


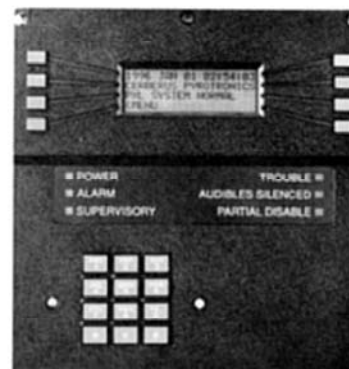
# SIEMENS PXL

Cerberus Division

## Conventional Zone Fire Alarm Control Panel

### ENGINEER AND ARCHITECT SPECIFICATIONS

- 12 Zone System Expandable to 36
- 10 Amp Base Power Supply
- Multiple Power Supplies Available
- 4 Notification Appliance Circuits in Base System - Expandable to 16
- Four 2 Amp, Power Limited Notification Appliance Circuits in Base System Expandable to 16
- Easy to Use, ATM-type Display for Operation and Programming with 80 LCD Character
- On-line Help Text for All System Operations
- Graphic Annunciator Driver Available
- Remote Serial Annunciators Available
- Factory Programmed - Ready to Install
- Fully Field Programmable Options - No Programming Tools Required
- Compatible with Pyrotronics Conventional Initiating Devices and their Accessories
- Alarm Verification by Zone
- Remote Reset Capability
- Generic Input for Horn/Strobe Power
- One Person Test Feature
- Password Protection
-  Listed, ULC Listed, CSFM & NYMEA Approved



### Introduction

The PXL is a conventional fire alarm control panel designed to meet the changing needs at the core of the fire alarm market. While providing basic fire protection in a flexible architecture, it also uses technology designed for other markets to speed installation and to simplify the response to fire. Combined with Pyrotronics' smoke detectors, which long ago established a standard for quality in the industry, PXL fire alarm controls are the most reliable and easy to use systems available today.

### Description

The PXL basic system consists of a microprocessor based control with 12 alarm initiating circuits. At the heart of the system's flexible architecture is a 10 amp power supply with a 2 amp battery charger. Although this supply is included in the base PXL it can also be reproduced in the system.

The power supply includes 3 relays which are automatically activated in the event of fire alarm, supervisory conditions, or trouble conditions - one relay for each type of condition. Additionally, the power supply includes four

CATALOG NUMBER **8100**

notification appliance circuits, each rated at 2 amps. These features supply the power required to answer today's needs for signaling devices and remote communication of system conditions.

System status is reported on a 4 line LCD display in a format similar to an automated teller machine. The system user can quickly identify the condition of the facility by viewing this display and/or individual zone LED's. Proper response to conditions is indicated in the display by clear, easy to read messages which highlight the correct buttons to press. When the user is confronted with multiple functions which can be performed at the same time the system simply leads him or her to the most critical functions first.

This same display is used for system programming. The entire system, including many of the desirable software features available in today's systems, can be programmed through this display without the need for a computer or other programming tools. Further, most installers can program all of these features without any training.

## **Expansion**

The basic PXL can be expanded conveniently to 36 zones, 32 relays and 16 - 2 amp notification appliance circuits supported by two power supplies. A larger enclosure or multiple standard enclosures are required.

## **Enclosures**

Three enclosure sizes are available for the PXL. The Model PSE-1 includes a single module mounting bracket which can support one PZE-4B, in addition to the main control, for a total of 16 initiating circuits. The PPS-10M power supply is also mounted in this bracket with room for 2 other expansion cards, either PNC-2Z's or PRM-4's.

The PSE-1M houses a PXL system including up to 28 IDC's, one PTX-12 and a 15 Amp hour battery set. Up to either 5 PNC-2Z's or PRM-4's can also be added.

The Model PSE-2 is a larger enclosure which can support up to 36 IDC's, two power supplies and the full complement of bell and relay modules. If two power supplies are installed, the batteries are to be moved to a Model BB-55 battery cabinet.

## **Zone Expansion**

The Model PZE-4B is a 4 zone expander for the base PXL. All zones are Style B (Class B) and can be converted to Style D (Class A) with the Model PZC-4D card. These Initiating Device Circuits (IDC's - see NFPA 72) are compatible with all of Pyrotechnics currently available conventional detectors and devices. Please refer to the chart on the wiring diagram for a complete list.

A maximum of 6 PZE-4B cards can be supported in any PXL system.

## **Notification Appliance Circuits**

The Model PNC-2Z is a 2 circuit expander for the base PXL. All PXL Notification Appliance Circuits (NAC's - see NFPA 72) come standard as Style Z (Class A). They are compatible with the majority of Pyrotechnics' currently available signaling devices. Please refer to the chart on the wiring diagram for a complete list.

A maximum of 4 PNC-2Z cards can be supported in any PXL system.

## **Relays**

The Model PRM-4 has 4 single pole double throw relays for expanding the base PXL output capability. Each Form 'C' relay is rated at 5 amps for resistive loads and can be programmed to follow the status of any number of IDC's.

A maximum of eight PRM-4 cards can be supported in any PXL system.

## **Power**

The Model PPS-10M power supply can be duplicated in the PSE-2 enclosure. A maximum of 2 power supplies can be supported in any PXL system including the primary supply in the base unit. The module includes a 2 amp battery charger and 10 amps for NAC power. One PTX-12 transformer is required with each PPS-10M.

## **Remote Annunciation**

Remote annunciation is accomplished through serial connection with the Model LED-3 or LED-4 eight zone LED annunciators, or model RSA-16 Series 16 zone LED annunciators. The RSA-16R and RSA-16B units display alarm and supervisory conditions; the LED-3, LED-4, RSA-16RTL, RSA-16BTL, RSA-16RSC, and RSA-16BSC units display alarm, supervisory and trouble conditions. The RSA-16RSC and RSA-16BSC also have remote system acknowledge, system silence, and system reset capability. Two complete annunciator banks can be used on a single system.

## **Features**

The PXL answers the needs of today's fire alarm market with both hardware and software based features. Following is a description of some of the many features available in the system.

## **Initiating Device Circuits**

All PXL IDC's can support 30 conventional smoke detectors. Additionally, the individual smoke detector can support a remote lamp with a remote relay or audible base. Only one initiating device is guaranteed to alarm per zone. This should be taken into account when using the detector relay base for fan shutdown. The IDC's can also support up to 5 DF-30 flame detectors.

Alarm verification is available as a software option. When an IDC is programmed for alarm verification, that IDC can support manual fire alarm stations (or other shorting devices) along with smoke detectors. The detectors will cause a fire alarm only after the verification cycle is complete. The manual stations will create a fire alarm when activated, without delay.

All IDC's can be programmed for general alarm, supervisory service or alarm verification. Additionally they can be programmed for remote reset which will allow a switch input from a remote location to reset the fire alarm system.

Finally, any zone can be programmed as a generic zone. When activated from a contact device, for instance in another fire alarm panel, all alarm NAC's in the PXL will turn on. When the contact device is reset to its normal state the PXL NAC's will turn off again. This feature can

be used to take advantage of the power in the PXL when upgrading existing systems to comply with ADA requirements for your building.

### **Notification Appliance Circuits**

All NAC's are rated 2 amps and are power limited per UL 864 requirements.

All NAC's can be programmed for the following options: Temporal Code, March Time, or Non-Silenceable, steady. Temporal Code meets the requirements of NFPA 72 and ANSI S3.41 for emergency evacuation signals.

Each IDC whether set for alarm or supervisory service, can be mapped to specific NAC's as required via program options.

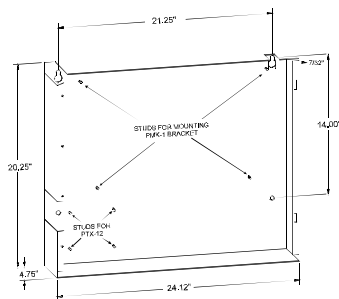
### **Relays**

Alarm, supervisory and trouble relays on the power supply operate automatically on the specific condition. The relays on the PRM-4 expansion card are fully programmable to follow the activation of any alarm or supervisory IDC. Activation of a relay by multiple zones utilizes OR logic so that the first of the mapped zones to alarm will activate the relay. All relays have transient protection.

### **Power Supply**

Each power supply has a 10 amp NAC power output and a 1 amp auxiliary, power limited output. If used, the 1 amp auxiliary output reduces the available current at the NAC power output.

## **Dimensional Drawings**



**PSE-1 Enclosure**



**PSE-1M Enclosure**

## **Assembly**

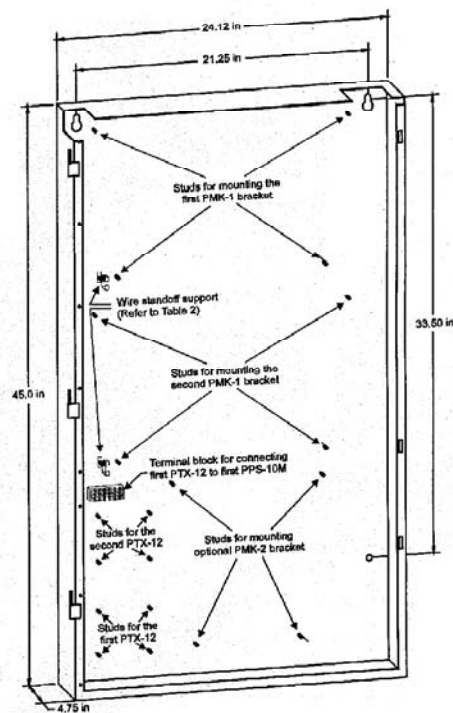
The PXL system is assembled into the PSE-1, PSE-1M or PSE-2 enclosures with the use of the PMK-1 mounting bracket kits. One bracket is required for mounting modules in the PSE-1 and is shipped in this enclosure. Two PMK-1 mounting brackets are required and included in the PSE-2 (large) enclosure. A model PMK-2 bracket is available for mounting additional relay & NAC cards in the PSE-2.

These mounting brackets can be ordered separately to allow for the assembly and test of systems off-site, prior to installation.

## **Software Features**

The PXL system has numerous software based features as well as options only available through programming. Following is a list of the majority of those features. Please refer to the Installation, Operation and Maintenance Manual part number 315-094131, for specific details on these features.

- Zone Map to Bells
- Zone Map to Relays
- Zone Bypass (IDC)
- Bell Circuit Bypass (NAC)
- Relay Bypass
- Bell Inhibit and Cutoff Timers (NAC)
- Password Protection
- Custom Message by Zone (IDC), NAC, and Relay
- One Person Test
- Bell Circuit (NAC) and Relay Test
- History Log - 30 events per condition type
- History Clear
- On-Request Help Messages



**PSE-2 Enclosure**

**TABLE 2  
COMPATIBLE NOTIFICATION APPLIANCES**

Strobes	Electronic Horns 1-Tone with strobe	Electro-Mech. Horn/Strobes		Chimes
U-S17 U-S75 U-S110	U-EH-S17 U-EH-S75 U-EH-S110	U-HN-S17 U-HNH-S17	U-HN-S75 U-HN-S110 U-HNH-S110	U-EC U-EC-C
Vibrating Bells	Horns/Horn Strobes 8-Tone	Electro- Mech. Horns	Tri-Horn	Chimes/ Strobes
BT-F BE-F BS-F BF-F BT-LC BE-LC BS-LC BF-LC	U-MMT U-MMT-S17 U-MMT-S75 U-MMT-S110	U-HN U-HNH HNH-EP HN-EP	TTH   <b>Electronic Slow Whoop</b>  EW-C	U-EC-S17 U-EC-S75 U-EC-S110

**COMPATIBLE DETECTORS\***

Detector	Quantity per Loop	Base	Installation Instructions Part No.
DI-3/3H	30	DB-3S	
DI-A3/A3H	30	DB-3S	315-081943-15
DI-B3/B3H	30	AD-3RI	315-093234-3
DI-4A	30	DB-4	
DI-6	30	DB-4	
DT-3P-135	**	DB-3S	315-084401-4
PE-3	30	DB-3S AD-3RILP	
PE-11	30	DB-11	315-085198-1
S121/122	5		315-085258
DF-30	5	DB-3S	315-092604

See 315-094131 or 575-295093 for updates.

\* When a zone is in alarm, each IDC can operate the following:  
- One ionization or photoelectric type smoke detector  
- one relay base, or audible base, or remote alarm lamp

\*\* When determining quantity of shorting devices, use sound engineering judgement

**ELECTRICAL RATINGS**

	Supervisory	Alarm
PCM-1 (IDC)	20.0-26.4 VDC 8.5mA max	20.0-26.4 VDC 180mA max
PZE-4B (IDC) Class B	20.0-26.4 VDC 8.5mA max	20.0-26.4 VDC 180mA max
PNC-2Z (NAC)	24 VDC Nominal 2.4mA max	24 VDC Nominal 2A max
PPS-10M (NAC)	24 VDC Nominal 2.4mA max	24 VDC Nominal 2A max
PPS-10M (Relays)	30 VDC / 120 VAC 5A max resistive	30 VDC / 120 VAC 5A max resistive
PPS-10M (Serial Bus)	400mA, 24V	400mA, 24V
PRM-4	30 VDC / 120 VAC 5A max resistive	30 VDC / 120 VAC 5A max resistive

PXL Operation, Installation and Maintenance Manual is P/N 315-094131

Note: All enclosures available in red.

**PXL FUSE REPLACEMENT**

Fuse	Description	Value
F1	XFORM SEC	20.0A, 250V, Normal Blow
F2	BATTERY	20.0A, 250V, Normal Blow
F3	AUX POWER	1.50A, 250V, Normal Blow
F4	+24 VDC	1.00A, 250V, Normal Blow

See 315-094131 or 575-295093 for updates.

## Ordering Information

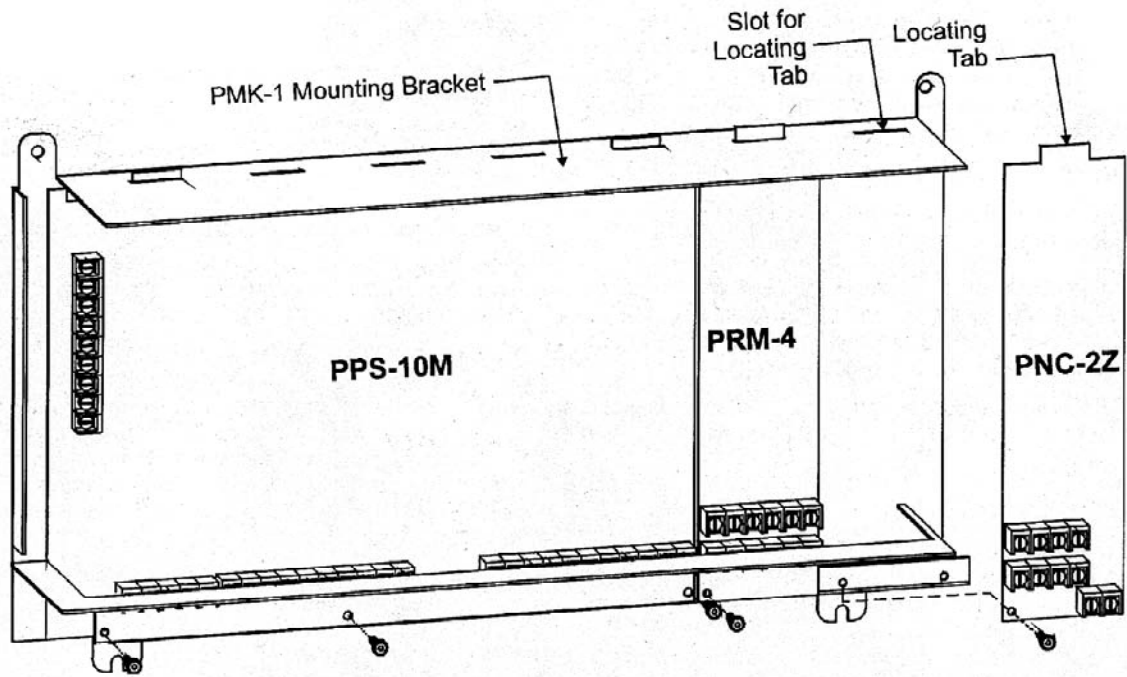
Model Number	Part Number	Description
PXL	599-694189	Complete PXL system including: Main Board w/ display and 12 initiating zones; 10 amp power supply board w/ 4-2 amp bell CKT's; transformer, battery charger, and system relays; system enclosure and door.
PZE-4B	500-894064	4 zone expansion module for PXL
PZC-4D	500-894148	4 zone Class 'A' conversion module
PNC-2Z	500-894079	2 zone notification appliance circuit module
PRM-4	500-894080	4 relay card module - form 'C', 5 amp relays
LED-3 LED-4	500-693062 500-693317	remote serial annunciator. 8 zone white/black
PPS-10M	500-494274	auxiliary 10 amp power supply w/ 4-2 amp bell circuits and battery charger
PTX-12	500-694133	12 amp 120 VAC transformer
PSE-1	500-693690	PXL system small enclosure and door (also houses 1 PPS-10M)
PSE-1M	500-696435	PXL Mid-size Enclosure
PSE-2B	500-695505	PXL system large Back Box
PSE-2D	500-695506	PXL System Large Door
PMK-1	500-693691	Spare Module Mounting Bracket
PMK-2	500-694253	Relay Mounting Bracket
BP-61	175-387194	15 AH battery set
BTX-1	175-083897	31 AH battery set
BTX-2	175-083898	55 AH battery set
LED-3	500-693062	Remote Annunciator - Black
LED-4	500-693317	Remote Annunciator - White
RSA-16R	500-396028	Annunciator - 16 Zone, Alarm or Supervisory Only - Red
RSA-16B	500-396029	Annunciator - 16 Zone, Alarm or Supervisory Only - Black
RSA-16RTL	500-396030	Annunciator - 16 Zone, Alarm & Trouble with Local Sounder & Silence Switch - Red
RSA-16BTL	500-396031	Annunciator - 16 Zone, Alarm & Trouble with Local Sounder & Silence Switch - Black
RSA-16RSC	500-396032	Annunciator - 16 Zone, Alarm & Trouble with System Control - Red
RSA-16BSC	500-396033	Annunciator - 16 Zone, Alarm & Trouble with System Control - Black

Notes:

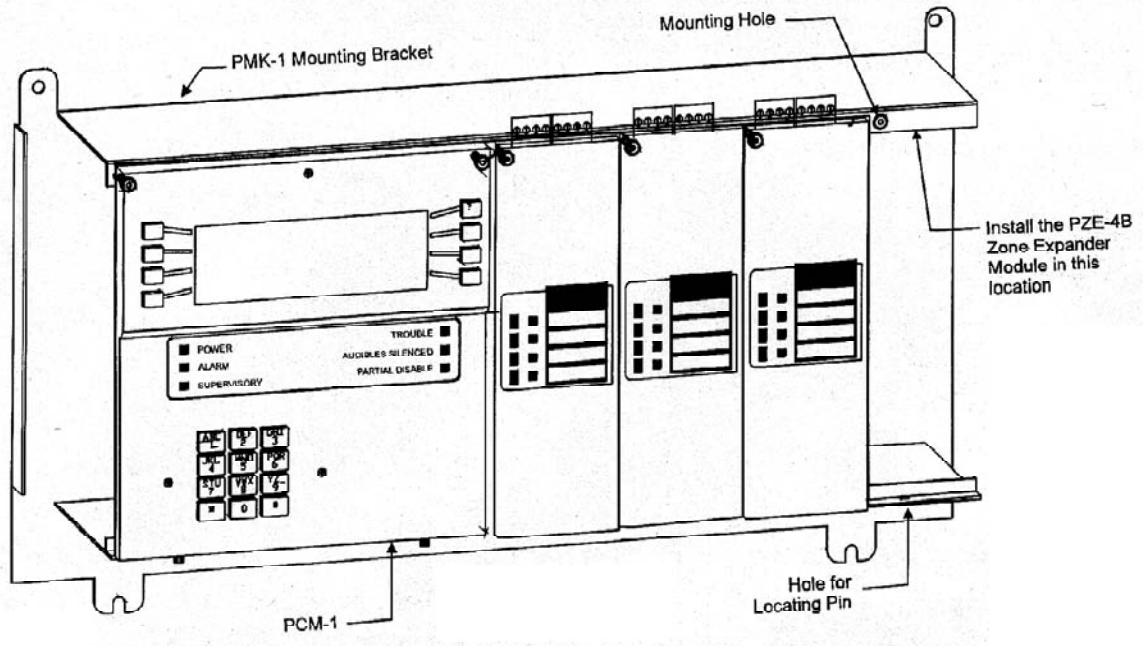
- All wiring must comply with local and national codes.
- Make no wiring connections while the System is powered.
- Relay Contacts are shown de-energized. Suitable for resistive load only.
- Refer to the *PXL Operation, Installation, and Maintenance Manual*, P/N 315-094131, for further details.
- No T-tapping allowed.
- Connect standby batteries only to terminals BAT+ and BAT-. The batteries may be installed in either the bottom of the cabinet or in a UL listed battery enclosure.
- In all cases the Pyrotech model number is the compatibility identifier, including the control panel, module(s), and all compatible initiating devices.
- All power limited wiring requires separation from non-power limiting wiring. Refer to the *PSE-1 Installation and Power Limited Wiring Instructions*, P/N 315-094154.
- Combination of NAC power and AUX power can be no greater than 10A.
- Use up to 31AH lead-acid battery only. Battery charging current is 2A max.
- Canadian systems require automatic battery disconnect. Refer to Appendix B of the *PXL Operation, Installation, and Maintenance Manual*, P/N 315-094131, for wiring information.
- Up to 10 LED-3/4 modules or up to 6 RSA-16 series modules can be connected to a serial bus (T-5). For further information, refer to the LED-3/4 Installation Instructions, P/N 315-093066, or the RSA-DRIV Installation Instructions, P/N 315-095898.



# Mechanical Drawings



**Mounting of PPS-10M, PRM-4's and PNC-2Z's**



**Mounting of PCM-1 and PZE-4B**