system switches to battery operation and indicates such by flashing the AC power LED on the display. Battery capacities of 24 and 60 hours are available. See accompanying chart for model numbers and details.

### **Manual Controls**

The SXL-EX display has four switches for acknowledging alarm, supervisory and trouble conditions; silencing notification appliance circuits; resetting the system; and for the drill function. These switches are also used when programming the control unit.

### **Field Programmability and Test Functions**

The following functions are field programmable in the SXL-EX. These features are generally not programmed in the unit as received from the factory. Field programming is accomplished through the display and does not require the use of a computer or any proprietary tools.

#### *Initiating Circuits*

Alarm Verification by Zone, Zone Bypass, Supervisory Zone or Generic Zone when the SXL-EX is to be used to provide remote notification appliance circuits.

**(Note: The default mode is an alarm causing zone.)**

#### *Notification Appliance Circuits:*

Non-silenceable, Simple Zone Coding, March Time, Temporal, Silence Inhibit, Cutoff Timers and Reminders.

**(Note: The default mode is a steady signal.)**

#### *Outputs:*

Bypass Outputs/Relays.

#### *System Programming:*

Zone to Output Matrix and Password Maintenance.

System tests features include the One Person Test feature, a Lamp Test, Search and Clear of the alarm, trouble and supervisory history buffer.

## Engineer and Architect Specifications

The fire alarm control panel shall be a Cerberus Pyrotronics SXL-EX, shall utilize conventional zones, shall be microprocessor based and fully field programmable. The base panel shall include four initiating zones, relays for general alarm and trouble and two power limited notification circuits capable of a total of 3 Amps of power.

The system shall be expandable via a model SZE-4X expander module which contain an additional four conventional zones, four general purpose relays and four general purpose open collector outputs.

The fire alarm system shall have the following features: subsequent alarm and trouble, one person test feature, brown out protection, 24 or 60 hour battery backup. It also has the following selectable features: supervisory

zones, alarm verification by zone, non-latching zones, alarm, trouble and supervisory history, notification appliance circuit coding, alarm/trouble 24 hour reminder, and zone/output bypass.

Any initiating device circuit shall have the capability of being mapped to any optional output via the system programming function.

The fire alarm control panel shall be UL/ULC listed and meet the requirements of NFPA 72 for local fire alarm control for automatic or manual service, and for sprinkler supervisory and waterflow service.

It shall meet NFPA 72 requirements for central station service when connected to the model 5128 or 5129 digital fire communicator.

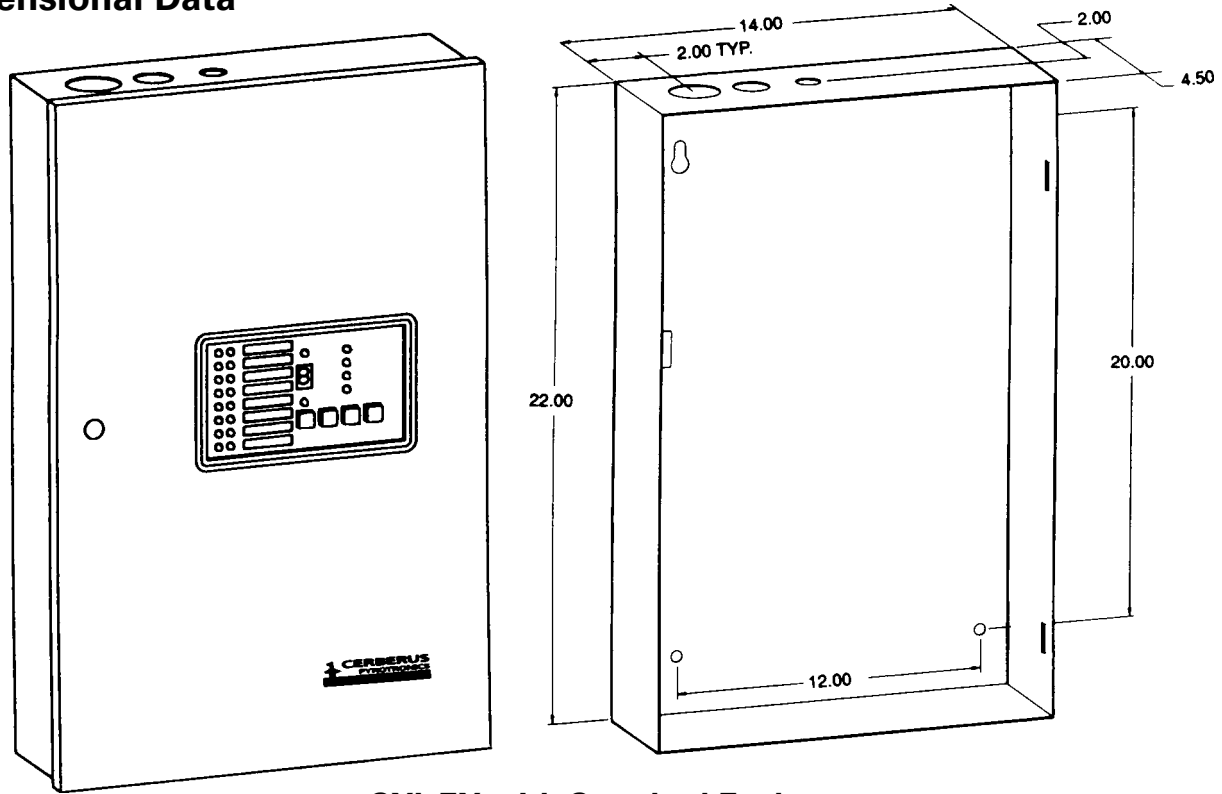
## Ordering Information

Model Number	Part Number	Description
SXL-EX	599-696000	4-Zone Fire Alarm Panel
SZE-4X	500-696006	4-Zone Expander Module
SZE-8AX	500-696007	Class "A" Expander Module
SRC-8	500-692972	8 Output Relay Module
SLT-1	500-093285	Municipal Tie/Leased Line Module
<b>Optional Assemblies</b>		
SXL-EX-DF	599-696005	4-Zone Fire Alarm Panel w/ Dead Front Construction
SXL-EX-RED	599-696004	4-Zone Fire Alarm Panel w/ Red Enclosure
SXL-EX-INT	599-696010	4-Zone Fire Alarm Panel, 220/240 VAC 50 Hz
<b>Accessory Items</b>		
LED-3	500-693062	Remote Annunciator - Black
LED-4	500-693317	Remote Annunciator - White
MM-SX	500-696008	Meter Module
FT-SX	500-695890	Semi-Flush Trim Kit
<b>Batteries</b>		
BT-33	175-387141	6 AH Battery Set
BT-34	175-387140	10 AH Battery Set
BP-61*	175-389194	15 AH Battery Set

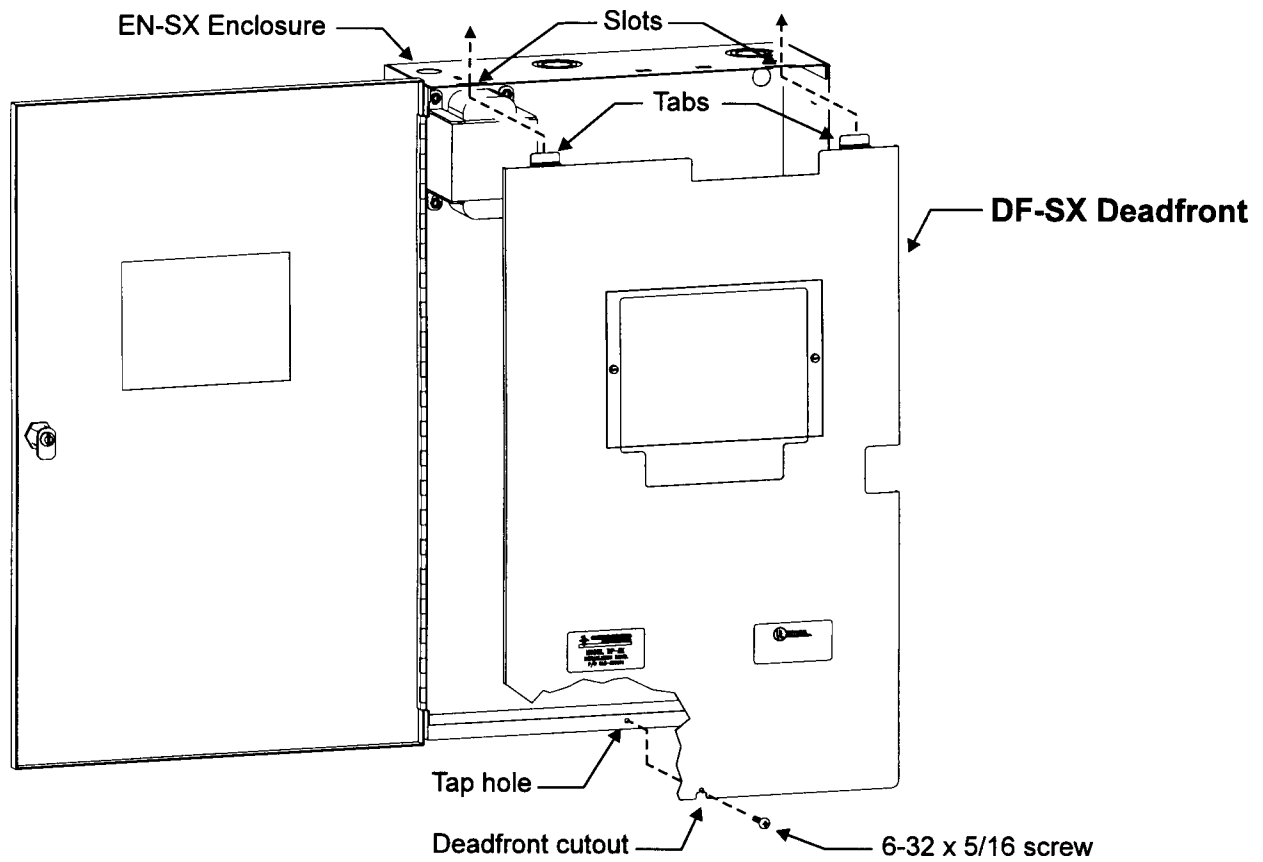
\* BP-61 requires a separate enclosure, such as the BB-55.

Note: *SXL-EX Operation Installation and Maintenance Manual* is P/N 315-095999. See Catalog Number 7907 for SZE-4X. See Catalog Number 7902 for SRC-8. See Catalog Number 7903 for LED-3 and LED-4. See catalog number 7905 for SLT-1.

# Dimensional Data



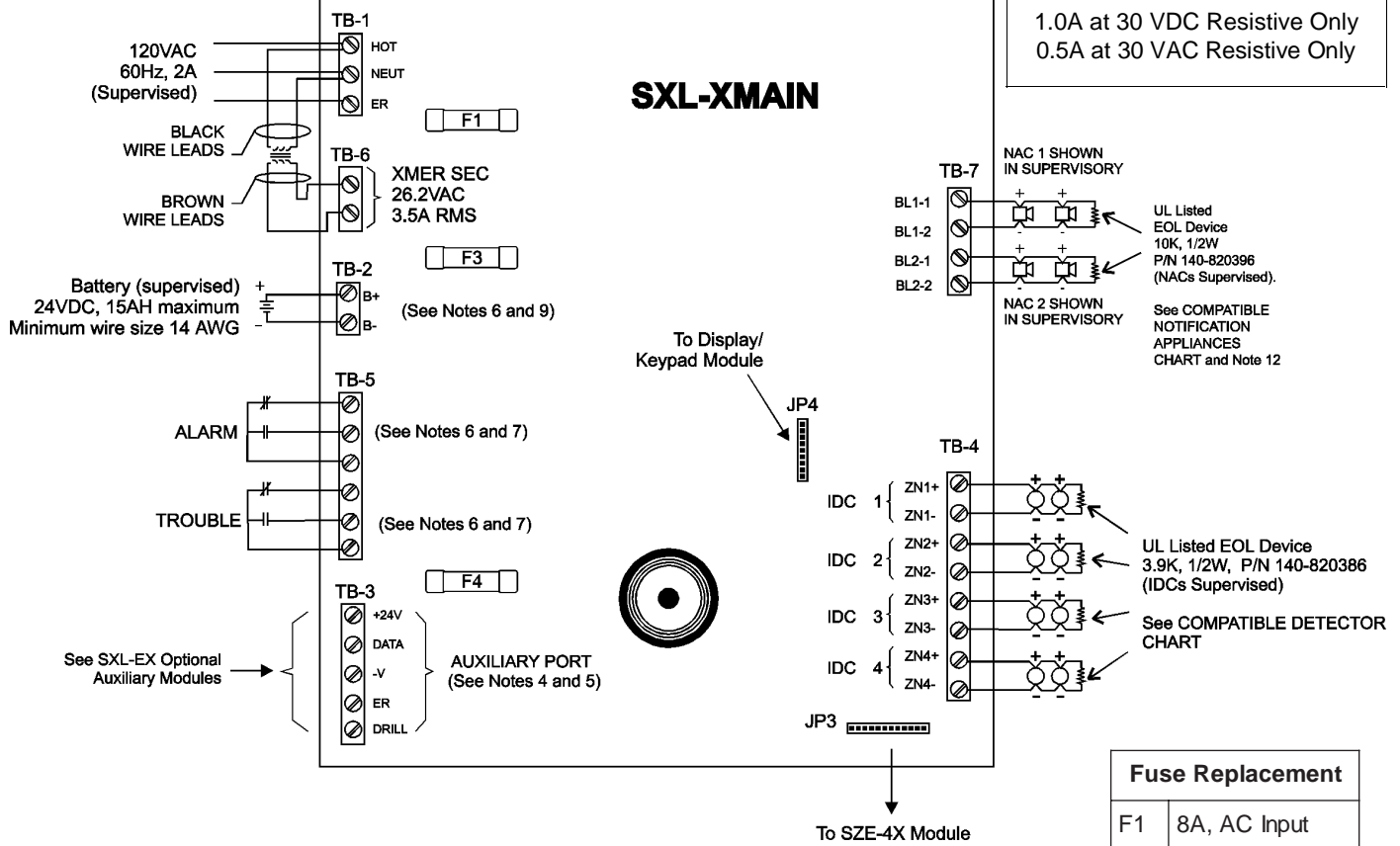
**SXL-EX with Standard Enclosure**



**SXL-EX with Dead Front Enclosure**

# SXL-EX Main Board Connection Diagram

For 220V/240V Power Supply Option, refer to instruction P/N 315-092669.



Fuse Replacement	
F1	8A, AC Input
F2	15A, Batteries
F3	.75A, AUX Port

## Compatible Notification Appliances

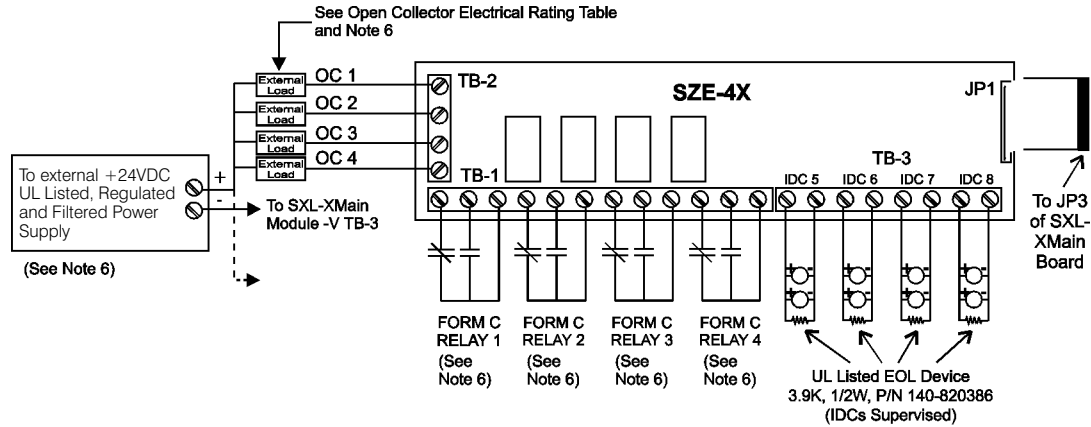
Chime/Strobes	Vibrating Bells	Electro-Mech. Horn/Strobes		Single Stroke Bells	Strobes
U-EC-S17 U-EC-S75 U-EC-S110	BE-F/LC BF-F/LC BS-F/LC BT-F/LC	U-HN-S17 U-HN-S75 U-HN-S110	U-HNH-S17 U-HNH-S75 U-HNH-S110	BE-SS BF-SS BS-SS BT-SS	U-S17 U-S75 U-S110
Bell/Strobe Plate	Sync. Strobes	Synchronizing Control Module	Sync. Bell/Strobe Plate	Sync. Electro-Mech. Horn/Strobes	Chimes
U-S17-6060H/6090V U-S75-6090V U-S110-6090V	U-S17S U-S75S	DSC DSC-W	U-S17S U-S75S	U-HN-S17S U-HN-S75S U-HN-S17S U-HN-S75S	U-EC
Mini-Horns		Sync. Mini-Horns	Electro-Mech. Horns	Tri-Tone Horns	Suffixes
U-MH-1G/1GW U-MH U-MH-S17 U-MH-S75 U-MH-S110	U-MHT-1G/1GW U-MHT U-MHT-S17 U-MHT-S75 U-MHT-S110	U-MHST-1G/1GW U-MHST U-MHST-S17 U-MHST-S75S	HN-C/EP/F/S HNH-C/EP/F/S	SEA TTH	C = Ceiling EP = Explosion Proof G = Gang Mount H = Horizontal LC = Low Current SS = Single Stroke U = Universal Mount V = Vertical W = White
Mini-Horns/Strobes 8-Tone			Sync. Mini-Horns/Strobes 8-Tone		
U-MMT-1G/1GW U-MMT U-MMT-S17 U-MMT-S75 U-MMT-S110			U-MMT-S17S U-MMT-S75S		

The DSC Synchronizing Control Module must be used with these modules to synchronize the strobes.

## NOTES:

- All field wiring must be in accordance with NFPA 70, Article 760.
- Make no wiring connections while the System is powered.
- Alarm Relay Contacts are shown de-energized and Trouble Relay Contacts are shown energized. Suitable for resistive load only.
- Auxiliary output rated 0.5 amps at +24 VDC filtered. Maximum line impedance of 5 ohms.
- Combined current output for NAC1, NAC2, and auxiliary outputs is limited to 3.0 amps.
- Equipment connected to these terminals must be located within the same room.
- Refer to the **SXL-EX Operation, Installation, and Maintenance Manual**, P/N 315-095997, for further details.
- No T-Tapping allowed.
- Connect standby batteries only to terminals B+ and B-. The batteries may be installed in either the bottom of the cabinet or in a UL listed battery enclosure.
- In all cases the Cerberus Pyrotechnics model number is the compatibility identifier, including the control panel, module(s), and all compatible initiating devices.
- When using the SLT-1 module, not suitable for remote station protected premises service where separate transmission circuits are required for fire, supervisory, and trouble signals.
- All power limited wiring requires separation from non-power limited wiring. Refer to the **SXL-EX Power Limited Wiring Instructions**, P/N 315-095994.

# SZE-4X Connection Diagram



See COMPATIBLE DETECTOR CHART and INITIATING DEVICE CIRCUIT ELECTRICAL RATINGS

INITIATING DEVICE CIRCUIT ELECTRICAL RATINGS	
Voltage:	16.4-26.4 VDC
Supervisory Current:	9mA (max)
Alarm Current:	120mA (max)
Maximum line impedance of 25 ohms per IDC zone.	
All IDC zones are supervised and power limited per NFPA 70, Article 760.	
Each IDC zone must use at least 18 AWG, 300V insulation, color coded wire for low voltage circuits where local codes require conduit. Where local codes permit, use limited energy shielded cable rated at 300V.	
Each IDC zone will support one initiating device in alarm. The IDC zone compatibility is an unlimited number of shorting type devices. For smoke detector compatibility, see the Compatible Detectors chart.	

COMPATIBLE DETECTORS			
Detector	Quantity per Loop	Base	Installation Instructions Part No.
DI-3/3H	30	DB-3S	315-081943-1
DI-A3/A3H	30	DB-3S	315-081943-1
DI-B3/B3H	30	AD-3I	315-093234-3
DT-3P-135	30	DB-3S	315-084401-5
DT-11	30	DB-11 DB-3S with DB-ADPT	315-095429-1 315-095429-1
PB-1191A	1	PB-1191B	315-095424-2
PE-3/3T	30	DB-3S AD-3ILP	315-090875-6 315-093234-3
PE-11/11T	30	DB-11 DB-3S with DB-ADPT	315-094198-5 315-094198-5

NOTIFICATION APPLIANCE CIRCUIT ELECTRICAL RATINGS	
Voltage:	24 VDC
Supervisory Current:	1.5mA (max)
Alarm Current:	1.5A (max)
Each NAC rated at 1.5A, +24 VDC.	
Maximum line impedance per circuit of 3.0 ohms.	
All NACs are supervised.	
Each NAC must use at least 14 AWG, 300V insulation, color coded wire.	
All NACs are power limited per NFPA 70, Article 760 for non-coded applications.	

SZE-4X FORM C RELAY ELECTRICAL RATINGS
2.0A at 30 VDC Resistive Only 0.5A at 30 VAC Resistive Only

OPEN COLLECTOR ELECTRICAL RATINGS
50mA (max) at 26.4 VDC (max)