Kentec Electronics Ltd

XT+ Releasing Control Unit
Installation Manual

UL Version 1.00 | December 2018 | MAN-1252KE

CONTENTS

Contents **3**

Compliance Information **7**

Underwriters Laboratories (UL) 7

NFPA 7

FM Global Technologies LLC (FM APPROVALS) 8

Introduction **9**

Technical Support 9

Return Material Authorization (RMA) 9

Warranty Service 10

Advanced Replacements 10

Overview **11**

Fascia 11

Buttons 12

LED Status Indicators 13

Keyswitches 13

Internal Indicators and Switches 13

Terminals 14

Top 14

Bottom 14

Power Supply 14

Features 15

Batteries 15

Installation **17**

Preparing for Installation 18
Mounting the XT+ Unit 18
Removing Cabinet Components 19
Replacing Cabinet Components 19
Installing the Power Supply 19
DIP Switches 21
5.25 Amp Power Supply 21
Status Indicators 22
Connecting Standby Batteries 23
Connecting Field Wiring 24
Networking Multiple XT+ Modules 25
24V Power 26
Aux 24V 26
Trouble 26
1st Stage 27
2nd Stage 27
3rd Stage (Released) 27
Supv. / Abort 27
Extract 27
Notification Appliances 28
3rd Stage Alarm 28
2nd Stage Alarm 28
Exting. 1 (Main) and Exting. 2 (Reserve) 28
Bottom Terminals 29

CIE Serial 30
Status Serial / Status Pow. 30
Access Levels **31**
Standby Mode 31
Access Level 2 31
Access Level 3 33
Set the Extinguishant Output Calibration 33
System Startup **35**
Setting the Address 35
CIE Serial Bus Termination 35
Testing the Installation 35
Testing the Power Supply 35
Lamp, Display, and Buzzer Test 36
Communication Between Elite RS and XT+ 36
Testing Field-Installed Devices 36
Configuration 36
Times Tab 37
Disablements Tab 38
Settings Tab 39
NOTICE TO USERS, INSTALLERS, AUTHORITIES HAVING JURISDICTION, AND OTHER INVOLVED PARTIESUL Compliance Limitations 41
Appendix A: Specifications **42**
Terminal Electrical Ratings 43
Appendix B: Maintenance and Repair **44**

Batteries 44
Replacing Battery Leads 44
Replacing Standby Batteries 44
Removing the Standby Batteries 44
Installing the Standby Batteries 45
Fuses 45
Battery Lead Fuse on 5.25A Power Supply 45
Replacing the Power Supply Fuse 45
Removing the Power Supply Fuse 45
Installing the Replacement Power Supply Fuse 46
Troubleshooting 46
Appendix C: Equipment List 48
Model Numbers 48
Replacement Parts 49
Accessories 50
Compatible Releasing Devices 51
Special Releasing Accessories 52
Index 53

COMPLIANCE INFORMATION

Underwriters Laboratories (UL)

Fire Alarm Equipment
Kentec Electronics Ltd
The XT+ Releasing Control Unit is suitable as follows:

- Types of signaling services are automatic fire alarm and manual fire alarm
- Class B for Notification Appliance Circuits
- Protected Premises Unit (PPU) for Local Service, Remote Station Service, Center Station Service, Proprietary Service, Auxiliary Service when used with the Elite RS FACP.

NFPA

Install this product in accordance with NFPA 13, NFPA 72, NFPA 70, and NEC 70 and all local codes.

Install SLC detectors with spacing as specified in section NFPA 72. Units employing "multiple detector operation" shall include guidelines for installing of a minimum of two detectors in each protected space and to reduce the detector installation spacing to 0.7 times the linear spacing in accordance with National Fire Alarm Code, NFPA 72.

All field wiring should be installed using fire rated cables according to the NFPA 72. Riser conductors shall be installed in accordance with the survivability from attack by fire requirements in National Fire Alarm Code, NFPA 72, Section 12.3. Riser conductors shall employ either a 2 hour rated cable system, or meet requirements approved by the AHJ.

This product, when used with XT+ Releasing modules K1711-xx & K1712-xx, satisfies releasing operation under:

• Carbon dioxide extinguishing systems, NFPA 12

• Halon 1301 fire extinguishing systems, NFPA 12A

• Sprinkler systems, NFPA 13

• Water spray fixed systems for fire protection, NFPA 15

• Foam-water sprinkler and foam-water spray systems, NFPA 16

- Dry chemical extinguishing systems, NFPA 17
- Wet chemical extinguishing systems, NFPA 17A
- Water mist, NFPA 750
- Clean agent fire extinguishing systems, NFPA 2001
- Fixed Aerosol fire extinguishing systems, NFPA 2010

FM Global Technologies LLC (FM APPROVALS)

Kentec Electronics Ltd

INTRODUCTION

Technical Support

For technical support, contact Kentec Electronics, Ltd at +44 (0)1322 222121 or techsupport@kentec.co.uk.

Prior to contacting technical support, have the following information available:

- Product part number
- Purchase order or order number
- Product serial number
- Current function of the product
- Expected function of the product
- Installation of the product

Return Material Authorization (RMA)

Contact Technical Support to obtain an RMA for any product to be returned. Returns will not be accepted without an accompanying RMA number. An RMA number is assigned when:

- Tech Support acknowledges a possible product failure.
- A product was damaged during shipping
- An incorrect product was shipped
- An order was placed using an incorrect part number *
- An order was placed using an incorrect part quantity *
- An order is no longer required *

* Restocking fees may apply.

All returned products are tested to confirm operating failures experienced in the field. If the product is found to be functional, contractors must absorb expenses for return shipping, as well as the cost and shipping of the advanced replacement product.

Prominently display the RMA number on all packages sent for return. Ship all return products to:

Attention: RMA # _____
Kentec Electronics, Ltd
Units 25-27 Fawkes Avenue

Questor, Dartford
Kent. DA1 1JQ
United Kingdom

Warranty Service

Technical Support can replace or repair a defective product when the original purchase is within the warranty period defined in the sales contract. Check your contract for more information, or contact your sales representative about your specific warranty period.

Advanced Replacements

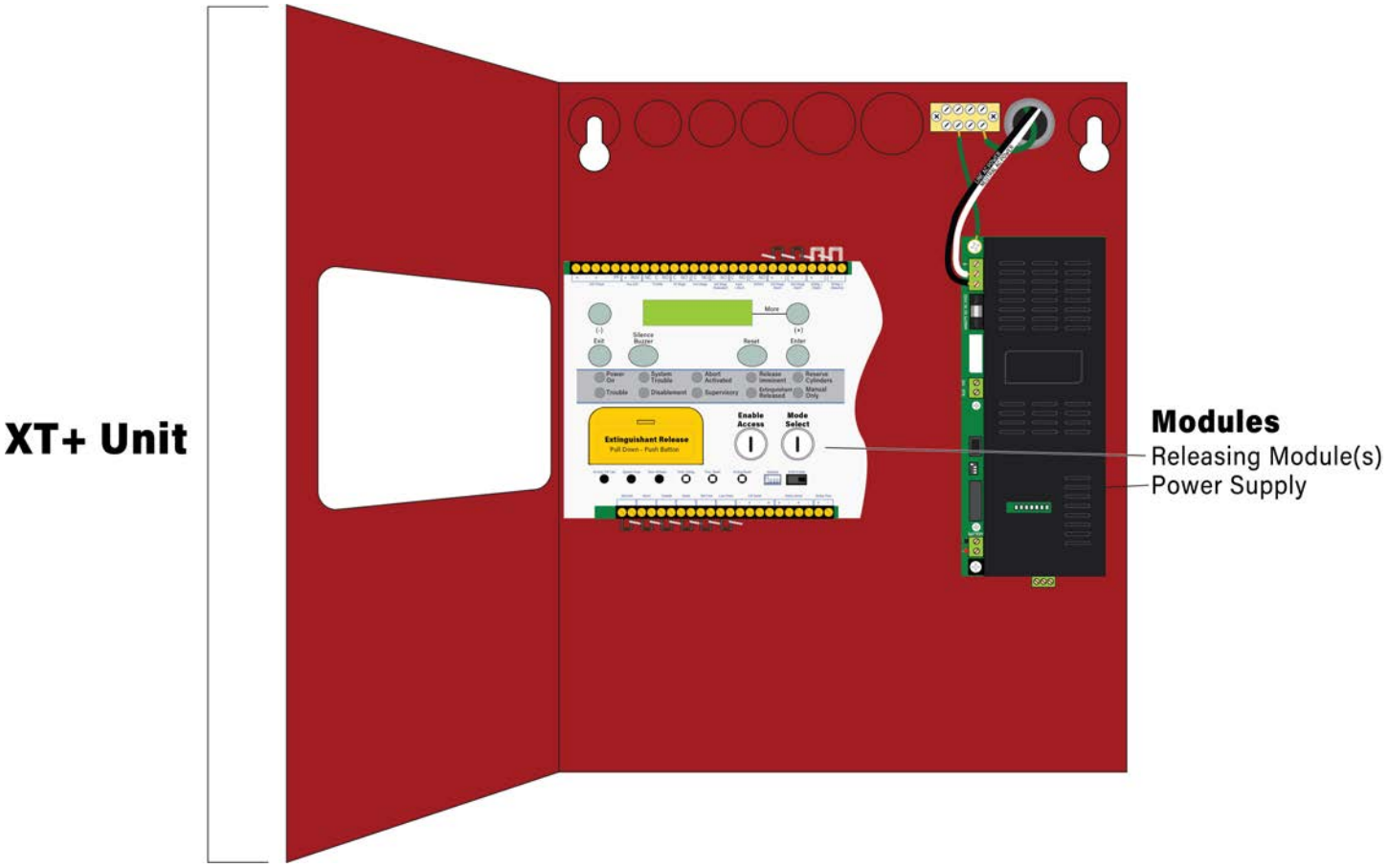
Products that fail to operate in the field can be replaced quickly using the advanced replacement process. The advanced replacement process is available to all contractors who maintain an acceptable line of credit.

Initiate the advanced replacement process by requesting an RMA number from a Tech Support representative. Advanced replacements can be shipped to your location when the product is covered under warranty and when a replacement product is in stock.

- Advanced replacements can be expedited at the request of the contractor. Shipping costs associated with this process are the responsibility of the contractor.
- Products returned using the advanced replacement process must be received within 30 days of the RMA issue date.

OVERVIEW

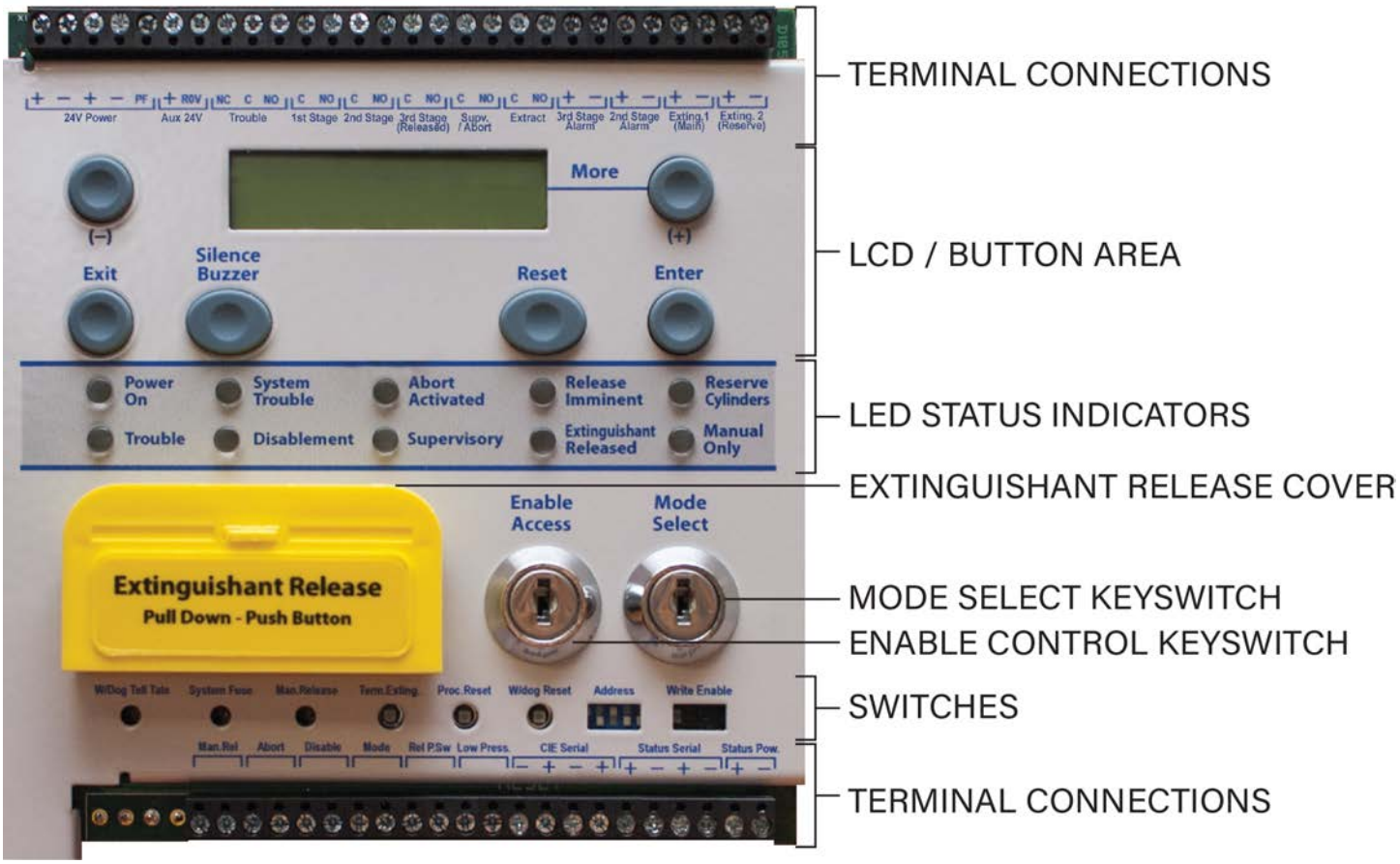
The XT+ Releasing Control Unit is a microprocessor-controlled releasing control unit that will communicate with a master fire alarm control panel via a two-wire serial bus. Each unit may contain one or two independent XT+ modules, as shown. Up to 15 modules can be connected to an Elite RS panel, model number VF0850-xx or VF0860-xx, firmware V07.02.005A (for Apollo) or greater or V07.02.005H (for Hochiki) or greater.



As shown in the image, the entire cabinet and everything contained within is referred to as a "unit". The individual releasing modules and power supply are referred to as "modules".

Fascia

This section describes the features of the XT+ that are located on the fascia.



Buttons

Label	Description
(-) and (+)	Press (-) to move back through the menus and (+) to move forward through the menus.
Exit	Press Exit to return to the Main Menu.
Silence Buzzer	Mutes the internal buzzer of the XT+ module. No NAC outputs are silenced. If the unit contains two modules, each module must be silenced individually.
Reset	Reset clears latching inputs on the XT+ module. The **Extinguishant Release** button and **Man. Rel** input terminal are the only latching inputs. This button does not reset the master control or latching inputs of other modules.
Enter	Press **Enter** to enable the menu selection when in Access Level 2 or 3.
Extinguishant Release	Initiates the releasing process, which can happen immediately or after 30 seconds, depending on the configuration. This button shall not take the place of any NFPA required manual release device(s).

LED Status Indicators

Label	LED Color	Description
EXTERNAL		
Power On	Green	The XT+ is powered on.
System Trouble	Yellow	An internal hardware trouble exists.
Abort Activated	Yellow	The Abort Input is active.
Release Imminent	Red	One of the contributing devices within a zone has activated.
Reserve Cylinders	Yellow	The reserve (backup) cylinder is currently the active cylinder.
Trouble	Yellow	The Trouble LED illuminates in the event of any trouble condition on the XT+ module(s) or disconnection of the serial bus between Elite RS panel and XT+ module(s).
Disablement	Yellow	The Disablement LED illuminates when options of the LCD menu have been used to disable specific devices and when the disablement input is active.
Supervisory	Yellow	A supervisory point has been activated. Status is provided on the LCD display and the buzzer sounds continuously.
Extinguishant Released	Red	The extinguishant is actively being released.
Manual Only	Yellow	The XT+ is manual mode. Extinguishant will not automatically be released.
INTERNAL		
W/Dog Tell Tale	Yellow	Indicates that the processor has failed to correctly execute code and has been restarted by the watchdog circuit. The watchdog reset switch must be pressed to clear the Watchdog trouble condition. Press the **W/dog Reset** button. If the system does not return to normal, the module is probably damaged and needs to be replaced.
System Fuse	Yellow	Indicates that the main fuse has been overloaded and the module has shut down. Review all loads and reconnect one at a time.
Man. Release	Yellow	Indicates that a manual release has been initiated. This indication can only be cleared by power cycling the module or pressing the **Proc. Reset** button.

Keyswitches

Label	Description
Enable Access	Insert the key in the lock and turn it to the right to obtain Access Level 2. XT+ releasing modules will ignore Enable Access commands from the Elite RS panel and will enter access level 2 only when their own Enable Access switch is operated.
Mode Select	Insert the key in the lock and turn it to the right to put the module into Manual mode.

Internal Indicators and Switches

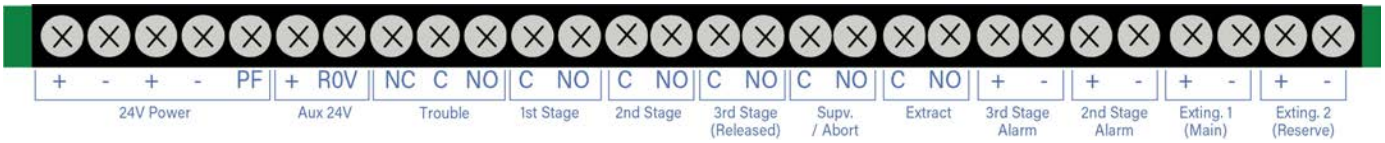
These indicators and switches are only accessible when the unit is unlocked by qualified service personnel.

Label	Description
Term. Exting.	Terminates the flow of extinguishant caused by a releasing event and resets the operation of the XT+.
Proc. Reset	Resets the XT+ processor.
W/dog Reset	Clears the watchdog event caused when the unit failed to carry out an operation.
Address	Each module must be allocated an address between 1 and 15 using the binary coded DIP switch.
Write Enable	When this switch is on, the configuration will be write-protected. When this switch is off AND the Enable Access keyswitch is on, the module will be at access level 3; if not, the module will indicate a configuration ROM write-protect trouble.

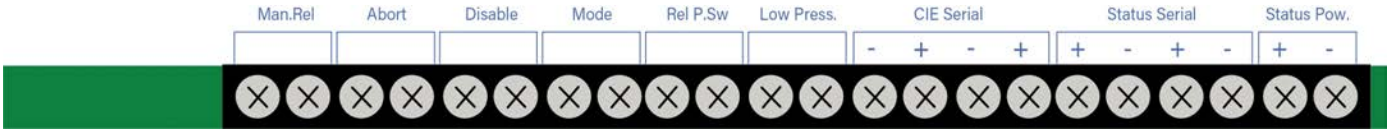
Terminals

For detailed descriptions and wiring information, refer to the Installation section.

Top



Bottom



Power Supply

The XT+ uses a 5.25 Amp power supply, capable of charging batteries with capacities ranging from 7 to 60 Ah and providing an output voltage of 24V and accepting input voltages of 120 VAC or 240 VAC. A jumper connection for the 5.25 Amp power supply is set at the factory according to input voltage requirements of the customer, either 120VAC or 240 VAC.

Features

Features of the power supplies include:

Features	Description
Deep Discharge Prevention	Prevents deep-discharge of the standby batteries by disconnecting the load when the standby battery-voltage drops below 19 +/- 1V DC. A deep-discharge can cause permanent damage to standby batteries. Preventing this condition allows standby batteries to recharge for continued operation after extended power outages.
Battery Backup	Provides battery power to the load when the AC input of the power supply falls below the rated level. The voltage at the load remains within the specified range during these switching-transitions.
Battery Boost	Boosts standby battery voltage to maintain a constant 22 VDC when the voltage drops below the 22 VDC level.
Short-Circuit Protection	Provides a shut down on the load side of the power supply when the load-current exceeds the maximum level.
Automatic Retry	Restores output to the load when operating conditions return to nominal levels. This feature restores voltage levels at the load following conditions such as over-current and AC restore.
Battery Impedance	Provides a warning when the impedance of the battery reaches a level that could prevent proper system operation.
Battery Supervision	Battery presence and low battery voltage supervision
Earth Fault Detection	Earth Fault Detection
General Trouble Relay	All troubles are reported over the common trouble contacts.

Batteries

Standby Battery Type	Two 12 VDC, valve-regulated lead acid
Standby Battery Charging	Two standby batteries wired in series
Maximum Amp Hour Capacity	60 AH maximum
Charge Current	1.25 A Max
Output Current	4 A Max
Maximum Alarm Current	4 A
Normal Standby Load during AC Fail	XT+ 1 Area Releasing Control Unit: 140mA XT+ 2 Area Releasing Control Unit: 230mA XT+ 2 Area Releasing Control Unit w/ Status unit & Ancillary board for each Area: 372 mA A 12Ah battery can support a full alarm load (4A) for 7 minutes following 24hr standby with a max standby load of 379mA.
Standby Operating Time	24 Hours
Battery Charge Voltage	27.6 VDC

Recommended battery size is 12 Ah for a typical configuration. Required battery size is mainly dependent on standby current. To determine the most appropriate battery size, use the battery calculator in LE2.

If your required battery capacity exceeds the space available in the cabinet, an appropriately-sized auxiliary UL listed battery cabinet suitable for fire alarm service will be required. If needed, install that cabinet (wired close-nippled) adjacent to the unit to minimize battery lead length.

INSTALLATION

This section provides instructions for connecting cables, mounting, and testing the XT+ Releasing Control Unit for installation. The following is a general checklist for the installation of the unit. Detailed instructions are provided for each step.

IMPORTANT! The XT+ Releasing Control Unit installation must be performed by qualified service personnel. Maintain extreme care when anchoring the cabinet to the premises wall. Electronic components within the unit are vulnerable to physical damage from severe shock and vibration. Remove the cabinet door and fascia from the cabinet when installations cannot guarantee vigilant care during cabinet anchoring.

	Task
❑	Obtain required mounting hardware, tools, and batteries.
❑	Disconnect ground cables and all pre-installed wiring.
	NOTE It is recommended that a photo is taken of the factory wiring for ease of reinstallation.
❑	Open and remove the door and fascia from the cabinet.
❑	Disconnect and remove the power supply from the cabinet.
❑	Anchor the empty cabinet to the premises wall.
❑	Thread the cabling into the cabinet.
❑	Reinstall the power supply and fascia.
❑	Reconnect all factory pre-installed wiring.
❑	Connect all field wiring.
❑	Reinstall the door and reconnect ground cables.
❑	Place standby batteries in the base of the unit and connect them to the power supply.
❑	Apply power to the unit from the AC source.
❑	Configure the unit using Loop Explorer 2.
❑	Test the installation.

Preparing for Installation

1. Refer to the checklist provided above before beginning the installation process. For detailed information, refer to the appropriate, referenced section in this document.
2. Select a suitable operation environment. The site should be clean, dry, and not subject to shock or vibration. Ensure that the environment is free from wire ends, knockout tabs, and other debris.
3. Familiarize yourself with the unit and components.

Item	Description
Power Supply	The XT+ will have a 5.25 A power supply.
Ground Cable(s)	Ground cabling is green and yellow, insulated wire containing connecting lugs. Ground cabling provides common electrical grounds of the cabinet to the door.

4. The following items are not included, but may be required for the installation:

- Two 12 VDC VRLA (Valve-Regulated Lead Acid) Standby Batteries - Required
- Mounting Hardware - Mounting hardware that secures the cabinet to the wall is not provided. Screws should be either a #10 or #12.
- A Ground Strap is required for handling circuit boards.
- Various Diodes and Resistors: S2027 - 6.8k Ohm Resistor, S2028 - 10k Ohm Resistor, S2029 - EOL Diode, S2051 - 470 Ohm Trigger Resistor

Mounting the XT+ Unit

IMPORTANT! Electronic components within the unit are vulnerable to damage from electrostatic discharge. Ground straps must be worn by installers before handling circuit boards to prevent damage from electrostatic discharge.

Mount the cabinet box on a flat, dry surface. Use the cabinet box as a template and mark the position of the mounting holes while ensuring that the wall is flat at the chosen location. The unit must be mounted in an accessible location. It must not be mounted in another enclosure or near sources of excessive heat. The unit is intended for indoor, dry use only. Use knockout tabs of the cabinet box to route external cabling into the unit.

IMPORTANT! Drilling additional holes in the cabinet will void the product warranty.

Removing Cabinet Components

Remove the door, fascia, and power supply before mounting the cabinet box. To remove these components:

1. Disconnect all wires and cables between the door/fascia and the cabinet.
2. Remove the hinge pins of the fascia and then remove it from the cabinet box. Return the hinge pins to the hinges of the cabinet box for safekeeping.
3. Remove the hinge pins of the door. Return the two hinge pins to the hinges of the cabinet box for safe-keeping.
4. Disconnect the power supply and remove it from the cabinet.
5. Mark hole locations on the wall for mounting the empty cabinet.
6. Drill holes and anchor the empty cabinet box to the wall using appropriate mounting hardware to secure it.
7. Remove the necessary number of knockout tabs from the cabinet box and feed external cabling into the unit.

WARNING! Separate high and low voltage wiring in the enclosure with a minimum gap of 0.25". Do not route low voltage cabling through the same conduit as AC lines. AC power lines should be threaded through a dedicated conduit.

Replacing Cabinet Components

1. Replace the power supply.
2. Replace the door and fascia.
3. Reconnect the cabling.
4. Install the standby batteries.

Installing the Power Supply

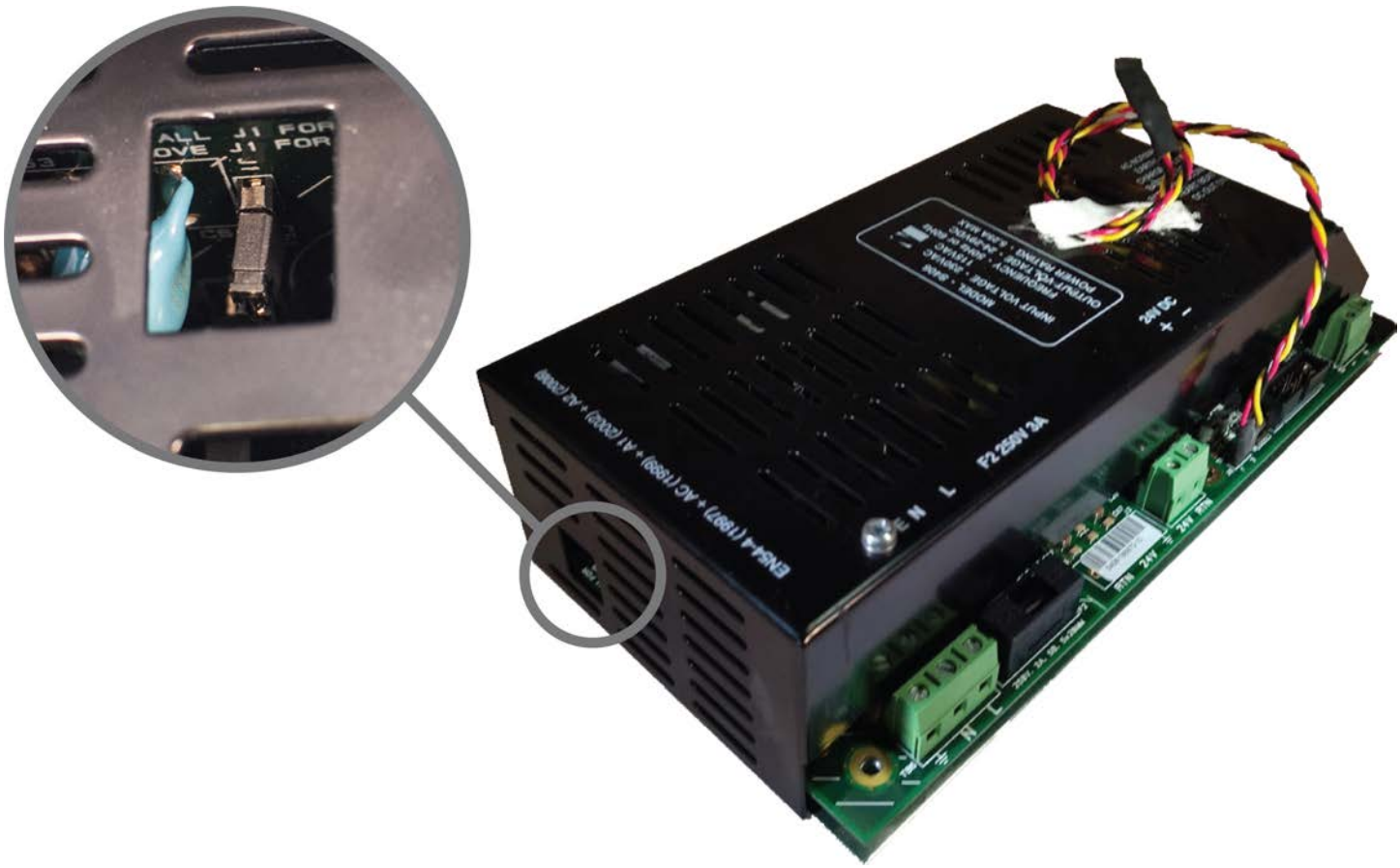
The XT+ is equipped with a 5.25 Amp power supply. Set DIP switches on the power supply before completing the installation process. Refer to DIP Switch Settings. The power supply settings must be performed to establish the optimal charge current of the standby batteries. These power supplies can be set to operate at

inputs of 120 VAC or 240 VAC. For more information about the power supplies and their functions, see **Section 1: Power Supplies**.

The power supply contains a jumper setting for changing from 120 VAC to 240 VAC. Check the jumper setting prior to wiring and operating the 5.25 Amp Power Supply.

WARNING! Remove jumper J1 before operating the unit at 240 VAC. Failure to remove jumper J1 prior to operation will cause permanent damage to the power supply.

Confirm that the 5.25 Amp Power Supply is set for 240 VAC before operating. Permanent damage of the power supply will result if the 120 VAC jumper setting exists while operating the power supply at 240 VAC.



High voltage is present on jumper pins. Remove AC power before changing jumper setting.

WARNING! Remove jumper J1 before operating the XT+ Releasing Control Unit at 230 VAC. Failure to remove jumper J1 prior to operating at 240 VAC will cause permanent damage to the 5.25 Amp power supply.

Voltage	Jumper Required
120	Yes
240	No

Refer to "Installation" on page 17 for specific details about wiring the power supplies. Provide an AC power connection to the terminal block from a 15 Amp branch circuit.

1. Connect a wire from the ground terminal (⏚) to the grounding block of the cabinet box.
2. Connect a wire from the grounding block of the cabinet box to a ground. Provide this connection in close proximity to the cabinet box.
3. Connect a wire from the neutral terminal (N) to the neutral of the power source.
4. Connect a wire from the line terminal (L) to the line of the power source.

DIP Switches

DIP switches are located on the edge of the power supply.

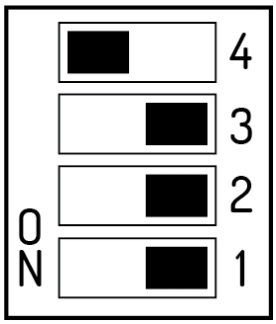
5.25 Amp Power Supply

The following figure illustrates the location of DIP switches on the 5.25 Amp Power Supply:

The tables below describe DIP switch settings 1 through 4 of the 5.25 Amp Power Supply. For UL compliance, DIP switches should be set to the defaults, as shown.

SW1&2 together define the Battery Load Test (also known as Battery Impedance Test)

Switch 1	Switch 2	Description
Off (DEFAULT)	Off (DEFAULT)	Recommended for standard operation. Load test the battery every 59 minutes. Measured voltage drop > 900mV fails the test.
Off	On	NOT USED. Load test the battery every 59 minutes. Measured voltage drop > 1100mV fails the test.
On	Off	Disable trouble reporting of disconnected standby batteries. Load test the battery every minute. Measured voltage drop > 900mV fails the test. This setting also masks BATTERY_MISSING troubles.
On	On	Disable trouble reporting of standby battery impedance. No load test performed.



Switch setting 3 is not used on the 5.25 Amp Power Supply and should be set to OFF.

SW4 defines Battery Manufacturer.

Switch 4	Description
On (DEFAULT)	Sets standby batteries for the Powersonic manufacturer.
Off	Sets standby batteries for the Yuasa manufacturer.
Other manufacturer batteries can be used. Consult the manufacturer's datasheet for proper settings.	

Status Indicators

LED Indicator	Condition
AC NORMAL	The AC power is connected.
EARTH FLT	The 24V DC supply is connected to the ground.
CHARGER FAULT w/ abnormal HEARTBEAT	An internal fault has been detected in the power supply module. The HEARTBEAT indicator blinks different patterns to indicate the fault. 1-1 AC Power is on and 24V output is not in regulation. 1-2 The battery voltage is too high.

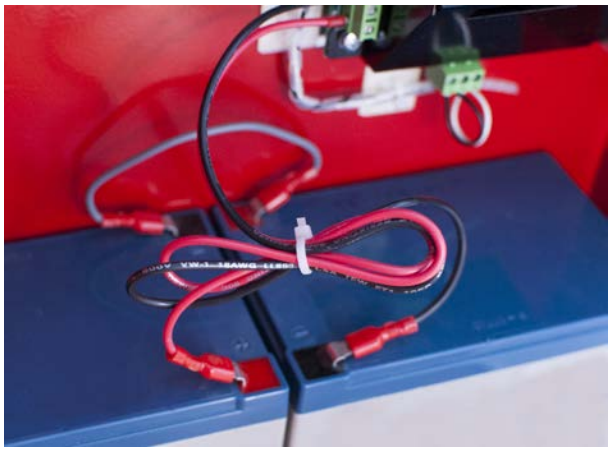
LED Indicator	Condition
	1-3 The battery charge current is too high. 1-4 The battery charge current is low while the charger output current control is MAXed.
BATTERY LOW (no CHARGER FAULT)	The unit is operating from battery and the battery voltage is below 21 V OR The unit is operating from AC power and the battery voltage is below 24 V.
BATTERY LOW and CHARGER FAULT	The battery impedance exceeds the acceptable limit. Install new batteries.
BATTERY DISCON	Standby batteries are disconnected.
HEARTBEAT	The power supply is functioning.
DC OUT ON	The 24V DC supply is supplying power to the load.

Connecting Standby Batteries

The XT+ provides connections for two standby batteries. If your required battery capacity exceeds the space available in the cabinet, an appropriately-sized auxiliary UL listed battery cabinet suitable for fire alarm service will be required. If needed, install that cabinet (wired close-nippled) adjacent to the unit to minimize battery lead length.

WARNING! Battery terminal shorts can cause a fire or an explosion. Do not permit battery terminals to short while connecting standby batteries. Handle standby batteries with care.

1. Place two 12 VDC, VRLA, rechargeable, standby batteries in the base of the cabinet.
2. Orient terminals of the standby batteries so that the positive (+) terminal of one standby battery is facing the negative (-) terminal of the other.
3. Connect the black wire of the power supply to the negative (-) terminal of Battery 1.
4. Connect the red wire of the power supply to the positive (+) terminal of Battery 2.
5. Connect the jumper wire from the (+) of Battery 1 to the (-) of Battery 2.



6. Route battery leads at least 0.25" from all other cabling.

The series connection described provides the 24 V standby voltage required by the XT+. Do not connect the two batteries in parallel. A parallel connection will not provide the 24 V required for operating the unit in a standby condition.

The battery connections can be made while AC power on or off. If AC power is off, the battery connection will not be recognized (and the unit will remain unpowered) until AC is restored. Once AC power is on and the batteries are connected, examine the LED Status Indicators on the power supply:

- Confirm that the AC NORMAL and DC OUT ON indicators are both illuminated, and the HEARTBEAT indicator is blinking yellow.
- Confirm that BATTERY DISCON is off. If it is on, recheck the battery connections and test or replace the batteries.
- Wait 3 minutes and confirm that no trouble indicators are illuminated.

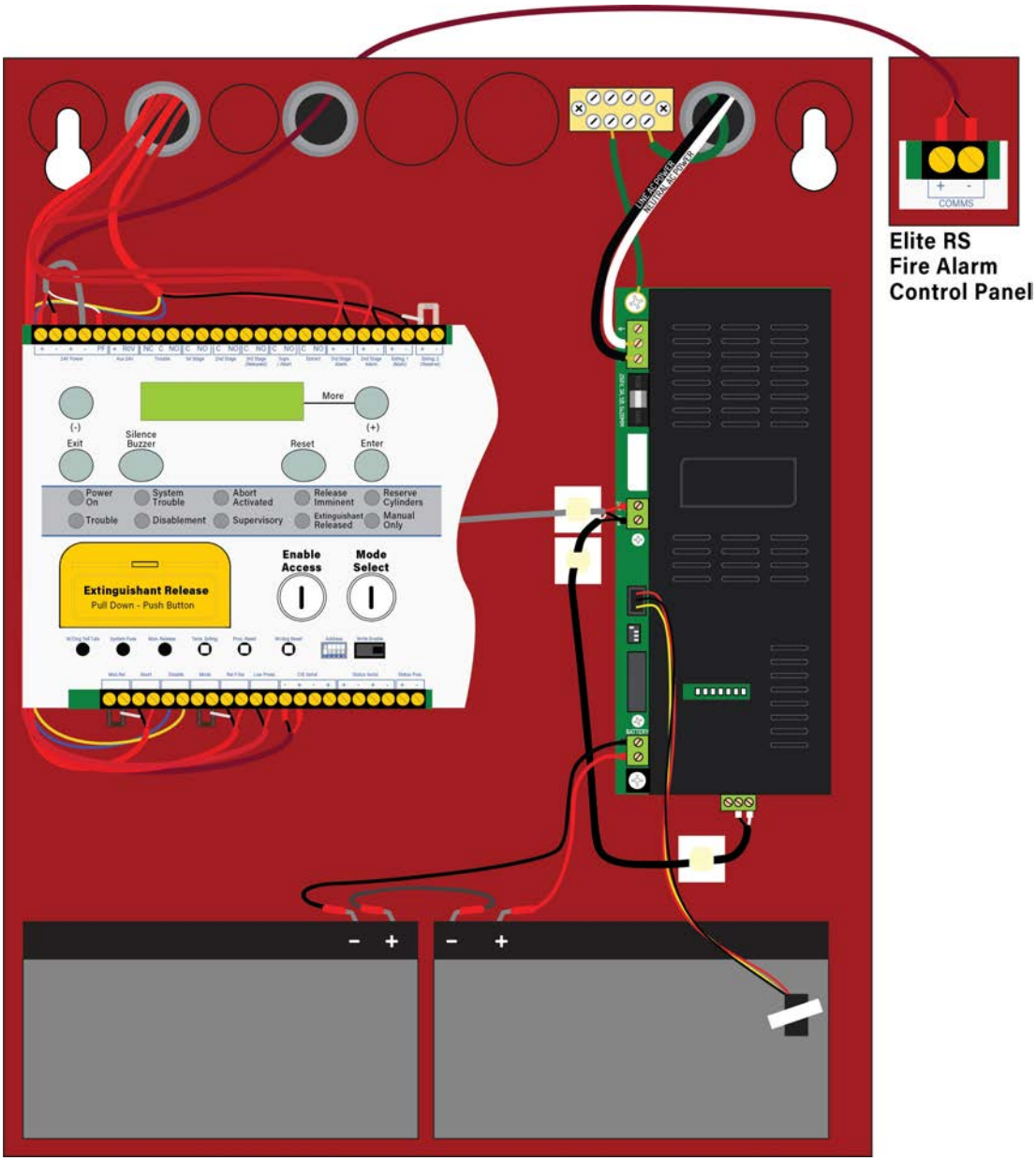
Using a volt meter, measure the voltage across each battery separately. Typically, the voltage of each battery will measure 12.0 to 14.5 volts depending on the level of charge. Voltages below 12.0 are possible if the battery is severely discharged. Compare the two battery voltages. A difference of more than 1 volt may indicate a problem with the batteries.

Connecting Field Wiring

Because the fascia is hinged, route all wiring to the left as shown, so that the fascia can be opened without disconnecting the wiring. Power-limited conductors must be installed using Types FPL, FPLR, FPLP, or equivalent cables. When connecting field wiring, separate high and low voltage wiring in the enclosure with a minimum gap of 0.25".

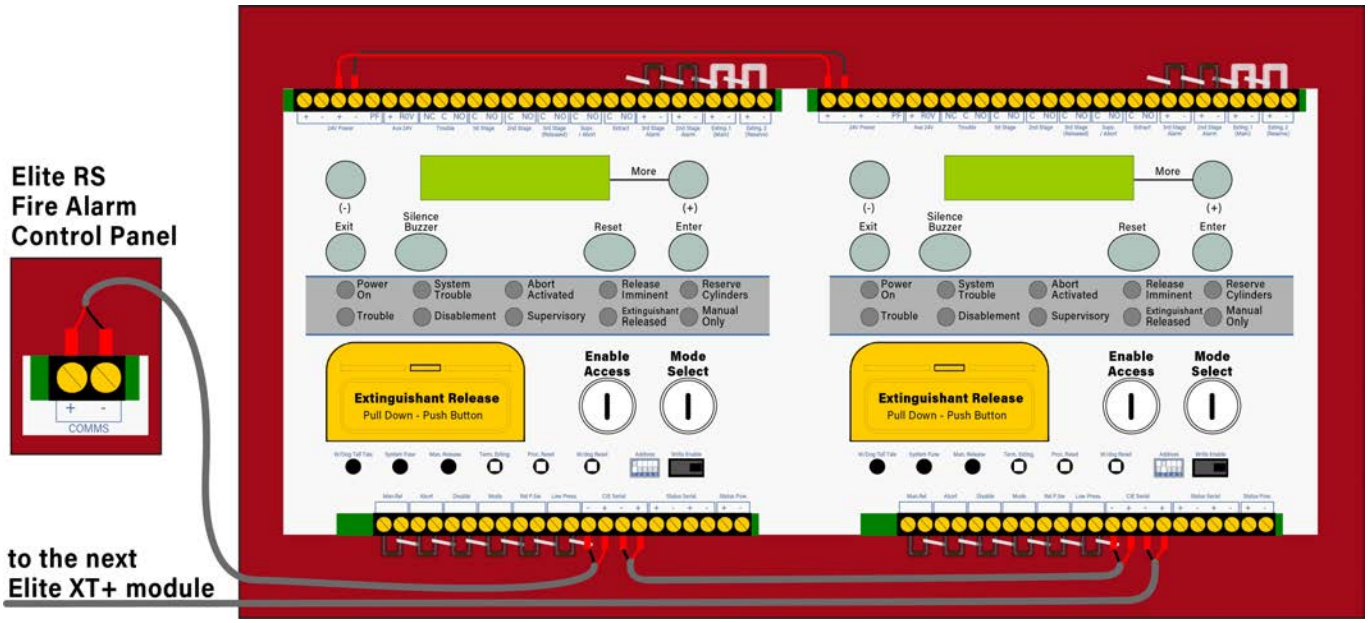
All circuits are power-limited except AC power lines and battery leads.

WARNING! Do not route low voltage cabling through the same conduit as AC lines. AC power lines should be threaded through a dedicated conduit. Refer to the following illustration when connecting any wiring.



Networking Multiple XT+ Modules

Because the fascia is hinged, route all wiring to the left as shown, so that the fascia can be opened without disconnecting the wiring. Separate high and low voltage wiring in the enclosure with a minimum gap of 0.25".



24V Power

The 24V Power terminals provide 24V regulated, continuous power from the power supply to the module(s) of the XT+ unit.

Aux 24V

The AUX 24V output terminals provide regulated 24V DC with a maximum load rating of 360mA for powering ancillary devices. This is a class B connection supervised for grounds and shorts only. To provide supervision for opens, the use of an end-of-line relay (such as System Sensor's EOLR-1) is required. The end-of-line relay must be the last device on the circuit and the relay contacts must be supervised. Refer to the installation instructions of the end-of-line device for wiring information. The R0V terminal is opened for around 5 seconds each time the module is reset. This is typically used to reset ancillary items such as beam detectors, which need a power cycle to reset them. If this function is not desired, it can be disabled in LE2.

Wiring gauge on AUX 24V outputs must be sized as a function of cable length and device load to ensure that voltage-drop of the cable does not result in less than the minimum operating voltage at the ancillary devices.

Trouble

The Trouble terminals are dry form C relay contacts. They activate on any module-related trouble and clear when all troubles are clear.

NOTE These terminals are in the trouble state when all power is removed.

1st Stage

The 1st Stage terminals are normally-open relay contacts. They activate when the first pre-release condition has been met. The first pre-release condition is satisfied upon activation of any initiating device in any of the zones associated with this releasing control.

2nd Stage

The 2nd Stage terminals are normally-open relay contacts. They activate when all pre-release conditions have been met and the release delay countdown has started.

If the **Activation Mode** setting in the XT+ Module configuration is set to "Single", the 2nd Stage activates simultaneously with 1st Stage.

If the **Activation Mode** setting in the XT+ Module configuration is set to "Coincidence", the 2nd Stage activates upon activation of a second initiating device in any of the zones associated with this releasing control.

3rd Stage (Released)

The Released terminals are normally-open relay contacts. They activate when the release delay countdown has completed and the extinguishant is being released.

Supv. / Abort

The Supv terminals are normally-open relay contacts. They activate on any module-related supervisory (depending on configuration) and clear when all supervisories are clear.

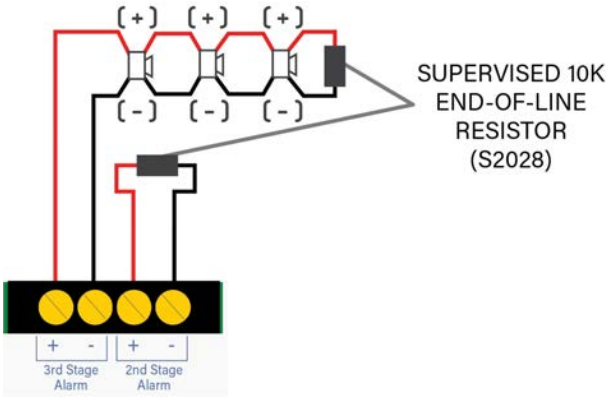
Extract

The Extract terminals are normally-open relay contacts. They activate when Extract is turned on in the Access Level 2 menu and clear when Extract is turned off.

Notification Appliances

Each NAC provides a regulated 24V DC, 850 mA maximum output for non-pulsing audible loads. For Class B operation, the End-of-Line resistor must be connected across the terminals of the last device on the NAC circuit. Branching of Class B notification appliance circuits prevents proper circuit supervision and is not permitted.

Required EOL: 10k Ohm Resistor (S2028)
Maximum Line Loss: 4V
Maximum RMS Current for any Single Appliance: 300 mA



3rd Stage Alarm

The 3rd stage NACs activate when the release delay countdown has completed and the extinguishant is being released.

NOTE If the Release Indication setting in LE2 is set to "Release Pressure Switch", this output will not activate until the **Rel P.Sw** input is activated.

2nd Stage Alarm

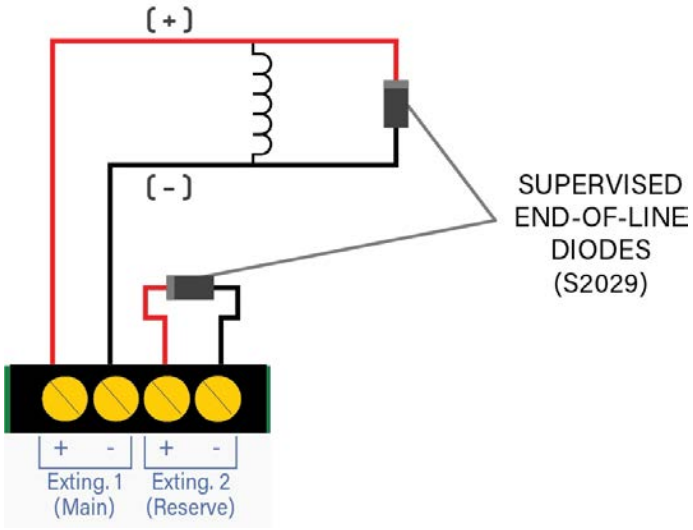
The 2nd stage NACs activate when all pre-release conditions have been met and the release delay countdown has started.

Exting. 1 (Main) and Exting. 2 (Reserve)

The Exting. 1 and Exting. 2 are class B circuits, each providing regulated 24V DC at 1A maximum. They can be connected to a releasing agent control valves or actuators, such as solenoids as shown. Refer to the Equipment List for compatible solenoids.

This operation is controlled by the **Output Mode** setting in LE2.

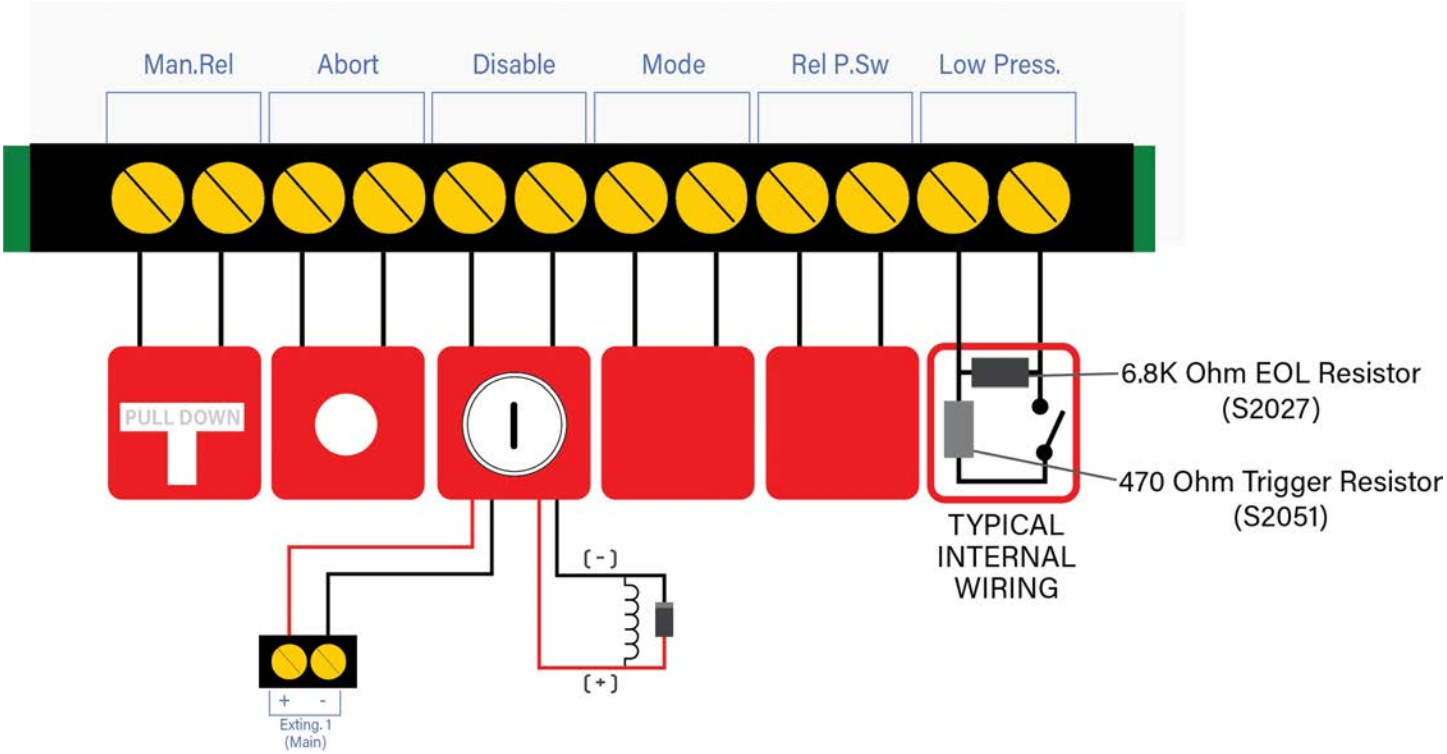
- When set to **Common**, the two extinguishant outputs are released at the same time.
- When set to **Main / Reserve**, only one extinguishant output is released at a time. Use the Access Level 2 menu to toggle between Main and Reserve Exting Output. Exting. 1 is the **Main** output. Exting. 2 is the **Reserve** output. When the Reserve output is selected, the Reserve Cylinders LED will be illuminated.



Required EOL: EOL Diode (S2029)

Refer to "Access Level 3" on page 33 for extinguishant output calibration instructions.

Bottom Terminals



Required EOL for each set of Terminals: 6.8k Ohm Resistor (S2027) and 470 Ohm Trigger Resistor (S2051)

The Abort input is not used on systems intended to perform pre-action or deluge water functions. These systems disallow the use of an Abort switch.

Systems which incorporate the use of a manual release and release Halon 1301, water mist, aerosol, and/or clean agents must additionally employ a mechanical manual release.

CIE Serial

These terminals are used to connect the XT+ unit to the Elite RS panel. Refer to Networking Multiple XT+ Modules for wiring information for the CIE Serial terminals.

Status Serial / Status Pow.

These terminals are used when connecting a Status Unit to the XT+. Refer to the Equipment List for model numbers of that unit.

ACCESS LEVELS

Standby Mode

Standby mode indicates that they Enable Keyswitch has not be activated. The LCD screen will display the following:

Specific functions are restricted when operating the unit in the standby, however this level allows users to perform simple tests. It also provides options for testing LED indicators of the fascia as well as color composition of the LCD panel GUI.

Access Level 2

Insert the key in the Enable Access keyswitch and turn it to the right to obtain Access Level 2. XT+ releasing modules will ignore Enable Access commands from the Elite RS panel and will enter access level 2 only when their own Enable Access switch is operated. When the Enable Access keyswitch is turned, the XT+ LCD menu will display:

Press **Enter** to disable the extinguishant release outputs. The Disablement and Supervisory LEDs will illuminate and the buzzers will sound on the XT+ module and the Elite RS FACP.

WARNING! Disabling the Extinguishant Release from this menu is not UL or NFPA Compliant for non-water based releasing service. For non-water based releasing service, use of a Disablement Switch (VF1832-xx) is required for compliance with these standards.

Press **Enter** to re-enable the outputs and restore the Disablement and Supervisory conditions.

Disable Manual Release?	Press **Enter** to disable the manual release input. The Disablement LED will illuminate and the buzzers will sound on the XT+ module and the Elite RS FACP.
Enable Manual Release?	Press **Enter** to re-enable the input and restore the Disablement condition.
Disable Stage 1 Output?	Press **Enter** to disable the 1st stage relay output. The Disablement LED will illuminate and the buzzers will sound on the XT+ module and the Elite RS FACP.
Enable Stage 1 Output?	Press **Enter** to re-enable the output and restore the Disablement condition.
Disable Stage 2 Output?	Press **Enter** to disable the 2nd stage relay output. The Disablement LED will illuminate and the buzzers will sound on the XT+ module and the Elite RS FACP. The display will show:
Enable Stage 2 Output?	Press **Enter** to re-enable the output and restore the Disablement condition.
Disable Released Output?	Press **Enter** to disable the released output. The Disablement LED will illuminate and the buzzers will sound on the XT+ module and the Elite RS FACP. The display will show:
Enable Released Output?	Press **Enter** to re-enable the output and restore the Disablement condition.
Disable Extract Output?	Press **Enter** to disable the extract output. The Disablement LED will illuminate and the buzzers will sound on the XT+ module and the Elite RS FACP. The display will show:
Enable Extract Output?	Press **Enter** to re-enable the output and restore the Disablement condition.

Turn ON Extract Output?	Press **Enter** to turn on the extract output. The buzzer will sound on the Elite RS FACP. The display will show:
Turn OFF Extract Output?	Press **Enter** to re-enable the output and restore the Disablement condition.
Select Reserve Exting. Output?	Press **Enter** to select the Reserve output. When the Reserve output is selected, the Reserve Cylinders LED will be illuminated and the LCD will display the following:
Select Main Exting. Output?	Press **Enter** to select the Main output.

Access Level 3

To enter Access Level 3, turn the Enable Access keyswitch and turn the Write Enable switch to the on (left) position. The # on the LCD represents the number of updates to the XT module's configuration.

```
AL3 Updates = #
ENTER for Menu
```

This is the number of times the extinguishant outputs have been calibrated. It is incremented each time the following procedure is performed and cannot be reset. This functionality can be used to provide evidence of tampering.

Set the Extinguishant Output Calibration

The extinguishing outputs (Exting.1 (Main) and Exting. 2 (Reserve)) are supervised for shorts and opens. Each output is calibrated to the electrical characteristics of the specific devices that are connected to it. When a new device is initially installed on this output, a trouble will likely occur and a recalibration will be required.

Press **Enter**, then **(+)** until the LCD displays:

```
Exting. O/P 1
Level = XXX
```

The XXX displayed here is the EXISTING value to which the monitoring level is set and corresponds to the **Exting. 1 (Main)** output on the module.

To recalibrate **Exting. O/P 1**, press **Enter**. The LCD will display:

The **XXX** shown here is the NEW value detected for the extinguishing output. Press **Enter** to store that level. The monitoring level is then learned by the unit and any active trouble will restore. A new trouble will occur if the electrical characteristics on this output change.

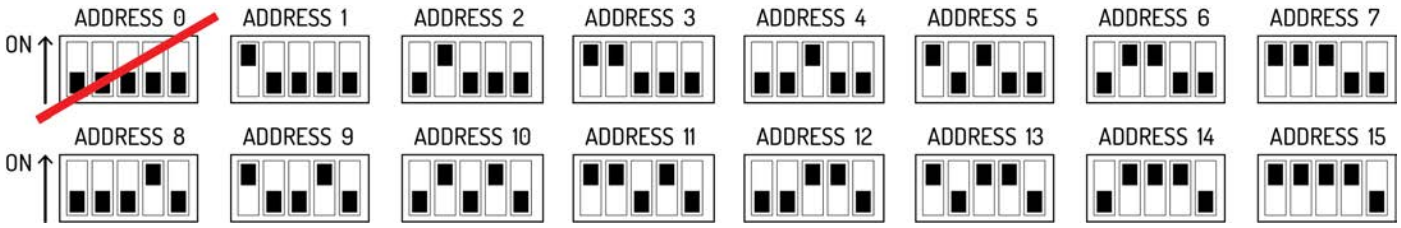
Press **(+)** to display and set the monitoring level for output 2 in the same way as output 1.

IMPORTANT! After calibration of these outputs, testing should be done to confirm proper operation of the extinguishing system.

SYSTEM STARTUP

Setting the Address

Set the address DIP switches on each module to a unique address between 1 and 15.



CIE Serial Bus Termination

Remove the jumper LK1 from each module unless the module is the last device on the CIE serial bus.

Testing the Installation

Once all field wiring connections are complete, test the power supply, field circuits, and panel GUI to ensure proper operation of the XT+. Apply AC Power and allow the XT+ to boot. The following messages will appear on the LCD(s):

```
V1960 Module
Initializing...
```

Once the initialization process is complete, the LCD will display the following when in normal standby mode:

```
MAN&AUTO
```

Testing the Power Supply

Perform the following tests to confirm operation of the power supply:

1. Apply AC and battery power to the XT+.
2. Check that the AC Normal LED is illuminated on the power supply.

3. Check that the Heartbeat LED is flashing on the power supply.
4. Remove AC power and ensure that the standby batteries are powering the unit. The AC Normal LED on the power supply switches off after 30 seconds to indicate the loss of power.
5. Reapply AC power to the unit.
6. Disconnect the red wire from the Standby Battery terminal. The Battery Disconnect LED on the Power Supply illuminates and the unit continues to operate.
7. Reconnect the red wire from the Standby Battery terminal.

Lamp, Display, and Buzzer Test

To perform a lamp, display, and buzzer test, press and hold the **Exit** button. After several seconds, the following should occur:

- all LEDs will illuminate
- the buzzer buzzes steadily
- the LCD will display the following:

Communication Between Elite RS and XT+

To test communication between the Elite RS panel and the XT+ unit(s), unplug the COMMS terminal block from the Elite RS panel. The Elite RS panel will display a trouble indicating that the extinguishant units are not installed, and each unit will display a Master Comms Trouble on the LCD.

Testing Field-Installed Devices

Verify that each field-installed device functions as expected.

Configuration

The XT+ can be configured via LE2. An master FACP must be configured, and then up to 15 XT+ modules can be added.

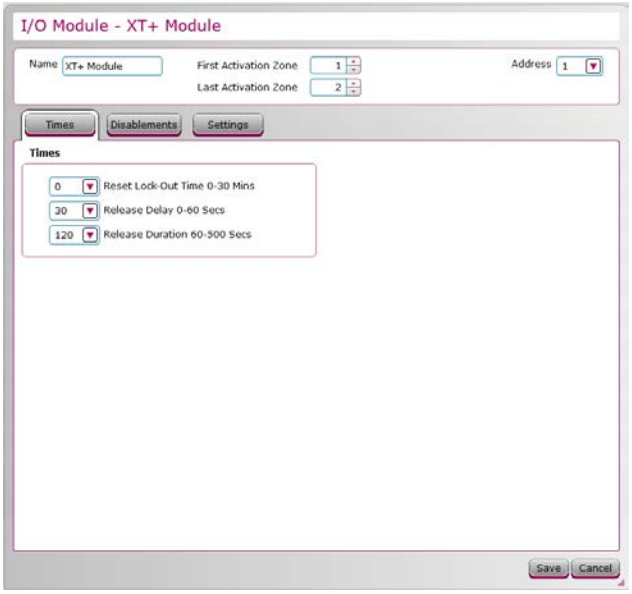
Item	Description	Value	LE2 Default
Name	This is the name used by LE2 to refer to the XT+ Module.	XT+ Module	XT+ Module
First Activation Zone	The lowest numbered zone in the releasing area for this module.	1-500	1
Last Activation Zone	The highest numbered zone in the releasing area for this module.	1-500	2
Address	The address of the module.	1-15	1

The releasing area of a module must consist of one or more sequentially numbered zones. This range of zones is defined by the first and last activation zones.

Initiating devices which are in this range of zones and are connected directly to the same panel as the XT+ will be the only devices that will initiate a release. When configured for coincidence, any two of these devices will initiate a release.

Devices outside this range or connected to other network panels will not initiate a release.

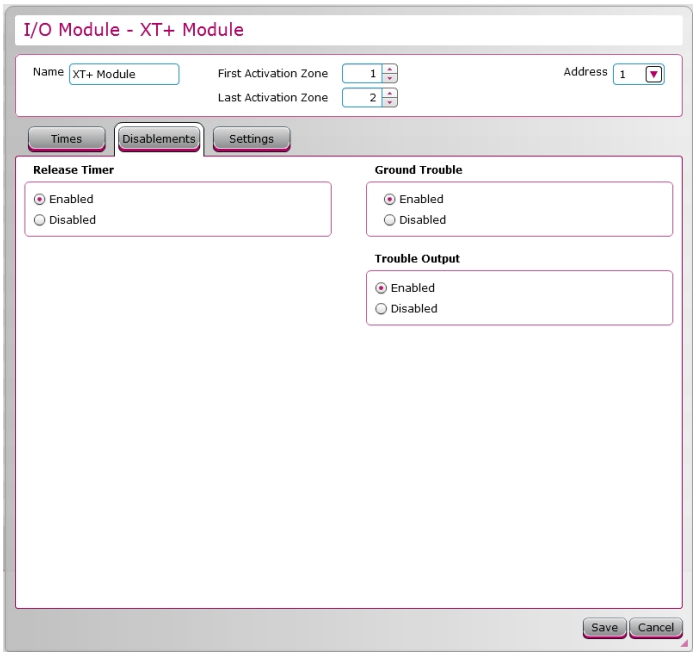
Times Tab



Item	Description	Value	LE2 Default
Reset Lock-Out Time	The length of time before the extinguishant outputs can be reset.	0 - 30 minutes	0 minutes
Release Delay	The delay between the activation of a module and extinguishant release.	0 - 60 seconds	30 seconds

Item	Description	Value	LE2 Default
	For UL compliance, this field must not exceed 50 seconds.		
Release Duration	The length of time the extinguishants are released.	60 - 500 seconds	120 seconds

Disablements Tab



Item	Description	Value	LE2 Default
Release Timer	This disables the "Release Duration" above setting.	Enabled or Disabled	Enabled
Ground Trouble	This disables ground trouble monitoring. For UL compliance, this field must be set to Enabled.	Enabled or Disabled	Enabled
Trouble Output	The trouble relay on each module can be disabled. For UL compliance, this field must be set to Enabled.	Enabled or Disabled	Enabled

Settings Tab

Item	Description	Value	LE2 Default
Stage Two Alarms	The second stage alarm NAC output can be set to activate pulsed or steady.	Pulsed (Temporal 3) Steady	Steady
Stage Three Alarms	The third stage alarm NAC output can be set to activate pulsed or steady.	Pulsed Steady	Pulsed
Release Indication	The Release Pressure Switch is normally used, but can be bypassed to use the Extinguishing Output when no pressure switch is available.	Release Pressure Switch Extinguishing Output	Release Pressure Switch
Release Pressure Switch Mode	This can be used to invert the action of the Release Pressure Switch input when a normally closed Pressure Switch is available. For UL compliance, this field must be set to Normal.	Normal Invert	Normal
Pre-Release Delay on Manual Activation	This can be used to eliminate the countdown when manually releasing the extinguishant.	Delay No Delay	Delay
R0V Removed on Reset	The Aux24V output supply can be configured such that the R0V (negative) is removed for around 5 seconds when the module is reset. This is typically used to reset ancillary items such as beam detectors which need a power cycle to reset them.	Yes No	No
Low Pressure Switch Mode	This can be used to invert the action of the Low Pressure Switch input.	Normal Invert	Normal

Item	Description	Value	LE2 Default
	For UL compliance, this field must be set to Normal.		
Language	Some modules are factory fitted with an alternate language to English. The alternate language can be used by selecting Other.	English Other	English
Output Mode	When set to Common, the two extinguishing outputs are released at the same time. When set to Main / Reserve, output 1 will release and a Main / Reserve selection option appears at Access Level 2. The Reserve Cylinders LED will be illuminated and output 2 will release during the next activation.	Common Main / Reserve	Common
Activation Mode	By default, two devices (Coincidence) must be active for a module to enter the Activated condition. This setting can be used to allow any Single active device to cause the module to enter the Activated condition. **IMPORTANT!** Initiating devices must be connected directly to the same panel as the XT+ Releasing Control Unit. (Devices in the same zone connected to other network panels will not initiate a release.)	Coincidence Single	Coincidence
User Output Mode	This changes the function of the of the Supv terminal.	Supervisory Abort	Supervisory
Abort Mode	Abort switches are not permitted on systems intended to perform pre-action or deluge water functions. For UL compliance, this field must be set to Abort.	Abort Hold	Abort

When the Manual Release input is configured for no delay, it will override an active Abort input. When the Manual Release input is configured for pre-release delay, it will override an active Abort input and cause the countdown to resume.

NOTICE TO USERS, INSTALLERS, AUTHORITIES HAVING JURISDICTION, AND OTHER INVOLVED PARTIES

UL Compliance Limitations

In order for the product to comply with the requirements in the **Standard for Control Units and Accessories for Fire Alarm Systems, UL 864 10th Edition**, certain programming features or options must be limited to specific values or not used at all as indicated below.

Field	Configurable Range	UL Permitted Value / Range
Release Delay	0 - 60s	0 - 50s
Ground Trouble	Enabled Disabled	Enabled
Trouble Output	Enabled Disabled	Enabled
Release Pressure Switch Mode	Normal Invert	Normal
Low Pressure Switch Mode	Normal Invert	Normal
Abort Mode	Abort Hold	Abort
Access Level 2 > Disable Exting. Release?	Disable Enable	Enable
Power Supply DIP Switches SW2 SW1	 OFF / ON OFF / ON	 OFF OFF

APPENDIX A: SPECIFICATIONS

Construction	1.2mm mild sheet steel
IP Rating	IP30
Finish	Epoxy powder coated
Color	**Lid & Box** Red (RAL3002) Gray (BS 00 A 0S) **Fascia** RAL7016
Cabling	FP200 or equivalent (max capacitance 1uF max inductance 1 mH)
Weight	17.6lbs (standard configuration)
Power Supply	1.83 Amps Max @ 120 V, 50/60 Hz 0.915 Amps Max @ 240 V, 50/60 Hz
Power Supply Fuse	3 A
Power Supply Rating	1 and 2 Area Units: Regulated 24V DC @ 4A
Maximum Ripple Current	1 V Maximum
Battery Charge Voltage	27.6 VDC nominal (temperature-compensated)
Battery Fuse	10A 3AG
Current Draw in Power Failure	54 mA per module
Maximum Current Draw from Batteries	4A
Ground Fault Impedance Value	100 Ohms
Temperature Range	32°F (0°C) - 120°F (49°C)
Relative Humidity	Up to 93%, non-condensing

Terminal Electrical Ratings

Label	Rating
	TOP TERMINALS
24V Power	24V Regulated, continuous (power input)
Aux 24V	24V Regulated @ 360mA Max, Power-limited
Trouble	Volt-free contact rated at 30V DC, 1A, Resistive
1st Stage	Volt-free contact rated at 30V DC, 1A, Resistive
2nd Stage	Volt-free contact rated at 30V DC, 1A, Resistive
3rd Stage (Released)	Volt-free contact rated at 30V DC, 1A, Resistive
Supv. / Abort	Volt-free contact rated at 30V DC, 1A, Resistive
Extract	Volt-free contact rated at 30V DC, 1A, Resistive
3rd Stage Alarm	24V Regulated @ 850mA Max, Power-limited
2nd Stage Alarm	24V Regulated @ 850mA Max, Power-limited
Exting. 1 (Main)	24V Regulated @ 1A Max, Power-limited
Exting. 2 (Reserve)	24V Regulated @ 1A Max, Power-limited
	BOTTOM TERMINALS
Man. Rel	Supervised: Class B End-of-Line device: 6.8K Ohm resistor (S2027) Activation device: 470 Ohm resistor (S2051) Maximum Voltage / Current: 24V DC / 50 mA Maximum Wiring Impedance for Each Circuit: 50 Ohms Power-limited
Abort	
Disable	
Mode	
Rel P. Sw	
Low Press.	
CIE Serial	Two wire, RS485 connection, Data 3.3 V, current-limited, Class B, supervised Maximum Wiring Impedance: 120 Ohms
Status Serial	Two wire, RS485 connection, Data 3.3 V, current-limited, Class B, supervised Maximum Wiring Impedance: 120 Ohms
Status Pow.	24V Regulated @ 360mA Max, Power-limited

APPENDIX B: MAINTENANCE AND REPAIR

IMPORTANT! The XT+ maintenance and repair must be performed by qualified service personnel.

XT+ units do not require any specific maintenance but should be kept clean by wiping with a slightly damp cloth. Ensure that water does not enter the enclosure. Testing of the extinguishant system should only be carried out by trained personnel and must be done with appropriate isolation measures in place to ensure that accidental discharge of the extinguishant agent is avoided. The electronic assembly and front plate can be replaced if necessary. AC and battery power should be removed before any internal components are replaced.

Batteries

Load test the batteries and inspect their connections to the power supply as part of annual system maintenance.

WARNING! Battery terminals and leads are not power-limited. Shorts can cause a fire or an explosion. Use extreme caution while connecting standby batteries.

Replacing Battery Leads

When replacing leads, disconnect them from the battery before disconnecting them from the power supply.

Replacing Standby Batteries

Typical battery life is 5 years. Specify replacement batteries that are Valve Regulated Lead Acid (VRLA) types.

Removing the Standby Batteries

1. Disconnect the jumper between Battery 1 and Battery 2.
2. Disconnect the black lead from the positive terminal of Battery 1.
3. Disconnect the red lead from the negative terminal of Battery 2.
4. Remove Battery 1 and Battery 2 from the bottom of the XT+ Releasing Control Unit cabinet.
5. Recycle Battery 1 and Battery 2 according to the manufacturer procedures provided in the battery packaging.

Installing the Standby Batteries

Refer to Connecting Standby Batteries for information describing the standby battery installation process.

Fuses

The XT+ contains fuses to protect it against overloads. During the life of the product it may be necessary to replace one or both of the fuses. Replace fuses only after addressing the cause which resulted in the fuse failure.

Battery Lead Fuse on 5.25A Power Supply

Failure of the battery lead fuse will result in a **Battery Missing** trouble. Verify that the fuse is the problem by disconnecting the fused-lead from the battery, and measuring the resistance of the lead from end-to-end with an ohm meter. The resistance should measure less than 1 ohm. If it measures higher, replace the fuse with a UL listed slow blow fuse. After replacing the fuse, measure the resistance again. If it still measures higher than 1 ohm, replace the lead. Refer to the Equipment List for the fuse part number.

Once the replacement is complete, reconnect the lead to the battery terminal and verify the **Battery Missing** trouble has cleared.

Replacing the Power Supply Fuse

Failure of the power supply fuse will result in a **Power Failed** trouble. Verify that the internal fuse is the problem by checking that the proper AC voltage is present across the L & N terminals on the AC-in terminal block of the power supply.

WARNING! This is high voltage area. An electrical shock hazard exists. Use extreme care.

If the terminals have proper AC voltage and the green AC NORM indicator on the power supply is not lit, disconnect AC power at the source and replace the fuse.

Replace the power supply fuse by removing it from the fuse housing contained on the circuit board of the power supply. Install the replacement fuse in the fuse housing and then test the power supply to determine that it operates. The following figure illustrates the fuse of the power supply:

Removing the Power Supply Fuse

1. Turn off the AC power. It is not necessary to disconnect the batteries.

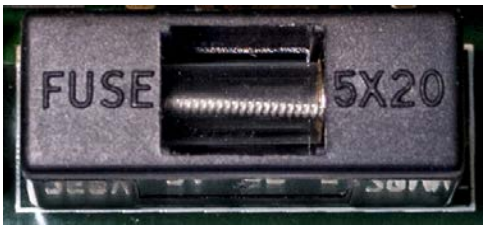
WARNING! This is a high voltage circuit area. An electrical shock hazard exists in this area when the unit is operating. Do not remove the fuse while powering the unit. Remove AC power at the source before attempting to remove the fuse of the power supply.

2. Locate the housing containing the fuse.
3. Remove the upper-half of the fuse housing with long nose pliers.
4. Remove the fuse from the upper-half of the fuse housing.

Installing the Replacement Power Supply Fuse

WARNING! This is a high voltage circuit area. An electrical shock hazard exists in this area when the unit is operating. Do not replace the fuse while powering the unit. Remove AC power at the source before attempting to replace the fuse of the power supply.

1. Insert and center the replacement fuse in the upper housing. Use only a UL listed 250V, 3A, slow blow, 5x20mm fuse.
2. Press the upper housing on the lower housing until the halves snap together. The following figure illustrates the closed fuse housing:



3. Restore AC power.
4. Monitor the AC NORMAL and DC OUT ON LED indicators on the power supply to determine that trouble conditions are not reported following fuse replacement.

Troubleshooting

If the configuration is corrupted on power up/reset, the configuration ROM items can be reset to their default values by performing the following procedure:

1. Turn the Enable Controls keyswitch on.
2. Set the write-protect switch off.
3. Press both the **(-)** and **Exit** buttons until the `System Initializing` indication is displayed on the LCD.

APPENDIX C: EQUIPMENT LIST

Model Numbers

Model Number	Description
K1705-10	XT+ Releasing Module Back Box Red
K1705-40	XT+ Releasing Module Back Box Gray
K1706-10	XT+ Releasing Module Cabinet Lid Red
K1706-40	XT+ Releasing Module Cabinet Lid Gray
K1708-00	XT+ Releasing Module Fascia (1 Area)
K1709-00	XT+ Releasing Module Fascia (2 Area)
K1710-00	XT+ Releasing Module (Electronics only)
K1711-10	XT+ 1 Area Releasing Module w/ Cabinet Red
K1711-40	XT+ 1 Area Releasing Module w/ Cabinet Gray
K1712-10	XT+ 2 Area Releasing Module w/ Cabinet Red
K1712-40	XT+ 2 Area Releasing Module w/ Cabinet Gray

Replacement Parts

The following replacement parts are provided for the XT+ Releasing Control Unit.

Models	Description
MAN-1252KE	XT+ Releasing Control Unit Installation Manual
S406	5.25 Amp Power Supply, 120 VAC / 240 VAC "1 Power Supplies are required components of the XT+." below
S2027	6.8k Ohm Resistor
S2028	10k Ohm Resistor
S2029	EOL Diode
S2051	470 Ohm Trigger Resistor
S007	Panel Key Lock Set
B3532	Panel Cabinet Lock
B1828	Enable Key Switch
	Mode Select Key Switch
M117	Hinge Pins (Long)
M118	Hinge Pins (Short)
	Panel Grounding Block
K1514-00	Battery Lead Set with fuse holder and 10A 3AG fuse for 5.25A power supply

[1] Power Supplies are required components of the XT+.

Accessories

Model Number	Device
K1822-10 K1822-40	Ancillary Board with Enclosure
K1823-10 K1823-40	Abort Switch, Suitable for Releasing
	XT+ Status Unit
K1821-11	Surface mount, Red
K1821-12	Flush mount, Red
K1821-13	Surface mount with Keyswitch, Red
K1821-14	Flush mount with Keyswitch, Red
K1821-41	Surface mount, Grey
K1821-42	Flush mount, Grey
K1821-43	Surface mount with Keyswitch, Grey
K1821-44	Flush mount with Keyswitch, Grey
K1832-10 K1832-40	Manual Extinguishant Disablement Switch
	Sequential Activator, Suitable for Releasing
K1824-10	Standard cabinet, Red
K1824-11	Large cabinet, Red
K1824-40	Standard cabinet, Gray
K1824-41	Large cabinet, Gray

Compatible Releasing Devices

Manufacturer	Model
ASCO	8210G207
ASCO	HV2185328
Fire Eater	305451 Ci IS8B Solenoid and Manual
Fire Eater	305450 Ci IS8B Solenoid
Firetrace, TLX Technologies	Linear Actuator-FTF500125 or 01-501462; TLX Technologies PA0128-5
Firetrace	FTF500024, Solenoid, 24VDC, 11W
Firetrace	FTF501224, Solenoid, 24VDC, 15W
Janus	18481
Kidde	B6793-859: The B6793-859 is equivalent to Kidde-Fenwall 81-100000-001
Kidde	K-45-8017: The K-45-8017 is equivalent to Kidde-Fenwall 486500-01
Safety Hi-Tech	SH21006404
Safety Hi-Tech	SH21006403
Sevo Systems. TLX Technologies	SOL EA45: The SOL EA45 is equivalent to Sevo Systems 510006 and TLX Technologies PA0036-3
Snap-Tite, Sevo Systems, Orient Chemori, Solenoid Solutions	2823A-2NB-A4F6
Victaulic	Series 753-E FireLock
Viking	11596
Viking	11595
Viking	11592
Viking	11602
Viking	11601
Viking	11591

Special Releasing Accessories

Kentec Electronics Sequential Activator	K1824-10 or -40 (Red or Gray) K1824-11 or -41 (Red or Gray) FP-SA/GEN3.0 (Gray) FP-SA/GEN3.0R (Red) FP-SA/GEN3M8 (Gray) FP-SA/GEN3M8R (Red)
FirePro Fixed Condensed Aerosol Extinguishing System Units	FP-20SE (FNX-20S) FP-20T (FNX-20T) FP-40S (FNX-40S) FP-40T (FNX-40T) FP-80S (FNX-80S) FP-80T (FNX-80T) FP-100S (FNX-100S) FP-200S (FNX-200S) FP-500S (FNX-500S) FP-1200 (FNX-1200) FP-1200S (FNX-1200S) FP-1200T (FNX-1200T) FP-1200TS (FNX-1200TS) FP-2000 (FNX-2000) FP-2000S (FNX-2000S) FP-2000T (FNX-2000T) FP-2000TS (FNX-2000TS) FP-3000 (FNX-3000) FP-3000S (FNX-3000S) FP-3000T (FNX-3000T) FP-3000TS (FNX-3000TS) FP-4200T (FNX-4200T) FP-4200TS (FNX-4200TS) FP-5700 (FNX-5700) FP-5700S (FNX-5700S) FP-5700T (FNX-5700T) FP-5700TS (FNX-5700TS)

INDEX

2

24V 14, 22, 42

5

5.25 14, 18, 49

A

AC Normal 22, 35, 46

AUX 24V 26, 43

B

Battery Discon 23

Battery Low 23

Buzzer 12, 36

C

Cabling 17, 42

Class B 7, 26, 43

D

DC Out On 23

DIP Switch 14

E

EOLR 26

F

Fascia 11, 17, 31, 42, 48

Fuse 13, 42, 49

G

General Trouble 15

H

Heartbeat 22, 36

J

J1 20

K

Keyswitch 31, 47, 50

L

LK1 35

Loop Explorer 2 17

N

NAC 12, 28, 39

Network 37

R

RS485 43

S

SLC 7

Standby Batteries 15, 17, 36, 44

Standby Battery 15, 22, 36, 45

T

Terminals 14, 23, 43-44

Trouble 13, 22, 33, 36, 43, 45

Trouble Relay 15, 38