Wiring Diagram

This wiring diagram describes circuit connections for all models of the Sigma ZXT UL Releasing Fire Control Panel.

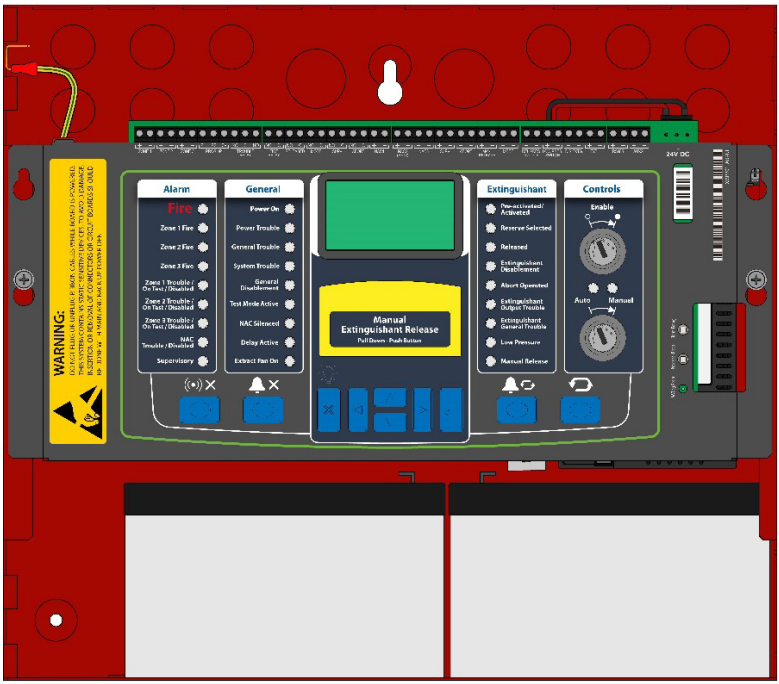
The operation of this product is intended for indoor use only.

Contents	Page
Front View, Wire Gauge and Related Documentation.....	2
Connection Diagram.....	3
Main Supply Circuit	4
Rechargeable Battery Circuit	5
Ground Fault Indications	7
Power Output Circuits	8
Limited-Energy Circuits	8
Supervised Circuits	8
Initiating Device Circuit	9 - 10
Notification Appliance Circuit	11 -14
Releasing-Device Circuits	14
Wiring Diagrams	15 -16
Status Units (Data and Power)	17
Relay Circuits	18
AUX 24V	18

Part Number: Man-1459
Revision 1, Date: March 2026

Front view, wire gauge and related documentation of the Sigma ZXT UL releasing fire control panel

Front View



Wire Gauge

Connect 18 to 14 AWG wiring for all field terminations except the AC input. Connect 14 AWG wiring for line, neutral and ground terminations of the AC input.

Related Documentation

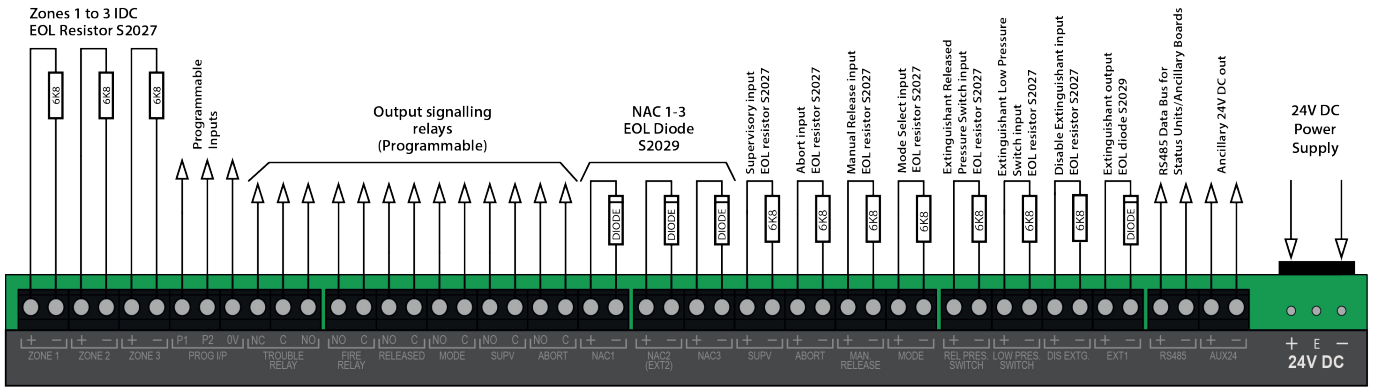
The following documents shall be used to provide additional information for installing and operating the Sigma ZXT UL Releasing Fire Control Panel:

- Installation and Operation Manual, Man-1456, Rev. X.XX
- Operating Instructions, Man-1457, Rev. X.XX

Part Number: Man-1459
Revision 1, Date: March 2026

Part Number: Man-1459
Revision 1, Date: March 2026

Connection Diagram
Of the Elite XT UL/ Sigma ZXT UL Releasing Fire Control Panel



Main Supply Circuit

Line Connection

S420 2.6A Power Supply

Terminal	Description	Voltage
L	**AC Line**	**110-240VAC @ 50 / 60Hz**
N	**AC Neutral**	
G	**Earth-Ground**	

S406 5.25A Power Supply

Terminals	Description	Voltage
L	AC Line	115 VAC @ 50 / 60Hz
		230 VAC @ 50 / 60Hz
N	AC Neutral	
G	Earth-Ground	

Power Supply

Rating		115 VAC - 125 VA 230 VAC - 126 VA

AC Input Fuse	S420 (2.6A)	T2.0A 20mm, 250V AC HRC
	S406 (5.25A)	T3.0A 20mm, 250V AC HRC
Input (Supervised)	S420 (2.6A)	110 – 240VAC @ 50Hz supervised
	S406 (5.25A)	115VAC @ 50/60Hz supervised
		230VAC @ 50/60Hz supervised
Transfer Voltage	S420 (2.6A)	90 VAC
	S406 (5.25A)	115 VAC transfer @ 90 VAC, 230 VAC transfer @ 180 VAC

Rechargeable Battery Circuit

Standby-Battery Type	**Small Enclosure**	Two 12 VDC, 7AH, sealed lead acid, batteries , flame retardant UL94:V-0
	Large Enclosure	Two 12 VDC, 17AH, sealed lead acid, batteries , flame retardant UL94:V-0
Standby-Battery Charging		Two standby batteries wired in series

Charge Current	S420 (2.6A)	600mA
	S406 (5.25A)	1.25A
Standby-Operating Time		24 Hours

Battery Charge Voltage		27.6 VDC
Max current draw from batteries in Mains fail	S420 (2.6A)	110 mA with buzzer sounding
	S406 (5.25A)	140mA with buzzer sounding
Maximum Current Draw of FACP, In Alarm (not including load from NACs, Solenoid, Status Units, Ancillary Boards or other Auxiliary equipment)	S420 (2.6A)	210mA
	S406 (5.25A)	260mA
Maximum Current Draw From Batteries	S420 (2.6A)	2 Amps
	S406 (5.25A)	5.5 Amps

Caution

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DDISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS

Ground Fault Indications

A ground fault indication occurs when 30K Ohms or less exists between earth-ground and the following field terminals of the Sigma ZXT UL Releasing Fire Control Panel:

- AUX 24V
- NAC 1, NAC 2 and NAC 3
- ZONE 1, ZONE 2, ZONE 3
- MODE
- MAN RELEASE
- ABORT
- REL. PRES. SWITCH
- EXTING.
- LOW P. SWITCH
- RS485
- PROG IP terminals P1, P2, 0V
- SUPV
- DIS EXTG

Power Output Circuits

Special application outputs are provided on the following terminals of the Sigma ZXT UL Releasing Fire Control Panel :

- NAC 1
- NAC 2
- NAC 3
- AUX 24V
- EXTING

Limited Energy Circuits

All circuits of the Sigma ZXT UL Releasing Fire Control Panel are power limited except AC input and battery.

Supervised Circuits

All circuits of the Sigma ZXT UL Releasing Fire Control Panel are supervised except programmable inputs P1 and P2, and all relay output contacts.

Initiating Device Circuit

Initiating Device Circuits are Class B, Style C

Terminals

ZONE 1 **ZONE 2** **ZONE 3**	- Supervised input - Open circuit voltage (MAX): 21.6 VDC - Short circuit current (MAX): 65 mA - EOL resistor S2027, 6.8K Ohm - Trigger resistor S2051, 470 Ohm - Maximum line impedance: 20.3 Ohms - Authorized initiating devices are two-wire smoke and closed-contact-type detectors. Refer to Compatible Devices section.
SUPV. **ABORT** **MAN. RELEASE** **MODE SELECT** **REL. PRESS. SWITCH** **LOW PRES.SWITCH** **DIS.EXTG.**	- Supervised input - Open circuit voltage (MAX): 5.7 VDC - Short circuit current (MAX): 5 mA - EOL resistor S2027, 6.8K Ohm - Trigger resistor S2051, 470 Ohm - Maximum line impedance: 20.3 Ohms

Pull stations authorized for use with the Sigma ZXT UL Releasing Fire Control Panel are non-addressable and UL listed.

Initiating Device Circuit

Programmable Inputs P1 &P2	- Unsupervised input - Activate when connected to "0V" - Open circuit voltage (MAX): 3.5 VDC - Short circuit current (MAX): 0.35 Ma - Maximum line impedance: 100 Ohms

Notification Appliance Circuit

Polarized Appliance Requirement	NAC outputs of the Sigma ZXT UL Releasing Fire Control Panel accept devices that are polarized only. A trouble condition is reported when non-polarized NAC devices are connected to these NAC outputs. Field connections must include symbol-markings for plus (+) and minus (-) on all polarized appliance terminations.

Connection	Rating
NAC 1 **NAC 2** **(NAC Output)** **NAC 3**	- Supervised NAC Output - Wiring Class: B - EOL device: S2029, 1N4004 EOL diode - Output Voltage: 21 to 28 VDC - Output Current Rating: 500 mA (MAX) - Fuse: Electronic, self-resetting - Supervision: Voltage reversing DC - Short Circuit Threshold: 800 Ohms +/-20% - Open Circuit Threshold: 220 Ohms +/- 20% - Maximum Wiring Loss: 3 Volts
Exting (EXT1) **NAC2 (EXT2 Releasing Output)**	- Supervised Releasing Output - Wiring Class: B - EOL device: S2029, 1N4004 EOL diode - Output Voltage: 21 to 28 VDC - Output Current Rating: 1000 mA (MAX) - Fuse: Electronic, self-resetting - Supervision: Voltage reversing DC - Short Circuit Threshold: Settable through calibration - Maximum Line Impedance: 3 Ohms (or less as may be required to ensure device operation.)

Notification Appliance Circuit

NAC Synchronization

The Sigma ZXT UL Releasing Fire Control Panel supports NAC device synchronization across all NAC outputs for any one of the following brands:

- Potter/Amseco
- Gentex
- System Sensor
- Cooper/Wheelock

No synchronization modules are required.

Maximum Current

All NAC outputs can supply their rated maximum load (up to 1.5 Amps total) as long as such loading does not result in overloading the power supply.

Notification Appliance Circuit

The following statements for NAC synchronization are necessary for UL qualification and exclude device-loading combinations that are common in most FACP installations:

Potter/ Amseco	As a special application circuit, each NAC output can power any combination of Potter/Amseco horns / strobes up to a total load of 500 mA.
Gentex	As a special application circuit, each NAC output can power any combination of Gentex horns / strobes up to a total load of 500 mA..
System Sensor	As a special application circuit, each NAC output can power any combination of System Sensor horns / strobes up to a total load of 500 mA.
Cooper/ Wheelock	As a special application circuit, each NAC output can power any combination of Cooper/Wheelock horns / strobes up to a total load of 500 mA.

Reference manufacturer data sheets for individual device loads and then total the loads to determine if the sum exceeds the 500mA threshold of each NAC output.

Releasing Device Circuits

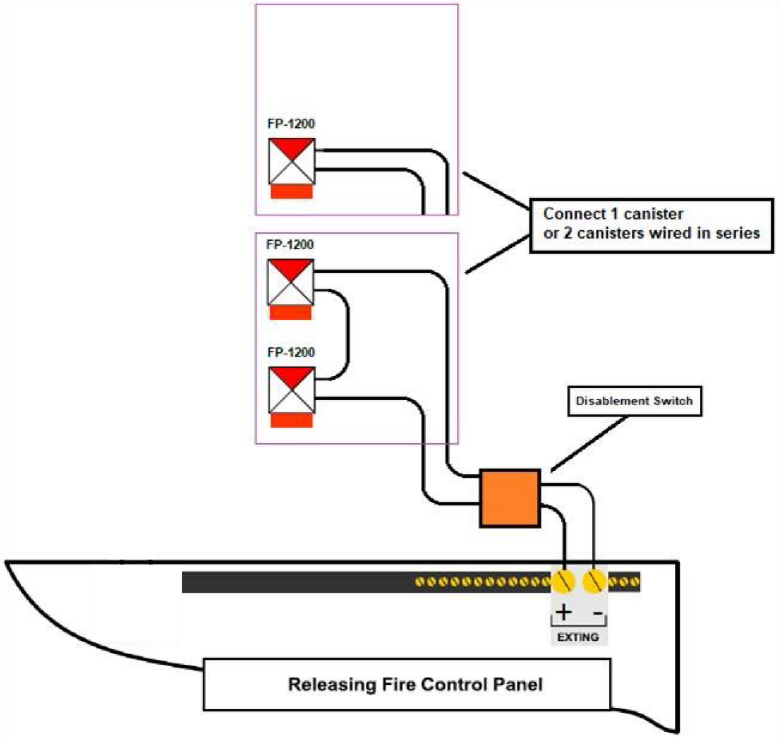
EXTING and EXT2 are the releasing device circuits

Authorized Releasing Valves

Refer to the panel's Installation & Operation Manual, Man-1456, for a list of Fire Protection Service Valves authorized for use on the releasing outputs of this Panel.

Wiring Diagrams

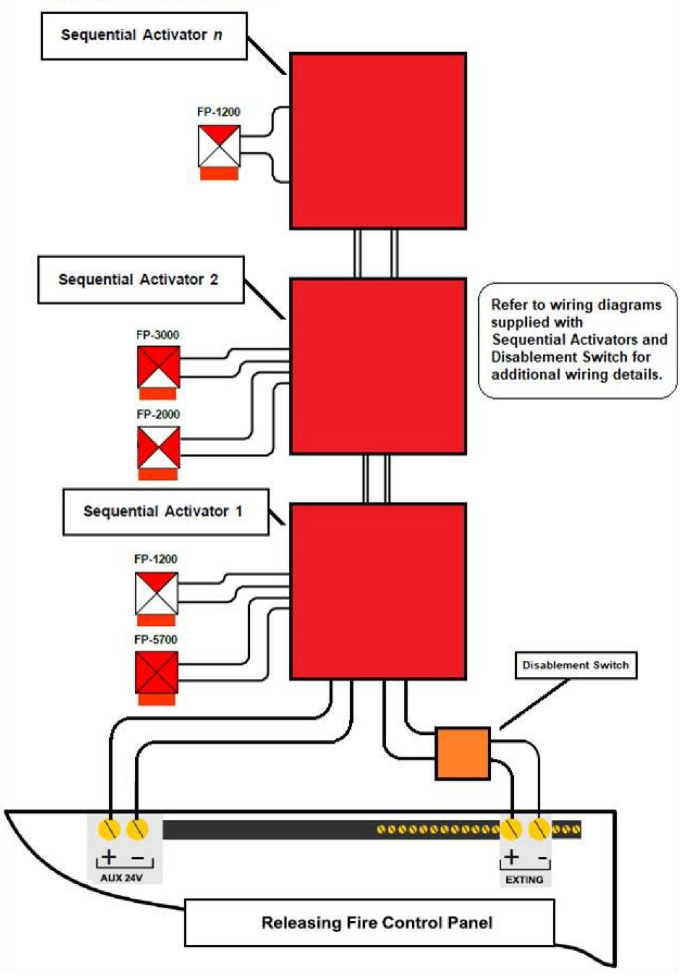
Extinguisher connections



Refer to the panel's Installation & Operation Manual, Man-1456, for a list of approved Aerosol Extinguishing accessories authorized for use on the releasing outputs of this Panel

Wiring Diagrams (continued)

Sequential activator connections



Refer to the panel's Installation & Operation Manual, Man-1456, for a list of approved Sequential Activator accessories authorized for use on the releasing outputs of this Panel

Status Units (Data and Power)

Data

RS485 Serial Bus	Two-wire RS485, Maximum line impedance 120 Ohms, SLC Class B Style 4
Connector Terminals	14 to 18 AWG wire
Maximum Number of Units	Maximum 7 Status Units,7 Ancillary Boards. A separate power source must be used if the total-load-current at the STATUS UNIT, POWER terminals exceed 300 mA.

Relay Circuits

Operation	Common
Current	1A maximum, volt free change over contact
Voltage	30 VDC
Power Factor	1.0 PF

AUX 24V

Terminal	Rating
AUX 24V (+ and -)	18 – 28 VDC Special Application output, 300 mA maximum