

PFC-8000 Series Fire Alarm Control Panel

Installation, Operation, & Programming Manual



Potter Electric Signal Company, LLC
St. Louis, MO

Customer Service: (866) 240-1870 Technical Support: (866) 956-1211 Fax: (314) 595-6999
www.pottersignal.com



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Section 1: Introduction

Overview

The PFC-8500/8060 Fire Alarm Control Panels (FACPs) are listed and approved microprocessor based addressable fire control/releasing panels that comply with UL-864, ULC-S529, NFPA-12, NFPA-12A, NFPA-13, NFPA-15, NFPA -16, NFPA-17, NFPA-17A, NFPA-72, NFPA-750, NFPA-2001, CSFM and NYMEA. Please refer to this manual to properly install, program and operate the PFC-8000 series systems.

The PFC-8000 series have the capability of storing setpoints, adding and removing devices as well as defining their operational behavior. All changes are stored in a configuration data file, which enables the user to easily configure the system from either the FACP or at a remote computer. This flexibility allows ongoing system upgrades and modifications to support building expansion and increased safety objectives.

Purpose of This Manual

This manual is intended to help you to efficiently install, operate, and program the PFC-8000 series FACPs. Please adhere to these procedures to experience a problem-free installation and to circumvent damaging the control panel and associated equipment. It's intended to be used by qualified personnel, including those responsible for security, maintenance, and training functions.

System Overview

The FACP is an expandable and intelligent system that monitors fire protection input devices configured in Signaling Line Circuits (SLCs) and provides appropriate outputs to peripheral devices. The FACP can be programmed and configured to provide optimum protection for specific applications ranging from a small facility to a large complex of buildings.

The FACP can be programmed to communicate with addressable modules and supports a total of 127 devices on a single SLC. The PFC-8500 may be expanded to support up to 508 devices when three (3) ALE-127 modules are configured.

NOTE: The PFC-8060 supports 60 devices on a single SLC.

System Features and Options

- The PFC-8500 series features a built in signaling line circuit (SLC) and is expandable to 508 Potter/Nohmi protocol devices.
- Power Supply provides 6.0 Amps for NAC circuits
- Built-in (DACT) Dual Line Fire Communicator
- Four (4) NAC circuits provides 1.5 Amps 24 V Regulated (Class A or B, Style X or Y); the PFC-8060 supports two (2) NAC circuits.
- Three (3) common dry contact outputs
- Auxiliary power contacts provide 0.5 Amps 24 VDC. (The PFC-8060 supports 0.3 Amps 24 VDC.)
- Auto Program detects connected sensors and modules for efficient system programming. RS-485 connections support the LCD Remote Annunciator (LCD-AN) and the LED Annunciator (LED-AN).
- Both annunciator models allow system monitoring at distances of up to 4,000 feet (1,200 meters) from the FACP.
- Optional ALE-127 modules may be installed (PFC-8500 only) to support up to three (3) optional SLCs.
- The system employs drift compensation as a false alarm preventive measure, and is controlled by the smoke head; it is not part of the control panel.

RS-485 Accessories:

Maximum of thirty-one (31) remote annunciators per system.

- LED-AN Remote Annunciator
- LCD-AN Remote Annunciator

Addressable Sensors:

- Photoelectric Smoke Detector (PSA)
- Photoelectric/Heat Smoke Detector (PSHA)
- Photoelectric Smoke Detector for Ducts (DSA)

- Fixed Temperature Heat Detector (FHA)
- Rate of Rise/Fixed Temperature Heat Detector (RHA)
- Addressable Isolator Base (AIB)
- Addressable Relay Base (ARB)
- Addressable Sounder Base (ASB)

Addressable Modules:

- Miniature Contact Module (MCM)
- Single Contact Module (SCM-4)
- Dual Contact Module (DCM-4)
- Twin Relay Module (TRM-4)
- Monitored Output Module (MOM-4)
- Conventional Input Zone Module (CIZM-4)
- Short Circuit Isolator (SCI)

How to Use This Manual

Refer to this manual prior to contacting Technical Support. Following the information presented in this manual is key to a successful installation and will assist you in understanding proper wire routing, system requirements and other guidelines specific to the PFC-8000 series systems.

Terms Used in This Manual

The following table provides you with a list of terms and definitions used in reference to the PFC-8000 series systems:

Term	Definition
PFC-8500 Cabinet	Enclosure
EOLD or Diode Assembly	End of Line Diode Assembly
ELOR	End of Line Resistor Assembly
Remote Annunciator	LCD-AN or LED-AN type remote annunciators
NAC	Notification Appliance Circuit
SLC	Signal Line Circuit or Loop
DACT	Digital Alarm Communicator Transmitter
ALE-127	Addressable Loop Expanders

How to Contact Potter

To contact Customer Service call: 1-800-240-1870.

To contact Technical Support call: 1-866-956-1211.

Section 2: Before You Start Installation

Overview

This section addresses information that will help you in completing a successful installation, including how to calculate the battery circuit and SLC current draw as required, wiring specifications, cabinet enclosure installation steps, and other system requirements and guidelines.

System Specifications

Cabinet Description

- Eighteen (18) gauge sheet steel with hinged, removable, locked door
- Enclosure dimensions – 24.25" x 14.84" x 5.19"

NOTE: The PFC-8060's dimensions are: 18.27" x 14.84" x 5.24"

Panel Visual Indicators

Alarm, Supervisory and Trouble conditions display applicable condition, status and circuit for each correlating condition.

- LCD (20 x 4 lines, alphanumeric characters)
- LED indicators (Red, Green, Amber)

Environmental Specifications

- Mount indoors only.
- Temperature 32° to 120°F, humidity 93% non-condensing.
- Verify panel is properly grounded.
- Remove all electronic assemblies prior to any drilling, filing, reaming, or punching of the enclosure. When possible, make all cable entries from the sides, bottom, or rear of the cabinet. Verify that they will not interfere with the batteries or other components.
- The panel and system must be tested and maintained in accordance with all local and national codes and ordinances.

System Configurations / Appliances

Model	Description	Local	Releasing Service	Auxiliary	Remote Station	Central Station	Proprietary
PFC-8500	Main Board/Panel Assembly	Y	Y	Y	Y	Y	Y
---	DACT	N	N	N	Y	Y	Y
ALE-127	Addressable Loop Expanders, three (3) units may be added to the 8500 panel	O					Y
LCD-AN	LCD Remote Annunciator	O	O	O	O	O	O
LED-AN	LED Annunciator	O	O	O	O	O	O
3005013	End of line resistor assembly	Y	Y	Y	Y	Y	Y
3005012	End of line resistor and diode	N	Y	Y	N	N	N
Note: The PFC-8060 supports 60 points on one (1) SLC. Y=Yes, required for applicable section N=No, not required for applicable section O=Optional, may or may not be used, has no affect on the applicable section.							

Electrical Specifications

Panel	# NACs	Rating per NAC	SLC Power	Notes	Style and Class
PFC-8500	4 circuits	1.5 Amp	Maximum Load of 55.86mA	Maximum of 508 addressable points	SLC -- Class A or B NAC -- Class A or B SLC and NACs are Power Limited
PFC-8060	2 circuits	1.5 Amp	Maximum Load of 55.86mA	Maximum of 60 addressable points	SLC -- Class A or B NAC -- Class A or B SLC and NACs are Power Limited

Main Board Wiring Specifications

There are several wiring requirements to consider prior to connecting circuits to the main board: (1) the circuit separation, and (2) wiring types.

Circuit Separation

Proper separation between the different types of circuits must be maintained between Power Limited, Non-Power Limited, and High Voltage wiring to reduce electrical interferences, transient voltage or voltage ratings.

- Separations between the different wiring types must be maintained by at least ¼ inch and the wire insulation must be for the higher voltage.
- The control panel cabinet has sufficient knockouts located around the periphery allowing the installer to maintain power limited and non-power limited connections.

NOTE: The National Electrical Code (NEC, NFPA 70) or the Canadian Electrical Code, C22.1, Part 1, Section 32 when installed in Canada should be followed for the proper installation and separation of power limited and non-power limited circuits.

Wiring Types

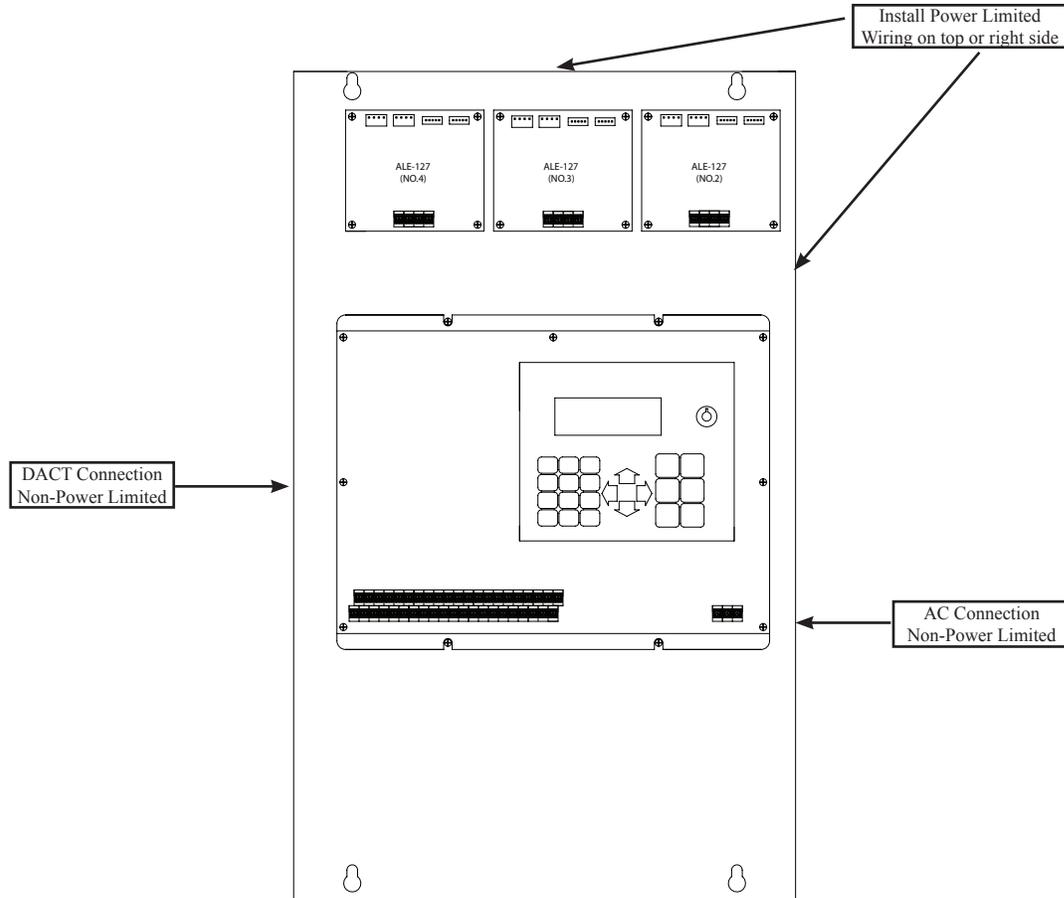
Wiring specifications must be followed to circumvent alarms from incorrectly activating, which may cause damage and/or other consequences. Please refer to table below for a breakout of the different wiring requirements listed by circuit type:

Circuit Type	Wiring Type	
	Voltage	Power
AC Connections	High	Non-Power Limited
Battery Connections	Low	Non-Power Limited
Trouble Relay	Low	Power Limited
Supervisory Relay	Low	Power Limited
Alarm Relay	Low	Power Limited
I/O Circuits	Low	Power Limited
Notification Device Circuits (NACs)	Low	Power Limited
RS-485 Connections	Low	Power Limited
Signaling Line Circuits (SLCs)	Low	Power Limited
Phone Line - DACT	High	Non-Power Limited
Primary Transformer Connection	High	Non-Power Limited
Secondary Transformer Connection	Low	Non-Power Limited

Cabinet Wiring Connections

The main AC power connection should be made on the right side or rear of the cabinet. If ALE's are installed, DACT connections should be made on the left side of the cabinet. If ALE's are **NOT** installed, DACT wiring should either be made on the left side of the cabinet or along the top left side of the cabinet.

Figure 1. Cabinet Wiring Connections



Installation of Enclosure

The enclosure back-box is surface mounted and suspended by mounting bolts. The cabinet should be installed at a location that allows the FACP door to be fully opened and knockouts accessible for cabling. Additionally, the LCD should be at eye level.

To install the cabinet:

1. Mark and drill the holes for the top keyhole mounting bolts.
2. Install the upper fasteners leaving them slightly protruding; use the correct sized bolts that support the FACP's weight.
3. Suspend the back box from the eyehole bolts.
4. Mark the lower mounting holes and remove the back box.
5. Drill the lower holes.
6. Suspend the back box from the upper eyeholes.
7. Install and tighten lower bolts.
8. Tighten upper bolts.

Power Supply (PCA)

The power supply provides 24 VDC operating power or 0.3 Amps or 0.5 Amps as auxiliary power. The PFC-8000 PCA series communicates with analog / addressable detectors and modules on the SLC, determines alarm conditions, and provides outputs to peripheral devices and remote annunciators. The power supply allocates up to 6 Amps for the four (4) on-board NACs [The PFC-8060 has two (2) on-board NACs.]

Battery Circuit Calculations

Before selecting the battery, it is important to determine the minimum size batteries for standby and alarm times required for each application and the SLC current draw. If the wrong batteries are installed, the proper standby or minimum alarm time may not be sufficient.

The battery circuit is rated for 8 to 40 AH batteries and will operate the panel alarm for at least 24 hours and 5 minutes. The cabinet will house up to two (2) 18 AH batteries.

Minimum battery size requirements to operate in standby and alarm mode are as follows:

- PFC-8500 - 18 AH for 24 hours (Hours Standby) and 5 minutes (Minutes Alarm)
- PFC-8060 - 8 AH for 24 hours (Hours Standby) and 5 minutes (Minutes Alarm)

Please use the "*Battery Calculation Worksheet*" and "*SLC Current Draw Worksheets*" provided in this section to calculate the battery size and current draw required. If additional devices are added later, you must calculate the additional current required and increase their size as needed.

Branch Circuit Calculation Worksheets

Please refer to the applicable worksheet to calculate the total branch circuit based on 120 VAC / 230 VAC required for the PFC-8060 and PFC-8500 panels.

Table 5: AC Branch Circuit 120 VAC Worksheet					
Panel Type	Number of Panels		Current Draw (Amps)		Total Current per Panel
PFC-8060	()	X	1.7 A	=	
PFC-8500	()	X	2.9 A	=	
Sum column for AC Branch Current required = Amps				=	Amps

Table 6: AC Branch Circuit 230 VAC Worksheet					
Panel Type	Number of Panels		Current Draw (Amps)		Total Current per Panel
PFC-8060	()	X	0.9 A	=	
PFC-8500	()	X	1.5 A	=	
Sum column for AC Branch Current required = Amps				=	Amps

Battery Calculation Worksheets

System Battery Capacity Calculation Worksheet

Description	Quantity	Standby (mA)	Total Standby (mA)	Alarm (mA)	Total Alarm (mA)
Main board of PFC-8060		172.00	xxx.00	272.00	xxx.00
Main board of PFC-8500		202.00	xxx.00	322.00	xxx.00
ALE-127		80.00		80.00	
Loop 1 device signal transmission <i>(see "Loops Calculation Worksheets")</i>			[] (a)		[] (b)
Loop 2 device signal transmission <i>(see "Loops Calculation Worksheets")</i>			[] (c)		[] (d)
Loop 3 device signal transmission <i>(see "Loops Calculation Worksheets")</i>			[] (e)		[] (f)
Loop 4 device signal transmission <i>(see "Loops Calculation Worksheets")</i>			[] (g)		[] (h)
NAC 1 and NAC 2 outputs					
NAC 3 and NAC 4 outputs					
Current consumed by AUX power of main board (PFC-8060:24VDC/0.3A, PFC-8500:24VDC/0.5A)	LCD-AN		35.00	65.00	
	LED-AN		35.00	75.00	
	ASB		5.00	100.00	
	ARB		5.00	50.00	
	CIZM-4		4.90 (See *Notes)	50.00	
	*NOTES: For Class A, you must use the value of 8.50mA. For Class B, you must use the value of 4.90mA.				
	MOM-4		1.60	1.60	
	Total current consumption of conventional smoke detector				
External devices, i.e., NAC devices					
Total			[] (A)		[] (B)

Battery Calculation: Monitoring time (hours) [] (C)

Alarm time (minutes) [] (D)

Battery Capacity (AH) = $1.2 \times ((A \times C) + (0.0167 \times B \times D)) / 1000 = [] \text{ AH}$

NOTES:

1. FACP enclosure can house up to two (2) 18 AH batteries.
2. NFPA 72 - 2011 requires 24 hours of standby power followed by 5 minutes alarm activation.
3. NFPA 12, 12A requires 24 hours and 5 minutes of alarm activation.
4. Total current must not exceed power supply rating (0.5A on PFC-8500 and 0.3A on PFC-8060).
5. Panel will only support 13 LEDs active at any one time.

Loop Calculation Worksheets

NOTE: Use 0.77 for the value of each loop total.

Loop 1 Current Calculation

Device Type	Quantity	Standby (mA)	Total Standby (mA)	Alarm (mA)	Total Alarm (mA)
Analog Photo Smoke Detector (PSA)		0.25		0.25	
Analog Photo DUCT Smoke Detector (DSA)		0.25		0.25	
Analog Photo Smoke / Fixed Heat Detector (PSHA)		0.25		0.25	
Analog Fixed Heat Detector (FHA)		0.25		0.25	
Analog Combo Heat Detector (RHA)		0.25		0.25	
Conventional Initiating Zone Module - 4 " mount (CIZM-4)		0.25		0.25	
Miniature Contact Module (MCM)		0.25		0.25	
Single Contact Module - 4" mount (SCM-4)		0.25		0.25	
Dual Contact Module - 4" mount (DCM-4)		0.25		0.25	
Monitored Output Module - 4" mount (MOM-4)		0.25		0.25	
Twin Relay Module - 4" mount (TRM-4)		0.25		0.25	
Short Circuit Isolator (SCI)		0.25		1.80	
Analog Sounder Base (ASB)		0.25		0.25	
Analog Relay Base (ARB)		0.25		0.25	
Isolator Base (AIB)		0.25		1.80	
Total <i>(The values are used in the "System Battery Capacity Calculation" Worksheet)</i>	[] Max. 127 (See Note#3)		[] (1)		[] (2)

Loop Battery Calculation Worksheets 0.77=[] (a) (b) (c) (d)

Loop 2 Current Calculation

Device Type	Quantity	Standby (mA)	Total Standby (mA)	Alarm (mA)	Total Alarm (mA)
Analog Photo Smoke Detector (PSA)		0.25		0.25	
Analog Photo DUCT Smoke Detector (DSA)		0.25		0.25	
Analog Photo Smoke / Fixed Heat Detector (PSHA)		0.25		0.25	
Analog Fixed Heat Detector (FHA)		0.25		0.25	
Analog Combo Heat Detector (RHA)		0.25		0.25	
Conventional Initiating Zone Module - 4 " mount (CIZM-4)		0.25		0.25	
Miniature Contact Module (MCM)		0.25		0.25	
Single Contact Module - 4" mount (SCM-4)		0.25		0.25	
Dual Contact Module - 4" mount (DCM-4)		0.25		0.25	
Monitored Output Module - 4" mount (MOM-4)		0.25		0.25	
Twin Relay Module - 4" mount (TRM-4)		0.25		0.25	
Short Circuit Isolator (SCI)		0.25		1.80	
Analog Sounder Base (ASB)		0.25		0.25	
Analog Relay Base (ARB)		0.25		0.25	
Isolator Base (AIB)		0.25		1.80	
Total <i>(The values are used in the "System Battery Capacity Calculation" Worksheet)</i>	[] Max. 127 (See Note#3)		[] (1)		[] (2)

Loop Battery Calculation Worksheets 0.77=[] (a) (b) (c) (d)

Loop 3 Current Calculation

Device Type	Quantity	Standby (mA)	Total Standby (mA)	Alarm (mA)	Total Alarm (mA)
Analog Photo Smoke Detector (PSA)		0.25		0.25	
Analog Photo DUCT Smoke Detector (DSA)		0.25		0.25	
Analog Photo Smoke / Fixed Heat Detector (PSHA)		0.25		0.25	
Analog Fixed Heat Detector (FHA)		0.25		0.25	
Analog Combo Heat Detector (RHA)		0.25		0.25	
Conventional Initiating Zone Module - 4 " mount (CIZM-4)		0.25		0.25	
Miniature Contact Module (MCM)		0.25		0.25	
Single Contact Module - 4" mount (SCM-4)		0.25		0.25	
Dual Contact Module - 4" mount (DCM-4)		0.25		0.25	
Monitored Output Module - 4" mount (MOM-4)		0.25		0.25	
Twin Relay Module - 4" mount (TRM-4)		0.25		0.25	
Short Circuit Isolator (SCI)		0.25		1.80	
Analog Sounder Base (ASB)		0.25		0.25	
Analog Relay Base (ARB)		0.25		0.25	
Isolator Base (AIB)		0.25		1.80	
Total <i>(The values are used in the "System Battery Capacity Calculation" Worksheet)</i>	[] Max. 127 (See Note#3)		[] (1)		[] (2)

Loop Battery Calculation Worksheets 0.77=[] (a) (b) (c) (d)

Loop 4 Current Calculation

Device Type	Quantity	Standby (mA)	Total Standby (mA)	Alarm (mA)	Total Alarm (mA)
Analog Photo Smoke Detector (PSA)		0.25		0.25	
Analog Photo DUCT Smoke Detector (DSA)		0.25		0.25	
Analog Photo Smoke / Fixed Heat Detector (PSHA)		0.25		0.25	
Analog Fixed Heat Detector (FHA)		0.25		0.25	
Analog Combo Heat Detector (RHA)		0.25		0.25	
Conventional Initiating Zone Module - 4 " mount (CIZM-4)		0.25		0.25	
Miniature Contact Module (MCM)		0.25		0.25	
Single Contact Module - 4" mount (SCM-4)		0.25		0.25	
Dual Contact Module - 4" mount (DCM-4)		0.25		0.25	
Monitored Output Module - 4" mount (MOM-4)		0.25		0.25	
Twin Relay Module - 4" mount (TRM-4)		0.25		0.25	
Short Circuit Isolator (SCI)		0.25		1.80	
Analog Sounder Base (ASB)		0.25		0.25	
Analog Relay Base (ARB)		0.25		0.25	
Isolator Base (AIB)		0.25		1.80	
Total <i>(The values are used in the "System Battery Capacity Calculation" Worksheet)</i>	[] Max. 127 (See Note#3)		[] (1)		[] (2)

NOTES:

1. The value of "0.77" is based on Loop efficiency.
2. For Class B, Style 4, eight (8) addresses must be deducted for each short circuit isolator; therefore, multiply the quantity of short circuit isolator by eight (8) to calculate the standby and alarm mA totals.
3. There is a maximum of 127 addressable devices. (The PFC-8060 supports 60 addressable devices.)
4. The total current value of each Loop's calculation must **NOT** exceed 55.86mA.
5. Panel will only support 13 LEDs active at any one time.

Battery Connections

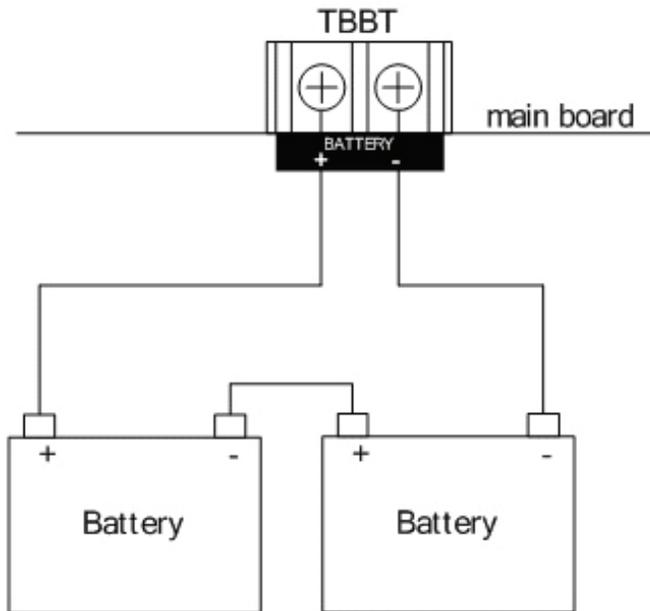
The **battery charging circuit** is located on the main panel in the lower portion of the board, and is supervised. Two 12V batteries are supported by a 1.0 Amp DC charging circuit with approximately 27.3 VDC charging voltage.

The battery is to remain in the cabinet with nothing on or around the batteries. Only properly sized sealed lead acid batteries are to be used with the control panel. Use of another battery or not providing the proper clearance may result in a fire or an explosion. (Refer to "Appendix B: System Testing and Maintenance" for more information on battery care and maintenance recommendations.)

NOTE: Clearly label the battery on the panel as *“sealed lead acid battery”* or equivalent.

Connect the battery wire leads to the terminal connections, as shown below.

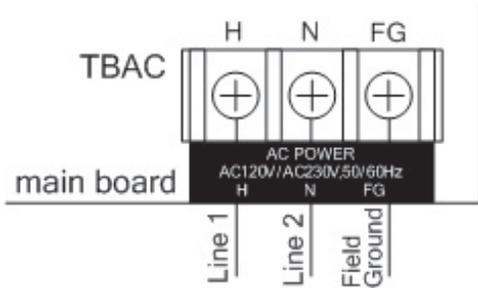
Figure 2. Battery Connections



Main Supply Circuit

The AC terminals are located in the lower right hand portion of the main board. The main board supervises the main AC power and indicates when AC power is absent. The AC power cable is connected to TBAC on the main board; please refer to the figure below for AC terminal connections.

Figure 3. AC Terminal Connections



The terminals are rated at 120 VAC / 230 VAC 50/60 Hertz and are marked accordingly on the board. The earth ground connection is marked as **“Field Ground”** and is the furthest connection from the line voltage connection.

The AC input power ratings are as follows:

- Maximum of 3.1A (340VA) at the nominal 120 VAC rating.
- Maximum of 1.60A (340VA) at the nominal 230 VAC rating.

NOTES:

1. The PFC-8500/8060 series standard models have 120 VAC by default; each model may alternatively be configured with 230 VAC if specified when ordered.
2. The PFC-8060 AC maximum of 1.7A (200VA) at the nominal 120 VAC rating and maximum of 0.90A (200VA) at the nominal 230 VAC rating.

AC power is to be provided by a dedicated branch circuit clearly labeled **“Fire Alarm”**. The branch circuit must connect to the line side of the main power feed of the protected premises, and no other equipment may be powered from this circuit. Additionally, the branch circuit wire must run continuously from the power source to the FACP without any disconnect devices.

NOTE: The over current protection for this circuit must comply with Article 760 of the National Electric Codes as well as applicable local codes.

Earth Resistance

The system monitors ground faults for the following circuits:

- NACs and SLCs on the main board
- The ALE-127
- The RS-485 port on the main board
- Auxiliary power (AUX)

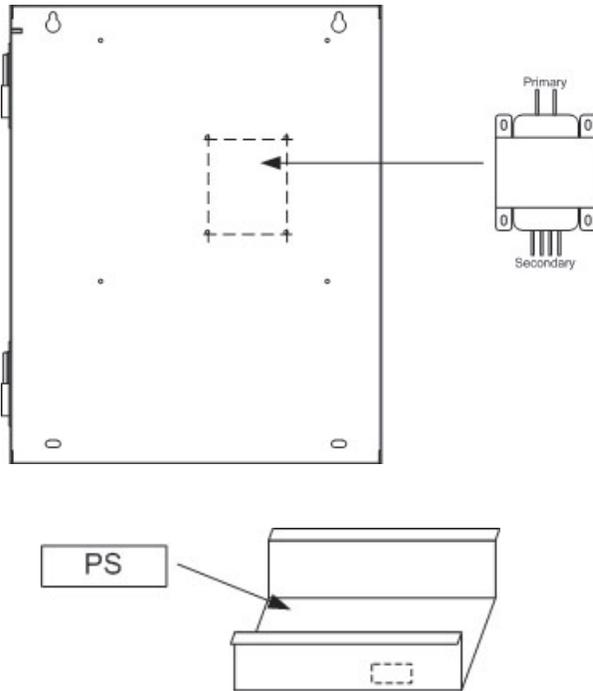
NOTE: The earth resistance of these circuits is below 10 kΩ at the lowest.

Transformer / Power Supply Board and Mounting Plate Installation

Please refer to the diagram shown below for installing the transformer, power supply board and PCA mounting plate.

NOTE: This unit is factory assembled; diagram is provided for reference only.

Figure 4. Transformer, Power Supply and PCA Mounting



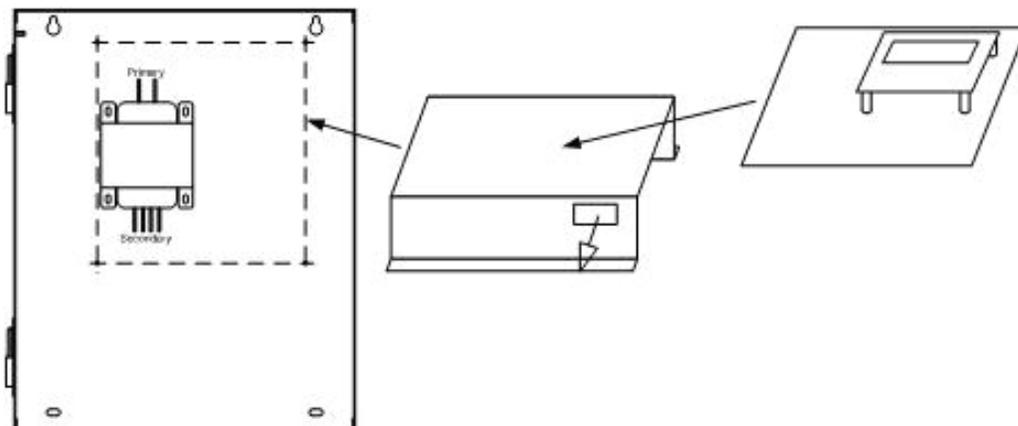
Main Board Installation

Please refer to the diagram shown below for installing the main board:

1. Connect the Power Supply Board cable to the **CNDC connector**.
2. Connect the Transformer's primary cable to **CNT1 connector**.
3. Connect the Transformer's secondary cable to **CNT2 connector**.

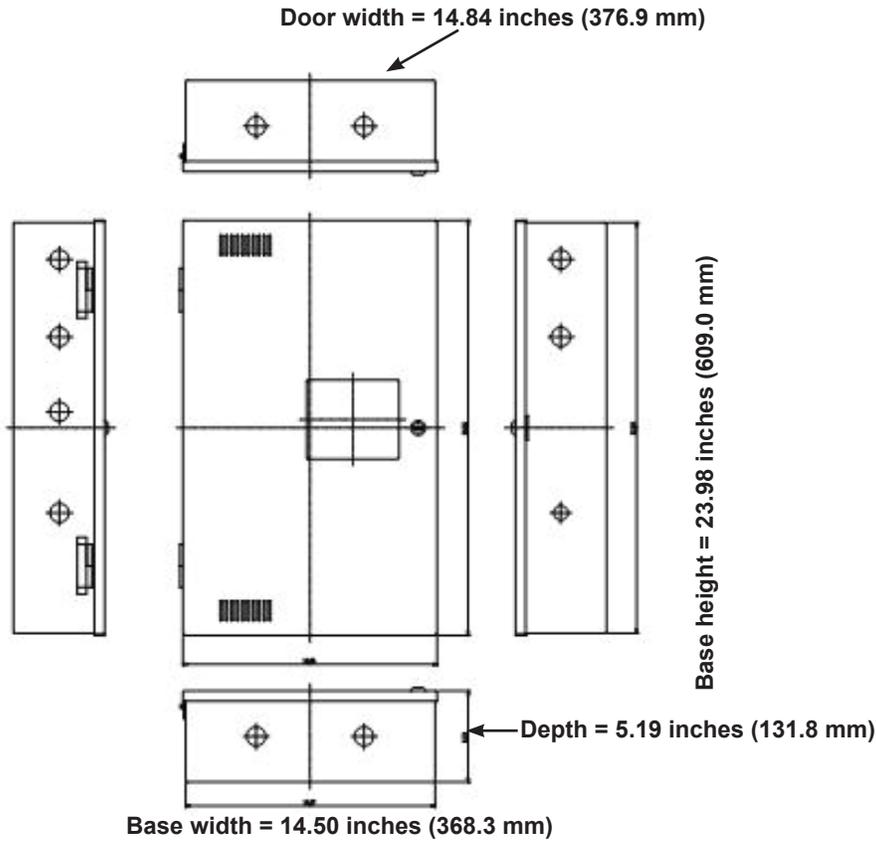
NOTE: This unit is factory assembled, and is provided for reference only.

Figure 5. Main Board Installation



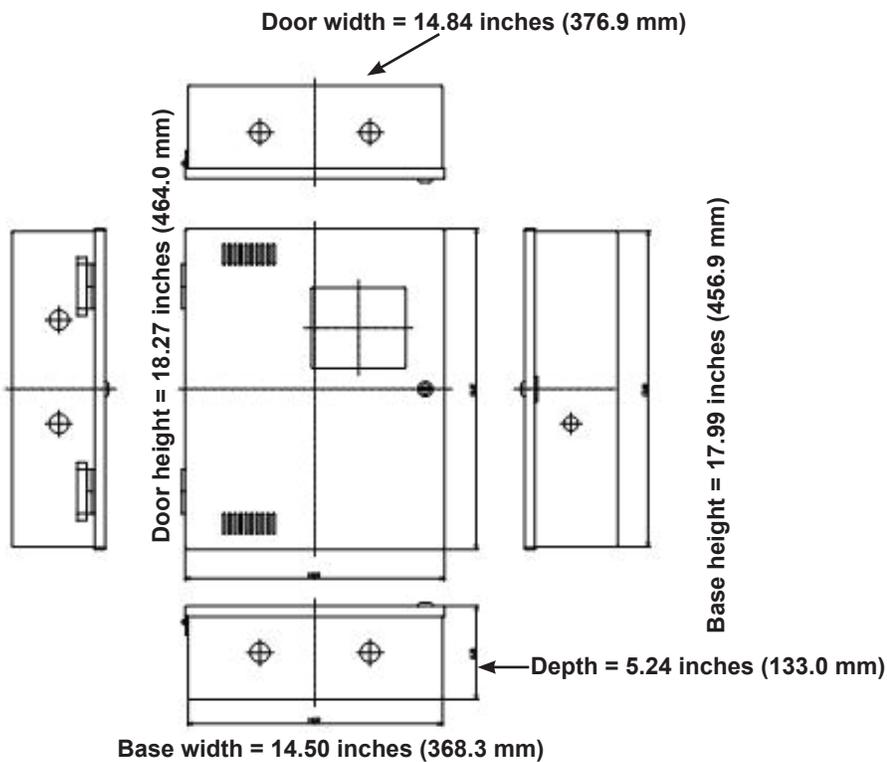
PFC-8500 Enclosure

Figure 6. PFC-8500 Enclosure Dimensions



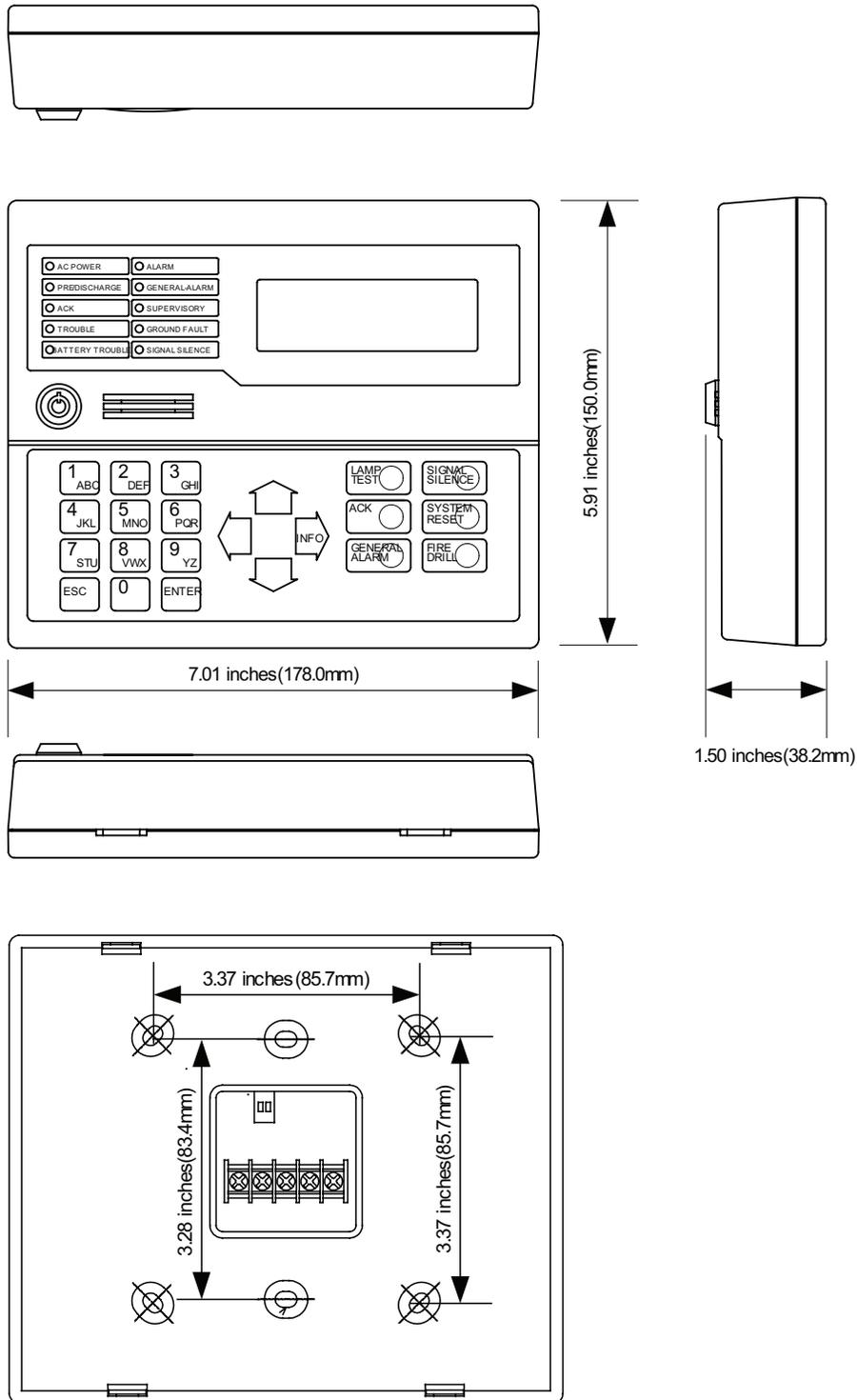
PFC-8060 Enclosure

Figure 7. PFC-8060 Enclosure Dimensions



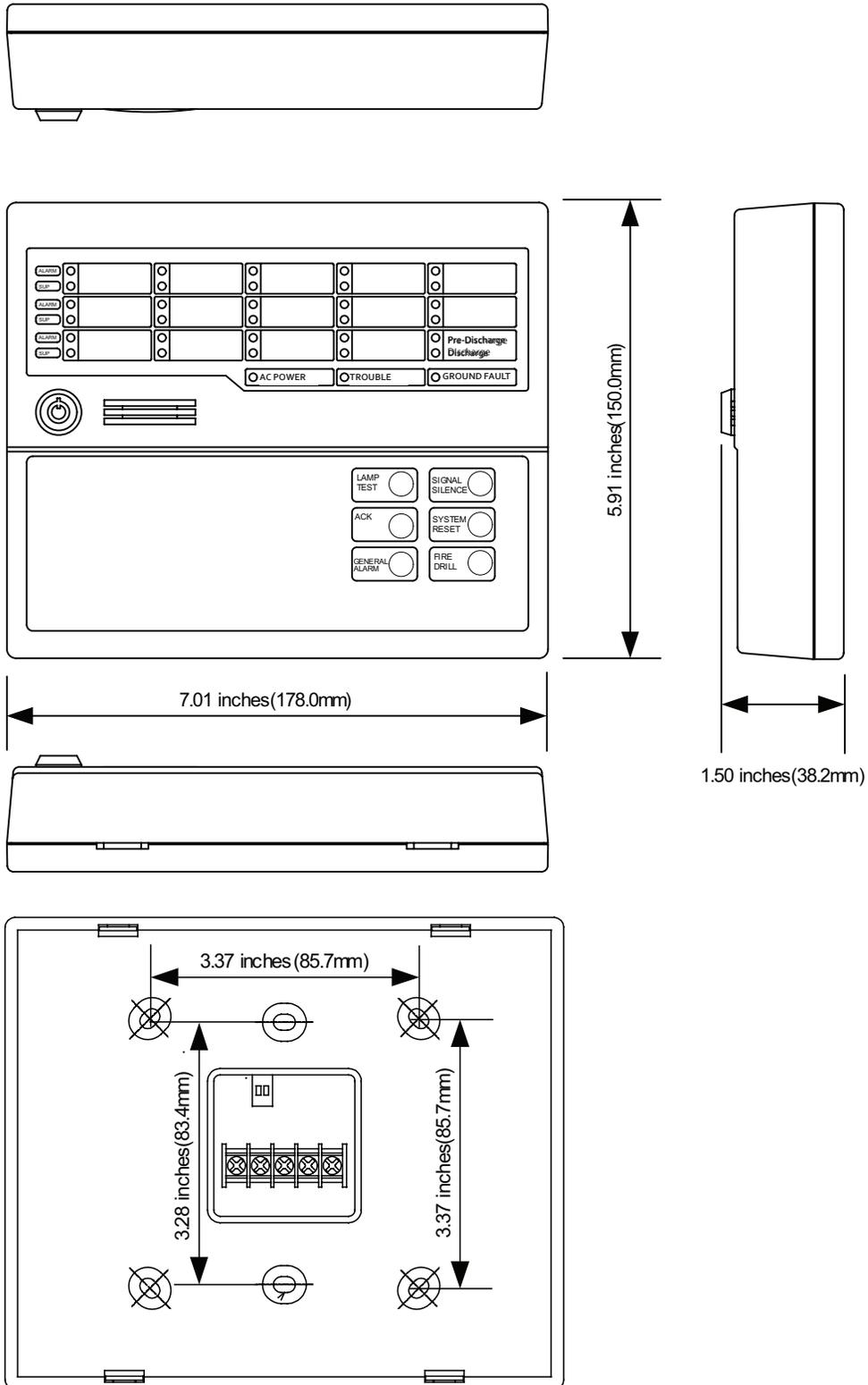
LCD Annunciator (LCD-AN) Enclosure

Figure 8. LCD-AN Annunciator Dimensions



LED Annunciator (LED-AN) Enclosure

Figure 9. LED-AN Annunciator Dimensions



Section 3: Installation

Overview

This section addresses installation procedures for SLCs, NACs and optional modules, including the ALE-127 (addressable loop expander) and LED / LCD Remote Annunciators. Wiring requirements and configuration examples are included throughout this section. Additionally, instructions for addressing SLC devices are included. Please read this section carefully before installing devices and/or modules to insure proper installation.

Signal Line Circuit (SLC) Installation

The PFC-8500 panel has a loop capacity of 127 addressable points configured in any combination of smoke sensors, heat detectors, and input or output modules. Plus, up to three (3) additional ALE-127s may be added, each supporting 127 devices. *(The PFC-8060 is a single loop panel supporting 60 devices.)*

NOTICE
<p>All devices require an address prior to connecting to the control panel. Refer to “<i>Addressing SLC Devices</i>” located later in this section for details.</p>

The SLC is fully supervised by sending and receiving a communication signal to each device on the loop. The entire loop is polled approximately every four (4) seconds.

SLC Wiring Requirements

The wiring parameters listed below **MUST** be followed to ensure proper installation:

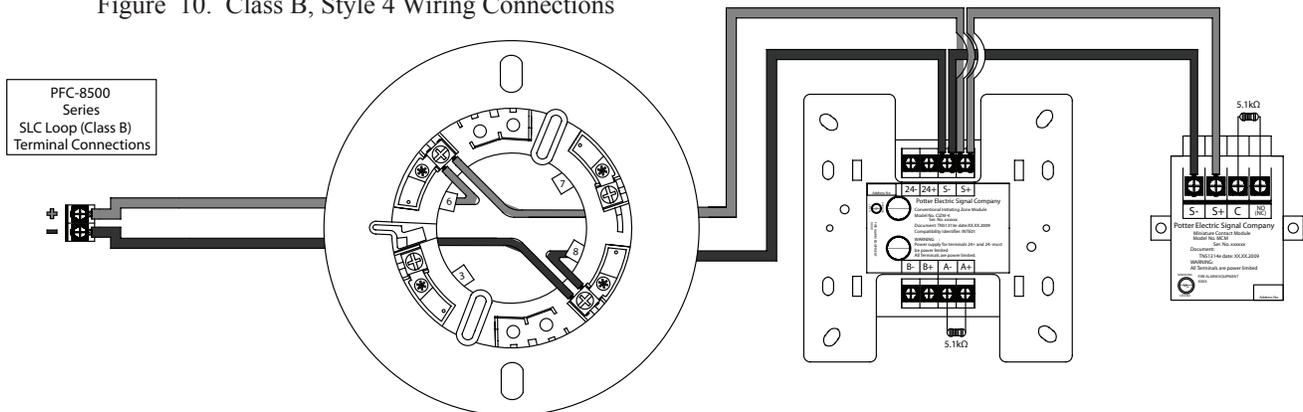
- Maximum wiring resistance between two (2) SCIs must be less than 10 ohms.
- Total resistance must be below 50 ohms.
- Maximum wire resistance must be calculated based on 0.1 ohm per SCI.
- Maximum voltage rating is 24 VDC (voltage range is 22-24 VDC).
- Maximum current rating is 56.4 mA.
- Maximum loop capacitance must be 0.5 micro farads.
- All SLC wiring is low voltage and power limited.

Connecting SLCs

Class B, Style 4 Wiring Configuration

Please refer to the figure shown below for an example of a Class B, Style 4 wiring configuration.

Figure 10. Class B, Style 4 Wiring Connections

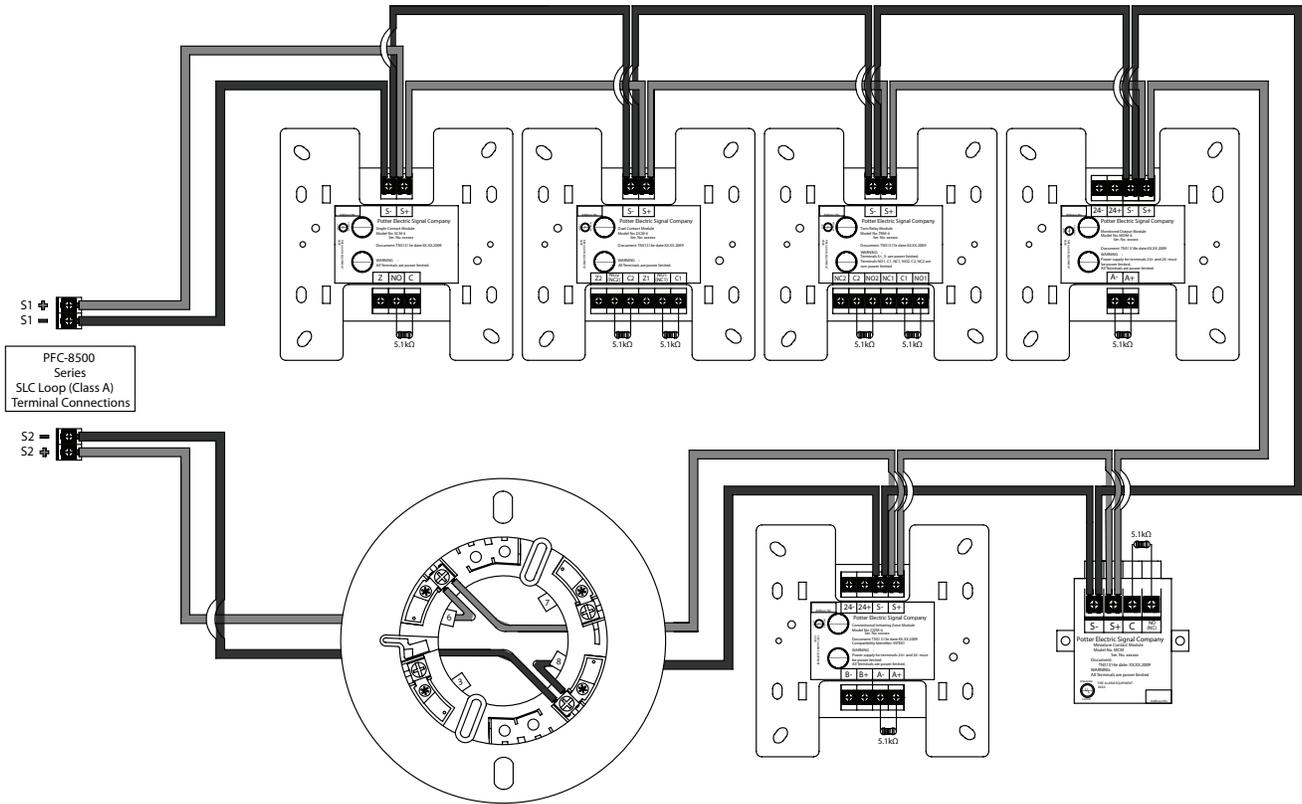


NOTE: In a Class B, Style 4 configuration, if SCIs or AIBs are used, **deduct eight (8) addresses per SCI or AIB** from the total number of addresses supported.

Class A, Style 6 Wiring Configuration

Please refer to the figure shown below for an example of a Class A, Style 6 wiring configuration.

Figure 11. Class A, Style 6 Wiring Connections



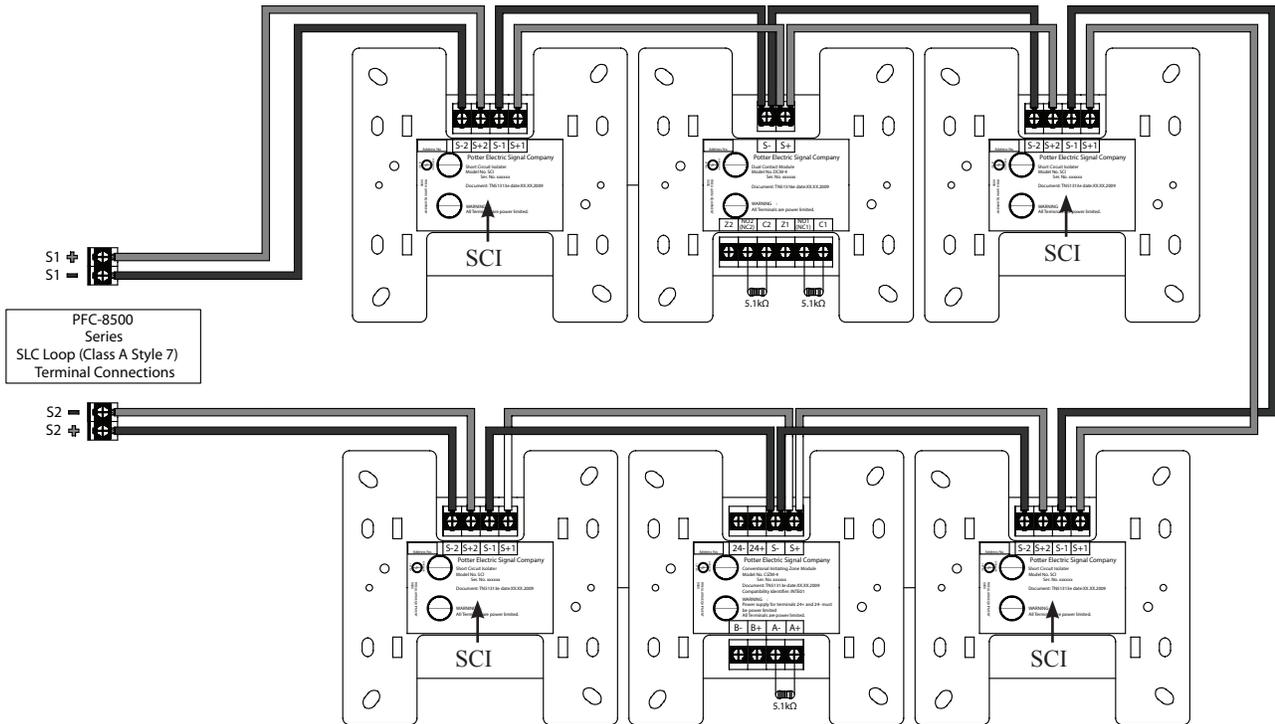
NOTES:

1. When multiple zones are configured to Notification Appliance Circuits (NACs), those NACs must be protected by SCIs or AIBs per zone.
2. The Class A, Style 6 configuration does not provide the level of protection as Class A, Style 7.

Class A, Style 7 Configuration

Please refer to the figure shown below for an example of a Class A, Style 7 wiring configuration.

Figure 12. Class A, Style 7 Wiring Connections



NOTES:

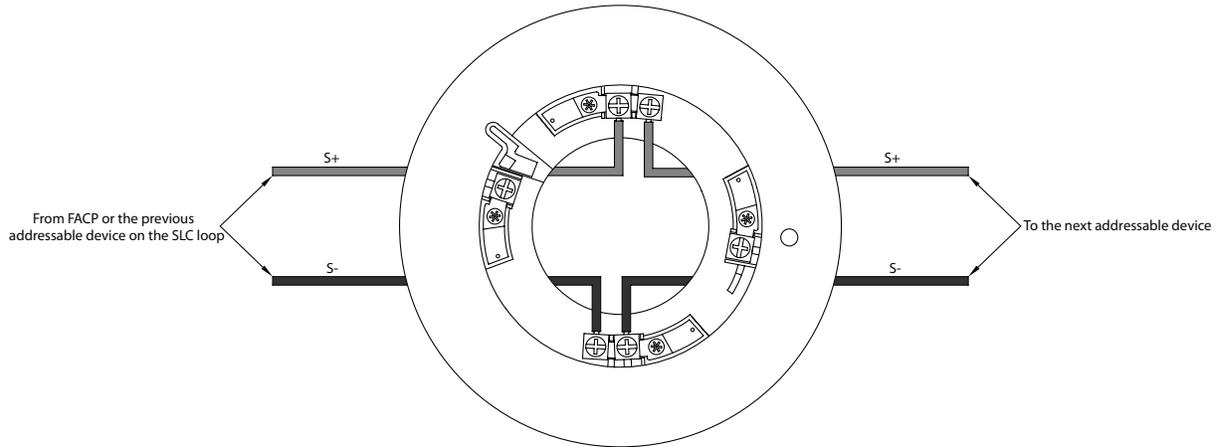
1. The Class A, Style 7 requires installation of an isolator close nipple connected to every module or sensor. Isolators may be either a SCI or an AIB addressable base.
2. The SLC connection requires that the wires are separated 10', installed in conduit or other mechanical protection.
3. Maximum wiring resistance must not exceed 50 ohms.

Connecting Analog Detectors

When installing analog detectors, such as a photoelectric smoke sensor (PSA), photo smoke/heat detectors (PSHA), heat detectors (FHA), or an analog combination type heat detector (RHA), use detector bases (i.e. AB-6). An analog detector activates its response LED when activated.

NOTE: There may be no more than 13 active LEDs per SLC.

Figure 13. Analog Detector Wiring Example



NOTES:

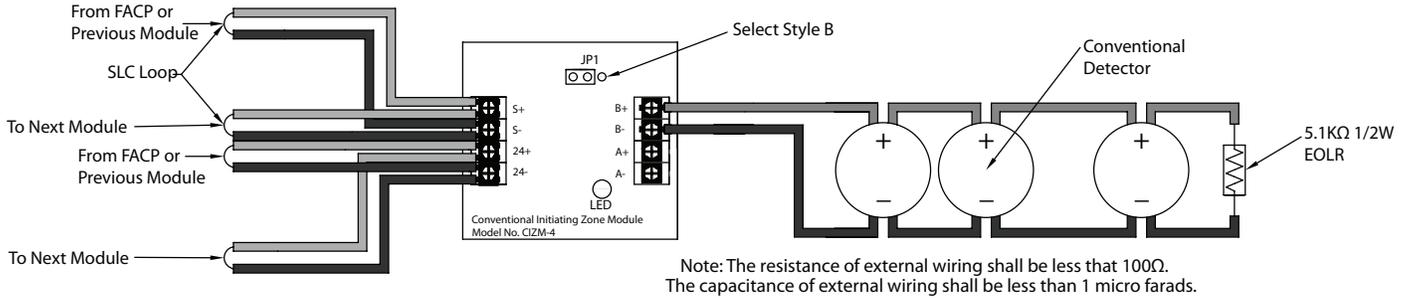
1. When configuring a counting zone or cross zone, two (2) or more detectors must be installed in each protected premise.
2. The detector installation spacing must be reduced to 0.7 times the linear spacing in accordance with National Fire Alarm Code, NFPA 72.

Connecting Addressable Modules

This section provides examples of wiring addressable modules, including the Conventional Initiating Zones (CIZM-4), Miniature Contact (MCM), Single Contact (SCM-4), Dual Contact Module (DCM-4), Twin Relay (TRM-4), Monitored Output (MOM-4), Analog Relay (ARB) and Analog Sounder Base (ASB) modules.

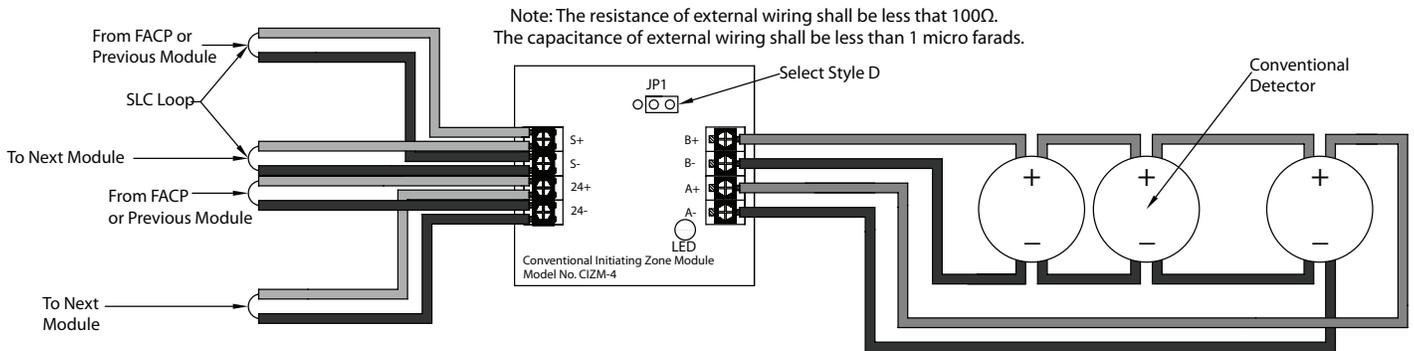
Conventional Initiating Zones (CIZM-4) Class B, Style B

Figure 14. CIZM-4 Class B, Style B Wiring Example



Conventional Initiating Zones (CIZM-4) Class A, Style D

Figure 15. CIZM-4 Class B, Style D Wiring Example



NOTES:

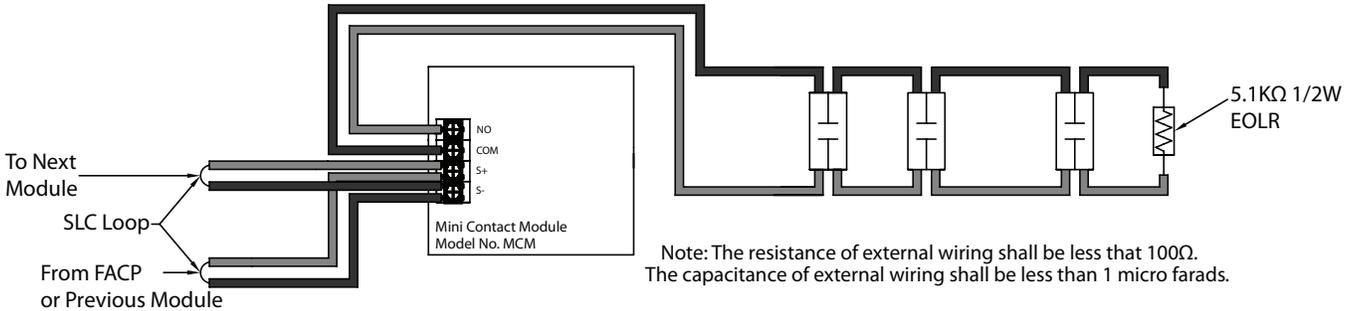
1. Only one (1) addressable module may be used in a zone when an initiating device has been configured for alarm verification.
2. In Class A, Style D, the open circuit "trouble condition" of IDC is latched at the control panel until the system is reset. Therefore, the system **MUST** be reset at the control panel after clearing the open circuit condition at the site.
3. When configuring a counting zone or cross zone, two (2) or more detectors must be installed at each protected premise.

Miniature Contact Module (MCM) Class B, Style B

Normally Open Contact Configuration

The FACP configuration software defaults to a normally open contact configuration. The normally closed contact is not a UL/ULC feature. Refer to the figure shown below for a MCM normally open contact wiring example:

Figure 16. MCM Normally Open Contact Wiring Example



NOTES:

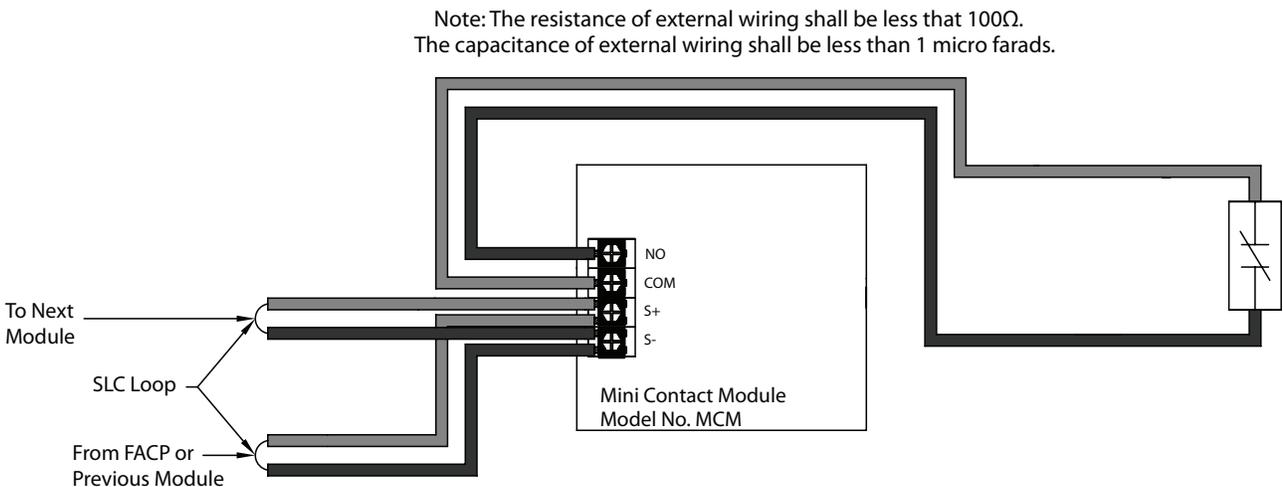
1. When a switch is connected to the input module and the module input type classification is set to *"Abort Switch"*, the switch must be marked *"Abort"*. The switch must be of the manually operated, self-restoring type.
2. When a switch is connected to the input module and the module input type classification is set to *"Manual Release"*, the switch must be marked *"Manual Release"* or equivalent.
3. There is a delay in Abort since it is a polling device.
4. The normally closed contact is not a UL/ULC feature.

Normally Closed Contact Configuration (Not UL/ULC listed)

In normally closed contact configurations, the MCM's setting must be selected as *"input mode=b"* in the FACP configuration software. In this case, a short circuit condition operates as a *"normal"* condition, an open circuit condition operates as an *"active"* condition. The Tank Temperature Supervisory Switch (*TTS is manufactured by Potter*) can be connected as a normally closed contact application.

Refer to the figure below for an example of a MCM normally closed wiring configuration:

Figure 17. MCM Normally Closed Contact Wiring Example

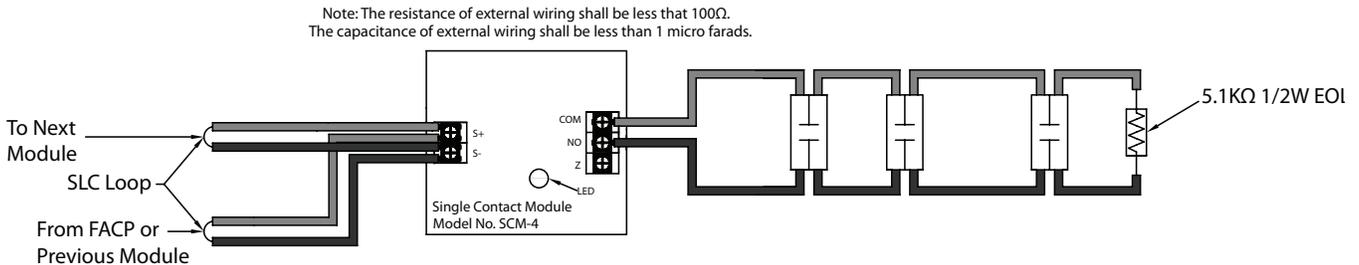


Single Contact Module — 4 inch Mount (SCM-4)

Normally Open Contact Configuration (Class B, Style B)

The FACP configuration software defaults to a normally open contact configuration. Please refer to the figure shown below for a normally open contact SCM-4 wiring example:

Figure 18. SCM-4 Class B, Style B, Normally Open Contact Wiring



NOTES:

1. When a switch is connected to the input module and the module input type classification is set to "**Abort Switch**", the switch must be marked "**Abort**". The switch must be of the manually operated, self-restoring type.
2. When a switch is connected to the input module and the module input type classification is set to "**Manual Release**", the switch must be marked "**Manual Release**" or equivalent.
3. The normally closed contact is not a UL/ULC feature.

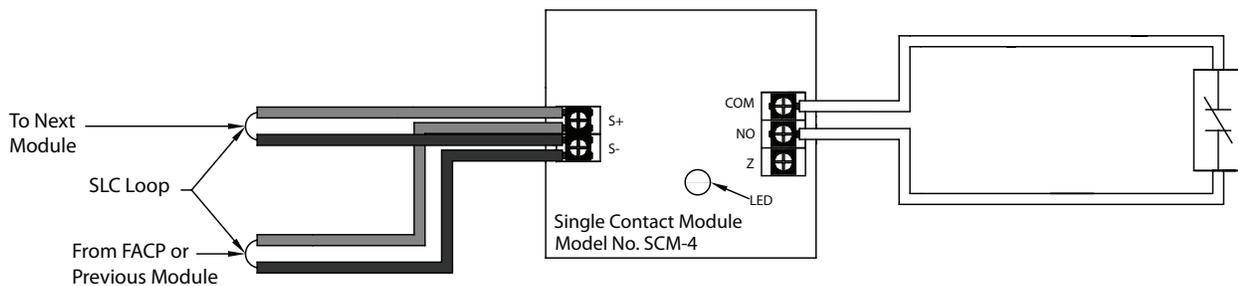
Normally Closed Contact Configuration (Class B, Style B) (Not UL listed)

In normally closed contact configurations, the SCM-4's setting must be selected as "*input mode=b*" in the FACP configuration software. In this case, a short circuit condition operates as a "*normal*" condition, an open circuit condition operates as an "*active*" condition. The Tank Temperature Supervisory Switch (*TTS is manufactured by Potter*) can be connected as a normally closed contact application.

Please refer to the figure shown below for a normally closed contact SCM-4 wiring example:

Figure 19. SCM-4 Class B, Style B, Normally Closed Contact Wiring Example

Note: The resistance of external wiring shall be less than 100Ω.
The capacitance of external wiring shall be less than 1 micro farads.

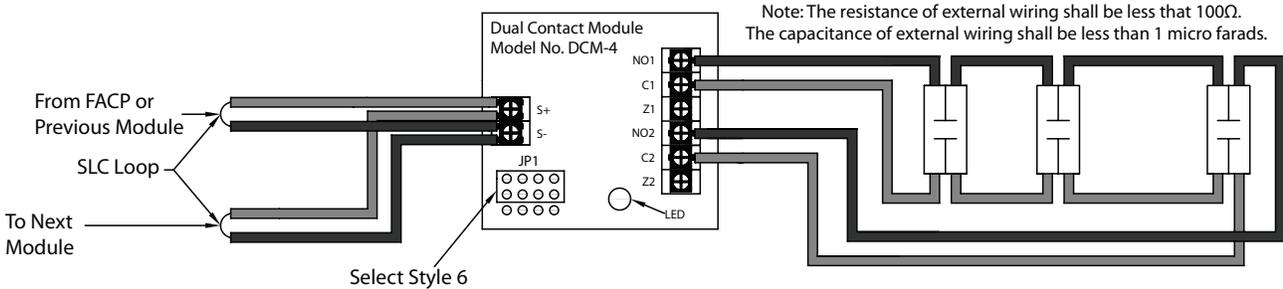


Dual Contact Module — 4 inch Mount (DCM-4)

Normally Open Contact Configuration (Class A, Style D)

The FACP configuration software defaults to a normally open contact configuration. Please refer to the figure shown below for a normally open contact DCM-4 wiring example:

Figure 20. DCM-4 with one Class A Circuit



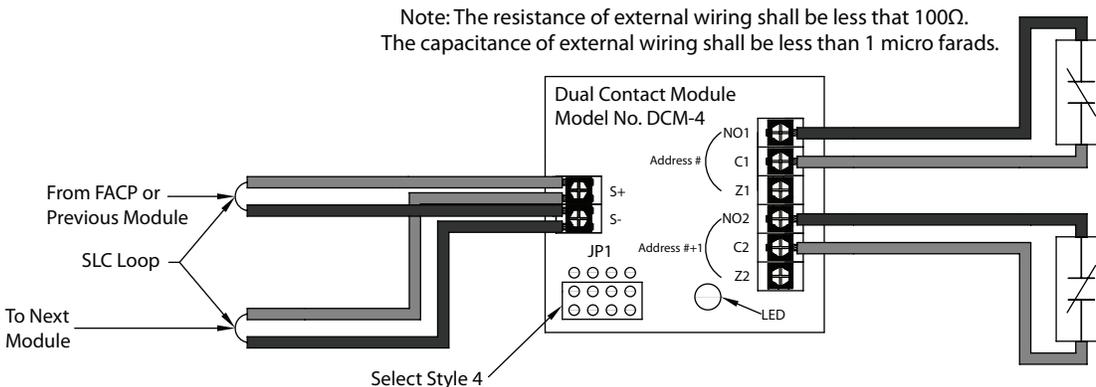
NOTES:

1. In Class A, Style D, the DCM-4 normally closed contact connection is not supported.
2. The DCM-4 requires two (2) addresses; therefore, when assigning addresses to these modules, take this into consideration, otherwise the system will ignore the second contact. For example: If you set the DCM-4 address to #005, and subsequently set another device to address #006, the DCM-4 will function as a single contact module.

Normally Closed Contact Configuration (Not UL listed)

In normally closed contact configurations, the DCM-4's setting must be selected as "input mode=b" in the FACP configuration software. The Tank Temperature Supervisory Switch (TTS is manufactured by Potter) can be connected as a normally closed contact application. Please refer to the figure shown below for a normally closed contact DCM-4 wiring example:

Figure 21. DCM-4 with Two Class B Circuits



When configuring Class B, Style 4, the DCM-4 has two (2) addresses. If address No.1 is set, input circuit No.1 (NO1, C1) will be addressed as No.1 and input circuit No.2 (NO2, C2) will be addressed as No.2.

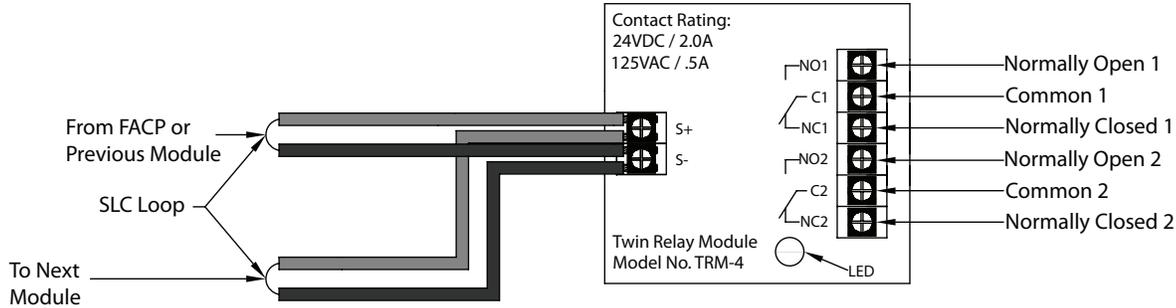
NOTES:

1. The "Abort" may delay for up to 4 seconds.
2. When a switch is connected to the input module and the module input type classification is set to "Abort Switch", the switch must be marked "Abort". The switch must be of the manually operated, self-restoring type.
3. When a switch is connected to the input module and the module input type classification is set to "Manual Release", the switch must be marked "Manual Release" or equivalent.
4. The DCM-4 requires two (2) addresses; therefore, when assigning addresses to these modules, take this into consideration, otherwise the system will ignore the second contact. For example: If you set the DCM-4 address to #005, and subsequently set another device to address #006, the DCM-4 will function as a single contact module.

Twin Relay Module — 4 inch mount (TRM-4)

The TRM-4 has two (2) contacts that are active simultaneously when TRM-4 is in the active mode. Normal output is non power-limited, unless the power supply connected to the TRM-4 is power-limited. The figure shown below provides a TRM-4 wiring example.

Figure 22. TRM-4 Wiring Example



NOTE: Prior to connecting an output device, connect the module to the SLC and "Reset" it through the FACP. If you do not follow this procedure, the internal relay may not be unlatched. If the relay is in a latched state, possible damage may occur.

Monitored Output Module — 4 inch Mount (MOM-4)

The output of MOM-4 is non power-limited, unless the power supply connected to the MOM-4 is power-limited. The circuit's wiring resistance cannot exceed the maximum wiring resistance ("**R_{max}**"). Please refer to the formula below to calculate the maximum wiring resistance.

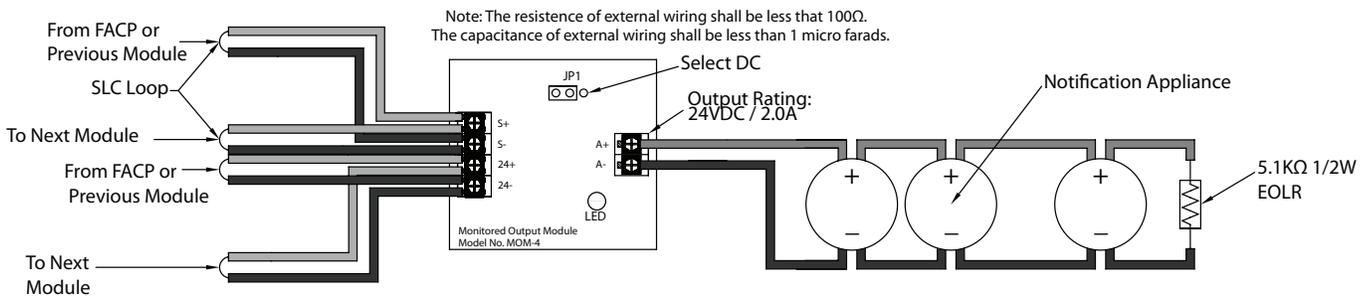
Maximum Wiring Resistance Formula

$$R_{max} \text{ (ohm)} = (24V - V_{min}) / I_{total}$$

V_{min} = Lowest voltage for operation of connected devices (volts)

I_{total} = Total operation current of connected devices (amps)

Figure 23. MOM-4 Wiring Example



NOTES:

1. Prior to connecting an output device, connect the module to the SLC and "Reset" it through the FACP. If you do not follow this procedure, the internal relay may not be unlatched. If the relay is latched (i.e., terminal between OUT+ and OUT- are powered) and activates the output device, possible damage may occur.
2. When Notification Appliances are connected to a MOM-4, each MOM-4 must be connected between short circuit isolators (SCIs or AIBs) in order to protect it from short circuiting the SLC wiring.
3. When NACs are synchronized, the Wheelock (SM-12/24 or DSM-12/24) and/or AMSECO (SMD10-3A) modules may be used.

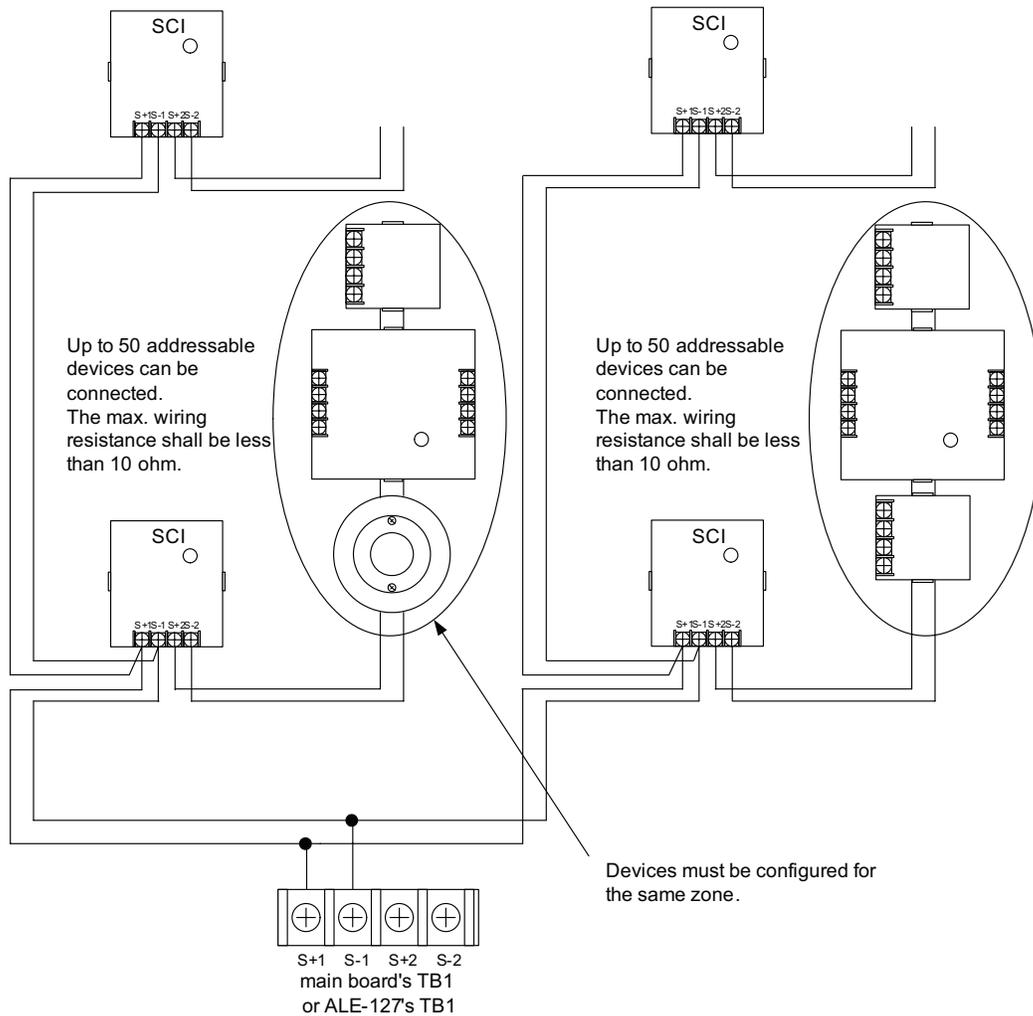
Connecting SCIs

The wiring for terminals S+1, S-1, S+2 and S-2 are supervised and power limited. When a short circuit is detected in wiring S+1 and S-1 (or S+2 and S-2), the wiring is isolated in order to protect the devices connected to S+2 and S-2 (or S+1 and S-1). When the short circuit is removed, the SCI is automatically reset to the normal monitoring condition.

Class B, Style 4 Wiring Configuration

Please refer to the figure shown below for an example of a Class B, Style 4 wiring.

Figure 25. SCI Class B, Style 4 Wiring Example



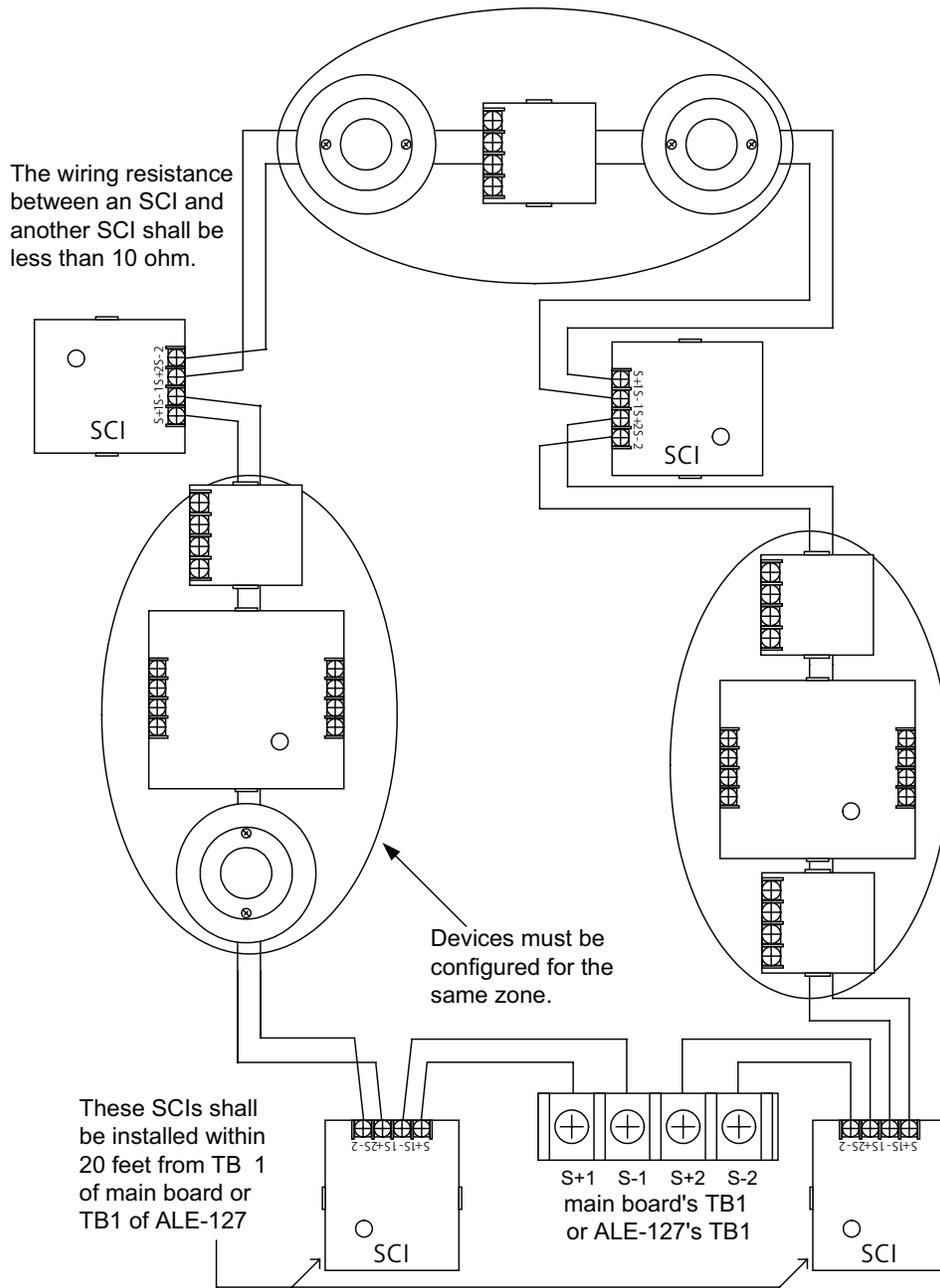
NOTES:

1. When multiple zones are configured to Notification Appliance Circuits (NACs) those NACs must be protected by SCIs per zone.
2. If SCIs are used in Class B, Style 4 configurations, **subtract eight (8) per SCI** from the total number of addresses supported.

Class A, Style 6 Wiring Configuration

Please refer to the figure shown below for an example of a Class A, Style 6 wiring:

Figure 26. SCI Class A, Style 6 Wiring Example



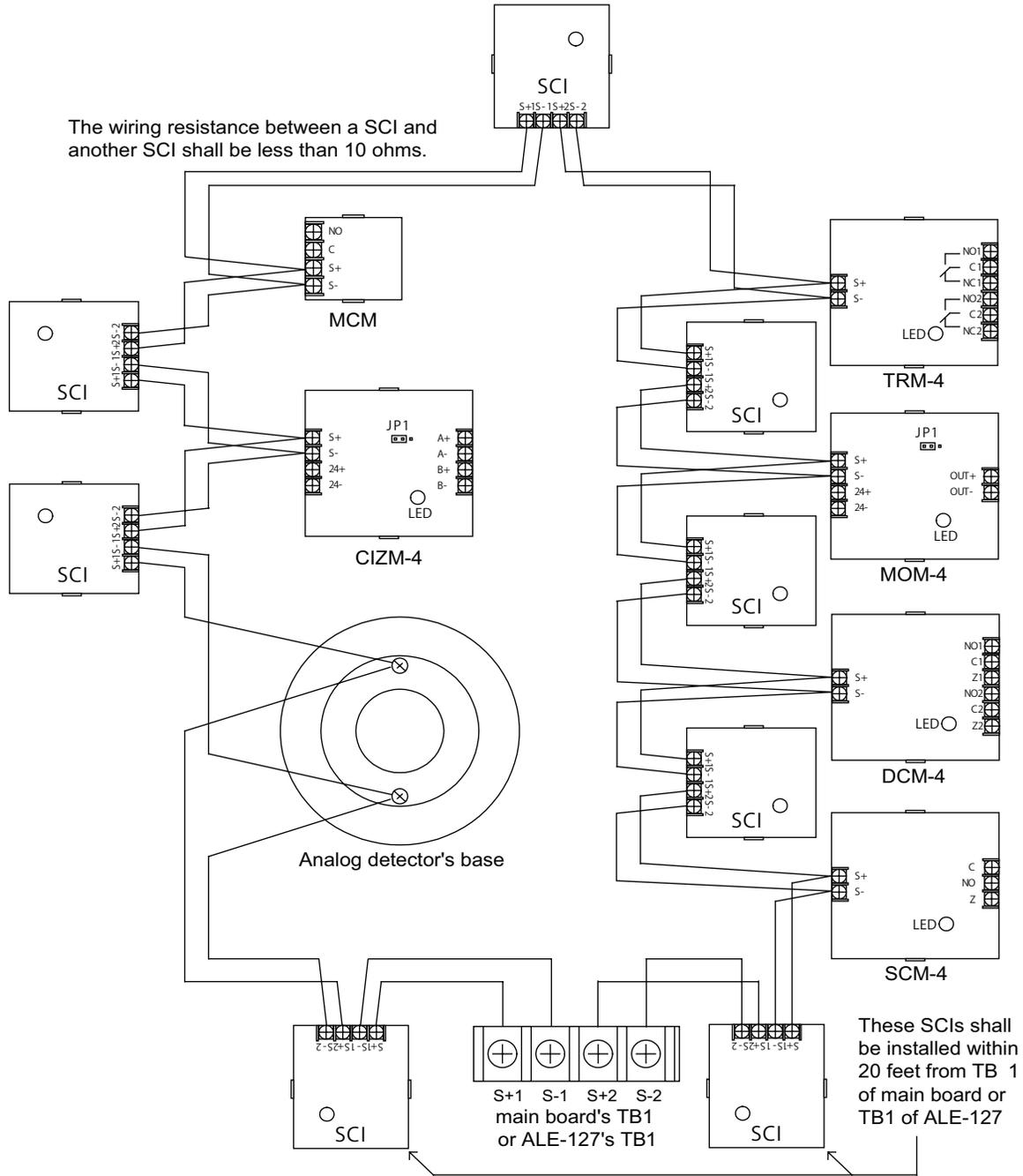
NOTES:

1. In Class A, Style 6 configurations, all the wirings between SCIs and addressable devices must be installed in conduits.
2. When multiple zones are configured to Notification Appliance Circuits (NACs), those NACs must be protected by SCIs per zone.

Class A, Style 7 Wiring Configuration

Please refer to the figure shown below for an example of a Class A, Style 7 wiring:

Figure 27. SCI Class A, Style 7 Wiring Example



NOTES:

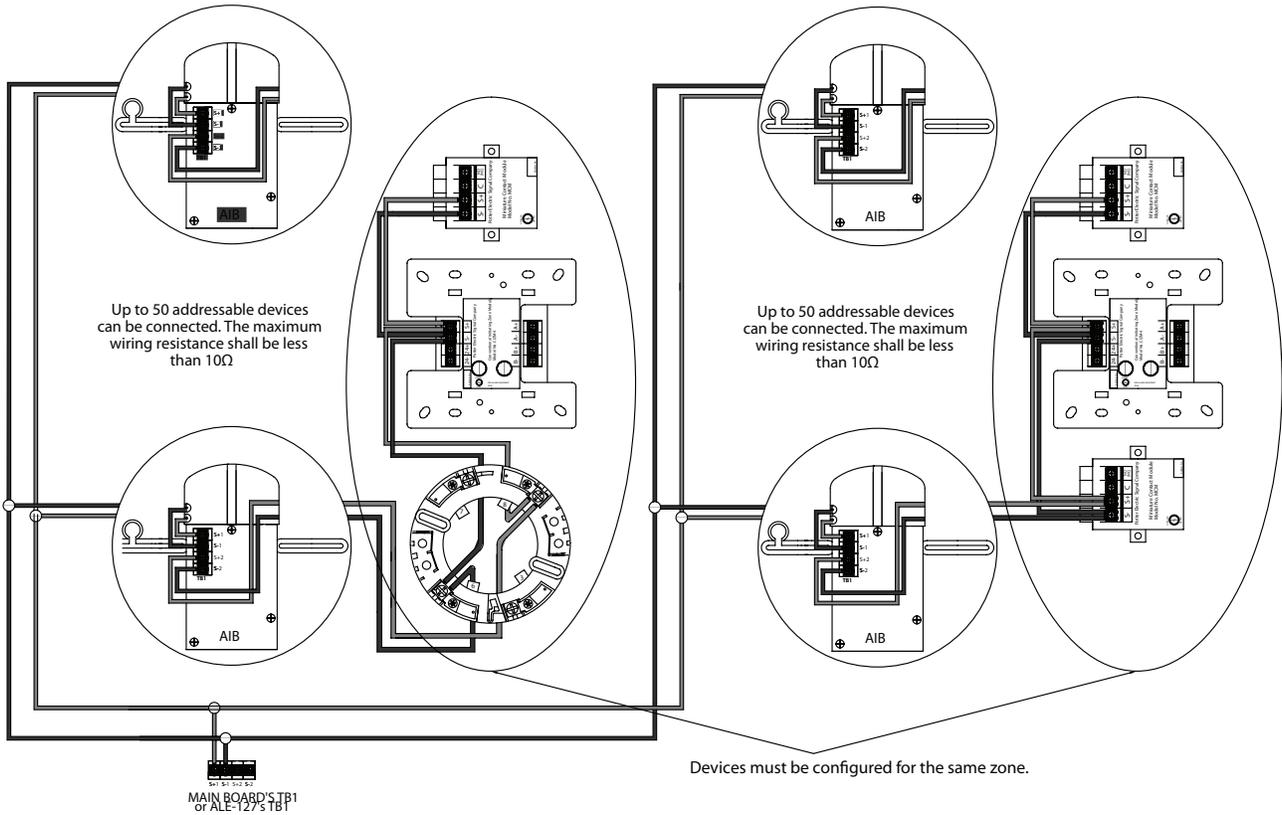
1. If SCIs are used in Class A, Style 7 configurations, **subtract one (1)** from the total number of addresses supported.
2. The Class A, Style 7 requires installation of an isolator on each side of every module or sensor. Isolators may be either a SCI or an AIB addressable base.
3. The SLC connection requires that the wires are separated 10', installed in conduit or other mechanical protection.
4. Maximum wiring resistance must not exceed 50 ohms.

Connecting Isolator Bases (AIB)

The wiring for terminals S+1, S-1, S+2 and S-2 are supervised. When a short circuit is detected in wiring of S+1 and S-1 (or S+2 and S-2), the wiring is isolated in order to protect the detector connected to the isolator base and the devices connected to S+2 and S-2 (or S+1 and S-1). When the short circuit is removed, the AIB is automatically reset to the normal monitoring condition.

Class B, Style 4 Wiring Configuration

Figure 28. AIB Class B, Style 4 Wiring Example



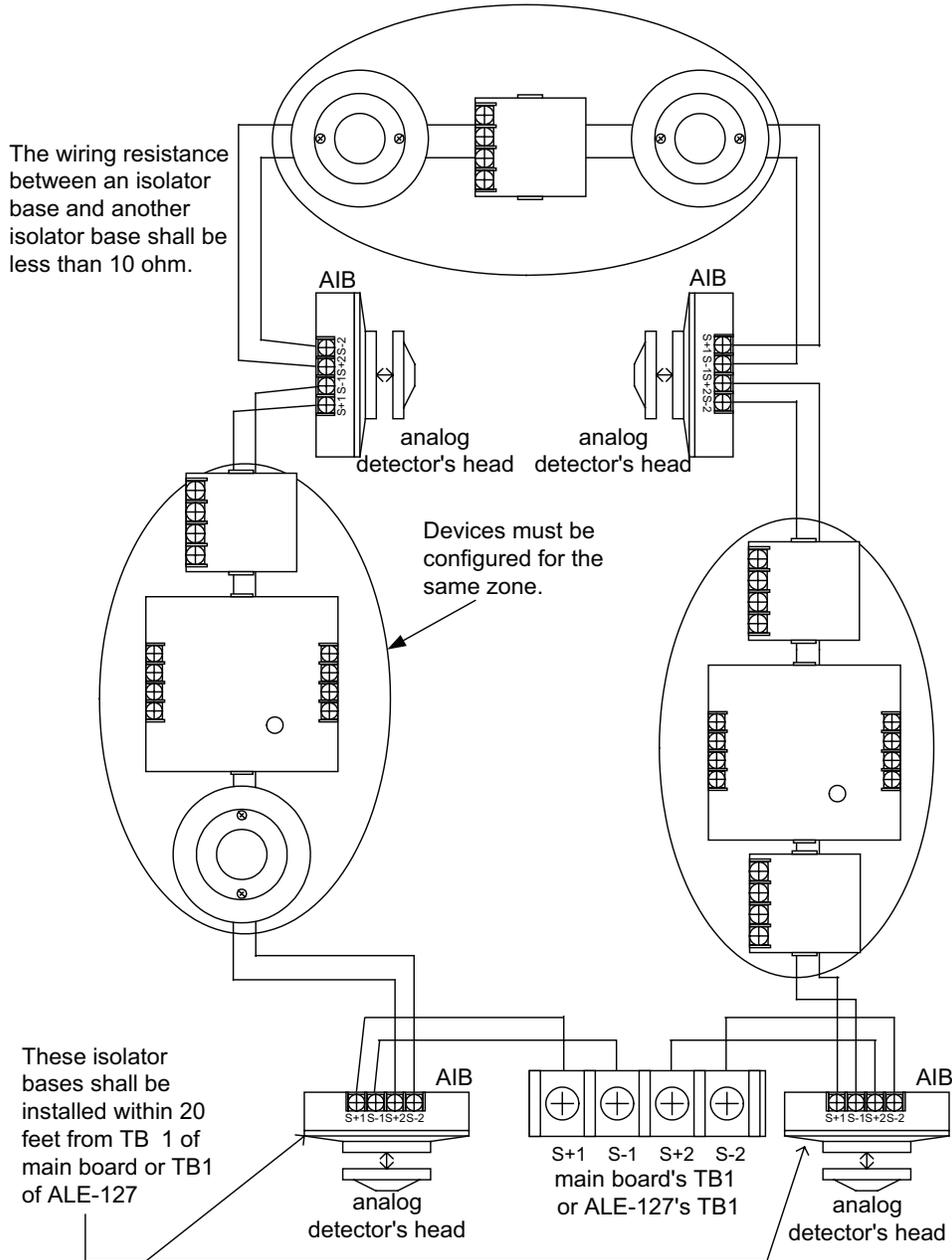
NOTES:

1. In Class B, Style 4 configurations, if isolator bases are used, **subtract eight (8) per AIB** from the total number of supported addresses.
2. When multiple zones are configured to Notification Appliance Circuits (NACs) those NACs must be protected by isolator bases per zone.

Class A, Style 6 Wiring Configuration

Please refer to the figure shown below for an example of a Class A, Style 6 wiring:

Figure 29. AIB Class A, Style 6 Wiring Example



NOTES:

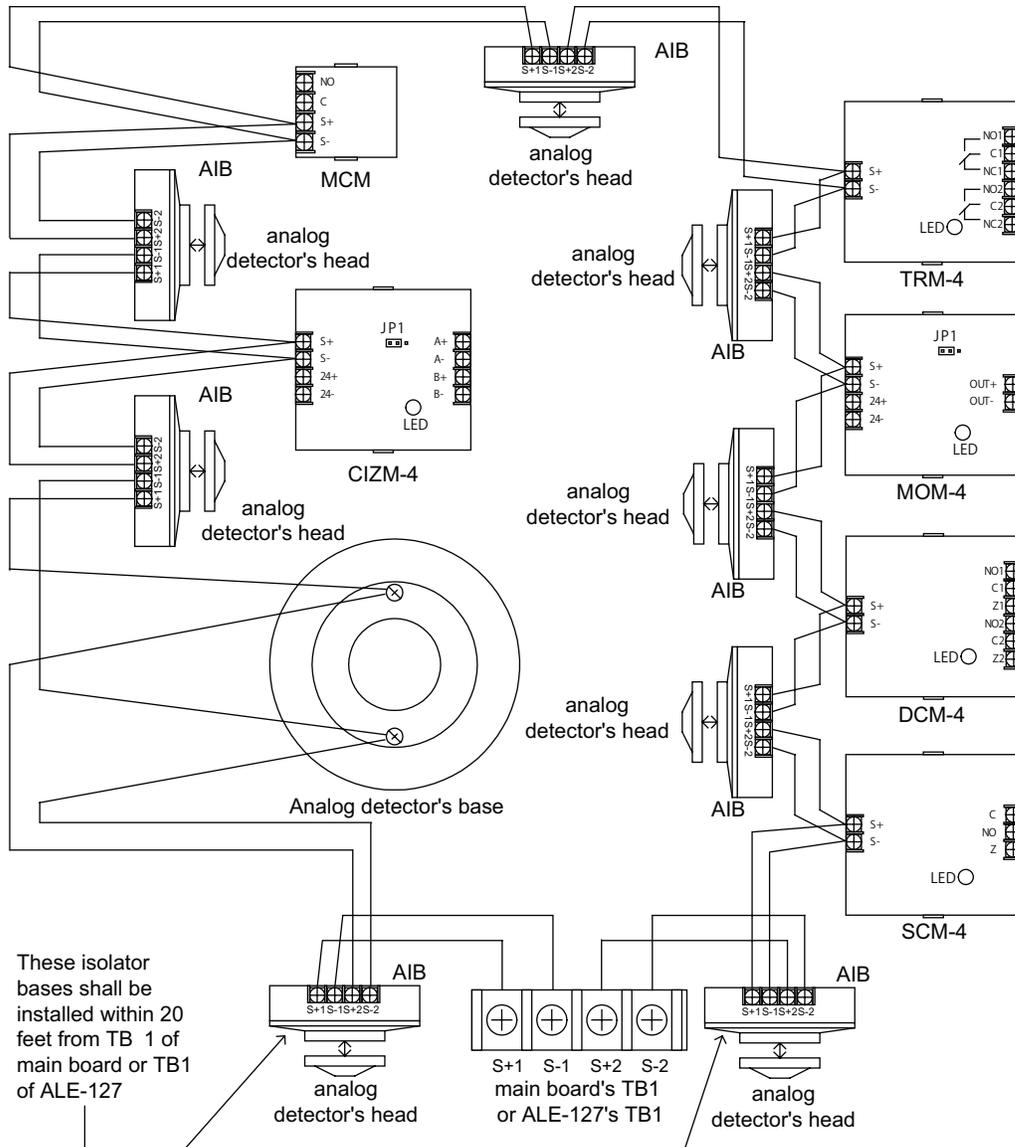
1. In Class A, Style 6, all wiring between Isolator Bases and addressable devices must be installed in conduits.
2. When NACs are configured in multiple zones, those NACs must be protected by isolator bases per zone.
3. When multiple zones are configured to Notification Appliance Circuits (NACs) those NACs must be protected by isolator bases per zone.

Class A, Style 7 Wiring Configuration

Please refer to the figure shown below for an example of a Class A, Style 7 wiring:

Figure 30. AIB Class A, Style 7 Wiring Example

The wiring resistance between an isolator base and another isolator base shall be less than 10 ohms.

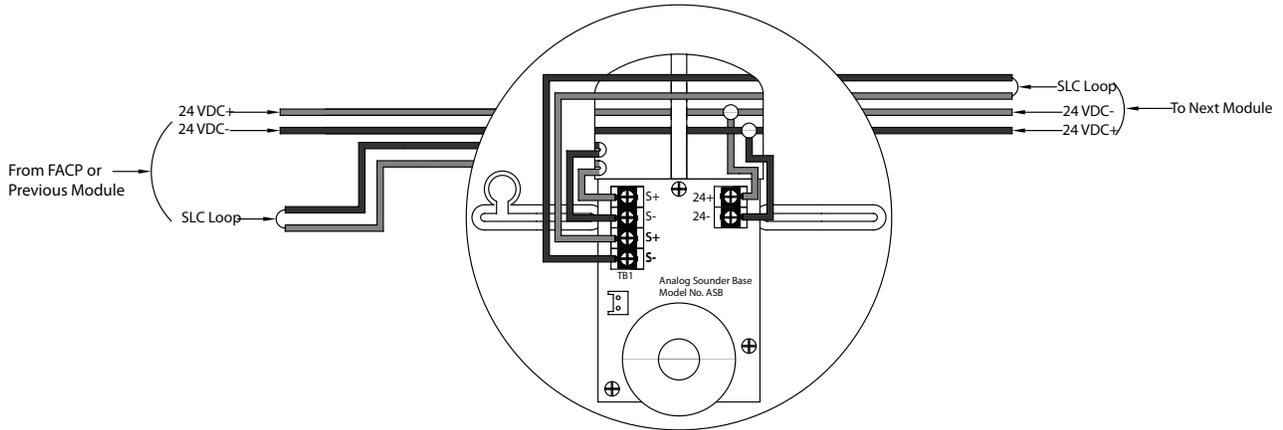


NOTES:

1. If AIBs are used in Class A, Style 7 configurations, **subtract one (1)** from the total number of addresses supported.
2. The Class A, Style 7 requires installation of an isolator on each side of every module or sensor. Isolators may be either a SCI or an AIB addressable base.
3. The SLC connection requires that the wires are separated 10', installed in conduit or other mechanical protection.
4. Maximum wiring resistance must not exceed 50 ohms.

Connecting Analog Sounder Base (ASB)

Figure 31. ASB Wiring Example

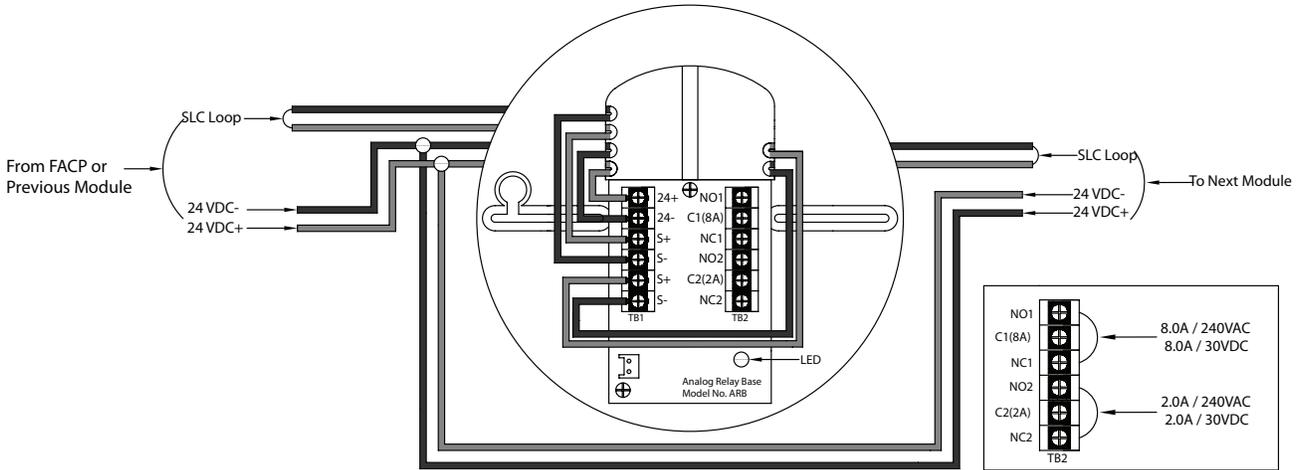


NOTES:

1. The ASB cannot support coded output, unless the power supply is configured as output.
2. ASB does not generate a coded output; it tracks the pattern sent to the 24 VDC input.

Connecting Analog Relay Base (ARB)

Figure 32. ARB Wiring Example



Addressing SLC Devices

Before devices can be programmed, they must be assigned a unique address. There are two (2) methods to address devices: (1) You may use a *hand-held address setting device* or (2) Use the FACP's "**Device AD Set**" function available through the *Level 3 Menu*.

NOTES:

1. Only authorized personnel may access this function. (Please refer to "**Section 5: Programming - Menu Passwords**" for details on accessing and/or changing menu passwords.)
2. The FACP disables connectivity between the panel and computer when addressing devices.

Device Address / System Address

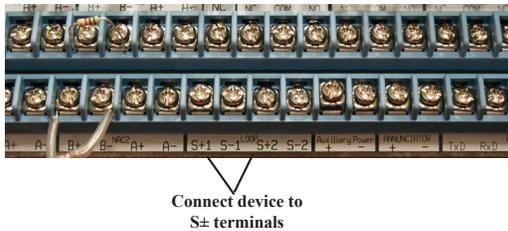
Each device is assigned a *three-digit device number* ranging from 1 to 127. The *system address* is a *four-digit number* (1001-4127) comprised of the device number plus a one-digit prefix (*i.e.*, 1-4), representing the loop number. **Loop "1"** represents the **main board's SLC** and "**Loops 2-4**" for any optional ALE-127s.

EXAMPLE: The system address "*1001*" represents *device "001"* configured on *Loop 1*.

To address devices via a hand-held address device:

1. Connect the hand-held address device to the **S± terminals** as shown below:

Figure 33. Example of S± terminals



2. Aim address device to 1st device.

NOTE: The address device automatically prompts when to attach the next device and provides other instructions guiding you through the process.

3. Disconnect addressing device from S± terminals when completed.

To address devices via the FACP software:

1. Turn key to the "Normal" position.

The "Input Password Level 1" screen displays.

Input Password Level 1
Password=

ENT to Set

2. Enter Level 1 menu password, press RIGHT ARROW, and select [6] Password Input.
3. Enter the Level 3 menu password.

- Press **[3]** to select **"Device AD Set"**.

The **"Device AD Set"** screen displays.



- Connect 1st device to the **S± terminals** as shown below:

Figure 34. Example of S± terminals



Connect device to
S± terminals

- Press **ENTER**.

The panel displays the device's currently assigned number.



- In the **"New=_"** field, enter a new number, and press **ENTER** to save.



- Repeat for next device, and press **ESC** or **EXIT** when finished.

NOTE: The System stores all addresses in a **"Device Address Table"** which allows you to view maintenance and event lists. For details on this feature, please refer to **"Section 5: Programming – Device & Zone Maintenance Lists"** for details.

Notification Appliance Circuit Installation

The PFC-8500 has four (4) NAC outputs [the PFC-8060 has two (2) NACs] which may be programmed for a variety of functions. Their output rating is 24VDC/1.5A and may be bridged to provide 3.0 Amps at 24VDC (*PFC-8500 only*). Please refer to the wiring examples provided throughout this section.

NAC Wiring Overview

- Outputs are supervised and regulated.
- Circuits are power limited.
- Reverse polarity upon activation (*board and illustrations must be marked accordingly*).
- Type of NAC output is selectable, and may be configured for strobe synchronization with Potter/AMSECO, Gentex® or Cooper/Wheelock® strobe devices.

NOTE: Please refer to the listing of compatible models located in the “*NAC Compatibility Document*”, Potter document #5403592, for this information.

NAC Maximum Impedance Formula

The maximum impedance is a function of the load placed on the circuit. To calculate the maximum line current impedance, use the following formula:

$$R_{max} \text{ (ohm)} = (24V - V_{min}) / I_{total}$$

V_{min} = Lowest voltage for operation of connected devices (volts)

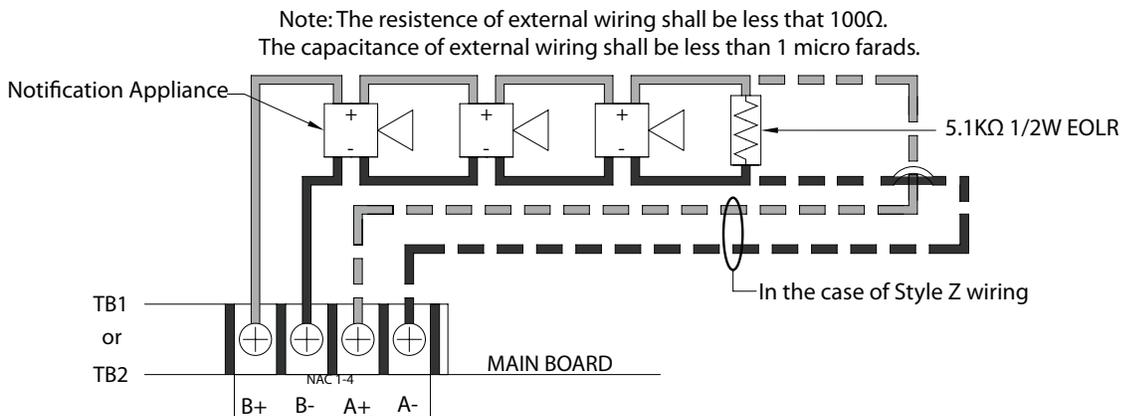
I_{total} = Total loop current (amps)

NAC Wiring Configurations

The NAC circuits may be configured as Class A, Style Z. The panel has ground fault detection on the NAC circuits. The impedance to ground for ground fault detection is 10K ohms. An example of Class A Wiring follows.

Class A, Style Z Wiring Example

Figure 35. NAC Circuits Class A Style Z Wiring



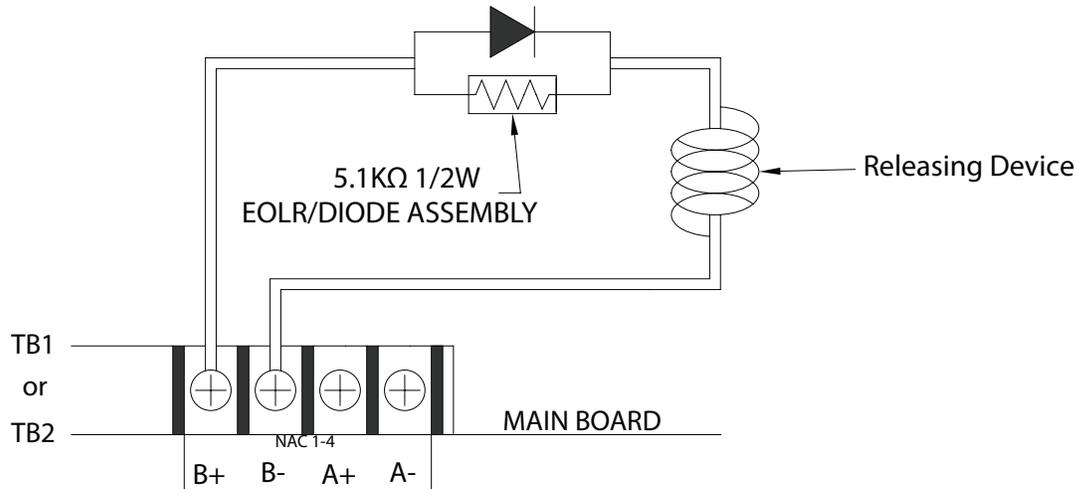
NOTE: The End of Line Resistor (EOL) assembly has been evaluated in past projects and is a standard in the Potter panel product line. The Potter part number for the listed end of line assembly is 3005013 EOL Resistor Assembly.

NAC as Releasing Device Circuit

The releasing device circuit is typically a NAC programmed to control a releasing device, such as a solenoid or squib. It is fully supervised and power limited. Refer to the figure shown below for a wiring example.

Figure 36. NAC as Releasing Device Wiring

Note: The resistance of external wiring shall be less than 100Ω.
The capacitance of external wiring shall be less than 1 micro farads.



NOTE: When a NAC is used as a releasing circuit, the End of Line Diode (EOLD) assembly must be installed. The EOLD is Potter part #3005012 and must be installed in accordance with the installation manual.

NAC (Releasing) Maximum Impedance Formula

The maximum line impedance of the releasing device circuit is calculated using the following formula:

$$R_{max} \text{ (ohm)} = (24V - V_{min} - 0.95V) / I_{total}$$

V_{min} = Lowest voltage for operation of connected devices (volts)

I_{total} = Total current of connected devices

When the control panel is programmed as a releasing circuit, additional features are allowed specific to releasing. A MOM-4 monitored output module may be connected to a releasing device as well to operate as a releasing circuit. When the MOM-4 is used for releasing, it must have a regulated power supply that has a battery back-up equal to that of the panel or greater.

NOTE: Only one releasing device may be connected per MOM-4.

MOM-4 Releasing Device Configuration

The MOM-4 may be connected to one (1) releasing device, however, the circuit's wiring resistance cannot exceed the maximum wiring resistance ("*R_{max}*"). Please refer to the formula below to calculate the maximum wiring resistance.

Maximum Wiring Resistance Formula

$$R_{max} \text{ (ohm)} = (24V - V_{min} - V_r) / I_{total}$$

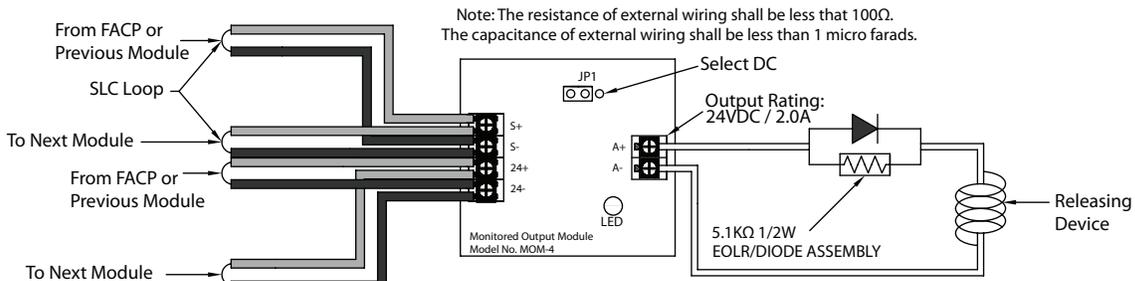
V_{min} = Lowest voltage for operation of connected devices (volts)

V_r = Forward voltage of diode in End-of-Line Device (0.95V)

I_{total} = Total operation current of connected devices (amps)

Refer to the figure below for an example of wiring a MOM-4 to a releasing device.

Figure 37. MOM-4 Wired to Releasing Device Wiring Example



NOTES:

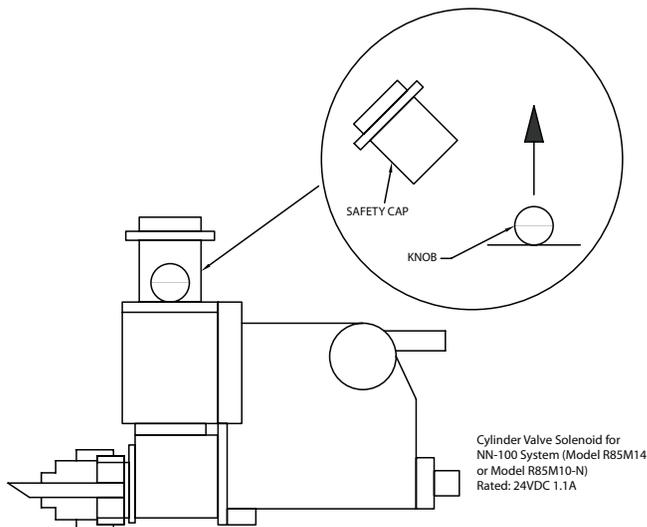
1. The MOM-4 **MUST** be installed near the releasing device to operate effectively.
2. The Victaulic Series 753E or Parker (73218BN4UNLVNOH111C2) solenoids may be connected to the MOM-4.

NN-100 (Nohmi) Manually Operated Solenoid

To operate and configure the NN-100 manually operated solenoid valve:

1. Remove the plastic safety cap, and pull the knob up, as shown below.

Figure 38. Operating a NN-100 Solenoid Valve Operating a NN-100 Solenoid Valve



2. Connect wires to cables #1 and #3 of the valve, and program the applicable releasing device's "*soak time*" setting to five (5) seconds.

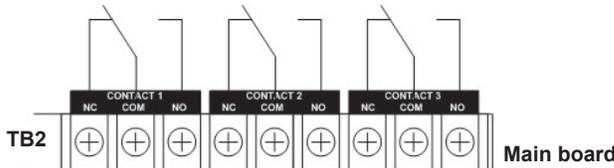
Relay Output Wiring

The panel has **three (3) common relays and one (1) dedicated "Trouble" relay**. The common relays may be configured for a variety of purposes, including Fire Alarm Status, Trouble Status, AC Fault Status or Conventional Zones (Z000-Z999). These relays have a contact rating of 24VDC / 2.0A, 125VAC / .5A, and a Power Factor of 1.0. These outputs are non-power limited and not supervised. (*Please refer to Section 5: Programming for details on programming options.*)

NOTE: If the power supply connected to the devices is power-limited, then the outputs are power limited.

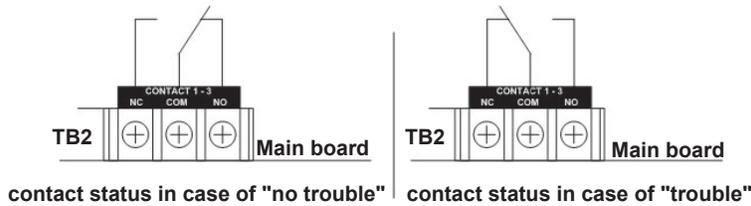
The figure below shows the relay connections:

Figure 39. Relay Output Connections



If a common relay is configured as a **"Trouble Status" output**, it changes position anytime a trouble condition occurs, as shown below:

Figure 40. Example of Trouble Status Output Connection



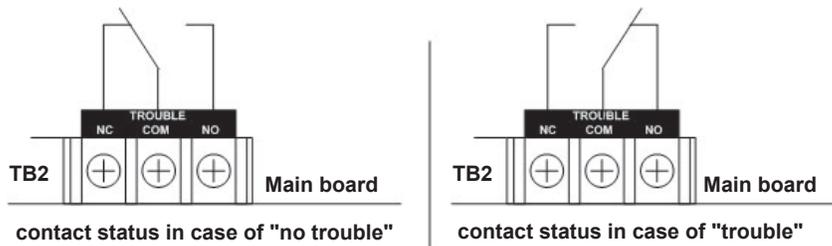
Trouble Contact Output

The dedicated **"Trouble" relay** has a contact rating of 24 VDC / 2.0A, 125VAC / 0.5A, and Power Factor of 1.0; output is non-power limited and not supervised.

NOTE: If the power supply connected to the devices is power-limited, then the output is power limited.

Refer to the drawing below for an example of the relay contact when a trouble or no trouble occurs:

Figure 41. Example of Dedicated Trouble Contact Output Connection

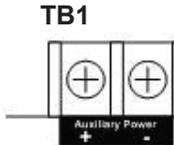


Auxiliary Output

The main board has terminals for constant auxiliary power. The output is a constant 24 VDC output rated for 0.5 Amps (PFC-8060 – 0.3 Amps). The auxiliary power is power limited and non-supervised. Any connection from auxiliary power to ground at or above 10,000 ohms will result in a ground fault indication. The auxiliary power is provided with secondary power from the batteries and the load must be considered in proper battery calculations.

The figure below shows the terminal connection:

Figure 42. Auxiliary Output Connection

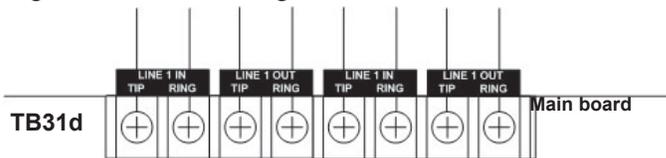


DACT Output

The PFC-8000 series systems have a Digital Alarm Communicator Transmitter ("**DACT**") built onto their main boards.

Please refer to the drawing below for an example of the DACT wiring:

Figure 43. DACT Wiring Connection



The DACT may be enabled, disabled or bypassed depending on the mode of operation. When the DACT is disabled, the panel is not capable of transmitting any alarms off premises through the DACT.

The DACT provides for up to two (2) phone lines for communication to a monitoring station. The DACT communicates using the Ademco Contact ID or SIA-DC-03 protocols. When enabled, the DACT automatically monitors each phone line or voltage and has the ability to seize the line and connect with a remote receiver. Once the communication is complete, the DACT will hang up the phone line.

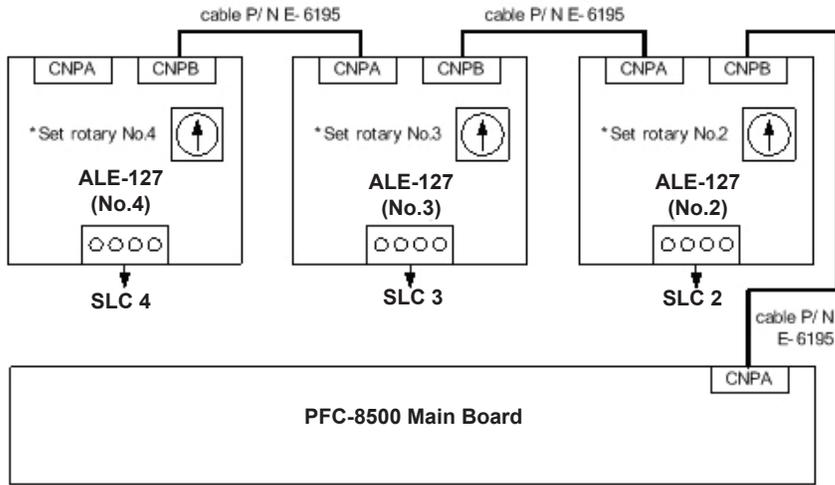
The DACT is provided with an "IN" and "OUT" for each phone line. In order for the DACT to work properly, it must be installed on a plain old telephone service (POTS) or equivalent as deemed by the authority having jurisdiction.

The phone lines are not power limited and the DACT phone lines should be run in a separate conduit from all other circuits. The wire conductors connecting the DACT to the phone system should be 26 AWG or larger.

ALE-127 Installation

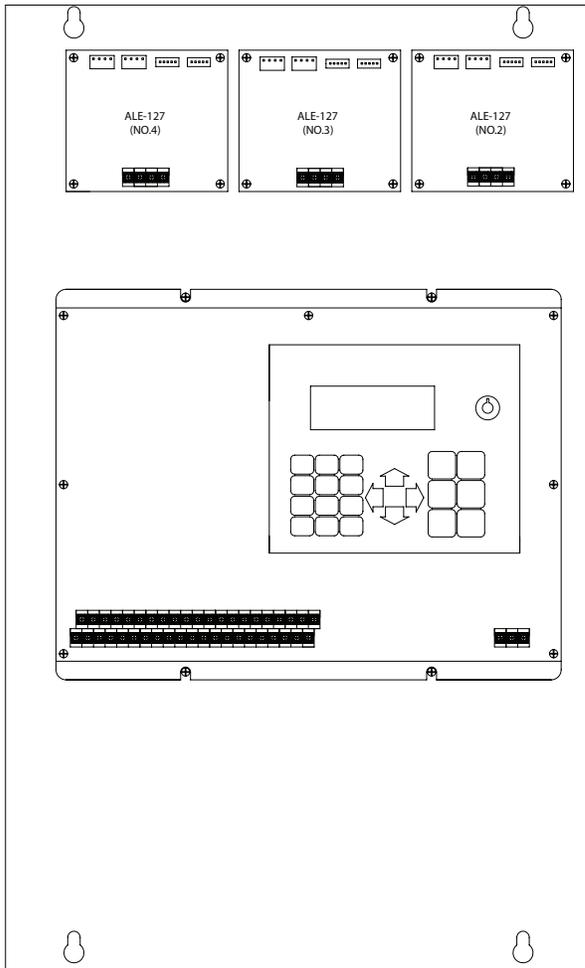
The ALE-127 modules or Addressable Loop Expanders may be added to the PFC-8500 system to provide up to three (3) additional SLCs. Each module supports up to 127 devices, and are wired as shown below:

Figure 44. Example of ALE-127 Wiring



The ALE-127's are installed in the cabinet as shown in this example:

Figure 45. Example of ALE-127 Cabinet Installation



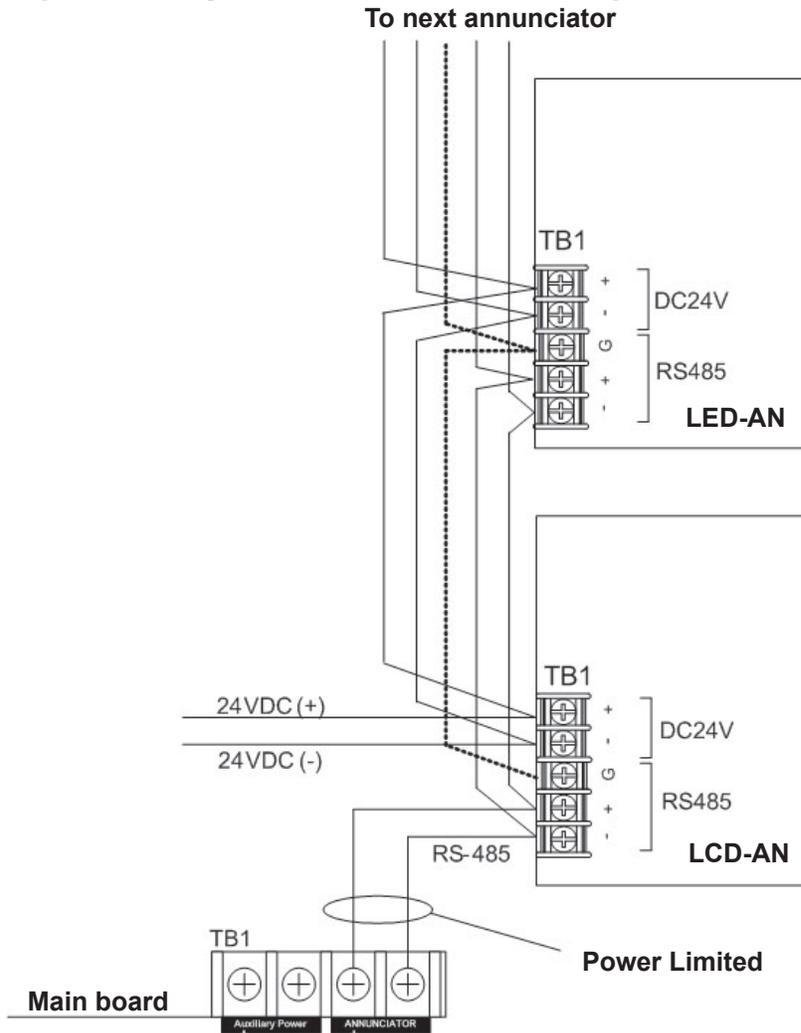
Remote Annunciators

The remote annunciators (LCD-AN, LED-AN) are supervised and power limited via the RS-485 cable connection. Up to thirty-one (31) annunciators may be connected to the main control panel using a Class B, Style 4 configuration.

Configuration Characteristics

- The RS-485 maximum wire length is 4,000 feet (1,219.2 meters).
- Maximum wiring resistance is less than 40 ohms.
- Maximum capacitance between wiring is less than 0.4 micro F.

Figure 46. Examples of LED-AN and LCD-AN Wiring



NOTES:

1. JP of the farthest annunciator shall be shorted, and JP of other annunciators shall be open.
2. Any connection to ground of 10,000 ohms will be annunciated as a ground fault.
3. Remote annunciators must be mounted on either a 2-gang or standard 4-inch square electrical box.

LCD Annunciator (LCD-AN)

The LCD-AN's front panel display is the same as the FACP. Please refer to "*Section 4: Operation — LCD Display and Function Buttons*" for details on functions and LCD options.

REMINDER: The LCD is operable only when the security key is enabled.

To configure a LCD annunciator:

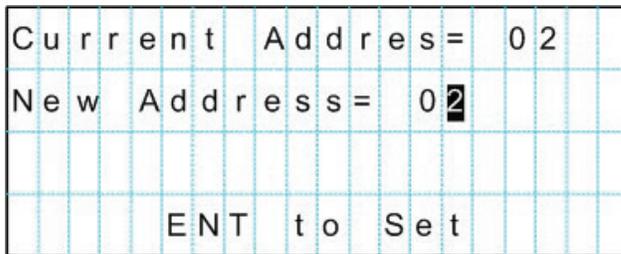
1. Assign a device number 01-31.

NOTE: Refer to "*Addressing SLC Devices*" located earlier in this section for details on this procedure.

2. Set **Dip Switch 1** to "*ON*".
3. Input **24VDC** to **TB2**.

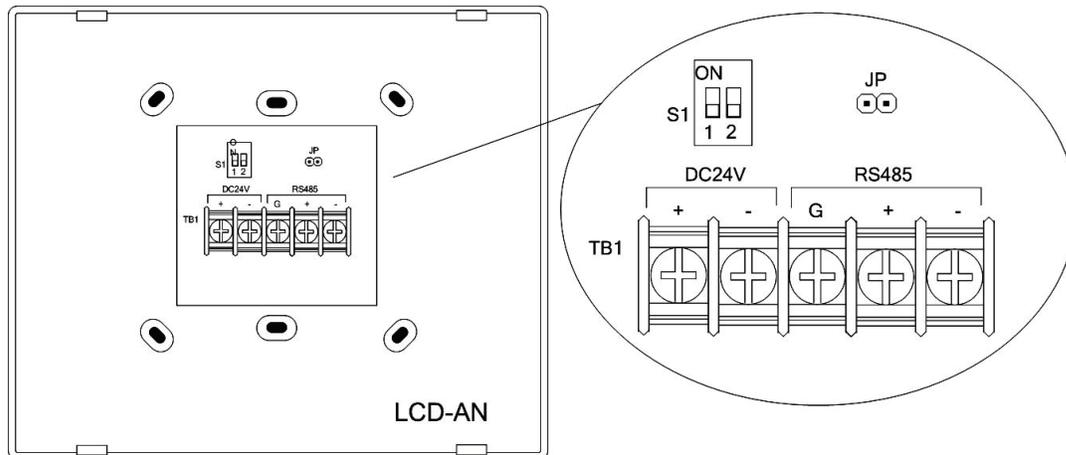
The LCD displays the current address of the selected device as follows:

Figure 47. Example of LCD-AN Display Screen



4. Use the numeric keypad to enter the applicable number (*i.e., 0-9*), and press **ENTER**.
5. Set **Dip Switch 1** to the "*OFF*" position to begin initializing.

Figure 48. Example of LCD-AN Dip Switch Setting



To set the transmission rate:

1. Set **Dip Switch 1** to "**ON**".
2. Input **24VDC** to **TB1**. The LCD displays the following:

Figure 49. Example of LCD-AN Configuration Screen

Baud	Rate =	9600	bps
Key "1"	=	9600	bps
Key "2"	=	4800	bps
Key "3"	=	2400	bps

3. Use the numeric keypad to select an applicable baud rate: **1=9600 bps / 2=4800 bps / 3=2400 bps**

NOTE: The system default baud rate is 9600 bps.

4. Set **Dip switch 1** to the "**OFF**" position to begin initializing.

LED Annunciator (LED-AN)

The LED-AN has fourteen (14) front panel LEDs and the same six (6) function push buttons as the FACP (*Lamp Test, Signal Silence, ACK, System Reset, General Alarm and Fire Drill*). You may configure the zones and corresponding LEDs to activate when an alarm or trouble occur. This is addressed in "**Section 5: Programming - LED-AN**" of this manual.

REMINDER: The functions are operable only when the key is enabled.

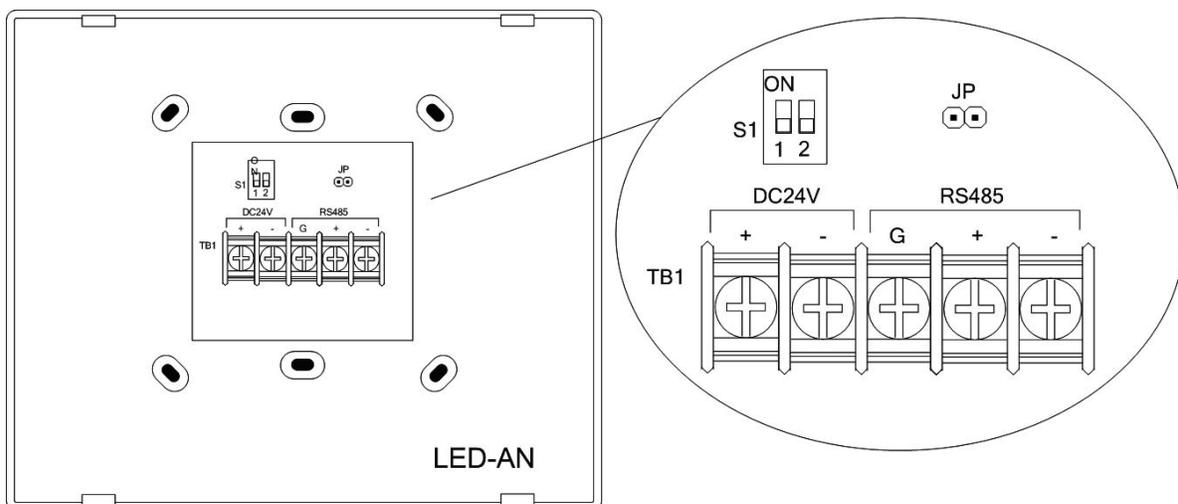
To configure the LED annunciator:

1. Assign a number between 01-31.

NOTE: Please refer to "*Addressing SLCs Devices*" located earlier in this section for detailed instructions on this process.

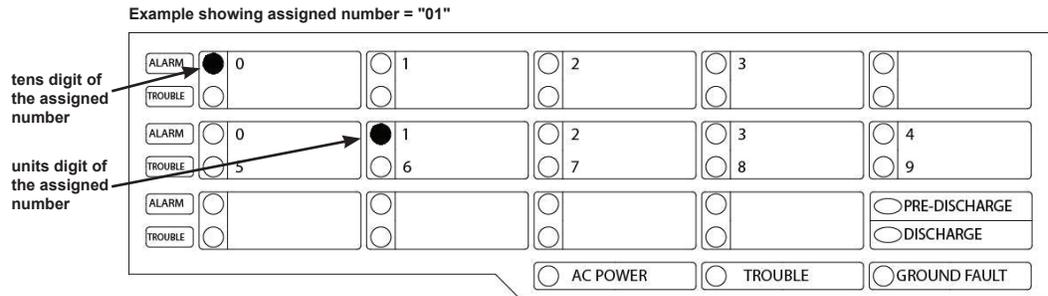
2. Set **Dip switch 1** to "**ON**".

Figure 50. Example of LED-AN Dip Switch Setting



3. Set input **24 VDC** to **TB2**.
4. The LED-AN's current assigned number can be determined by turning on the LED as shown below:

Figure 51. Example of Determining a LED-AN's Assigned Number

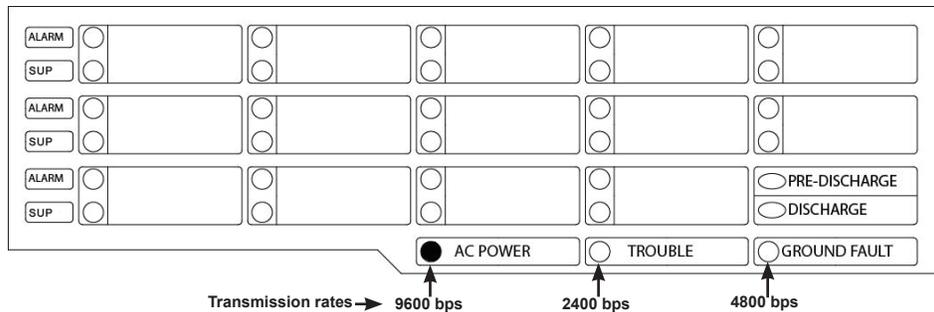


5. Press the **Lamp Test / Signal Silence buttons** to change the tens digit of the assigned number, and press **ACK** to save.
6. Press the **Lamp Test / Signal Silence buttons** again to set the first digit of the assigned number, press **ACK** to save.
7. Set **Dip switch 1** to the **"OFF"** position to begin initializing.

To set the transmission rate:

1. Set Dip switch 1 to the **"ON"** position.
2. Set input **24VDC** to **TB2**. The LED-AN's current transmission rate can be determined by turning on the LED as shown below:

Figure 52. Example of Determining a LED-AN's Transmission Rate



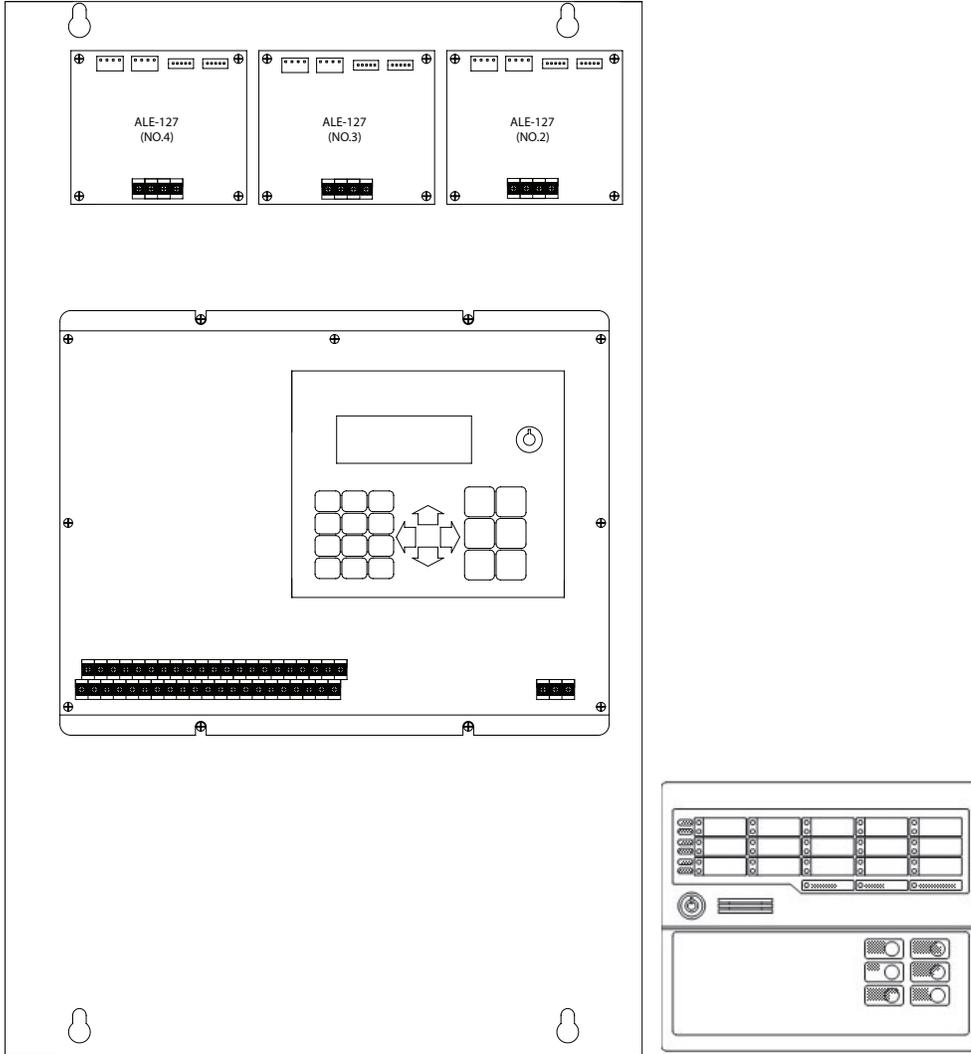
NOTE: In this example, the transmission rate is 9600 bps.

3. Press the **Lamp Test Button** to display the current transmission rate.
4. Select the applicable rate: **9600 bps / 4800 bps / 2400 bps**.
7. Set **Dip switch 1** to the **"OFF"** position to begin initializing.

ULC Installations

Canadian installations require that a LED-AN is installed directly to the control panel cabinet as shown in the figure below. The LED annunciator must be mounted on a four (4)” square electrical box coupled to the cabinet.

Figure 53. Example of ULC PFC-8500 Cabinet with LED Annunciator



Printer Connection

The Keltron's Remote Printer Model No. V90 may be connected to the main board's RS-232 serial port. *(Please refer to the Keltron's Remote Printer Model No. V90 User's Manual for detailed instructions.)*

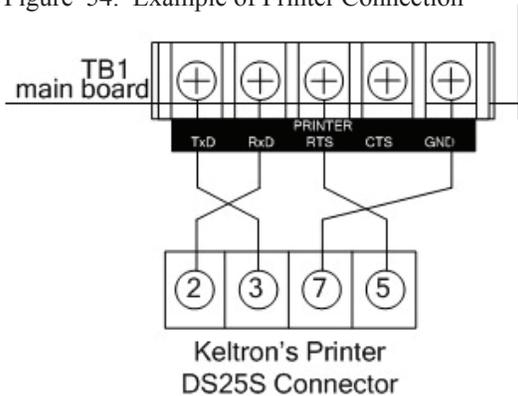
Configuration Characteristics

- Printer must be installed within 20 feet of the panel and in the same room.
- The connection between the panel and the printer **must** be installed in conduit.
- The maximum RS-232C cable must not exceed 50 feet (15 meters).
- The maximum line impedance is 1.5 ohms.

To connect and set up the printer on the main board:

1. Connect the printer cables to panel's serial port as shown below.

Figure 54. Example of Printer Connection

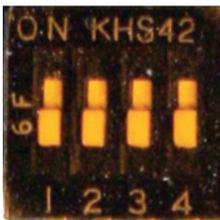


2. Set the dip switch settings as follows:

Dip Switch SP1	Dip Switch SP2
SP1-1 = Off	SP2 -1 = Off
SP1-2 = Off	SP2-2 = Off
SP1-3 = Off	SP2-3 = Off
SP1-4 = On	SP2-4 = On
SP1-5 = Off	SP2-5 = Off
SP1-6 = On	SP2-6 = Off
SP1-7 = On	SP2-7 = On
SP1-8 = Off	SP2-8 = Off

3. Set **1st position of dip switch DSW** (located on the main board) to "**ON**".

Figure 55. Dip Switch on Main Board



Section 4: Operation

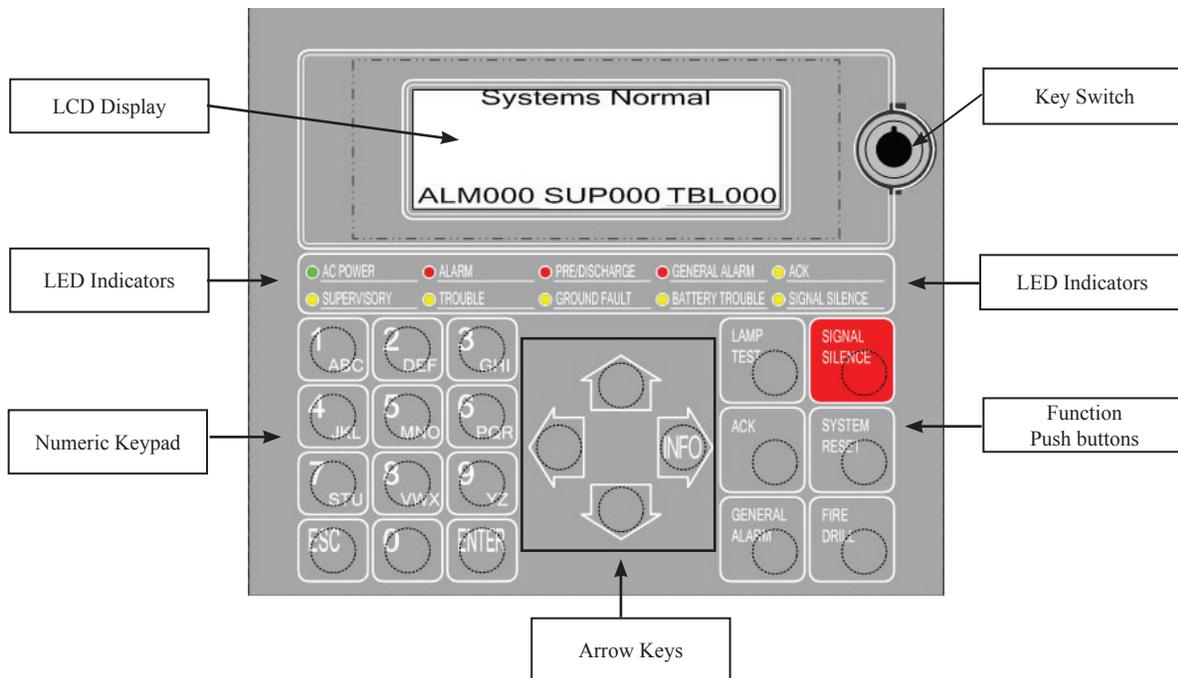
Overview

This section provides an overview of the FACP's operations available through Menu Levels 1 and 2. This section encompasses procedures for viewing configuration details for all devices, SLCs, modules and appliances, editing the system date/time, and processes for testing ranges of devices. *(Please refer to "Section 5: Programming" for information on Level 3 Menu options; these are intended for use by the programmers / installers only.)*

FACP Basic Operation

The front panel is comprised of a LCD display panel, arrow keys, push button function keys, status LEDs, the numeric keypad, and the key lock. A description of each component is included on the following pages. Please refer to the figure below for an example of the front panel.

Figure 56. PFC-8000 Series LCD Display Panel



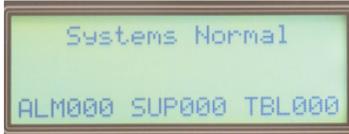
Key Switch

The key must be turned to the "**Normal**" position prior to accessing the system menus. Additionally, an applicable password must be entered to view and select menu options.

NOTE: Procedures for changing passwords are addressed in "*Section 5: Programming - Changing FACP Passwords*".

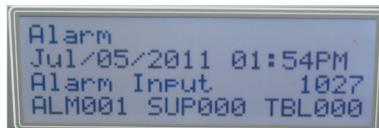
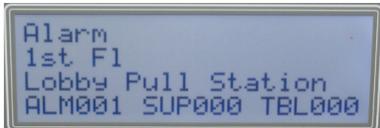
LCD Display

The LCD displays up to eighty (80) characters of information (4 lines x 20 characters per line) providing important feedback to users, i.e., system messages, status information, trouble conditions, or input changes. The LCD also provides access to the Main Menus (Levels 1 – 3) for daily system operations and programming functions. An example of the default "Startup" screen is shown below; it may be customized to include a two-line "Standby" message.



NOTE: Refer to *Section 5: Programming – Customizing Messages* for procedures on changing the "Standby" message.

When an event occurs, details including the event type, a customized or standard message, if any, date of the occurrence and the event's description displays. An example of an event's screens are shown below:



NOTE: If a customized user message was not created for an event, all details display on one screen.

The table below describes the information shown on the "Event Display" screens.

Table 9: Event Display Screens	
LCD Region	Description
Event Type	Type of event, such as "Alarm", "Trouble", or "Supervisory" displays.
Custom Message	User-defined message up to 40 characters in length displays.
System Status	The total number and type of events displays. NOTE: When an event's total # is "999", this may indicate more than 1,000 events.
Event Time	Press and hold the INFO key to display the event's date and time (2nd screen).
Classification	Press and hold the INFO key to display specific type and address of device, i.e., <i>analog smoke detector or trouble input</i> (displays on 2nd screen).
Event Location	Press and hold the INFO key to display the event's address (2nd screen). Addresses are comprised of four (4) digits and are assigned according to type of device, as shown here: Loop 1 (SLC1) = :1001–1127 Loop 2 (SLC2) = :2001–2127 Loop 3 (SLC3) = :3001–3127 Loop 4 (SLC4) = :4001–4127 NACs 1–4 (main board) = :0001–0004 Contacts 1–3 (main board) = :0005–0007 AUX Power = :0008

Navigation / Arrow Keys

The **arrow keys** (*UP, DOWN, LEFT, RIGHT/INFO*) allow you to scroll or move through the LCD panel messages and menus. The **ENTER** and **ESC** keys may also be used to navigate through menus, and are located on the numeric keypad. Refer to the table below for descriptions.

Keys	Description
UP / DOWN / LEFT / RIGHT (INFO)	<ul style="list-style-type: none"> Scrolls through menus and screens in their respective direction. Press and hold the INFO key to toggle between the <i>"Event Display" screens</i>. The second screen provides event's details, including time, classification or type, and location.
ENTER	Selects the current menu option and/or enters values input via the numeric keypad.
ESC	Returns to previous menu or screen, and cancels input on the current screen.

Numeric Keypad

The numeric keypad allows you to enter alphanumeric characters to input passwords, access and navigate within menus, or to enter custom messages.

Function Buttons

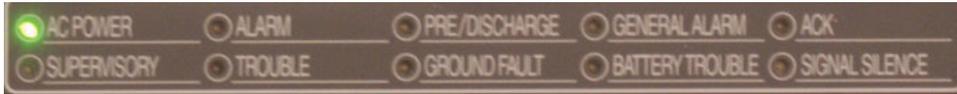
The FACP's function push buttons are used when system alarms, trouble conditions or other off-normal conditions, and fire simulations are run. The table below provides a brief summary of each push button.

Push Buttons	Description
	Press to <i>silence</i> all outputs programmed as <i>silenceable</i> and FACP buzzer.
	Press to <i>reset</i> the tripped devices and return to normal condition; off normal statuses display once reset is complete.
	Press for more than three (3) seconds to simulate a fire drill; when programmed, activates the outputs to simulate an alarm without creating an alarm event.
	Press to illuminate all LEDs (for a 5 second period); provides main control panel's software revision, including DACT and connected ALE units (<i>addressable loop expanders</i>).
	Press to <i>acknowledge</i> an event and to silence the FACP buzzer.
	Press to initiate an evacuation, if programmed. This is used generally for ULC installations when Two-Stage alarms are programmed.

Status LEDs

The status LEDs provide visual communication to the operator by illuminating and/or flashing the applicable green, red or amber indicators when system conditions occur. An example of the FACP's LEDs are shown below:

Figure 57. Example of Status LEDs



Please refer to the table below for status LED descriptions.

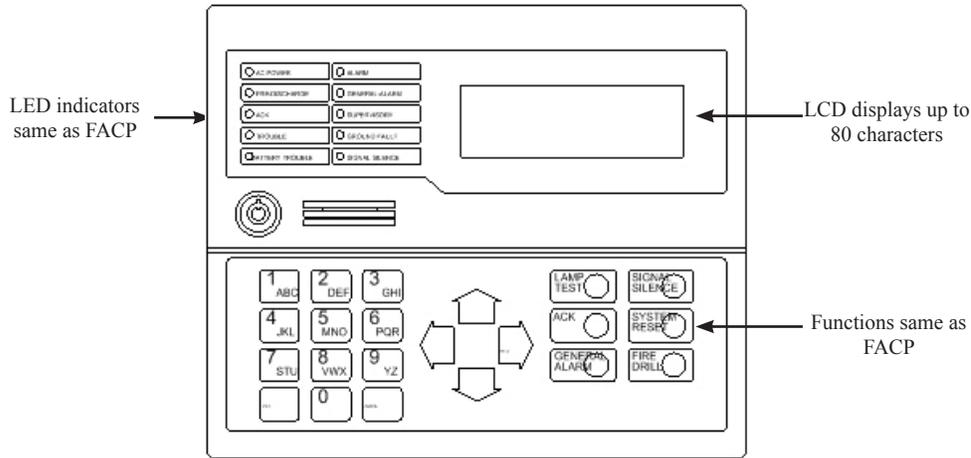
LED Type	LED Color / Description
AC POWER	STEADY GREEN indicates that <i>power</i> is present; the LCD displays the " <i>Standby</i> " message. NOTE: If power is absent for more than 15 seconds, LED with extinguish.
ALARM	STEADY RED indicates that an <i>alarm device</i> is active.
SUPERVISORY	STEADY AMBER indicates that a <i>supervisory condition</i> is present.
TROUBLE	STEADY AMBER indicates that a <i>trouble condition</i> is present; LCD displays trouble details, <i>i.e.</i> , <i>missing device, sensor fault, or device mismatch</i> . NOTE: If troubles are not resolved within 24 hours, the FACP audible device will reactivate.
PRE-DISCHARGE	FLASHING RED indicates that an output is in pre-discharge mode. STEADY RED indicates an output is actively releasing. NOTES: 1. The analog detector(s) must be programmed as a releasing device. 2. If there are multiple devices programmed as releasing outputs, once the first device is in discharge mode, the LED remains steady. The LCD displays information that another LED is in pre-discharge.
GROUND FAULT	STEADY AMBER indicates that ground fault is present on a control panel circuit.
GENERAL ALARM	STEADY RED indicates that an alarm condition is present (Two Stage).
BATTERY TROUBLE	STEADY AMBER indicates battery or charger is in trouble condition.
ACK	BLINKING AMBER indicates that ACK was pressed to acknowledge an " <i>off normal</i> " condition, <i>i.e.</i> , alarm, trouble, etc., and silences the local buzzer and/or remote annunciators. STEADY AMBER indicates that an " <i>all-event</i> " ACK operation has occurred.
SIGNAL SILENCE	STEADY AMBER indicates that Signal Silence was pressed to silence an alarm.

LCD (LCD-AN) Remote Annunciator Basic Operation

The LCD remote annunciator operates the same as the FACP's front panel. Refer to the figure shown below.

- LEDs, display panel, keypad and function buttons are the same as FACP
- Built-in audible devices activate and deactivate (*silenced*) according to FACP's conditions

Figure 58. Example of LCD Remote Annunciator

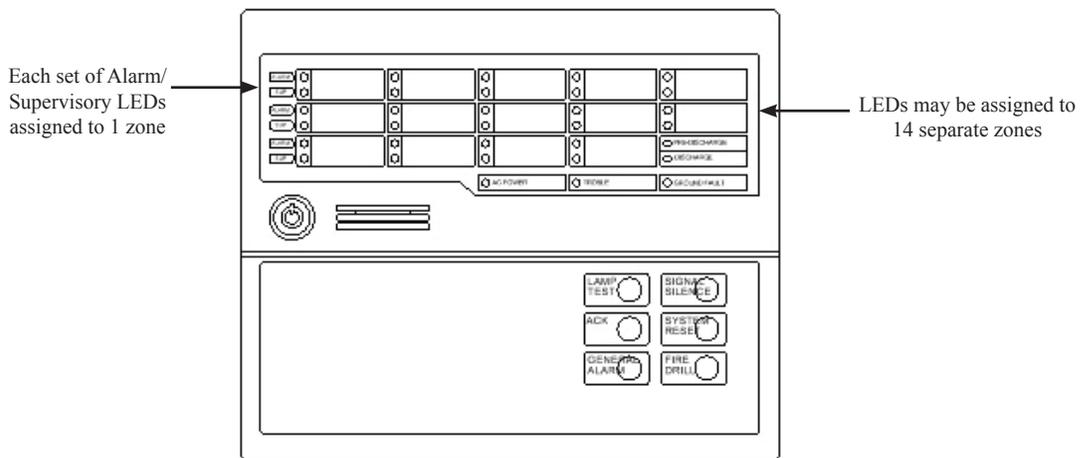


NOTE: Only one (1) remote LCD or LED annunciator may be active at one time. If the main keypad is activated, all others will be ignored.

LED (LED-AN) Remote Annunciator Basic Operation

The LED remote annunciator has the same function push buttons as the FACP's front panel and LCD-AN annunciator. However, it is comprised of fourteen (14) paired Alarm/Supervisory LEDs programmed to illuminate when these conditions occur in a specific zone. Please refer to the figure shown below for an example of a LED annunciator.

Figure 59. Example of LED Remote Annunciator



NOTE: Only one (1) remote LCD or LED annunciator may be active at one time. If the main keypad is activated, all others will be ignored.

Menu Passwords

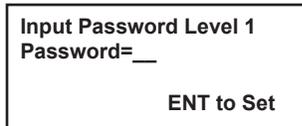
The *"Input Password Level 1" screen* displays once the FACP key is in the *"Normal"* position. You must enter the Level 1 menu password to gain access to the system. Once the Level 1 menu is displayed, press the *RIGHT ARROW* to select the *[6] Password Input option* to access a different menu level.

NOTE: The Level 3 Menu should only be accessed by the Installer / Programmer; refer to *"Section 5: Programming"* for details on this topic.

To access a FACP menu:

1. Turn the key to the *"Normal"* position, and press **ENTER**.

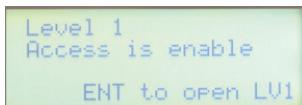
The *"Input Password Level 1" screen* displays.



2. Enter the default (or changed) password as shown here, and press **ENTER**.

NOTE: The default **Level 1** menu password = *"139"*

The *"Level 1" screen* displays, as shown below.



NOTE: Instructions on changing the FACP and PCCP passwords are addressed in *"Section 5: Programming – Changing Passwords"*.

3. Press **RIGHT ARROW**, if necessary, to select *[6] Password Input*.
4. Enter the **Level 2** menu password = *"1397"*

NOTE: See *"Section 5: Programming"* for information on the Level 3 menu password.

FACP Menu Options (Level 1 and 2)

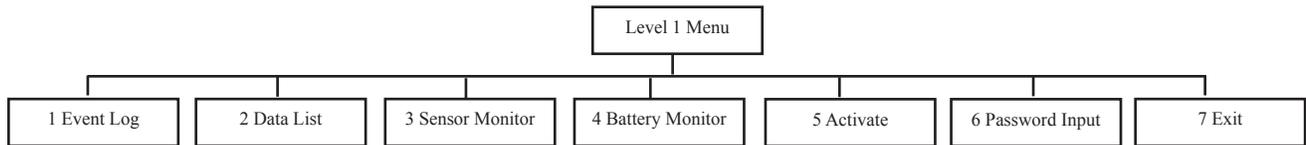
This topic provides details on accessing and using the Level 1 and 2 Menu options. Procedures for accessing these options are summarized in the table below.

NOTE: Refer to "*Section 5: Programming -- Level 3 Menu Options*" for details on Level 3 options.

Table 13: FACP Levels 1 & 2 Menus	
Level 1 Options	
1. Event Log	Displays and/or prints the last 2,000 system events.
2. Data List	Displays and/or prints configuration data for devices, zones, modules, or the entire system. This option provides valuable information such as mapping between zones and devices, details on devices, such as threshold or soak and delay time settings, and settings for pre-alarm or LED blinking options.
3. Sensor Monitor	Displays and/or prints a selected analog detector's settings, <i>i.e.</i> , %/ft or %/m and F° degrees or C° degrees.
4. Battery Monitor	Displays information on the Standby Power battery status; this option is not available when there is an existing " <i>Standby Power Fault</i> ".
5. Activate	Allows operator to activate a single output device, or to verify programming of the device. NOTES: 1. If the output is a notification appliance, it is activated according to the selected System NAC Code. 2. Addressable module power output and contact output types are activated continuously regardless of the programmed NAC Code Type.
6. Password Input	Displays the " <i>Input Password</i> " prompt providing access to other level menus.
7. Exit	Displays the " <i>Event Display</i> " screen; alternatively, the <i>ESC button</i> returns to this screen.
Level 2 Options	
1. Date/Time Change	Allows operator to set system date and time; the system " <i>date stamp</i> " is used in the Event Log and other important functions.
2. Bypass	Allows operator to bypass or temporarily ignore NACs, Zones, SLCs, DACT and other peripherals when troubleshooting or testing. NOTE: Remember to remove the bypass once testing is completed.
3. Device Bypass	Allows operator to bypass specific device(s) for testing or troubleshooting purposes; remove the bypass once testing is completed. NOTE: If the selected device is configured to activate an interlocked zone when an " <i>off-normal</i> " condition occurs, once it's restored, it will activate the zone.
4. Test	Allows automated testing of specified system components; test options are as follows: 1. Standard Walktest – tests that each selected device will output " <i>alarm</i> " signals and automatically reset without resetting the system. 2. Silent Walktest – operates identically to the " <i>Standard Walktest</i> " except that the FACP audible device does not activate and the configured interlocked initiating device (including NACs) does not activate. 3. Alarm Simulation – this option simulates " <i>alarm</i> " signals from selected initiating devices to test interlocked functions. Up to forty (40) initiating devices may be tested simultaneously.
5. Daylight Saving TM	Allows operator to enable daylight savings time by setting date to begin and end feature.
6. Password Input	Provides access to " <i>Input Password</i> " screen used to access menus.
7. Exit	Displays the " <i>Event Display</i> " screen; alternatively, the <i>ESC button</i> may be used.

Menu Levels 1 & 2

All Level 1 and Level 2 menu options are discussed in this section. For your convenience, Level 1's menu tree is shown below and Level 2's menu trees precede the associated functions.



Viewing the Event Log

This option allows the Operator to view up to 2,000 of the most recent events. The Event Log may also be viewed from the PCCP software, however, it must be first uploaded to the PC. Refer to "**Section 5: Programming - Event Log List**" for details on these procedures.

To view and/or print event log:

1. Enter the **Level 1 Menu password**, and press **[1] Event Log**.

The "**Event Log**" menu displays.

Event Log 1. Event Log Read 2. Event Log Print

2. Press **[1]** to view or read the log, or press **[2]** to print.
3. Press **ESC** to return to "**Event Display**" screen.

Device, Annunciator & System Data Lists

The *"Data List" menu* allows the Operator to view or print configuration information for devices, annunciators, zones, modules and the system. Procedures for accessing each option are addressed in this topic. The lists may be viewed and/or printed. Please note that for purposes of this manual, only procedures for viewing data are included; procedures for printing data is similar.

NOTE: Refer to *"Section 5: Programming - Event Log List and Maintenance List"* topics for information on viewing this information from your PC.

Viewing Device Data

To view and/or print a Device Data list:

1. Enter the **Level 1 Menu password**, and press **[2] Data List**.

The *"Data List" screen* displays.

```

Device List
1. Data Read
2. Data Print
  
```

2. Press **[1]** to view data (*i.e., device, annunciator or system information*).
OR
Press **[2]** to print the data.

NOTE: For purposes of this manual, this procedure shows screens for option *[1] Data Read* only. The *"Data Print" screens* are similar.

The *"Device Read" menu* displays.

```

Data Read
1. Device Data
2. Annunciator Data
3. System Data
  
```

3. Press **[1]** to display the *"Device Data" screen*.

```

Device Data Read
1. Device Data
2. Threshold   3. Zone
4. Classification
  
```

4. Press **[1]** to display the *"Enter Device Address" screen*.

```

Enter device address: __

                ENT to select
  
```

5. Enter the *device address*, and press **ENTER**.

6. Press the **UP/DOWN ARROW KEYS** to scroll through the device configuration fields as described below:

Table 14: Device List Information	
Field Name	Option(s)
User Custom Message	Message displays if defined by programmer.
Vrf (Alarm Verification Time)	Time setting may be between 00 – 55(s) [where "s" = seconds] set in increments of 5 seconds, i.e., 5, 10, 20, or 25
Pre (Pre-Alarm Enable)	Yes / No
Blk (LED Blinking Enable)	Yes / No
D/N (Day/Night Time Enable)	On / Off
Bypass: Device Bypass)	On / Off
Drill: Fire Drill Enable)	On / Off
P-Sig (Pre-Signal/PAS Enable)	On / Off
Soak (Soak Time)	Time setting may be 000 or between 001 – 999(s) [where "s" = seconds]
Delay (Delay Time)	Time setting may be 000 or between 001 – 255(s) [where "s"=seconds]
Input (Input module operation mode)	"Normally Open" or "Normally Closed" contact
Output (Normal output state setting)	"Normal On" or "Normal Off"

7. Press either **ENTER** or **ESC** to return to previous screen.

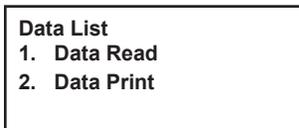
Viewing Device Thresholds

Select this option to view analog detector's alarm thresholds.

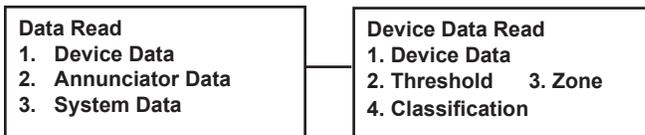
To view a device's threshold:

1. Access Level 1 Menu, and press **[2] Data List**.

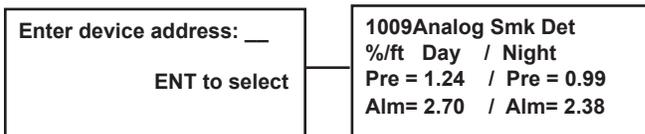
The **"Data List"** screen displays.



2. Press **[1]** to view the **"Device Read"** menu, then **[1] Device Data**.



3. Press **[2]**, enter a device address and press **ENTER** to display the device information.



EXAMPLE: Analog smoke detector #1009 shows the day / night pre-discharge and alarm settings.

4. Use the **UP/DOWN ARROW KEYS** to move through screens.

5. Press **ESC** to return to the **"Event Display"** screen.

Viewing Device Options

Select this option to view the zone mapping of the selected device.

To view the Device's Zone assignments:

1. Enter the **Level 1 Menu password**, and press **[2] Data List**.
2. Press **[1] Data Read**, then **[1] Device Data**.

The *"Device Data Read"* screen displays.

```

Device Data Read
1. Device Data
2. Threshold   3. Zone
4. Type
    
```

```

Data List
1. Data Read
2. Data Print
    
```

```

Data Read
1. Device Data
2. Annunciator Data
3. System Data
    
```

3. Press **[3]** to select *"Zone"*.
4. Enter a device address, and press **ENTER**.

```

Enter device address: __
                        ENT to select
    
```

EXAMPLE: All zones that analog smoke detector #1001 has been mapped or assigned to displays.

```

1001Analog Smk Det          [->]
Pre = Z001
Alm= Z001 Z002 Z003
Z004 Z005 Z006 Z007
    
```

```

                                [->]
Z008 Z009 Z010 Z011
Z012 Z013 Z014
    
```

5. Use the **UP/DOWN ARROW KEYS** to move through screens.
6. Press **ESC** to return to the *"Event Display"* screen.

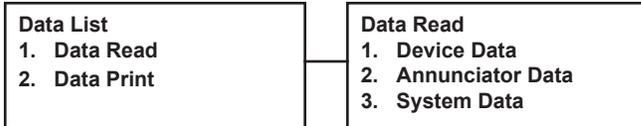
Viewing Device Type

Select this option to view a device's type, *i.e.*, *analog smoke or combination heat detector*:

To view a device's type:

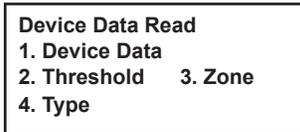
1. Enter the **Level 1 Menu password**, and press **[2] Data List**.

The *"Data List"* screen displays.

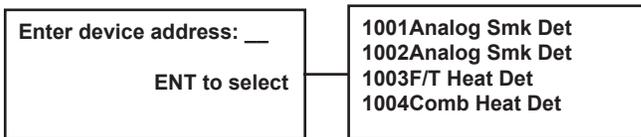


2. Press **[1] Data Read**, then **[1] Device Data**.

The *"Device Data Read"* menu displays.



3. Press **[4]** to select *"Type"*.
4. Enter a device address, press **ENTER**.



EXAMPLE: Analog smoke detector #1001 and the next three (3) consecutive devices display.

5. Press **UP/DOWN ARROW KEYS** to move through screens.
6. Press **ENTER** to return to previous screen or **ESC**.

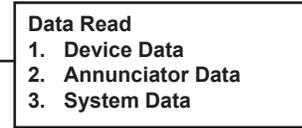
Viewing Annunciator Data

To view and/or print an Annunciator's data:

1. Enter the **Level 1 Menu password**, and press **[2] Data List**.

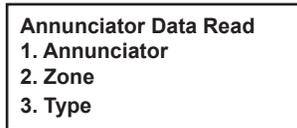
2. Press **[1] Data Read**, and **[1] Device Data**.

The "*Device Data Read*" menu displays.

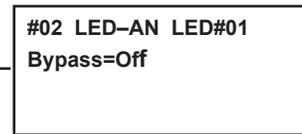
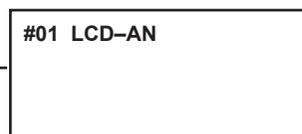
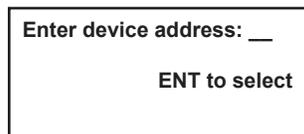


NOTE: For purposes of this manual, this procedure shows screens for option [1] Data Read only.

3. Press **[2]** to display the "*Annunciator Data Read*" menu.



4. Press **[1]**, enter the *Annunciator number* and press **ENTER**.



EXAMPLES: These are examples of LCD and LED annunciators' data screens.

5. Press **UP/DOWN ARROW KEYS** to move through screens.
6. Press **ENTER** or **ESC**.

Viewing Annunciator Zones

To view and/or print Annunciator zone assignments:

1. Enter the **Level 1 Menu password**, and press **[2] Data List**.

2. Press **[1]**, and **[2] Annunciator Data**.

The "*Annunciator Data Read*" menu displays.

```
Annunciator Data Read
1. Annunciator
2. Zone
3. Type
```

```
Data List
1. Data Read
2. Data Print
```

```
Data Read
1. Device Data
2. Annunciator Data
3. System Data
```

3. Press **[2] Zone** and enter annunciator's address.

```
Enter device address: __
ENT to select
```

4. Press **ENTER** to display zone assignments.

EXAMPLE: Annunciator #01 zone assignments are shown.

```
#01 LCD-AN LCD#01 [->]
Z001 Z002 Z003 Z004
Z005 Z006 Z007 Z008
```

```
Z009 Z010 Z011 Z012 [-<]
Z013 Z014
```

5. Press **UP/DOWN ARROW KEYS** to move through screens, if necessary.
6. Press **ENTER** or **ESC**.

VIEWING ANNUNCIATOR TYPE(S)

This option allows you to view *LED-AN* and *LCD-AN* annunciators by type.

To view *Annunciator's type*:

1. Enter the **Level 1 Menu password**, and press **[2] Data List**.

2. Press **[1]**, and **[2] Annunciator Data**.

The "*Annunciator Data Read*" menu displays.

```
Annunciator Data Read
1. Annunciator
2. Zone
3. Type
```

```
Data List
1. Data Read
2. Data Print
```

```
Data Read
1. Device Data
2. Annunciator Data
3. System Data
```

3. Press **[3] Type**, enter an annunciator's address and press **ENTER**.

```
Enter device address: __
ENT to select
```

```
#01 LCD-AN
#02 LCD-AN
#03 LED-AN
#04 LED-AN
```

EXAMPLE: LCD #01 and the next three (3) consecutive annunciators display.

4. Press **UP/DOWN ARROW KEYS**, if necessary, to move through screens.
5. Press **ENTER** or **ESC**.

Viewing System Data

The *"System – Data Read"* menu allows you to view and/or print a system's configuration, including point settings and mapping.

To view and/or print system configuration data:

1. Enter the **Level 1 Menu password**, and press **[2] Data List**.

```

Device Data Read
1. Device Data
2. Annunciator Data
3. System Data
    
```

2. Press **[1]** to display the *"Device Data Read" menu*.
3. Press **[3]** System Data.

The *"System Data Read" menu* displays.

```

System Data Read
1. System Data
2. Mapping Data
    
```

4. Press **[1]** to access the *"System Data" screen*.

NOTE: The system's configuration data settings display on four (4) *configuration screens ("Cfg1..Cfg4")*; the *"Standby Message"* displays on the last screen.

Refer to the example below for system settings as shown on their respective screens.

```

Cfg1 Unit=%/ft, degF
Loop=-ClassB Style4
ANN#=14 Rate=9600bps
NAC=Code3 Abort=ULI
    
```

```

Cfg2 Sil Inhi TM=300
AT Sil=900 TwoTM=120
1st=CONT 2nd=CONT
Pre-Sig=180 PAS=000
    
```

```

Cfg3 SynchroPat=AM
Pre-ALM as TBL=Off
PW Flt Delay=120mi
Verify Buzzer=Off
    
```

```

Cfg4 Date=USA
ALE2=1
ALE3=1
ALE4=1
    
```

```

Standby Message =
Enter a custom message
20 characters per line
    
```

5. Press the **UP/DOWN arrow keys** to move through the screens.

NOTE: Refer to the *"System Data Information" table* shown in this section for an explanation.

6. Press **ENTER** or **ESC**.

Table 15: System Data Information	
Field Name	Options
Cfg1, Cfg2, Cfg3, Cfg4	Designates configuration screen #.
Unit	Displays unit's settings for % of obscuration in ft/cm and degrees in F or C.
Loop	Displays loop style setting as Class B Style 4 or Class A Style 6.
ANN#	Designates number of connected annunciators, <i>i.e.</i> , between 00 – 31.
Rate	Displays baud rate setting, 9600 / 4800 / 2400 bps.
NAC	Displays NAC signal style setting, CONT, Code3, March or Calif.
Abort	Displays abort type, ULI, IRI, or AHJ.
Sil Inhi	Displays silent inhibit setting, as 000, or 010-300 seconds.
AT Sil	Displays auto silent time, as 000, or 030-900 seconds.
TwoTM	Displays Two-stage time as 30, 60, 120, 180, 240 or 300 seconds.
1st	Displays 1st-stage code setting, as CONT, Code3, March or Calif.
2nd	Displays 2nd-stage code setting, as CONT, Code3, March or Calif.
Pre-Sig	Displays Pre-signal setting as 000, or 060-180 seconds.
PAS	Displays PAS time setting as 000-180 seconds.
SynchroPat	Displays synchronization pattern, <i>i.e.</i> , AM=AMSECO, WH=Wheelock, or GE=Gentex
Pre-ALM as TBL	Displays Pre-alarm as trouble setting, ON / OFF.
PW FltDelay	Displays AC power fault delay as 000-180 minutes.
Verify Buzzer	Displays verify buzzer setting, ON / OFF.
Date	Displays current date format, USA / Euro
ALE#	Designates if ALE-127s are in use, 1=Yes, 2=No
Standby Message	Displays standby message, if created, two (2) lines x 20 characters/line.

7. Press ENTER or ESC to return to the previous screen.

Viewing System Mapping

To view and/or print the system's mapping by zone:

1. Enter the Level 1 Menu password, and press [2] Data List.
2. Press [1] Data Read, and [3] System Data.

The "System Data Read" menu displays.

System Data Read 1. System Data 2. Mapping Data

3. Press [2] Mapping Data, and enter a zone number.

EXAMPLES: Devices mapped to Zone 001 and a sample Cross/Counting (CRS10) zone are shown.

Z001 1014 Pre 2001 Pre 3011	1007 Pre 1021 ALM 3001 ALM 3012	CRS/CNT Data CRS10 In Z = Z002 Z011 Out Z = Z100 Z120 Z123 Z124
--------------------------------------	--	--

4. Press UP/DOWN arrow keys to move through screens, if necessary.
5. Press ESC.

Viewing Sensor Settings

The *"Sensor Monitor" menu option* displays an analog detector's current obscuration percentage and temperature settings (i.e., ft/m and F°/C° degrees).

To view an analog detector's status reading:

1. Enter the **Level 1 Menu password**, and press **[3] Sensor Monitor**.

The *"Sensor Monitor" screen* displays.

1. Analog Value Read 2. Dirty Value Read 3. Analog Value Print 4. Dirty Value Print
--

2. Press **[1]** and enter a sensor's #; press **ENTER** to display sensor's settings.

EXAMPLE: Device #1001's values are shown.

1001Analog SmK Det Analog Value = 0.014%/ft ESC to Stop

3. Press **ESC** to return to previous screen.

Viewing the Battery's Status

The *"Battery Monitor" menu option* allows you to view the status of the battery's standby power. You should check the battery's current and voltage regularly to ensure that your system has sufficient power to support all peripherals.

NOTE: Refer to *"Appendix B: System Testing and Maintenance"* for information on battery testing and maintenance.

To view the battery's standby power:

1. Enter the **Level 1 Menu password**, press **RIGHT ARROW**, then **[4] Battery Monitor**.

The *"Battery Monitor" screen* displays.

Battery Monitor Current=0.01A Voltage=27.3V ESC to stop
--

2. Press **ESC** to return to the previous screen.

Activating a Device

The *"Activate" menu option* allows you to activate an output device. If the device is a notification module, it's activated according to the NAC Code Type's programming.

NOTE: *Addressable module power and contact output types are activated continuously regardless of the programmed NAC code type.*

To activate a device:

1. Enter the **Level 1 Menu password**, press **RIGHT ARROW**, then **[5] Activate**.

The *"Activate Device Number" screen* displays.

<p>Activate Device Number __ ENT to Set</p>
--

2. Enter the *device #*, and press **ENTER**.

The device's *"Activate" screen* displays.

<p>Activate 2001Bell Circuit ENT to Set</p>
--

3. Press **ENTER** to activate and to display the *"Accept" screen*.

<p>Accepted Please Wait</p>
--

4. Press **ESC** to return to the previous screen.

Password Input (Levels 1 & 2)

The *"Password Input" menu option* allows you to access another menu level.

To view access the password input screen:

1. Enter the **Level 1 Menu password**, press ***RIGHT ARROW***, then [6] ***Password Input***.

The *"Password Input" screen* displays.

<p>Input Password Password= __ ENT to Set</p>

2. Enter the applicable password, and press **ENTER**.

– **Level 1 Password = 139**

– **Level 2 Password = 1397**

NOTES:

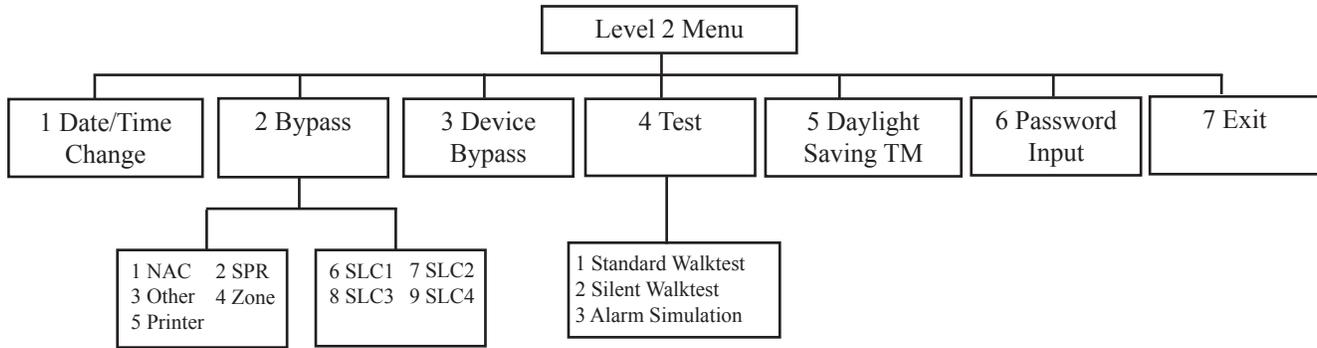
- These are factory-set passwords and may be changed through the *"Password Change"* option available in the **Level 3 Menu**. Please refer to *"Section 5: Programming Change Menu Passwords"* for details on this procedure.
- Only authorized programmers or installers may access the Level 3 Menu.

Exit (Levels 1-3)

The *"Exit" menu option* is available from all FACP Menus.

Press RIGHT arrow, then [7] from all menus to exit, and to return the "Event Display" screen.

Level 2 Menu Options



Setting the Date & Time

The *"Date/Time change" Level 2 Menu option* is used to view and/or change the current system date and time. Since the control panel maintains the date and time independently of the main or secondary power, this is the only method the date/time may be changed.

To view and/or change date/time:

1. Enter the **Level 2 Menu password**, and press **[1] Date/Time Change**.

The *"Date/Time Change" screen* displays showing the current ("CRN") date and time on the 1st line.

```

Date/Time Change
CRN=02/14/2011/08:32
New= / / / :
      ENT to set
    
```

2. Enter the new date and time in *MM/DD/YY/HH:MM format*, in the *"New=" field*.
3. Press **ENTER** to save change.
OR
Press **ESC** to return to previous menu without saving.

Bypassing Devices, Modules and SLCs

The *"Bypass" menu option* is used to temporarily bypass a device, module, such as a DACT, SLC, printer or other peripheral for testing purposes.

NOTES:

- For documentation purposes, this procedure provides an example of the **"NAC Bypass"** screen only. The steps for selecting or deselecting the *"Bypass" option* is the same for each peripheral.
- Remember to remove the bypass once testing has been completed.

PERIPHERAL BYPASS

To bypass a peripheral:

1. Enter the **Level 2 Menu password**, and press **[2] Bypass**.

The *"Bypass" screen(s)* display.

```

Bypass          [->]
1. NAC          2. SPR
3. Other        4. Zone
5. Printer
6. SLC1         7. SLC2
8. SLC3         9. SLC4
    
```

2. Press the **UP/DOWN arrows**, if necessary, to display the 2nd screen.

- Press the applicable option number, *i.e.*, [1] NAC, [2] SPR, or [7] SLC1.

NOTE: For purposes of this manual, only [1] NAC is shown; the screens are similar for all options.

The "*NAC Bypass*" screen displays.

<p>NAC Bypass Current =2(Off) New = 1=On 2=Off ENT to set</p>
--

EXAMPLE: The current setting is "2" or "*Off*".

- Press "1" to select "*ON*".
OR
Press "2" to turn bypass "*OFF*".

NOTE: All NACs configured to the power supply are automatically bypassed.

- Press **ENTER** to save change.

DEVICE BYPASS

To bypass an individual device:

- Access **Level 2 Menu**, and press [3] *Device Bypass*.

The "*Device Bypass*" screen displays.

<p>Device Bypass Device Number=__ ENT to set</p>
--

- Enter a device number and press **ENTER**.

EXAMPLE: The "*Device Bypass*" screen displays device #1001 where bypass is "*Off*".

<p>Device Bypass 1001 Current=2 (Off) New=__ 1=On 2=Off ENT to set</p>
--

- Press "1" to select bypass "*ON*".
OR
Press "2" to turn bypass "*OFF*".

NOTE: If a condition exists that normally causes an interlocked zone to activate when the bypassed device is restored, the device will activate that zone. A "*Warning*" message displays indicating that this may occur.

- Press **ENTER** to save changes.
OR
Press **ESC** to exit without saving changes.

NOTES:

- It is strongly recommended that "*activating output*" devices should **NOT** be bypassed.
- Remember to remove bypass once testing has been completed.

Testing Options

The **"Testing" menu** options allow you to test a range of devices to ensure that they output **"Alarm"** signals and automatically reset. Alternatively, you may choose to run an alarm simulation. All test results are stored in the **"Event Log"** for easy viewing and analysis. The three (3) test options are described below:

Table 16: Testing Options	
Name	Description
Standard Walktest	<p>Allows you to select a range of devices to test their output alarm signals; the following sequence occurs:</p> <ul style="list-style-type: none"> • FACP emits an audible sound for three (3) seconds when each initiating device is activated. • Interlocked outputs are activated for ten (10) seconds. • Each device resets. <p>NOTE: <i>The configured outputs in the "Alarm Status Signal Transmission" Zone (SZ01) are NOT activated.</i></p> <p>CAUTION! During a Standard Walktest, the monitoring functions of the selected initiating devices are suspended.</p>
Silent Walktest	<p>Same as <i>"Standard Walktest"</i> except for the following:</p> <ul style="list-style-type: none"> • FACP does NOT emit audible sound when each initiating device is activated. • Interlocked outputs are NOT activated.
Alarm Simulation	<p>Allows you to select a range of initiating devices to test interlocked outputs; the following sequence occurs:</p> <ul style="list-style-type: none"> • FACP emits an audible sound. • The <i>"Trouble"</i> LED flashes. <p>NOTE: Up to forty (40) initiating devices may be specified.</p>

To initiate a Standard / Silent test:

1. Enter the **Level 2 Menu password**, press **RIGHT ARROW**, then **[4] Test**.

The **"Test" screen** displays.

Test 1. Standard Walktest 2. Silent Walktest 3. Alarm Simulation

2. Press the applicable option number (**1 or 2**).

NOTE: For purposes of this manual, only the **"Standard Walktest"** screens are shown as the **"Silent Walktest"** option is identical.

Standard Walktest Device Number Start=___ Stop=___ ENT to Set
--

3. In the **Start and Stop fields**, enter the range of device numbers.
4. Press **ENTER** to save range of devices.
5. Press **ESC** to end test, if needed.

NOTE: The test will automatically end if an address outside of the **"test range"** detects an **"Alarm" condition** or if the FACP does not receive any input for 15 minutes.

To begin an Alarm Simulation:

1. Enter the **Level 2 Menu password**, and press **[4] Test**.

The "**Test**" screen displays.

```

1=Standard Walktest
2=Silent Walktest
3=Alarm Simulation
  ENT to Set

```

2. Press **[3]** and enter a device #.

The "**Alarm Simulation**" screen for the selected device displays.

```

Alarm Simulation
1001Analg Smk Det
Level=___ ENT to set
1=Pre-Alarm 2=Alarm

```

3. Enter **[1]** to test a "**Pre-Alarm**" condition, or **[2]** for an "**Alarm**" condition.
4. Press **ENTER** to set.
5. Press **ESC** on the "**Alarm Simulation**" screen to end test.

NOTES:

- The simulation **cannot** be ended by pressing the "**System Reset**" push button.
- When several initiating devices are being tested, the interlocked outputs associated with each device will be activated in the sequence they were configured.

Daylight Savings Time

The "**Daylight Savings TM**" menu option allows you to select the dates to begin and end Daylight Savings Time.

NOTE: The "**Daylight Saving Setting**" must be enabled by the Programmer in the PCCP program.

To adjust daylight saving time:

1. Enter the **Level 2 Menu password**, **RIGHT ARROW**, then **[5] Daylight Saving TM**.

The "**Daylight Saving TM**" screen displays.

```

Daylight Saving TM
Current=05/01-11/30
New=
  ENT to set

```

2. In the "**New**" field, enter the range of dates in **MM/DD format**.

NOTE: If "00/00–00/00" is entered, the daylight savings time feature is not enabled.

3. Press **ENTER** to save changes.

Section 5: Programming

Programming Introduction

This section addresses programming options and their parameters, includes an overview of the programming process, and addresses how to use the two programming methods: (1) the **FACP panel software**, and (2) the **PCCP software**, which is accessed from a remote PC. This information is intended to be used by qualified personnel, including those responsible for security, maintenance, and training functions.

NOTE: Only Programmers / Installers who have access to the FACP Level 3 Menu options should reference this section. Also see "*Appendix D: The FACP Program Menu Tree*" for reference to Level 3 Menu options.

Other procedures covered in this section includes how to upload and download configuration data, navigate within the software, modify programming settings, such as the system clock and day/night mode sensitivity settings, schedule holidays, and program modules [*i.e., DACT, remote LED and LCD annunciators and ALE-127s (Addressable Loop Expanders)*].

NOTE: This section focuses on using the PCCP computer software options; however, FACP steps are also provided at the end of each PCCP procedure.

Programming Options

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

This product incorporates field-programmable software. In order for the product to comply with the requirements in the Standard for Control Units and Accessories for Fire Alarm Systems, UL 864, certain programming features or options must be limited to specific values or not used at all as indicated below.

Table 17: PFC-8000 Series Programming Options

Topic	Feature or Option	Permitted in UL (Y/N)?	Possible Settings	Setting(s) Permitted in UL864?	Comment
Relay	AC Delay	Y	0-12 hours	Y	Settings for UL must be 30, 60 or 90 minutes
NACs	Signal Silence Inhibit	N	0, 10-300 seconds	N	ULC Allowed in Section 3.14
NACs	Two Stage	N	30 seconds, 1-5 minutes	N	ULC Allowed in Section 3.15
NACs	Auto Silence	N	30 to 900 seconds	N	
Input	Pre-Signal	Y	60-180 seconds	Y	UL does not specify a timing
Input	PAS	Y	1-180 seconds	Y	
Input	Detectors	Y	Alarm Verification	Y	Up to 55 seconds max
Day/Night	Smoke Sensitivity	Y	Full listed range of smoke detector	Y	Up to 20 holidays where day mode is not active.
DACT	Daily Test Call	Y	Any time of day	Y	
DACT	# of Attempts	Y	5-10	Y	Alternates between line 1 and 2 if line 2 is enabled.
Releasing	Soak Timer	Y	0-999 seconds	Y	Length of time the release circuit is active post release
Releasing	Delay Timer	Y	0-60 seconds	Y	Length of time of pre-discharge
Abort	Abort	Y	UL, IRI, AHJ	N	Only UL is permitted in UL installations

Programming Overview

The *PC-based computer program (PCCP)* is used to configure a newly installed fire alarm system remotely as well as to modify configuration data previously programmed at the panel. The PCCP software provides the user with the capability to customize the system for its current application, the flexibility to accommodate upgrades, and the ability to add optional peripherals. You may fine-tune device behavior characteristics or create mapping zones for a more sophisticated fire protection system.

Remote programming is accomplished via the on-board digital alarm communicator transmitter (DACT). The remote modem calls the DACT from a remote location and if the DACT is programmed to answer phone calls it will pick up the call.

The *FACP software* alternatively may be used to program the entire system. The *Auto Programming function* allows you to efficiently configure all connected system devices by assigning a name to each device and selecting the applicable device type (*i.e., module or sensor*). When *Auto Programming* is completed, the system configuration mirrors a basic fire protection system where all inputs and outputs are a one-to-one relationship.

The Programming Cycle

The diagram shown below provides a recommended approach in programming your system.

1. Address and install SLCs
2. Run Auto Program
3. Install software
4. Connect PC to Panel
5. Upload data to PC
6. Program the system
7. Download configuration file

NOTES:

- This approach may eliminate programming errors, however, these are only recommendations.
- If your PC does not have a serial port, a USB converter is required.

Auto Programming

The *Auto Program function* enables you to efficiently identify all connected addressed devices that have not yet been configured. During this process, all non-configured devices are flagged, and *"Trouble"* conditions for each device displays on the LCD. The devices are subsequently assigned to the same zone, known as *"Zone 000"*. Devices are configured with default settings based on their type. Refer to *"Configuring Zones & Devices"* located later in this section for detailed instructions on these topics.

NOTE: Refer to *"Section 3: Installation – Addressing SLC Devices"* for instructions on addressing SLC devices.

Only authorized users may access this function because of its potential impact to the system. Auto Program generates a list of all devices. The *PCCP "Maintenance List" option* lists the current analog value, status, and threshold settings of each analog detector by loops (Loops 1-4). Please refer to *"Configuring Devices"*, *"Mapping Zones"* and *"Maintenance Lists"* headings located later in this section for details.

NOTES:

- When Auto Program is used, all addressed devices are grouped into a single zone, referred to as *"Z000"*.
- If Auto Program is run after the system has been mapped and configured, any device that has been removed from the panel since the previous Auto Program, will be deleted from the configuration file.

To run Auto Program:

1. Position key in panel to display the *"Level 1 - Access is enable"* message.
2. Press **ENTER**.

The *"Input Password"* screen displays.



3. Enter the **Menu Level 3 password** and press **ENTER**.

NOTE: Menu Level 3 default password = 139713.

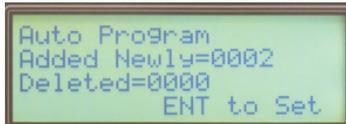


4. Press [1] to select *"Auto Program"*, and [1] *"Auto Program Start"*.

The message *"Please Wait"* displays.



5. The *"Auto Program"* screen displays additions and/or deletions, if any.



6. Press **ENTER** to save changes.
OR
Press **ESC** to exit without making changes.

The following message displays.



Memory Clear Function

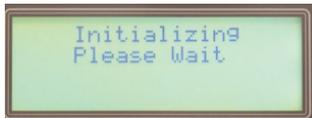
This option should only be used to default the entire panel. **All programming will be lost!**

To run clear memory:

1. Enter the **Level 3 Menu password**, and press **[1] Auto Program**.



2. Press **[2]** to display the *"Memory Clear" screen*.
3. Press **ENTER** to display the *"Initializing" screen*.



4. Press **ENTER** to proceed.
OR
Press **ESC** to exit without clearing memory.

Connecting the PC and Panel

This section provides instructions on setting up connectivity between a computer and the control panel. Once this is achieved, setup the communications port so you may program your system using the PC's software.

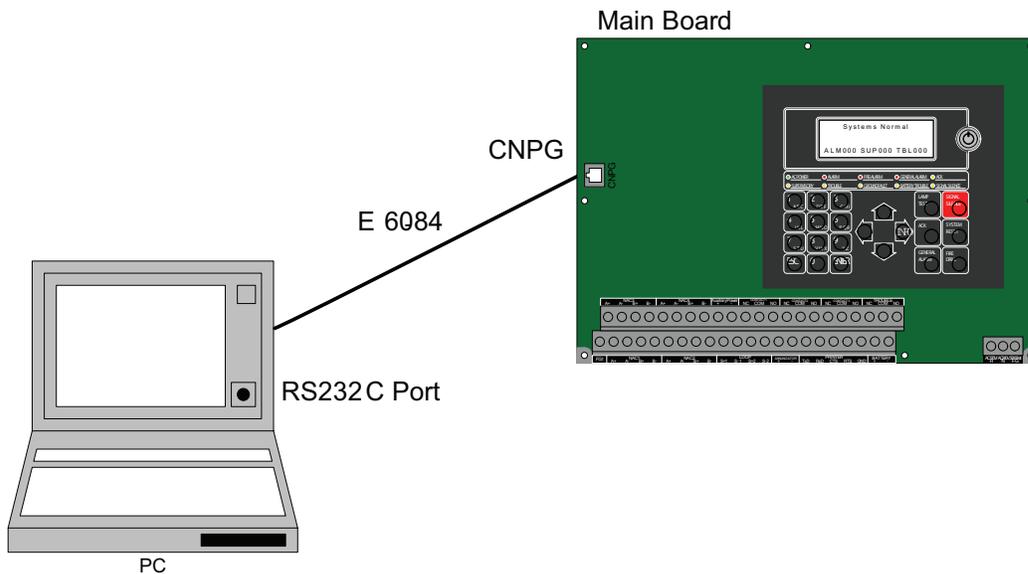
To connect the computer to the panel:

Connect a dedicated cable to the **RS-232C port** on the computer to the **"CNPG" port** on the main board.

NOTES:

- The dedicated cable is Potter part #3610051; this part number includes the software.
- If your laptop does not have a serial port, a USB converter is required.

Figure 60. Example of Connecting PC to Main Board



PCCP Software Installation

Installing the PFC-8500 software is an easy process and requires only a few minutes. The system software is compatible with Microsoft Windows 7, Windows XP or Windows Vista Operating Systems. The Windows' based software enables you to efficiently program and configure NACs, SLCs, modules, and other peripherals on your system.

NOTE: NET Framework 2.10 or later is required!

To install the software:

1. Insert the *PCCP CD-ROM* into the CD drive.
2. Double-click the '*setup.exe*' file to begin, and follow prompts.
3. You may change the location of the application files when prompted.

Accessing PCCP

Only authorized users should have access to the PCCP software. To ensure this, the default password(s) should be changed during the installation process and/or after accessing the software for the first time.

To access the PCCP software:

1. Double-click the  **PCCP icon**.

The "*PCCP Startup*" screen prompts to enter a password.

Figure 61. Example of the PCCP Startup Password Prompt



2. Enter the default password, "*0000000000*" (*ten zeroes*).
3. Click **OK** to continue or **CANCEL** to exit.

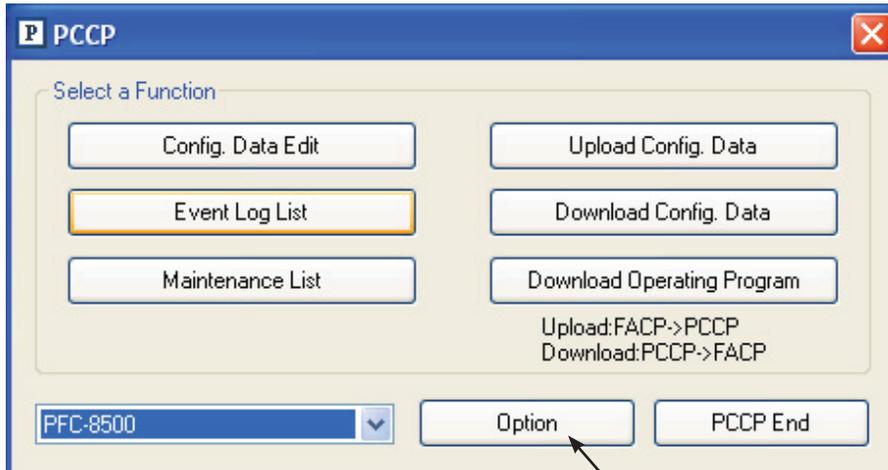
Selecting the PC Communications Port

Prior to uploading or downloading the configuration information, you must setup the computer's communications port. This is a quick process, and requires only a few minutes to complete.

To setup the communications port:

1. From the PCCP Main Menu, click the **Option** button.

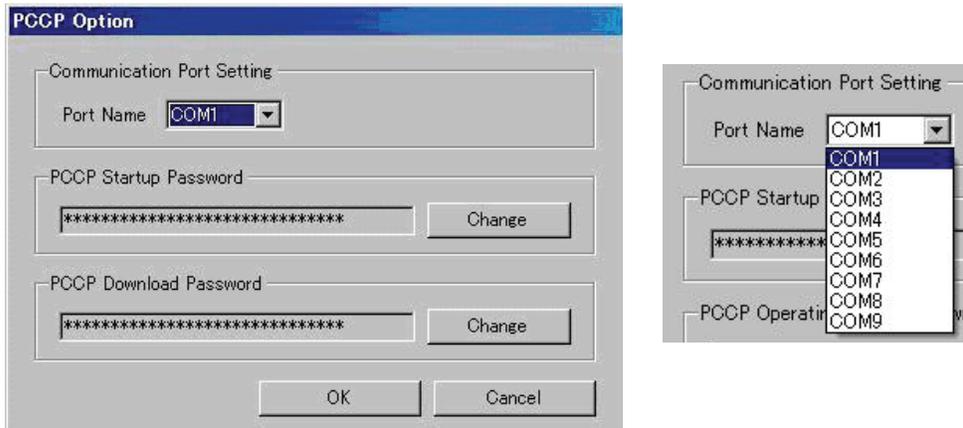
Figure 62. PCCP Main Menu



Click here to setup com port

2. The "PCCP Option" window displays.

Figure 63. Communications Port Setup & Options Windows



3. Click on the **"Port Name" drop down arrow** and select the applicable **com port #**.
4. Click **OK** to complete setup, or click **ESC** to exit without saving change.

Changing the PCCP Startup / Download Passwords

There are two (2) default passwords automatically assigned to the PCCP software — one password for accessing the software, and another to download configuration changes to the panel. You may assign two (2) different passwords or use the same password for both functions.

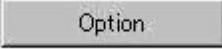
NOTE: It is recommended that two (2) different passwords are used to ensure the system is secure from unauthorized users.

Passwords may be comprised of up to *thirty (30) alphanumeric characters* and are *case sensitive*. When changing the passwords, you will be prompted twice to validate that you've entered the desired passwords.

NOTES:

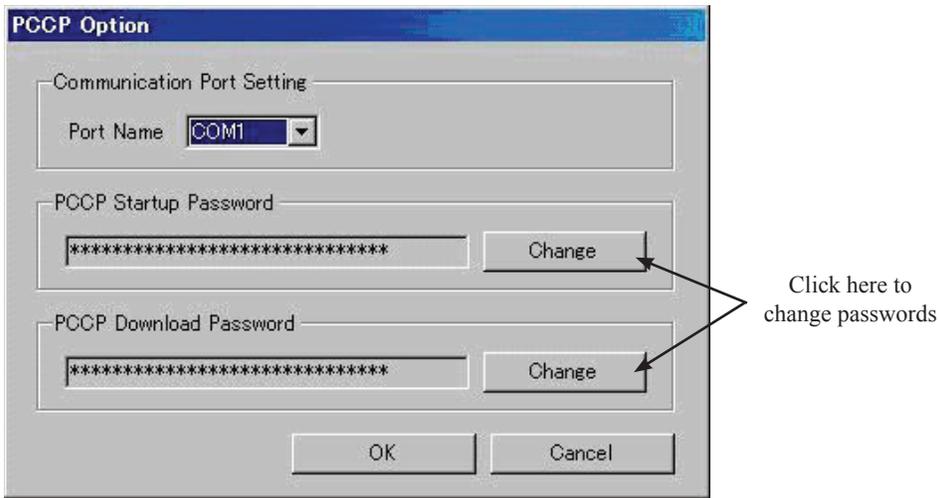
- Verify that the startup/download passwords match the FACP's.
- If passwords become compromised at a later time, change the passwords accordingly.

To change the password(s):

1. Click the  button from the *Main Menu*.

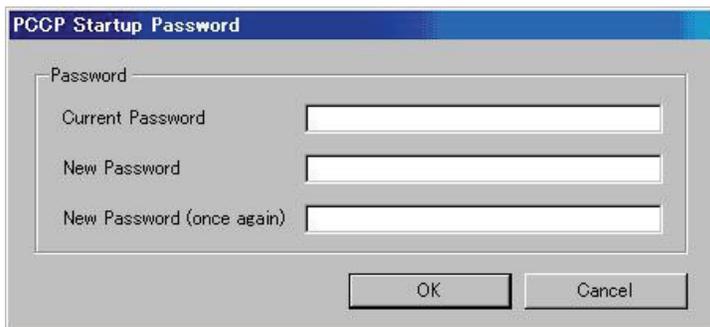
The "*PCCP Option*" window displays.

Figure 64. PCCP Change Passwords Dialog Box



2. Click the "*PCCP Startup Password*"  button to display the "*PCCP Startup Password*" dialog box.

Figure 65. PCCP New Password Dialog Box



3. Enter the **current password** [*default = 0000000000 (ten zeroes)*].
 - Enter a new password.
NOTE: Up to thirty (30) alphanumeric characters may be entered; passwords are case sensitive.
 - Re-enter the new password, and click **OK**.
NOTE: If you click **CANCEL**, the new password will not be saved.
4. Click in the "**PCCP Download Password**"  **button** to display the "**PCCP Download Password**" *dialog box*.
 - Enter the current password [*default = 0000000000 (ten zeroes)*].
 - Enter a new password twice.
5. Click **OK** to save changes, or click **CANCEL** to exit without saving.

NOTICE

Record the new password and store in a safe place. If you lose it, you **MUST** un-install the program!

Changing the FACP's Menu Passwords

The three (3) menu passwords should be changed after the initial system setup has been completed. Default passwords and their respective maximum number of digits are as follows:

Level 1 = 139 (3 digits only)

Level 2 = 1397 (4 digits only)

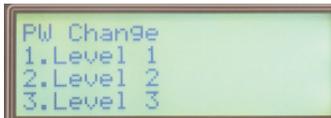
Level 3 = 139713 (6 digits only)

NOTES:

- Passwords may not be consecutive (*i.e.*, 123456) or contain the same value (*i.e.*, 1111 or 5555).
- For purposes of this manual, the procedure to change Level 1's password is included; only the number of digits allowed per password level varies.

To change a menu password:

1. Enter the *Level 3 Menu password*, press **RIGHT ARROW** several times to display the **[6] PW Change option**.
2. Press **[6] PW Change** to display the "*PW Change*" screen.



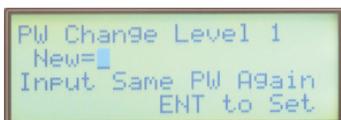
3. Press the applicable option number: "**1**"= Level 1; "**2**"= Level 2; "**3**"= Level 3

The "*Pass Change Level X*" screen displays (where "*x*" represents the menu level #).



4. Enter a **new password** (3 digits=Level 1; 4 digits=Level 2; 6 digits=Level 3), and press **ENTER**.

The "*PW Change*" screen displays again.



5. Re-enter the new password again, and press **ENTER** to save.

NOTES:

- If the **exact same** new password is not entered, a prompt displays indicating that you must re-enter the new password again.
 - If an incorrect password is entered repetitively, after several attempts you will be temporarily locked out from the login in screen. The "**Invalid Password**" message displays if you enter an incorrect password.
6. If you enter an incorrect password several times, the following message displays.



7. Press **ESC**.

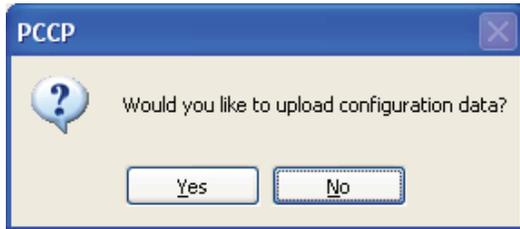
Uploading Configuration Data

After completing Auto Program and whenever devices are added or removed from the panel, the configuration file may be uploaded to the computer. This process uploads all changes to the PCCP's software which ensures that data is up to date, and if needed, can be further edited at the PC.

To upload a configuration file to the computer:

1. From the PCCP's **Main Menu**, click the  **button**. The following message displays:

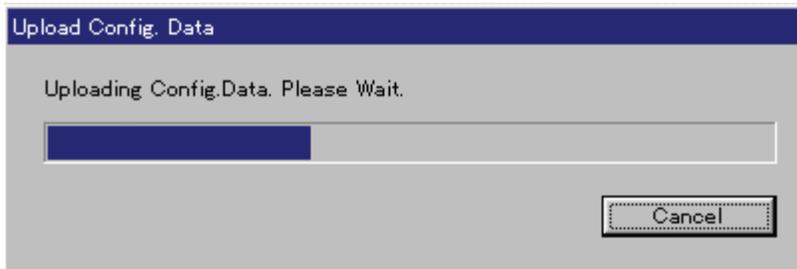
Figure 66. Upload Configuration Confirmation Dialog Box



2. Click **YES** to continue.
OR
Click **NO** to exit.

The "**Upload Config. Data**" *progress bar* displays.

Figure 67. Uploading Configuration Data Progress Bar



3. Click "**PCCP End**", or press **CANCEL** at any time to stop uploading.

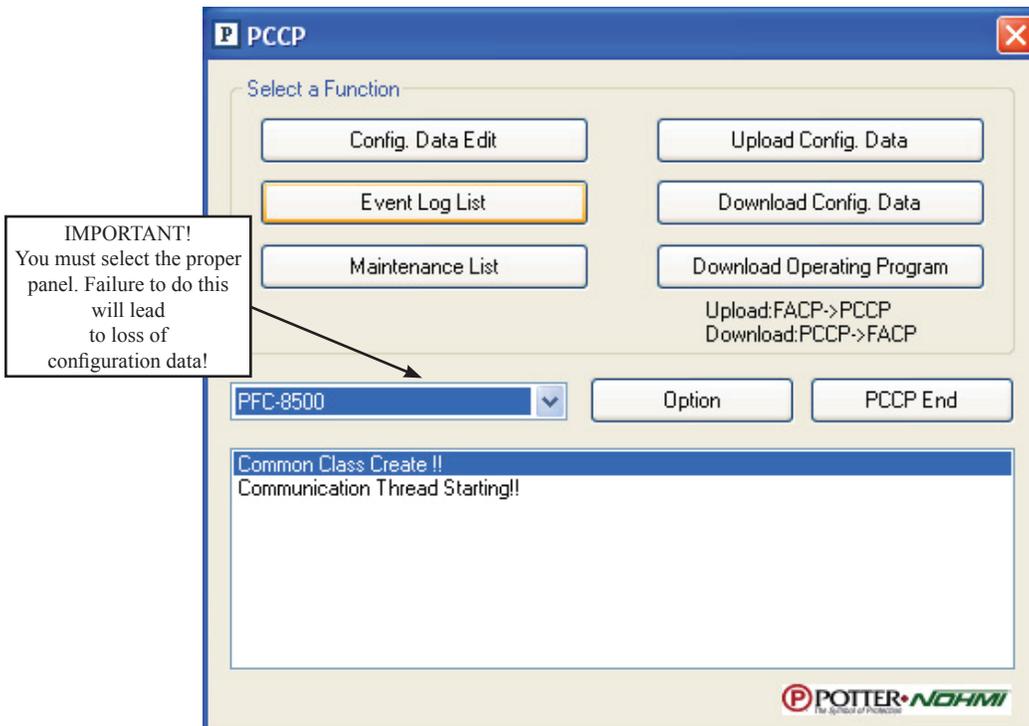
PCCP Software Overview

This section gives you an overview of the PCCP software, and addresses how to navigate within the program windows. Additionally, descriptions of the program features and a summary of basic system functions are included. This section is intended to help you efficiently configure and manage your system.

PCCP Main Menu

The **PCCP Main Menu** provides function buttons (*i.e.*, *Config. Data Edit*, *Upload Config. Data*, and *Event Log List*) for easy access to most system programming selections. This window displays system reports, provides the option to select your system (PFC-8500/8060) and allows you to exit the program. Each function is described in detail later in this section.

Figure 68. The PCCP Main Menu



PCCP Main Menu Overview

The table below gives you a snapshot of the PCCP Main Menu order along with brief descriptions of each option. Details for all functions are provided on the following pages.

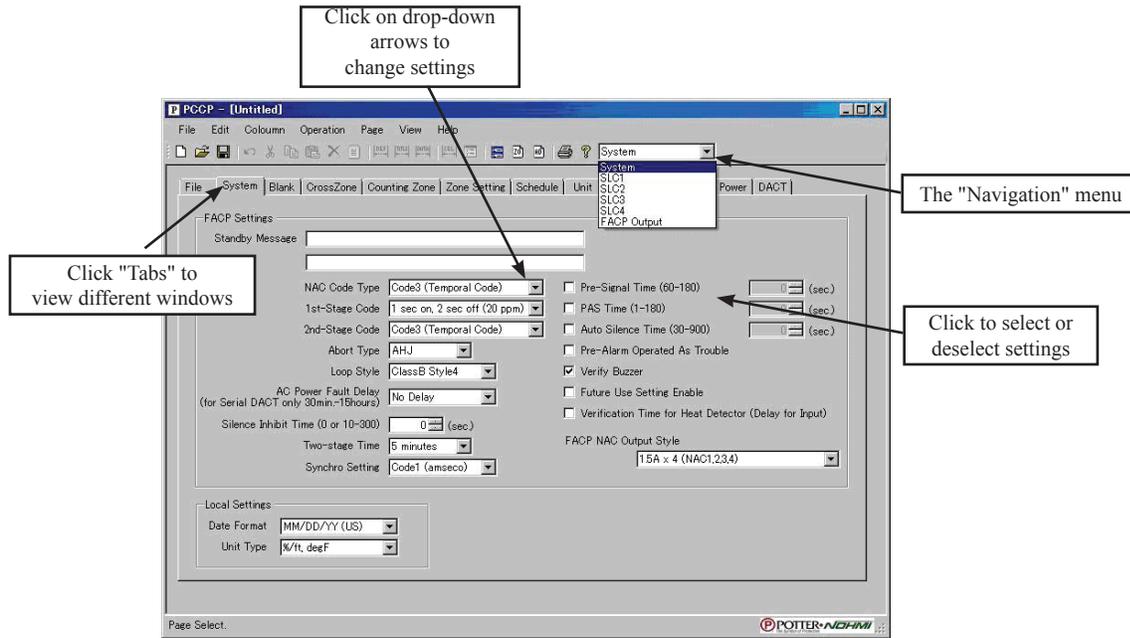
Table 18: PCCP Main Menu Overview	
MENU OPTION	DESCRIPTION
Config. Data Edit	Provides access to all configuration windows to create zones, configure NACs (1-4), SLCs, optional modules, such as the ALE (addressable loop expanders), and remote annunciators.
Event Log List	Allows the Event Log to be uploaded from the FACP, which contains a list of all trouble, alarm and supervisory events, to the computer.
Maintenance List	Allows the system Maintenance Log to be uploaded to computer; log is comprised of all SLC information.
Upload Config. Data	Allows configuration data to be uploaded, edited or reviewed at the computer.
Download Config. Data	Allows configuration data to be downloaded from computer to the FACP.
Download Operating Program	Downloads PC software to FACP as needed when software updates occur.
System (panel) menu	Allows selection of PFC-8500 / PFC-8060 system. NOTE: If the incorrect system is selected, all programming may be lost!
Option button	Displays the communication port setting and change password dialog box.
PCCP End	Exits the PCCP program and returns to computer desktop.

Config. Data Edit Windows

The "*Config. Data Edit*" option provides access to all system configuration windows. This section provides an in-depth discussion on each configuration option. The "*Configuration Data Edit*" window allows you to configure the system's overall settings, such as the LCD Standby message, date format, etc.

All *SLCs* and *FACP output* settings may be configured through this option. The following topics address how to configure each of these selections.

Figure 69. Config. Data Edit Window



NOTE: The "*System*" window displays automatically when *Config. Data Edit* is accessed.

Navigation Menu

The Navigation Menu is located at the end of the PCCP tool bar and allows you to navigate between the *System*, *SLCs*, or *FACP Output configuration windows*. Each are briefly explained below:

1. **System** — Allows you to view and configure overall system settings; "*System*" is the default window.
2. **SLC1 – SLC4** — Allows you to configure devices on selected SLC.
3. **FACP Output** — Allows you to configure NACs and Relay functions.

PCCP Configuration Toolbar

The *PCCP Configuration toolbar*, shown below, is comprised of a combination of Window's standard icons (i.e., *File Open*, *File Save*, and *Print*) and application specific icons (i.e., *Compare Data*, *Operation Zone* and *Operation Address*).

Figure 70. Config. Data Edit Toolbar



NOTE: Point to an icon to display a brief description.

Config. Data Edit Options

The table below contains a synopsis of the *Config. Data Edit options* each represented on separate "**TABS**" or windows. Click on the applicable "**TAB**" to navigate through the Config. Data Edit windows.

Table 19: Config. Data Edit Options	
Tab Option	Description
File	Allows you to create a new configuration file.
System	Allows you to configure overall settings for the System, SLC and FACP.
Blank	Allows you to create up to eight (8) classifications -- add more description
CrossZone	Provides option to configure cross zones.
CountingZone	Provides option to configure counting zones.
Zone Setting	Allows you to configure zones.
Schedule	Provides options to setup holidays and night schedules.
Unit	Allows you to configure ALE (<i>Addressable Loop Expander</i>) units.
Annunciator	Allows you to configure annunciator units.
Auxiliary Power	Allows you to configure the auxiliary power.
DACT	Allows you to configure the DACT.

Creating and Editing Configuration Files

Before making any configuration changes, you must first create a configuration file by clicking on the **"File" tab** or choosing the **"File - New" menu option**. Once changes are made, click the **"Save" icon** (or the **"File - Save" menu option**). Whenever additional changes are necessary, you may choose either **"File - Open"** or click the **"File - Open" icon**.

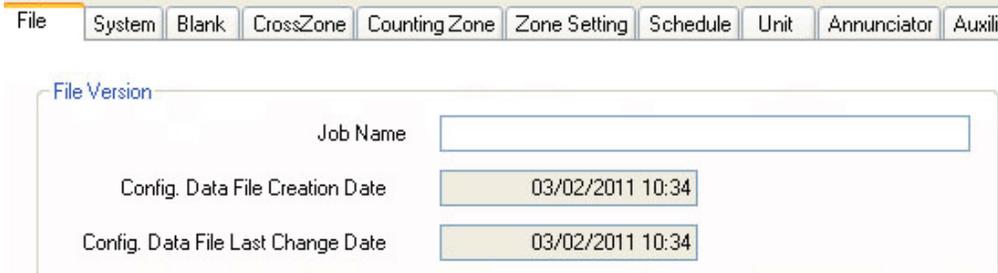
To create a configuration file:

1. From the **PCCP Main Menu**, click on the  **button**.

The **"Config. Data Edit" window** displays.

2. Click on the **"File" tab** to display the **File window**.

Figure 71. Config. Data Edit – File Window



File Version	
Job Name	<input type="text"/>
Config. Data File Creation Date	03/02/2011 10:34
Config. Data File Last Change Date	03/02/2011 10:34

3. In the **"Job Name" field**, enter a descriptive name.

NOTES:

- Job name may up to 20 alphanumeric characters.
- The **"Config. Data File Creation and Last Change Date" fields** are system generated, and cannot be edited.

4. Choose the **"File - Save" menu option** or click the **SAVE icon**.

5. Enter a filename, and click the **SAVE button**.

NOTE: Configuration file extensions are **".cfg"**.

Printing Configuration Data

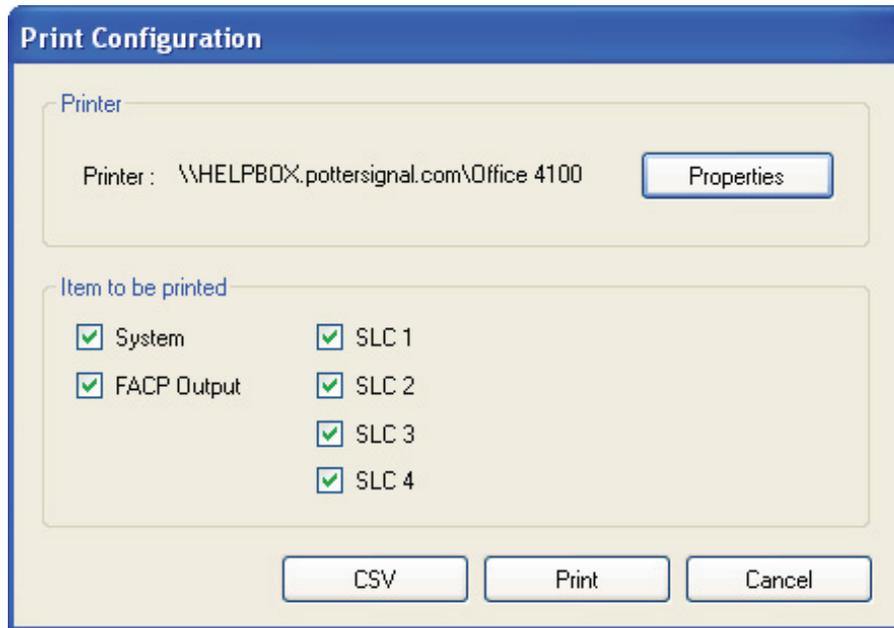
You may print the entire configuration file or selectively choose configuration items (*i.e.*, *System*, *FACP Output* or *SLCs*) you wish to print or output to a *.CSV file. If you choose to output the configuration information to a *.CSV file, you may print it at a later time.

To print configuration data:

1. Click the **printer icon** or choose **File - Print**.

The "**Print Configuration**" dialog box displays.

Figure 72. Example of the Print Configuration Dialog Box



2. De-select the item(s) you do **NOT** wish to print.

NOTE: All items are pre-selected; click to remove check mark.

3. Click **Print** or **CSV**.

OR

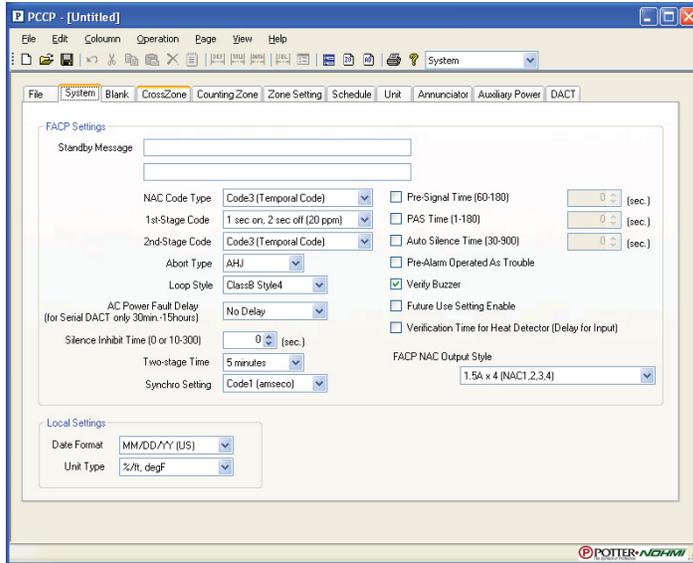
Click **Cancel** to exit without printing.

NOTE: To print the CSV file at a later date, choose **File - Open**, browse to file location and select to open.

Configuring the System

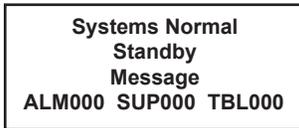
This section addresses how to configure general system settings, such as creating a "Standby Message", enabling the "Pre-Signal" and "Positive Alarm Sequence" options, selecting the NAC's output pattern, and modifying the day / night mode and holiday schedules.

Figure 73. Config. Data Edit – System Window

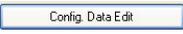


Customizing the Standby Message

Allows you to customize the panel's message that displays when system conditions are "normal". Enter up to two (2) lines of alphanumeric text, 20 characters per line, if desired. An example is shown below:



To customize the standby message:

1. Click the  button from the **PCCP Main Menu**.

The "**System**" window displays.



2. Click in the "**Standby Message**" field, and enter a custom message (*i.e.*, up to 20 alphanumeric characters per line).
3. Click in the second "**Standby Message**" field or press **TAB** to continue entering text, if needed.

FACP STANDBY MESSAGE PROCEDURE

- Enter the **Level 3 Menu password**.
- Press **RIGHT ARROW**, then **[5]** *Config. Data Edit*.
- Press **[2]** *System Data Edit*.
- Press **[1]** *System Setting*, then **[1]** *Standby Message*.
- Enter up to **20 alphanumeric characters** per line.
- Press **ENTER** to save or **ESC** to exit without saving.

FACP Configuration Settings

Please refer to the table shown below for a summarization of the System's configuration setting options.

Table 20: System Configuration Setting Options	
Options	Description
NAC Code Type <i>Default = Code3 (Temporal Code)</i>	<ul style="list-style-type: none"> • Specifies the output pattern for the four (4) on-board NACs programmed as NAC Code. • Click the drop-down menu to display output options as follows: <ul style="list-style-type: none"> Continuous – continuously "ON" (24VDC) March Time – 120 pulses per minute (0.25 sec on, 0.25 sec off) ANSI Temporal 3 (Code 3) – A repetitive sequence of 3 pulses followed by a 1.5 second pause. The interval between the 1st and 2nd, and 2nd and 3rd pulses is 0.5 seconds. California – A repetitive sequence of 10 seconds on and 5 seconds off. 1 sec. on, 2 sec. off – 20 ppm (pulses per minute)
1st Stage Code	<ul style="list-style-type: none"> • Specifies output pattern for NACS 1-4 when 1st stage occurs. • Click the drop-down menu to display options. • Options are same as "<i>NAC Code Type</i>"; please see descriptions above.
2nd Stage Code	<p>This option is available for ULC installations.</p> <ul style="list-style-type: none"> • Specifies output pattern for NACS 1-4 when 2nd stage occurs. The two stage operation is based on an input activating an output and beginning a timer. After the 1st stage timer expires, the system progresses to the 2nd stage which is the evacuation pattern. • Click the drop-down menu to display options. • The two-stage timer for progression from 1st stage to 2nd stage is selectable from 30 seconds or 1 – 5 minutes. • Options are same as <i>NAC Code Type</i>; please see descriptions above. <p style="text-align: center;">NOTE: It is recommended that the ANSI Temporal Code 3 output option is selected for the second stage evacuation pattern.</p>
Abort Type <i>Default = AHJ</i>	<ul style="list-style-type: none"> • Defines the manual input type, typically a switch, which stops or delays the suppression or extinguishing agent from being released. • Click on the drop-down menu to select applicable abort type as follows: <ol style="list-style-type: none"> 1. ULI <ul style="list-style-type: none"> – If abort switch is pressed during the pre-discharge time and the time remaining is greater than (>) 10 seconds, the timer will continue counting down to 10 seconds, and then stops. – As long as the abort switch is active, the timer will not count down. – If the switch is released, the pre-discharge time will resume the countdown. – Supervisory is generated if the abort switch is pressed when there is no pre-discharge occurring. 2. IRI (Industrial Risk Insurers) <ul style="list-style-type: none"> – Operation is basically the same as ULI. – IRI is unique in that the user must press the abort switch prior to the second fire alarm signal is received otherwise delay time cannot be stopped. 3. AHJ (Not UL Listed) <ul style="list-style-type: none"> – If abort switch is pressed during the pre-discharge time, the delay timer will stop. – As long as the abort switch is active, the timer will not count down. – After the delay timer is stopped, and if the abort switch is deactivated, the delay timer will start from the beginning. – Abort sequence can be repeated as many times as desired. – Supervisory is generated if the abort switch is pressed when there is no pre-discharge occurring.

Table 20: System Configuration Setting Options	
Options	Description
Loop Style <i>Default = Class B Style 4</i>	<ul style="list-style-type: none"> This option allows you to configure the system's SLC which determines how the main board (and ALE-127s) are supervised. NOTE: These options meet NFPA 72 specifications. Click the drop-down menu and select the applicable style as follows: Class B Style 4 Class A Style 6 and 7
AC Power Fault Delay <i>Default = "0" or No Delay</i>	<ul style="list-style-type: none"> This option is used to configure the DACT module and to delay reporting AC power failure. Range = "0" or no delay; 30, 60 or 90 minutes; 2, 3, 6, 12 or 15 hours. Click on drop-down menu to modify setting.
Silence Inhibit Time <i>Default = 0 seconds</i>	<ul style="list-style-type: none"> Controls the interval time during which the SILENCE and SYSTEM RESET functions cannot be operated. Range = "0" or 10 – 300 seconds. Click scroll arrows to modify setting.
Two-Stage Time <i>Default = 5 minutes</i>	For ULC installations. <ul style="list-style-type: none"> Range = 30 seconds, 1 - 5 minutes. Click drop-down menu to select time.
Syncho Setting <i>Default = Code 1 (Potter/AMSECO)</i>	<ul style="list-style-type: none"> This setting corresponds to the on-board NACs output. Click on drop-down menu to select the applicable synchronization option: Code 1 = Potter/AMSECO Code 2 = Wheelock Code 3 = Gentex
Pre-Signal Time <i>Default = Not Enabled</i>	<ul style="list-style-type: none"> When an Alarm signal is received, this option delays activation of the smoke detectors; this option cannot be used in conjunction with the PAS option. Range = "0" or 60 – 180 seconds. Enter a check mark in selection box to enable.
PAS Time <i>Default = Not Enabled</i>	<ul style="list-style-type: none"> When an Alarm occurs, this option immediately activates the NAC if ACK is not pressed within 15 seconds. This option cannot be used in conjunction with the Pre-Signal Time function. Range = 0 – 180 seconds. Enter a check mark to enable.
Auto Silence Time <i>Default = Not Enabled</i>	<ul style="list-style-type: none"> This setting deactivates the NACs after an Alarm signal is received. Range = 30 – 900 seconds. Enter a check mark in selection box to enable.
Pre-Alarm Operated As Trouble <i>Default = Not Enabled</i>	<ul style="list-style-type: none"> This function activates the system trouble relay when Pre-Alarm conditions occur. Enter a check mark in selection box to enable.
Verify Buzzer <i>Default = Enabled</i>	<ul style="list-style-type: none"> Enables the verification buzzer (sound). Enter a check mark in selection box to enable.
Optional Function	Allows you to enable <i>Analog Beam Smoke Detectors</i> and the <i>Nitrogen Gas Suppression System Model NN100's</i> classification as either <i>Auto Mode</i> or <i>Manual Mode</i> .
Verification Time for Heat Detector <i>Default = Not Enabled</i>	NOT UL Listed. Enables the verification time for heat detector's delay of input.
FACP NAC Output Style <i>(PFC-8500 only)</i>	<ul style="list-style-type: none"> This option allows you to configure the NAC's output setting. Click on the drop-down menu to select a style option as follows: 1.5A x 4 NACs 3.0A x 2 NACs 3.0A x 1 and 1.5A x 2 NACs

To configure system settings:

1. From **System window**, click in each of the following field's drop-down lists and make a selection, if applicable to your system.

A screenshot of a configuration window with the following settings:

- NAC Code Type: Code3 (Temporal Code)
- 1st-Stage Code: 1 sec on, 2 sec off (20 ppm)
- 2nd-Stage Code: Code3 (Temporal Code)
- Abort Type: AHJ
- Loop Style: ClassB Style4
- AC Power Fault Delay (for Serial DACT only 30min.-15hours): No Delay
- Silence Inhibit Time (0 or 10-300): 0 (sec.)
- Two-stage Time: 5 minutes
- Synchro Setting: Code1 (amseco)

2. Click all applicable options based on your System's configuration.

A screenshot of a configuration window with the following settings:

- Pre-Signal Time (60-180) 0 (sec.)
- PAS Time (1-180) 0 (sec.)
- Auto Silence Time (30-900) 0 (sec.)
- Pre-Alarm Operated As Trouble
- Verify Buzzer
- Future Use Setting Enable
- Verification Time for Heat Detector (Delay for Input)
- FACP NAC Output Style: 1.5A x 4 (NAC1,2,3,4)

3. For PFC-8500 systems only, choose an applicable "**NAC Output Style**".

A close-up screenshot of the "FACP NAC Output Style" dropdown menu, showing the selected option "1.5A x 4 (NAC1,2,3,4)".

FACP SYSTEM CONFIGURATION PROCEDURE

- Enter the **Level 3 Menu password**, **RIGHT ARROW**, and press **[5] Config. Data Edit.**
- Press **[2] System Data Edit**, and **[1] System Setting.**
- Press **RIGHT ARROW** as needed to select the applicable menu option numbers (2-13).

<p>System Setting</p> <p>1. Standby Message</p> <p>2. Unit Type</p> <p>3. Two-Stage Time [< >]</p>
--

<p>4. NAC Code Type</p> <p>5. Syncho Pattern</p> <p>6. Abort Type</p> <p>7. Loop Style [< >]</p>

<p>8. AC PW Fault DLY</p> <p>9. Silence Inhibit</p> <p>10. Pre-Signal / PAS</p> <p>11. Auto Silence Time [< >]</p>
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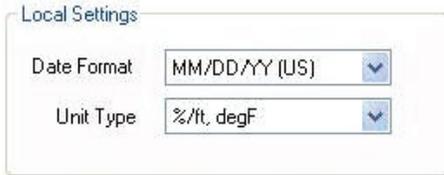
<p>12. Pre-Alarm as TBL</p> <p>13. Verify Buzzer</p> <p>14. AUX</p> <p>15. DACT [< >]</p>
--

Setting Date Format and Unit Defaults

Date format and unit defaults used by the System may be changed through the "Local Setting" fields on the *Config. Data Edit - System window*. By default, the date format is *MM/DD/YY (US)*, and the unit type is *%/ft and degF°*.

To modify date and unit settings:

1. From the "System" window, click on the "Date Format" drop-down arrow, if necessary.



2. Click a *date format option*.
3. Click the "Unit Type" drop-down arrow, and choose an option, if necessary.

FACP SET DATE FORMAT PROCEDURE

To modify date format:

- Enter the *Level 2 Menu password*, and press [1] *Date/Time Change*.
- Enter date and time in *MM/DD/YY:HH:MM* format.
- Press **ENTER** to save or **ESC** to exit without saving.

The Schedule Screen

The **"Schedule" screen** allows you to change the smoke sensitivity for days, evenings and holidays. This is done by setting up the day schedule, entering holidays, and selecting the days of the week for night mode. You may also enable and adjust the **"Daylight Savings Time"** dates on this screen.

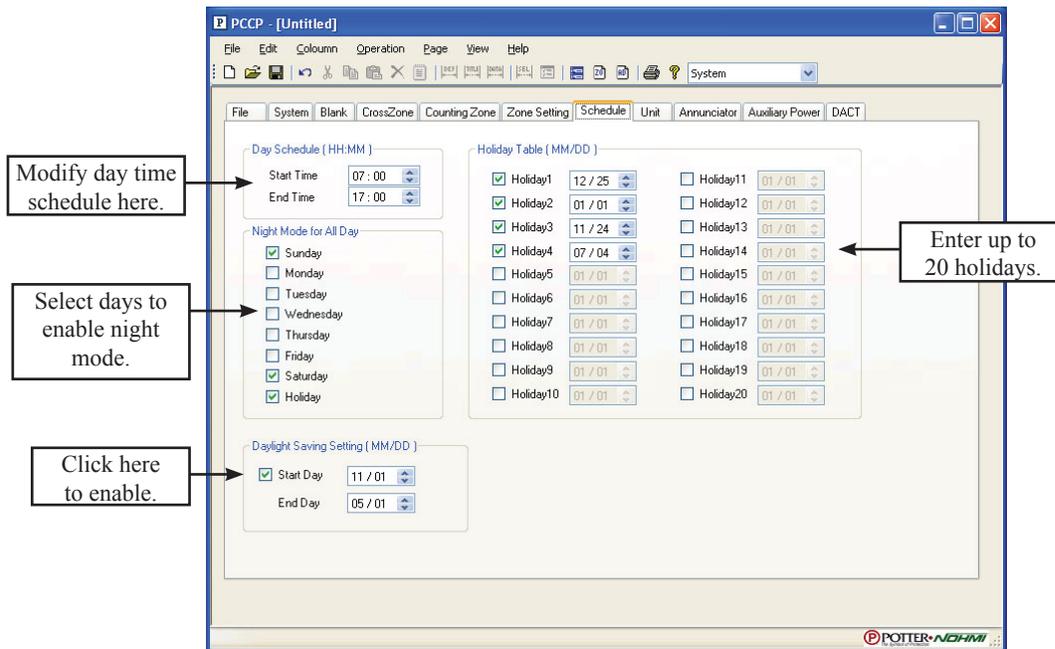
NOTES:

- The **"Daylight Savings Time" option** is not selected or enabled by default.
- Thresholds for the Day/Night modes may be adjusted, if needed. Refer to the **"SLC Device Configuration"** procedure discussed later in this section for details on setting alarm thresholds.

To modify date and unit settings:

1. Click the **"Schedule" tab** to display the **"Schedule" window**.

Figure 74. Example of the Schedule Window



2. Click in **"Start and End Time" fields** to adjust times, if necessary.

NOTES:

- The **"Start and End" times** default to 7:00 a.m. and 17:00 p.m., respectively.
- The system clock displays in military time.

3. Click in each applicable day of the week (*i.e., Sunday, Saturday, and/or Holiday*) to enable the night mode.

NOTE: Select days that site is typically unoccupied.

4. Click in the **"Holiday1...Holiday20" fields**, to enter holiday dates.

- Click in the **MM/DD fields**.
- OR
- Click on (**up/down arrows**) to adjust dates.

5. Click to enable the **"Daylight Savings" option**.

- Click in **"Start Day" and "End Day" MM/DD fields** to enter dates.
- OR
- Click on to make changes.

System Programming

System programming involves defining the function of devices and their relationships to each other, referred to as "*mapping*". You can define behavior characteristics of individual or groups of devices, map devices into multiple zones, and further customize your system using the PCCP software from a remote computer. Devices may be mapped to a single zone or multiple zones, if needed.

Mapping Zones Overview

Mapping is simply creating relationships between zones and their respective inputs and outputs. When an input activates, all outputs within the same zone are activated. Inputs and outputs may be mapped to one or more zones (*i.e.*, *cross zones*, *counting zones*). Mapping terms and other related mapping concepts are provided in this section.

The PFC-8000 series has three (3) types of zones: **Conventional**, **Status** and **Z000**. You may configure or define the device characteristics within *Conventional zones*; however, the system reserves the **Status** and **Z000 zones** for system functions.

All zones are automatically mapped to **Z000**. This "*system dedicated*" zone has a special mapping relationship whereby all output devices are linked to it. When outputs in a zone are activated, Z000 activates; conversely, when Z000's output devices are activated, output devices in zones Z001 to Z999 also activate.

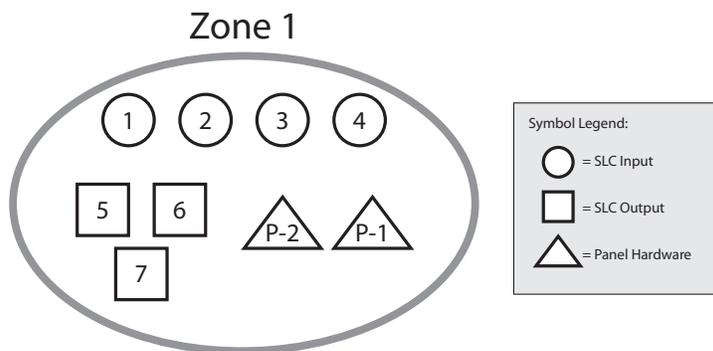
Please refer to the table below for a summary of zone types:

Table 21: Zone Types Summary	
ZONE NAME	DESCRIPTION
Conventional Zones	Z001 to Z999; Z000 automatically defaults to a NAC Code Type configuration where all NAC's behavior are determined by the NAC's code type. (Refer to " <i>NAC Configuration Options</i> " located in this section for more information.)
Z000	This system-dedicated zone may not be configured or deleted because of its special relationship to all other zones and devices. All output devices are "interlocked" or linked to Z000 which causes one of the following to occur: <ul style="list-style-type: none"> • If all inputs in a zone are activated, Z000's output devices activate. • If all inputs devices in Z000 are activated, all other conventional zones' output devices activate.
Status Zones	SZ01 to SZ09; these are reserved for system level status signal transmission (<i>i.e.</i> , <i>ALARM status</i>) and may NOT be configured.

Single vs. Multiple Zones

When the *Auto Programming function* is used, it creates or maps a basic, one-to-one relationship where all connected devices are automatically grouped into one zone, "Z000". When all devices are in the same zone, and an input device is activated, all output devices will activate. Please refer to the figure below for an example of this type of relationship:

Figure 75. Example of a Single Zone



The PCCP software allows you to customize the operational mode behavior of all devices within a conventional zone (Z001-Z999). All SLC devices, including the four (4) on-board circuits (NAC 1 – NAC 4) and three (3) contact outputs may be configured (*the PFC-8060 has two NACs*). This flexibility enables you to configure the system to maximize protection throughout your site.

By organizing devices into different zones enables you to create unique relationships between devices for specific outputs or events. This section addresses how to accomplish these tasks.

Mapping Terminology

The table below provides mapping terms that may be helpful to you in understanding the mapping concept:

Table 22: Mapping Terminology	
Term	Definition
Mapping	Creating relationships between devices, modules and sensor and defining their behavior.
Zone	<p>A group of devices:</p> <ul style="list-style-type: none"> Zones may represent a group of devices located in a specific <i>physical</i> area at the site. <i>Example:</i> Zone 001 is comprised of all devices located in the main lobby of a hotel, [i.e., pull station #1, one (1) sounder base, and one (1) strobe]. Zones may represent a set of devices configured for a specific function; their location may be scattered throughout the site. This group is a “<i>logical</i>” grouping or zone. <i>Example:</i> Zone 002 comprised devices in Zone 001 as described above, plus a 2nd pull station located at end of a hallway and two (2) additional Sounder bases. <p>NOTES:</p> <ol style="list-style-type: none"> If all input / output devices are grouped into one (1) zone, when any input is activated, all outputs activate; Z000 also activates. A device or point may be mapped into more than one (1) zone.
Latching	Device will not automatically reset; device must be RESET at the keypad to remove condition.
Non-Latching	Device will automatically restore when condition is no longer present, <i>i.e., tamper switch restores once condition clears.</i>
Cross / Counting Zones	<p>The purpose of creating cross zones is to ensure that two (2) or more separate zones are activated before an output zone is triggered.</p> <p><i>Example:</i> Smoke detector in Zone 001 (R&D Lab), and a heat detector in Zone 002 (main entrance) are activated, triggering an air handler circuit.</p> <ul style="list-style-type: none"> The redundancy in this example provides verification of an alarm condition by requiring that both sensors in two (2) different zones are activated before an output occurs. An output may be mapped to unlimited cross zones; as soon as a pair of input devices detects an “<i>alarm</i>” condition, the output will be activated.
Alarm Active Zone	<ul style="list-style-type: none"> Up to fourteen (14) Alarm Active zones may be configured. All devices mapped to these zones are output devices, <i>i.e., horns, strobes, etc.</i>

Zone Configuration Options

There are nine (9) different zone configuration options available for *Conventional Zones (Z001-Z999)*. The zone configuration type controls the behavior of the *on-board NACs* mapped within the zone. Refer to the table below for a description of these options.

Each Conventional Zone (*Z001-Z999*) can be assigned a zone setting for NAC or System activation. Zone settings can be applied to NACs and outputs listed as "*NAC Type*" in the *Blank Classification screen*.

NOTES:

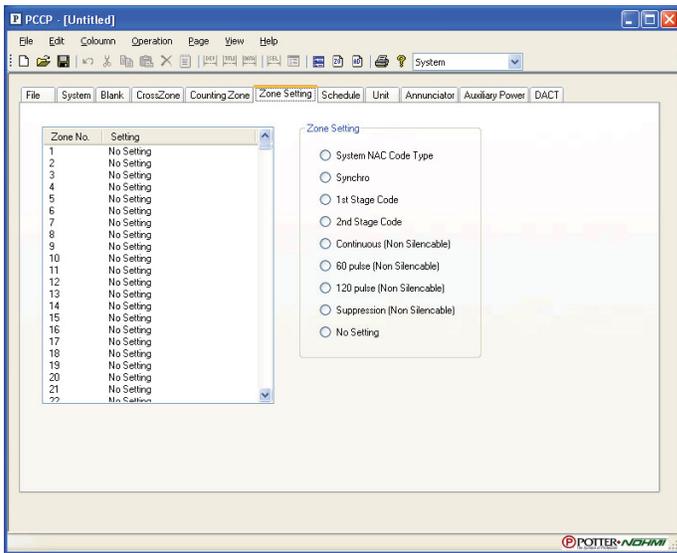
- The System's "*Z000*" configuration is fixed as "*System NAC Code Type*" and may not be modified.
- All addressable module outputs are automatically set as "*Continuously On*".

Table 23: Zone Configuration Options	
Option	Description
System NAC Code Type	<ul style="list-style-type: none"> • Activated according to NAC code type programmed in "System". • Press SIGNAL SILENCE to silence.
Synchro	<ul style="list-style-type: none"> • Available for on-board NACs only. • NACs activate according to the Synchronization protocol setting in "System". • Press SIGNAL SILENCE to silence.
1st Stage	<ul style="list-style-type: none"> • Available for on-board NACs only. • NACs activate according to the 1st stage code programmed in "System". • Press SIGNAL SILENCE to silence.
2nd Stage	<ul style="list-style-type: none"> • For ULC installations only. • Available for on-board NACs only. • NACs activate according to the 2nd stage as programmed in "System". • Press SIGNAL SILENCE to silence.
Continuous	NACs activate continuously, and cannot be silenced.
60 ppm	NACs activate intermittently at 60 ppm, and cannot be silenced.
120 ppm	NACs activate intermittently at 120 ppm, and cannot be silenced.
Suppression	<ul style="list-style-type: none"> • Up to ten (10) zones may be configured as Suppression. • Bells are deactivated; horns and strobes are activated when the suppression system in the same zone is activated; cannot be silenced.
No Setting	<ul style="list-style-type: none"> • NACs sound continuously. • Press SIGNAL SILENCE to silence.

To configure a zone:

1. From the **PCCP Main Menu**, click the Config. Data Edit button.
2. Click the **"Zone Setting" tab** to display the **"Zone"** window as shown here.

Figure 76. SLC Zone Setting Window



3. Click on the **Zone #**, then click on the applicable zone option.
4. Repeat steps until completed.

FACP ZONE CONFIGURATION PROCEDURE

- Enter the **Level 3 Menu password**, **RIGHT ARROW**, then select **[5] Config Data Edit**.
- Press **[2] System Data Edit**, **RIGHT ARROW** to display **[7] Zone Setting**.
- Press **[7] Zone Setting**.

Programming NACs, Contacts and SLCs

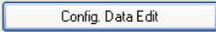
This section provides procedures on programming the on-board NACs, contact outputs, and SLCs output options. Each device may have a unique function in relation to the zone as well as to the entire system. You determine the specific output behavior and if a customized message or description displays when an event occurs for that device.

NAC and Contact Functions

The four (4) on-board NACs (*the PFC-8060 has 2 NACs*) and three (3) contact outputs may be configured according to their output function, *i.e., bell, horn, strobe, HVAC shutdown or Fire Alarm Status*. They are fully programmable in the PCCP software and may be configured as inputs. Refer to the table below for descriptions of the available programming functions.

Function	Description
Control Output	Activates connected circuit when interlocked input activates zone.
Bell, Horn, Strobe, Speaker Circuits	Activates when interlocked input activates zone.
Release Bell	Activates when releasing suppression system ends.
Release Circuit A	Activates connected aerosol or chemical release agent when interlocked input activates zone.
Release Circuit W	Activates connected water-based system release agent when interlocked input activates.
Discharge Confirm	Activates when suppression (release) zone initiates.
Relay	Activates when interlocked input activates zone.
Power Shutdown	Activates power shutdown when interlocked input activates zone.
HVAC Shutdown	Activates HVAC shutdown when interlocked input activates zone.
FAN Shutdown	Activates fan shutdown when interlocked input activates zone.
Fire Alm Status	Activates alarm when interlocked input activates zone.
Trouble Status	Activates trouble when any fault or " <i>off normal</i> " that would impair the system is annunciated as a trouble condition.
Supervisory (Supv) Status	Activates when supervisory device initiates.
Silence Status	Activates when silence device initiates.
Drill Status	Activates when fire drill occurs.
AC Fault Status	Activates when panel loses power.
Battery Fault Status (Batt Flt)	Activates when any battery fault occurs.
P-Dis (Discharge) Status	Activates when pre-discharge occurs.
Water Flow Status	Activates water flow device.

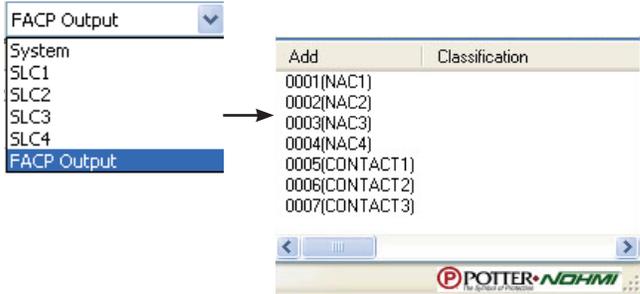
To configure NACs and Contacts:

1. From the **PCCP Main Menu**, click the  button.
2. Click the **"Navigation" drop-down button** (located at the end of the tool bar), and select **FACP Output**.

NOTE: The PFC-8060 displays two (2) active and two (2) inactive NACs.

The **"FACP Output" window** displays.

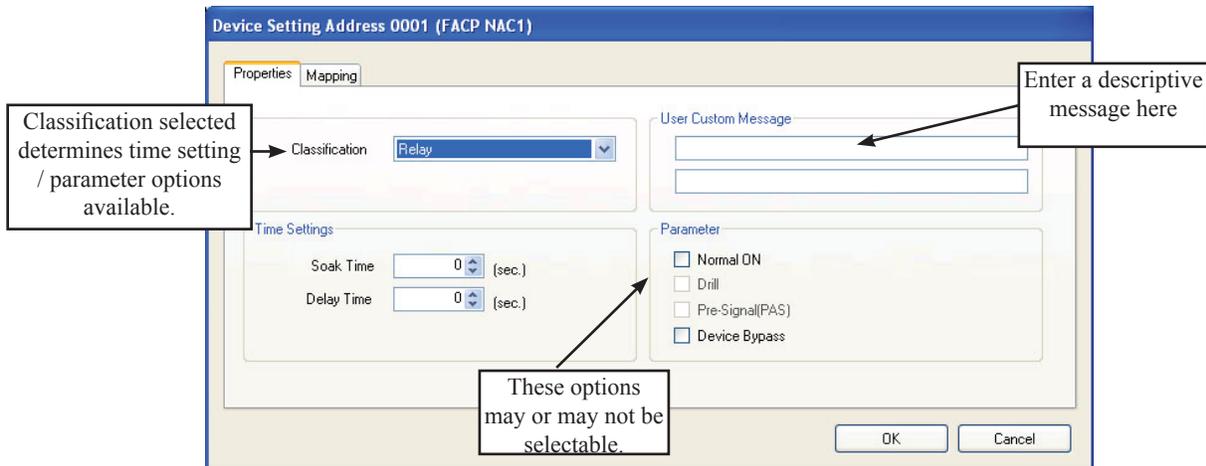
Figure 77. Example of the FACP Output Window



3. Double-click on the applicable output (NAC or contact).

The **" Properties – Device Setting Address 0000x" window** displays (where "x" represents the associated relay number selected).

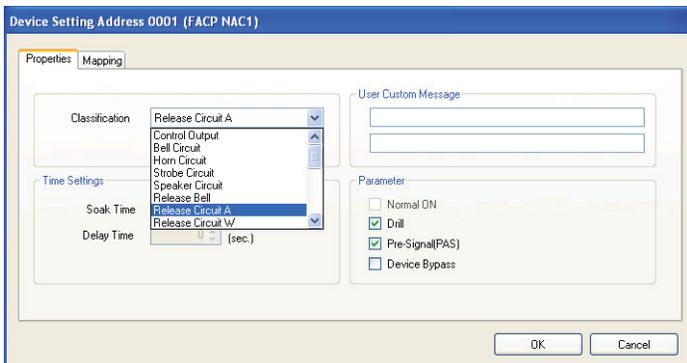
Figure 78. Example of the Device Address Window



NOTE: The available or "selectable" parameter and time setting options are based on the **"Classification"** type selected.

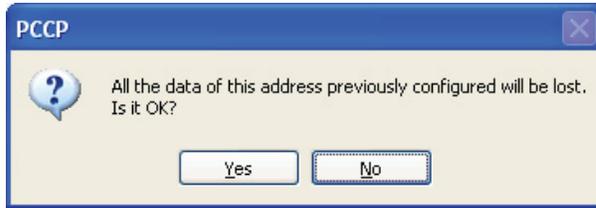
4. Click on the **"Classification" drop-down arrow** to select an output option.

Figure 79. Example of the Classification Pull-down Menu



5. Once you select a different output, the following prompt displays:

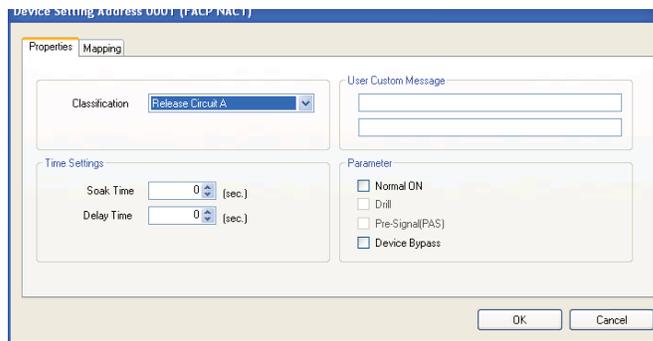
Figure 80. Example of Changing a Device's Configuration Message



6. Click on the **"Classification"** drop-down arrow to select an output option.
7. Click **YES** to continue or **NO** to discontinue changes.
8. If **YES** is selected, the **"Properties"** options are activated or selectable.

The **"Device Setting Address"** window re-displays.

Figure 81. Example of Device Setting Address Window



NOTE: The available or "selectable" time setting and parameter options are based on the **"Classification"** type selected.

9. Continue making changes as follows:
- Enter a **"User Custom Message"**, if desired (*i.e.*, up to 20 characters per line).
 - Enter **"Soak"** and **"Delay" times**, if applicable.
10. Select applicable parameters (*i.e.*, *Normal ON*, *Drill*, *PAS*, *Device Bypass*).
11. Press **OK** to save changes.
OR
Press **Cancel** to exit without saving.

FACP NAC CONFIGURATION PROCEDURE

- Enter the *Level 3 Menu password*, **RIGHT ARROW**, then press **[5] Config Data Edit**.
- Select **[1] Device Data Edit**.
- Press **RIGHT ARROW** to applicable *"Device Data" screen*, as shown below:

Device Message <>	Time Setting <> Verification = Soak Time = Delay Time =	Parameter 1=On 2=Off <> Pre-Alarm = LED Blinking = Day/Night =
Drill = 1=On 2=Off <> Pre-Signal/PAS = Input Mode = <> Output = <>	Threshold (%/ft) <> Day / Night Pre = _ / = _ ALM = _ / = _	Mapping 001/ 012/ 013/ 014 / / / / / / / /

- Press **ENTER** to save or **ESC** to exit without saving.

SLC Functions

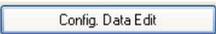
The SLCs may be configured to a specific device type or module (*i.e.*, *FHA*, *DSA*, *MCM/SCM-4/DCM-4*), and based on that selection, a specific device classification. You may also modify their output settings, such as soak and delay times or Pre-Alarm and Alarm thresholds. However, the "*selectable*" output options or properties vary according to the classification you choose.

NOTE: You may create customized classifications, if needed, to define a specific function for a module. Refer to "*Creating Customized (Blank) Classifications*" located later in this section for details on this procedure.

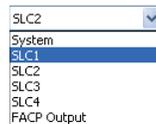
Table 25: SLC Functions		
Module/Device	Classification	Description
PSA	Analog Smk Det Analog or Supervisory	A=Alarm or S=Supervisory Analog Smoke Detector
FHA	Fixed Heat Det	<p>Fixed Heat Detector</p> <p>Pre-Alarm Sensitivity Thresholds (degrees Fahrenheit) <i>Range = 104.0° – 183.2°</i> <i>Day Default = 104.0°</i> <i>Night Default = 104.0°</i></p> <p>Alarm Sensitivity Thresholds (degrees Fahrenheit) <i>Range = 134.6° – 185.0°</i> <i>Day Default = 149.0°</i> <i>Night Default = 140.0°</i></p> <p>NOTES:</p> <ol style="list-style-type: none"> 1. The "<i>Day</i>" and "<i>Night</i>" defaults are based on the obscuration or amount of reduction in air transparency caused by smoke per foot. 2. The "<i>Day</i>" sensitivity threshold settings are functional during the time a building is normally occupied. 3. When programming thresholds, you may press the "Default" button (located on the "<i>Device Setting Address</i>" window) to reset the settings to the original defaults.
RHA	Comb Heat Det	<p>Combination Heat Detector</p> <p>NOTE: Refer to day/night sensitivity threshold range, defaults and notes shown above (<i>i.e.</i>, FHA description).</p>
PSHA	Smk/Fixed Det	<p>Photoelectric Smoke Heat Detector</p> <p>NOTE: Refer to day/night sensitivity threshold range, defaults and notes shown above (<i>i.e.</i>, FHA description).</p>
DSA	DUCT Det Analog or Supervisory	A=Alarm or S=Supervisory DUCT Detector
CIZM-4	Alarm Zone or SupervisoryL	Alarm or Latched Supervisory
MCM/SCM-4/ DCM-4	Trouble Input	Activates when a Trouble condition occurs.
	Waterflow	Activates when an Alarm condition connected to a Water flow detector occurs.
	Supervisory L	Activates when a <i>latched</i> Supervisory condition occurs.
	Supervisory NL	Activates when a <i>non-latched</i> Supervisory condition occurs.
	Abort Switch	Activates when Abort device condition occurs.
	Manual Release	Activates the suppression systems in the same zone.
	Sup Fire Pmp Run	Activates a Supervisory fire pump device.
Sup Fire Pmp Flt	Activates a Supervisory fire pump fault occurs.	

Table 25: SLC Functions		
Module/Device	Classification	Description
MCM/SCM-4/ DCM-4	Leak Detector	Activates a leak detector device.
	Signal Silence	Activates a Silence device.
	Fire Drill	Activates Drill device.
	System Reset	Activates Reset device.
	General Alarm	Manually activates a general alarm status when used with 2nd Stage operation.
	PAS Inhibit	Deactivates Pre-Signal functionality.
	Hazard Alert	Activates connected equipment.
	Second Shot	Reactivates suppression output in the same interlock zone.
	Monitor Point	Activates interlocked outputs.
	Alarm Input	Activates connected alarm contacts.
	Pre-Alarm Input	Activates connected alarm contacts.
Pull Station	Activates manual Alarm.	
MOM-4	Same as NAC / Contact functions; please see "NAC / Contact Functions" table located earlier in this section.	
TRM-4		
ASB	Analog Sounder Base	Activates connected equipment.
ARB	Analog Relay Base	Activates connected equipment.

To configure SLCs:

1. From the **PCCP Main Menu**, click the  button.
2. Click the **"Navigation" drop-down button** (located at the end of the toolbar), and select SLCx (where "x" represents the SLC number you wish to configure).

NOTE: The PFC-8060 displays SLC1 only.



The **"SLCx" window** displays.

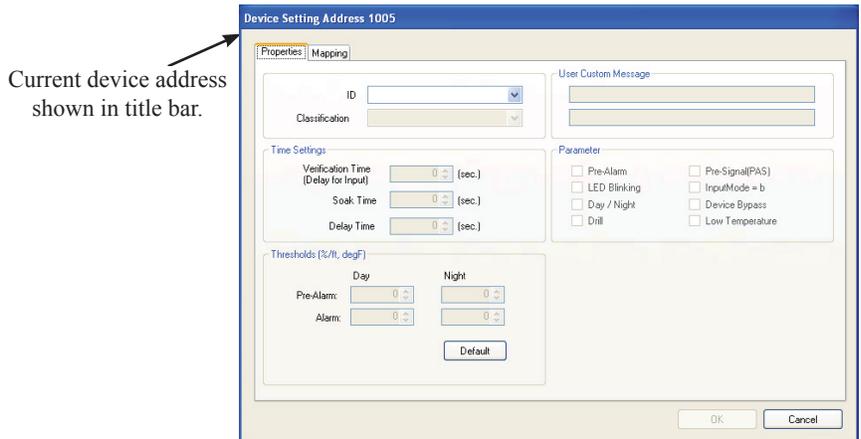
Figure 82. Example of a SLC Address Window

Add	ID	Classification	User Custom Messa
1001			
1002			
1003			
1004			
1005			
1006			
1007			
1008			
1009			
1010			
1011			
1012			
1013			
1014			

3. Double-click the device's address to select.

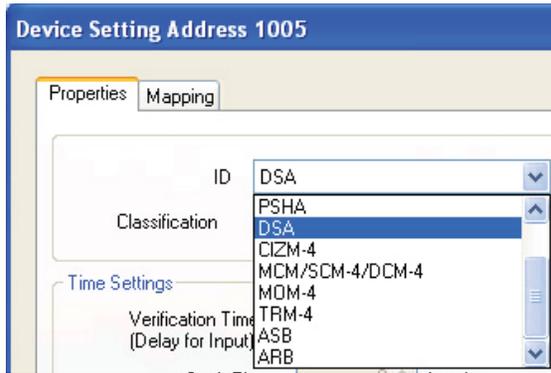
The " **Properties – Device Setting Address 0000x**" window displays (where "x" represents the associated relay number selected).

Figure 83. Example of a SLC Address Configuration Window



4. Select the SLC type from the "ID" field's drop-down menu.

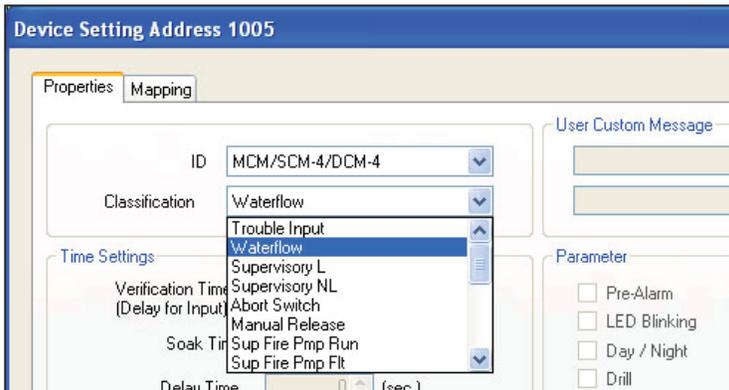
Figure 84. Example of a SLC ID Configuration Options



5. Select the *SLC classification* from drop-down menu.

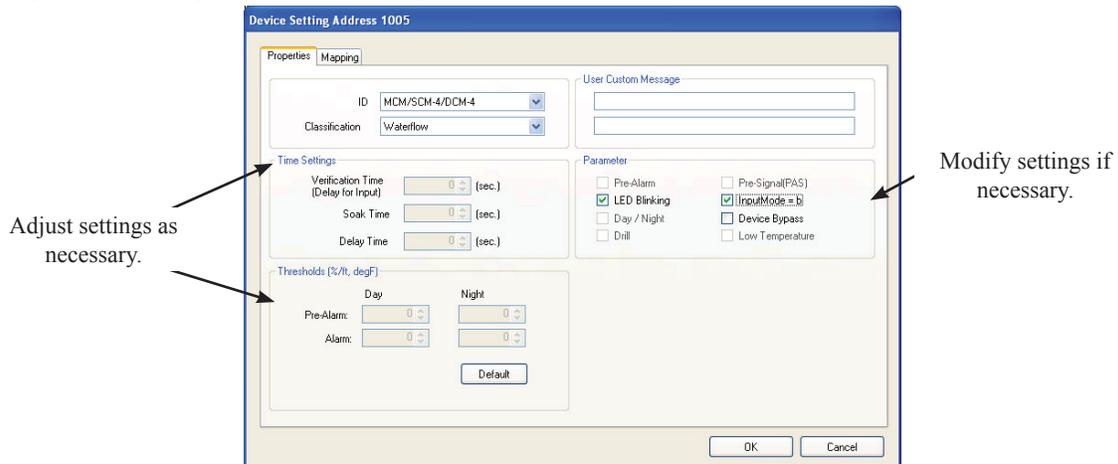
NOTE: The list of options are contingent upon the ID type selected.

Figure 85. Example of a SLC Classification Options



6. Make the necessary "*Time Settings*", "*Parameter*" and "*Thresholds*" changes.

Figure 86. Example of an SLC's Configuration Window



NOTES:

- The selectable options are contingent upon the "*Classification*" selected.
- When configuring analog smoke detector's thresholds, the software requires that the *pre-alarm threshold sensitivity setting* is lower than the *alarm threshold*. If the programmer attempts to set the alarm threshold lower than the pre-alarm threshold, the system will ignore the change and the value will not be saved. The alarm threshold may only be programmed for the listed range for the detector.
- Press the **button** to return threshold settings to default settings.

7. Click **OK** to save changes.
OR
Click **CANCEL** to exit without saving.

Mapping Devices

Once you've programmed the NACs, contacts, and SLCs, you may further customize the system by mapping devices into one or more zones to create unique relationships between those devices. The procedure to map NACs and SLCs are similar; however, any SLC detector device (*i.e.*, *PSA*, *FHA*, *PSHA*) may be assigned to one "Pre-Alarm" and up to fourteen (14) "Active" zones. NACs may not be assigned to "Pre-Alarm" zones.

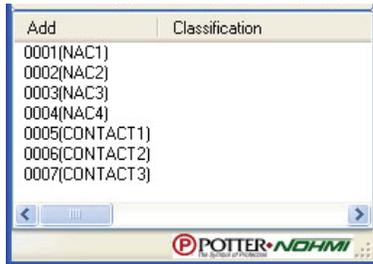
To map a NAC / Contact:

From the **PCCP Main Menu**, click the  button.

1. Click either **FACP Output** or **SLCx** from the *Navigation* button.

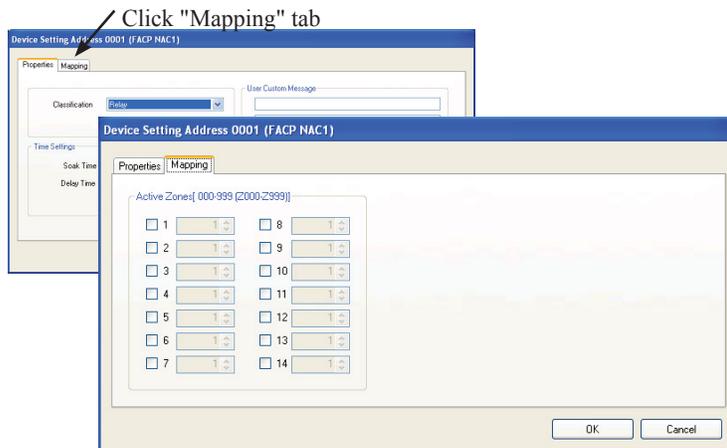
The "FACP Output" window displays.

Figure 87. The FACP Output Window



2. Double click the device you wish to map to display the "Device Setting Address" window; click the "Mapping" tab to display the "Zone Setting" window.

Figure 88. Device Setting Mapping Window



3. In the "Active Zones" section, select up to 14 zones (*i.e.*, any zone between Z000 - Z999).
 - Click in the first selection box, and then click the  up/down scroll button to select the applicable software zone.
 - Continue selecting up to 14 different zones, if needed.
4. Click **OK** to save changes or **Cancel** to exit without saving.

FACP MAPPING PROCEDURE

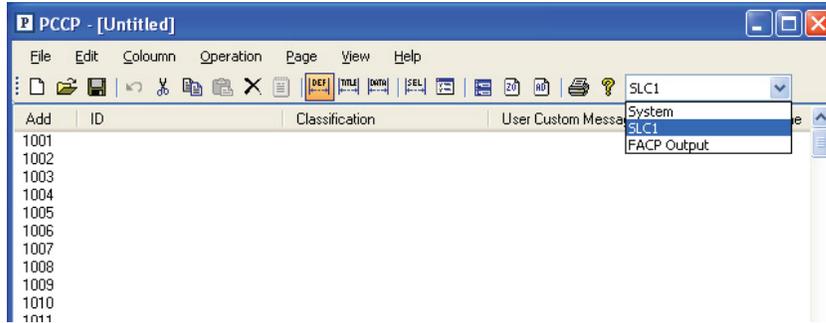
- Enter the **Level 3 Menu password**.
- Press **RIGHT ARROW**, then select **[5] Config Data Edit**.
- Select **[1] Device Data Edit**, press **RIGHT ARROW** several times to display the "Mapping" window.

To map a SLC device:

From the **PCCP Main Menu**, click the  button.

1. Click **SLCx** (where "x" represents the SLC # selected) from the **Navigation" button.**

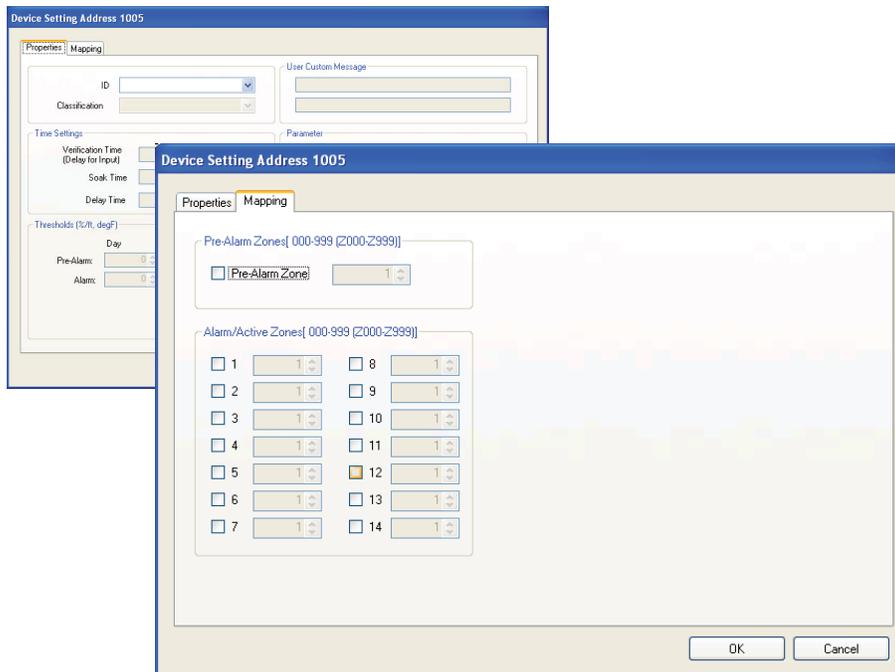
Figure 89. SLC Window



2. Double-click the device address you wish to map, and click the **"Mapping" tab.**

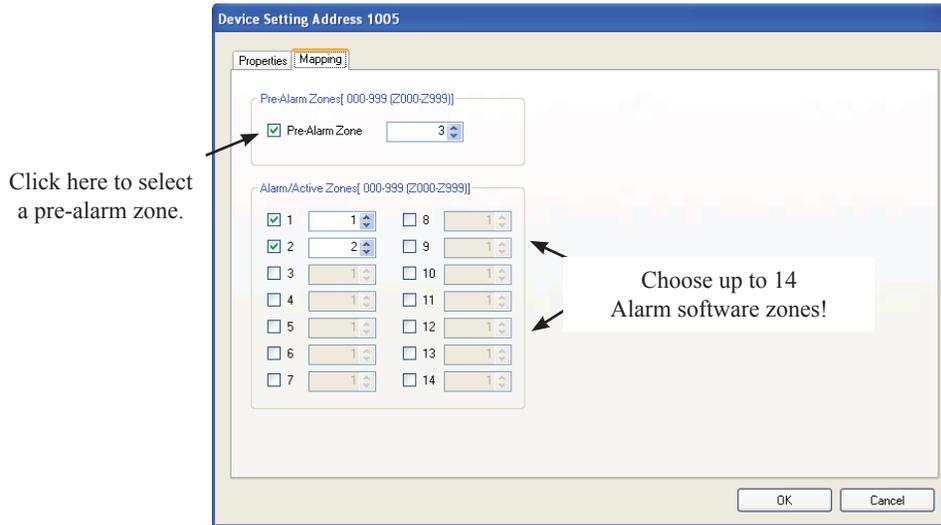
The **"SLC - Mapping" window** displays.

Figure 90. SLC Properties and Mapping Windows



- In the **"Pre-Alarm Zone"** section, click the **selection box** if you wish to choose a zone which will activate prior to any "Alarm/Active Zones".

Figure 91. SLC Mapping Window



- Click the  up/down scroll button to select the zone number.
NOTE: You may select any zone between Z000 and Z999.
- In the **"Alarm/Active Zones"** section, select up to 14 zones (i.e., any zone between Z000 - Z999).
 - Click in the first selection box, and then click the  up/down scroll button to select the applicable software zone.
 - Continue selecting up to 14 different zones, if needed.
- Click **OK** to save changes, or click **Cancel** to exit without saving.

FACP MAPPING PROCEDURE

- Enter the **Level 3 Menu password**.
- Press **RIGHT ARROW**, then select **[5] Config Data Edit**.
- Select **[1] Device Data Edit**, press **RIGHT ARROW** several times to display the **"Mapping"** screen.

Device Message <>	Time Setting Verification <> Soak Time Delay Time	Parameter 1=On 2=Off <> Pre-Alarm = 1 LED Blinking = 1 Day/Night = 1	Mapping Pre = 001 ALM = 002/ 003/
-------------------	---	---	---

- Press **ENTER** to save or **ESC** to exit without saving.

Cross Zones / Counting Zone Configurations

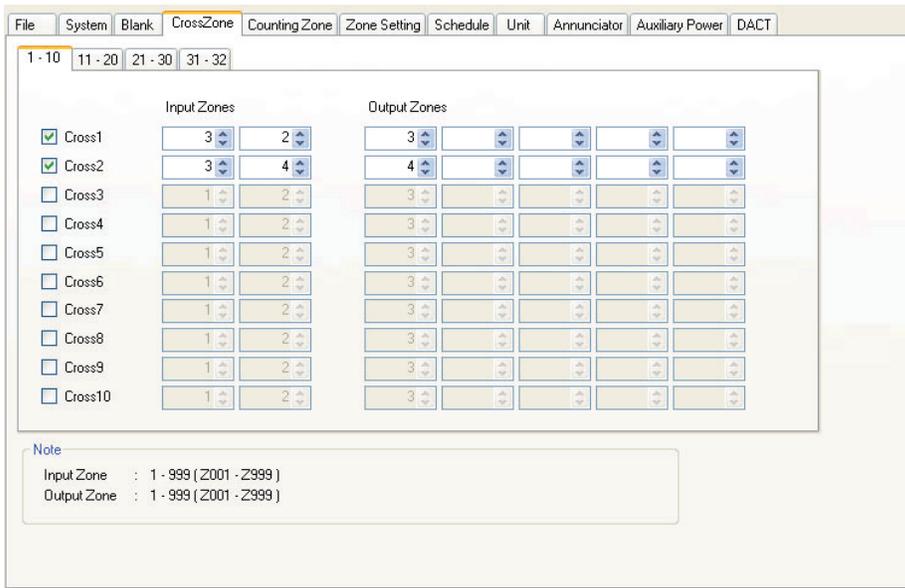
The purpose of creating Cross and/or Counting zones is to ensure that two (2) or more separate zones are activated before an output zone is triggered. Although Crossing two (2) zones is the most common configuration, up to **32 zones** may be combined. In this case, when all the zones that have been crossed are active, the specified outputs will be activated.

Several examples of releasing cross zones are provided in the next topic, *“Suppression (Releasing) Zone Configurations”*.

To configure a cross zone:

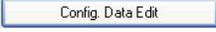
1. From the *PCCP Main Menu*, click the  button.
2. Click the **"Cross Zone" tab** to display the applicable window.

Figure 92. Example of the Cross Zone Window



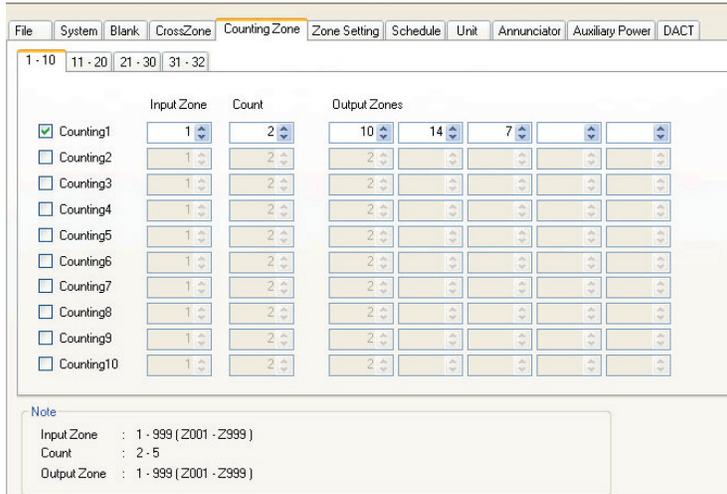
3. In the **"Input Zone" field**, designate the input zones (*i.e.*, Zone numbers 1-999).
4. In the **"Output Zones" fields**, designate up to 5 output zones.
5. Repeat steps above for creating additional Cross zones, as needed.

To configure a counting zone:

1. From the *PCCP Main Menu*, click the  button.
2. Click the *"Counting Zone" tab*.
3. Click in the *"CountingX"* selection box (where "x" represents the next sequential zone number).

NOTE: The *"CountingX"* fields are grouped into four separate tabs, i.e., "1-10", "11-20", "21-30", and "31-32".

Figure 93. Example of the Counting Zone Window



4. In the *"Input Zone"* field, designate the input zones (i.e., Zone numbers 1-999).
5. In the *"Count"* field, enter the number of initiating devices.
NOTE: Enter between 2 - 5 devices.
6. In the *"Output Zones"* fields, designate up to 5 output zones.
7. Repeat steps above for creating additional Counting zones, as needed.

EXAMPLE:

In the screen shown above, the *Input Zone* is specified as Zone 1. Two (2) initiating devices (i.e., *count=2*) must be active before the counting zone is activated. The output zones are Zone 10, 14, and 7. Therefore, when at least two (2) initiating devices in Zone 1 (i.e., *the input zone*) detect an alarm condition, Zones 10, 14 and 7 (i.e., *the output zones*) are activated.

NOTE: The *"Alarm Verification Time Delay"* may **NOT** be programmed if detectors are mapped to a Counting Zone.

FACP Cross/Counting Zone Configuration Procedure

1. Enter the Level 3 Menu password.
2. Press RIGHT ARROW, then select [5] Config Data Edit.
3. Press [2] System Data Edit, RIGHT ARROW to display options [5] or [6].
4. Press applicable option #, [5] Cross Zone or [6] Counting Zone.

Suppression (Releasing) Zones Configurations

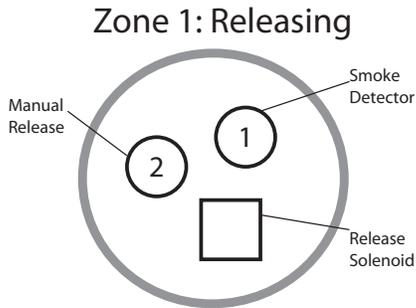
The PFC-8000 series provides the platform for a variety of releasing applications. This topic addresses several releasing configuration examples that may be used for water and chemical releasing zones:

- One Count or Single Interlock
- Cross Zone / Two Count (Double Interlock)
- Cross Zone / Two Count with Abort

Single Interlock (One Count) Releasing Application

This releasing application requires the activation of **one zone** or a **manual release input** within a designated releasing zone to start the release sequence. In this example, one (1) releasing zone contains two (2) input devices and one (1) output. The output configured is activated when either the manual station or a detector in the suppression / releasing zone are active.

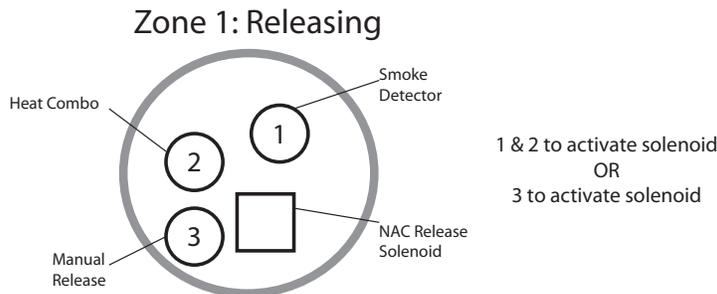
Figure 94. Example of Single Interlock (One Count) Suppression Application



Cross Zone / Two Count (Double Interlock) Releasing Application

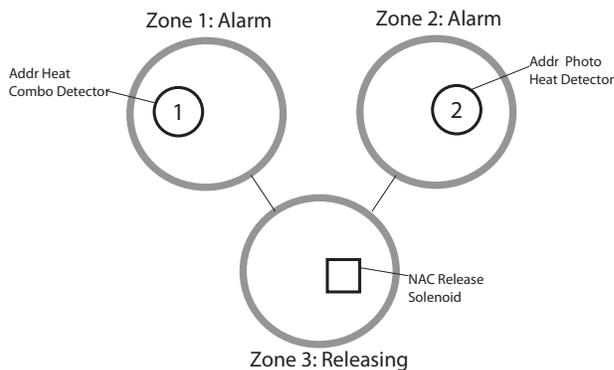
This releasing application requires the activation of **two zone** or a **manual release input** within a designated releasing zone to start the release sequence. In this example, one (1) releasing zone contains input and output (device or manual release) with an abort switch. Both sensors in the suppression zone or a manual release within the designated release zone must be activated to start the release sequence.

Figure 95. Example 1 of Cross Zone / Two Count (Double Interlock) Releasing



Example #2 illustrates three (3) separate zones, each containing one device. This application shows one (1) sensor within each of the cross zones or a manual release within the designated release zone must be activated to start the release sequence.

Figure 96. Example 2 of Cross Zone / Two Count (Double Interlock) Releasing Application

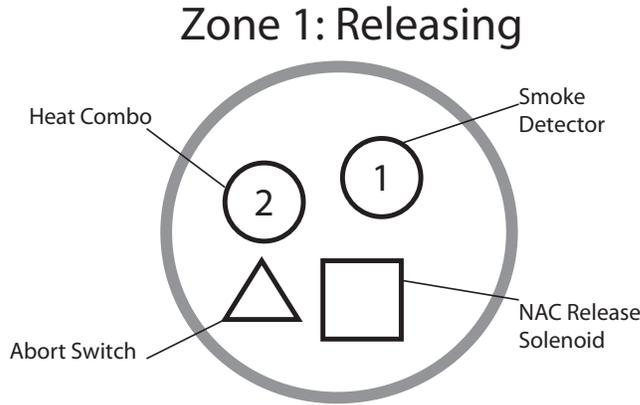


Two Count Releasing Application with Abort Switch

This releasing / suppression application requires the activation of **two zones** or a **manual release input** within a designated releasing zone to start the release sequence. The timing of the release can be affected by the operation of an abort input within the designated releasing zone.

Activation of the input module classified for the **abort switch function** will initiate the abort type sequence as selected in programming. The abort switch must be pressed prior to the pre-discharge timer expires as programmed.

Figure 97. Example 2 of a Two Count Releasing / Suppression Application with Abort Switch



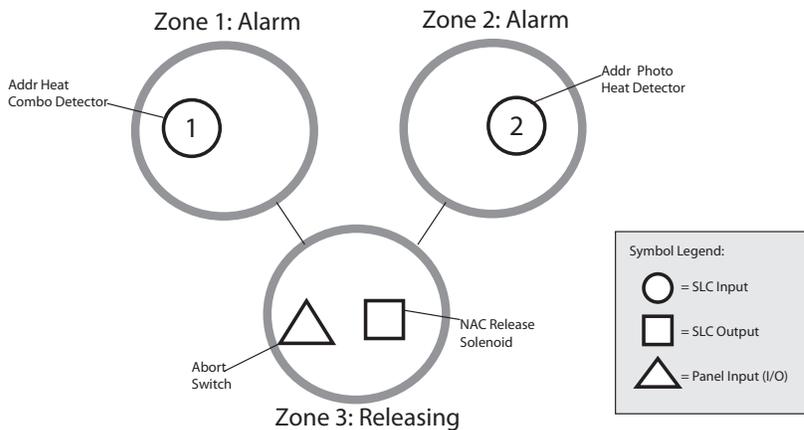
NOTE: Any device being used to initiate the abort function should be clearly marked and/or labeled.

Cross Zone Releasing Application with Abort Switch

This releasing / suppression application requires the activation of at least **one sensor** within **each** of the designated "Cross Zones" or a manual release within the designated releasing zone to start the release sequence. The timing of the release can be affected by the operation of an abort input within the designated releasing zone.

Activation of an input module classified for the **abort switch function** will initiate the abort type sequence as selected in programming. The abort switch must be pressed prior to the pre-discharge timer expires as programmed.

Figure 98. Example of a Cross Zone Releasing Application with Abort Switch



NOTE: Any device being used to initiate the abort function should be clearly marked and/or labeled.

NOTICE
<p>When an Abort switch is connected to a MCM, SCM or DCM, there is up to a five-second (5) delay between when the button is pressed and when the Abort interrupts the release.</p>

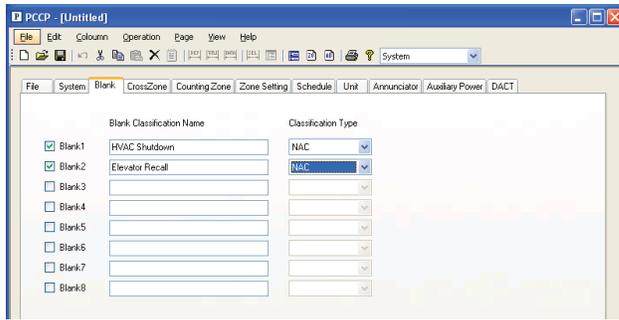
Creating Customized (Blank) Classifications

Choose this option to create customized classifications for modules if needed. For example, you may want to create a classification for a MOM-4 or MCM/SCM-4/DSM-4 module to shutdown the HVAC. When an event occurs, the classification name displays on the LCD providing the precise device related to the event. Up to eight (8) user-defined classifications may be created.

To create a classification:

1. From the **PCCP Main Menu**, click the **"Config. Data Edit" button**.
2. Click the **"Blank" tab** to display screen shown below:

Figure 99. Example of the Blank Classification Window



3. Click the **"Blank1: selection box** and enter a descriptive name in the **"Blank Classification Name" field**.

NOTE: Up to 16 alphanumeric characters may be entered.

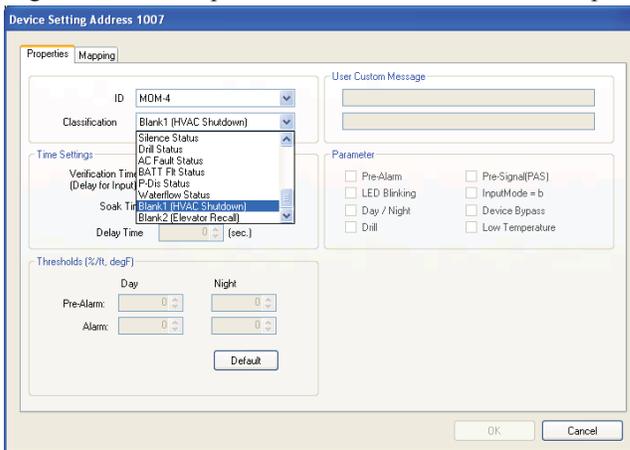
4. Click the **"Classification Type" drop-down menu** and choose the applicable type.



5. Continue to the next **"Blank x" selection box** (where **"x" represents the incremental number**), and complete as applicable.

NOTE: The custom classifications are added to the "Classification" drop-down list on the "Device Setting Address" window, as shown here:

Figure 100. Example of the Blank Classification - Properties Window



FACP BLANK CLASSIFICATION CONFIGURATION PROCEDURE

- Enter the **Level 3 Menu password**.
- Press **RIGHT ARROW**, and select **[5] Config Data Edit**.
- Press **[2] System Data Edit**, then **[2] Blank**.

Programming Modules

This section addresses how to program appliances, such as the built-in DACT, LED / LCD annunciators (LED-AN / LCD-AN, respectively), the ALE-127 units, and Auxiliary power. All modules may be either programmed through the *PCCP "Configuration Data Edit" option* or the *FACP Level 3 System Data Edit menus*.

NOTE: *This section provides step-by-step PCCP procedures, as well as a summary of FACP steps at the end of each procedure.*

NOTE: Once all modules have been configured, the configuration changes should be downloaded to the FACP.

DACT (Digital Alarm Communicator Transmitter)

The onboard DACT provides contact between the FACP and a remote monitoring company when alarms, troubles and supervisory conditions occur. The DACT may be enabled, disabled or bypassed. When enabled, the panel's status changes are remotely communicated to a monitoring station. Whereas, when disabled all communication is ignored and the DACT is basically turned off. In this state, the panel is only a local panel. When the DACT is bypassed, this is a temporary measure as determined by a technician on premise.

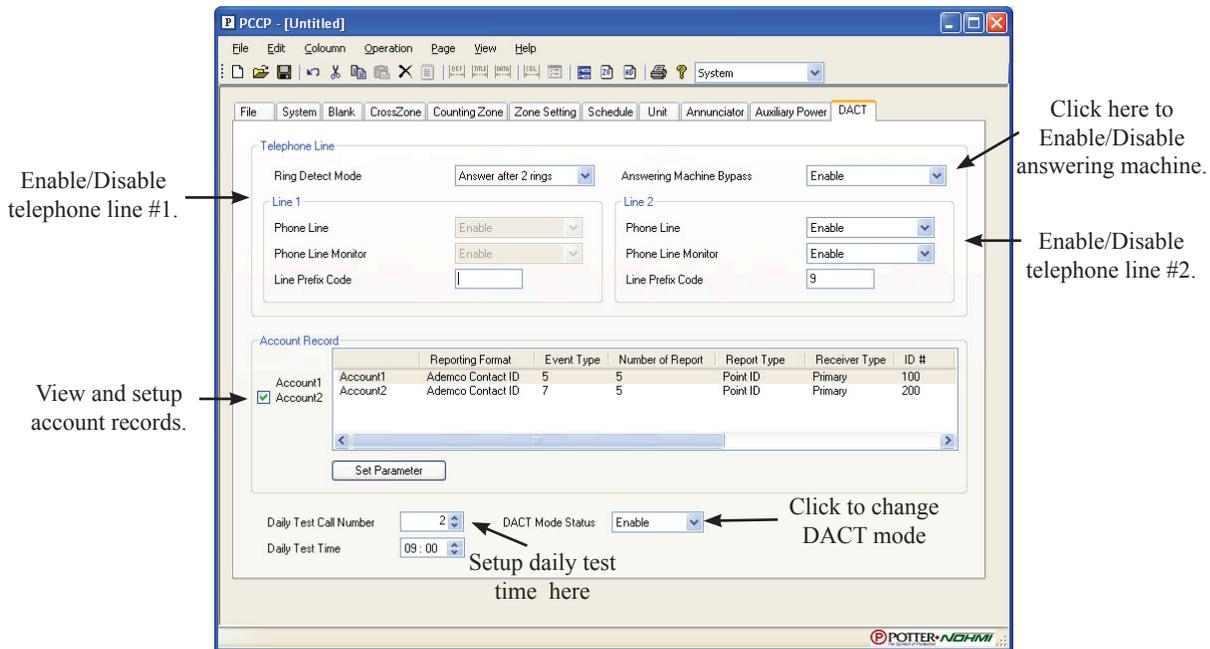
Programming options allow you to select separate accounts for test events and alarm, trouble, and supervisory conditions. You may set up telephone parameters, such as number of rings, where to send reports and other report output options. A daily test is automatically sent to a remote monitoring point at a designated programmed time.

NOTES:

- Dipswitch 2 on the DSW must be enabled or in the "ON" position at the protected premises. If this switch is not enabled, DACT communication will not be allowed.
- When the DACT is enabled, the first phone line is active. The second phone line may be disabled and another method used for the redundant path. This allows for the use of a cellular or radio back-up to the main phone line.
- If the DACT has been enabled and two (2) phone lines are used, DACT will alternate between lines on each daily call.

An example of the *"DACT Configuration" window* is shown below.

Figure 101. DACT Configuration Window



Telephone Line Settings

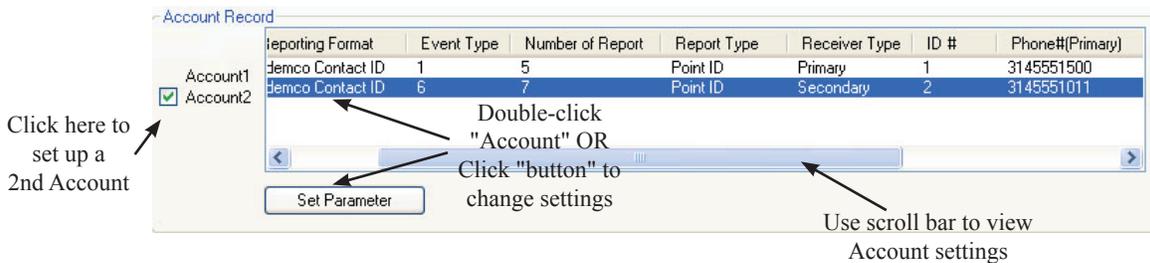
The “**Telephone Line**” section is used to enable or disable the telephone lines and the answering machine bypass option. Additionally, you may set the number of rings the number of rings the DACT will answer the call.

Option	Description
Ring Detect Mode	Select between 1-15 or "Never Answer"
Answering Machine Bypass	Enable or Disable lines 1 and 2
Phone Line (Lines 1 and 2)	Enable or Disable lines 1 and 2
Phone Line Monitor Lines	Enable or Disable lines 1 and 2
Line Prefix Code	Enter an applicable prefix, i.e., 9, if necessary

Account Records

The “**Account Record**” section allows you to configure up to two (2) accounts and customize their settings, such as their report type (*Ademco Contact ID / SIA DC-03*), choose event type(s) (*i.e., Alarms, Troubles, and Supervisory*), and enter primary and secondary information. Additionally, the “*Account View*” window allows you to view the current account settings or parameters by scrolling right/left through the window. Please refer to the “*Account Record*” example shown below:

Figure 102. DACT Account Records Information



Refer to the table below for a brief description of the Account configuration options:

Table 27: DACT - Account Records Parameters	
Option	Description
<div style="border: 1px solid black; padding: 2px;"> <input type="checkbox"/> Account1 <input checked="" type="checkbox"/> Account2 </div>	<ul style="list-style-type: none"> This selection box allows you to configure a second account if you wish to contact a different remote monitoring company for specific events or as a redundant contact. Click to select or deselect this option. <p>NOTE: If you configure a second account, and then deselect this option, all changes will be lost.</p>
Reporting Format Default = Ademco Contact ID	Ademco Contact ID or SIA DC-03 protocols
Event type to report this account Default = Alarm	Select one or more: Alarm(A), Trouble(T), Supervisory(S) to send these types of event reports to the selected Account.
Number of Report Default = 5 Range = 5-10	This number controls the # of attempts the DACT will call the primary # before switching to the secondary phone number.
Report Type Default = Point ID	Point ID or General Signal
Receiver Type Default = Primary	Choose one account as "PRIMARY" and the other as "SECONDARY".
Account ID Number	Enter the system account number.
Account Phone Number (Primary)	Enter primary account phone number in XXX-XXX-XXXX format.
Account Phone Number (Secondary)	Enter secondary account phone number in XXX-XXX-XXXX format.

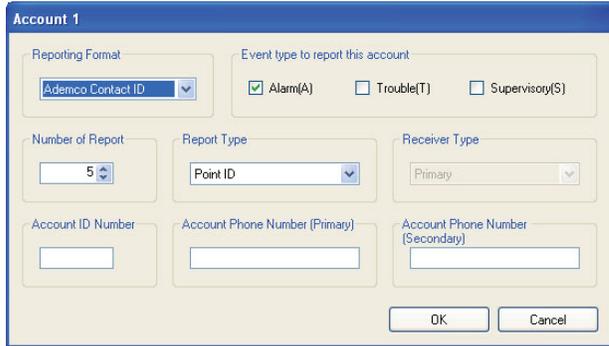
To configure the DACT module:

- From the **PCCP Main Menu**, click the  button.
- Click the **DACT tab** to display the "**DACT**" window.
- Click in each of the "**Telephone Line**" fields, and make applicable selections:
 - Ring Detect Mode** – number of rings.
 - Answering Machine Bypass Enable** – Enable / Disable
 - Phone Line** – Enable / Disable
 - Phone Line Monitor** – Enable / Disable
 - Line Prefix Code** – enter a prefix, if necessary.
- Click in the  selection box to set up two (2) accounts.

5. Double-click on **Account1 / Account2** to display the **"Account Setup" window**.

NOTE: You may alternatively select the account record then click the  **button**.

Figure 103. DACT Account Setup Window



6. Click in each of the **"Account" fields**, and make applicable selections:

Table 28: Account Fields	
Field	Description
Reporting Format	Ademco Contact ID or SIA DC-03 (default = Ademco Contact ID).
Alarm/Trouble/Supervisory	select one or more report type(s). NOTE: Account1 / Account2 may have the same or different event reports selected.
Number of Report	use ARROW buttons to increase/decrease number or type in number.
Report Type	select Point ID or General Signal.
Receiver Type	available for Account2 only.
Account ID Number	enter the system account number. NOTE: When an ADEMCO Contact ID is selected, enter a four (4) digit number (0-9).
Account Phone Number (Primary)	enter primary phone number.
Account Phone Number (Secondary)	enter secondary phone number.

7. Click **OK** to save account changes or **CANCEL** to exit without saving.

8. Repeat steps # 5 – 7 for second account, if applicable.

9. Click in **"Daily Test Call Number" field**, use  **up/down scroll button** to increase/decrease number or

Figure 104. DACT Test Time Fields



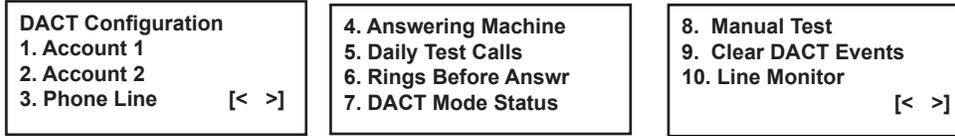
type in number (*i.e.*, between 1-4 calls).

10. Click in **"Daily Test Time" field** to adjust time; use  **up/down scroll button** or type in time.

11. Click in **"DACT Mode Status" field** to change mode, if needed.

FACP DACT CONFIGURATION PROCEDURE

- Enter the **Level 3 Menu password**.
- Press **RIGHT ARROW**, then select **[5] Config Data Edit**.
- Press **[2] System Data Edit, [1] System Setting**.
- Press **RIGHT ARROW** until screen displays **[16] DACT** as an option.
- Press **[16] DACT** to display the **DACT Configuration screen**.



- Press the applicable **menu option #**.
OR
- Press the **RIGHT ARROW** to display next screen.

NOTE: Refer to the "*DACT - Account Record Parameters*" table shown earlier in this section for a description of menu options.

DACT Manual Test

- Press [8] to run a Manual Test.

DACT Clear Events

- Press [9] to clear DACT events from the FACP memory.

DACT Line Monitor

- Press [10] monitor the DACT telephone line.

Configuring ALE-127s

Up to three (3) ALE units (*addressable loop expanders*) may be added to the PFC-8500 system to expand the number of SLC devices. Each unit supports an additional 127 devices.

To configure an ALE:

1. From the **PCCP Main Menu**, click the  button.
2. Click the **"Unit" tab** to display a list of all currently installed ALE units.
3. Click in each selection box to activate the applicable unit(s).

FACP ALE-127 CONFIGURATION PROCEDURE

- Enter the **Level 3 Menu password**.
- Press **RIGHT ARROW**, then select **[5] Config Data Edit**.
- Press **[2] System Data Edit**, then **[3] Unit in Use**.

Remote Annunciators (LED-AN / LCD-AN)

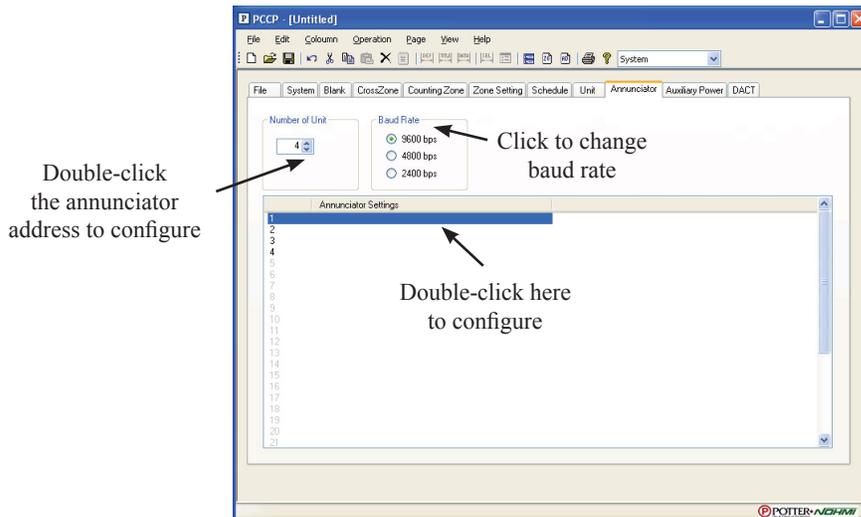
The *"Annunciator"* option allows you to select and configure the LCD and LED Annunciators connected to the system. Up to thirty-one (31) of any combination may be connected.

NOTE: By default, the system selects "LCD" for all annunciators! You must edit each LED annunciator to select their correct type.

To configure annunciators:

1. From the PCCP Main Menu, click the  button.
2. Click the *"Annunciator"* tab to display the *"Annunciator Data Configuration"* screen.

Figure 105. Annunciator Configuration Window



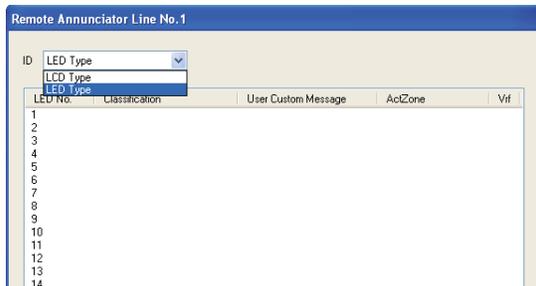
3. Click in the *"Number of Unit"* drop-down field to select the total number of connected units.

NOTE: Click the  up/down scroll button to select number of units.

4. Double-click the annunciator address to configure that annunciator.

The *"Remote Annunciator Line No. #"* screen displays (where *"#"* represents the annunciator number).

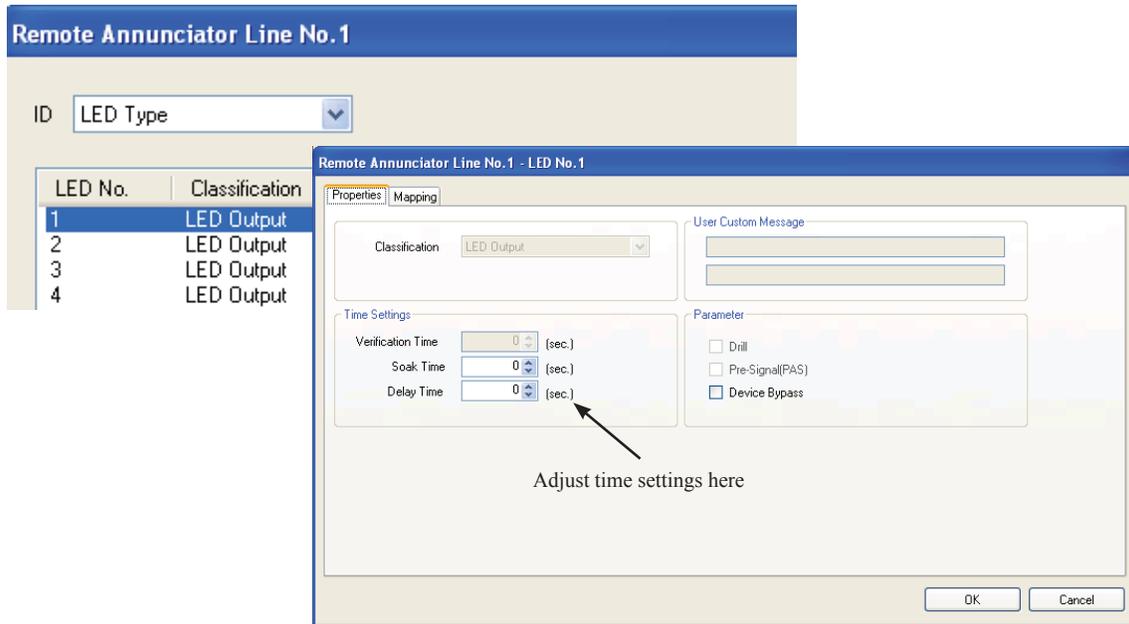
Figure 106. Annunciator Lines Screen



5. Click in the **ID field** and select **LCD** or **LED**.
 - If **LCD type** is selected, you are finished.
 - OR
 - If **LED type** is selected, double-click the applicable address to continue configuration settings.

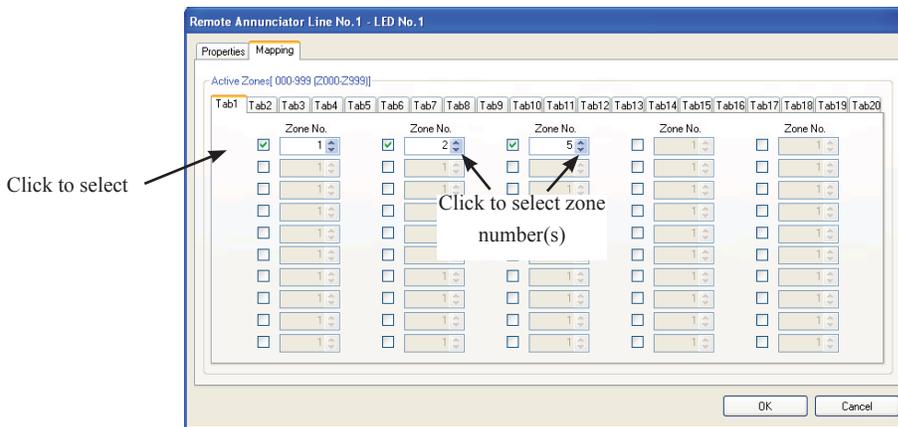
The "**LED-Remote Annunciator Line No. #**" screen displays (where # represents the annunciator # selected on the previous screen).

Figure 107. Annunciator Type Screens



6. Adjust the **time setting options**, if needed.
7. Click in "**Device Bypass**" selection box, if applicable.
8. Click the "**Mapping**" tab to display the "**Mapping**" screen.

Figure 108. Annunciator Type Screen



– Enter a **check mark** into each **"Zone No." field** to map to specific zone(s).

NOTES:

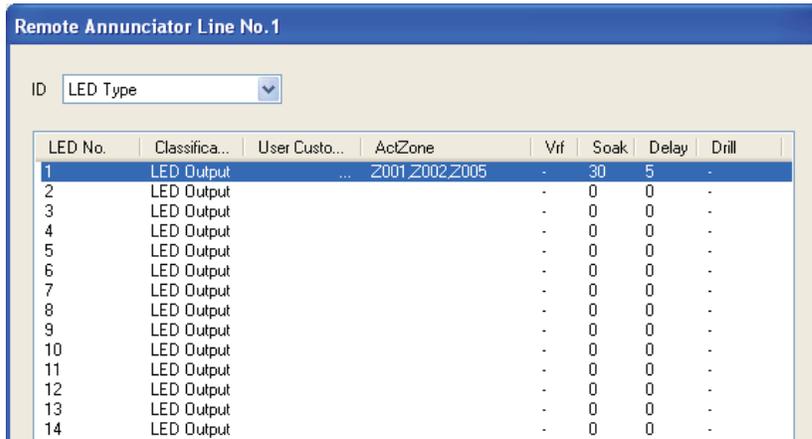
- You may map annunciator to up to 1,000 active zones.
- Click on the next **"Tab#"** to select additional zones.

– Click the  **up/down scroll button** to select the software **zone number**.

NOTE: Enter **"0"** if an annunciator is not connected.

9. Click **OK** to save changes or **Cancel** to exit without saving.
10. Continue configuring LEDs, if necessary or **OK** to return to **"Annunciator" window**.
The **"Remote Annunciator Line No. X" screen** displays.

Figure 109. Annunciator Type Screen



LED No.	Classifica...	User Custo...	ActZone	Vrf	Soak	Delay	Drill
1	LED Output	...	2001,2002,2005	-	30	5	-
2	LED Output			-	0	0	-
3	LED Output			-	0	0	-
4	LED Output			-	0	0	-
5	LED Output			-	0	0	-
6	LED Output			-	0	0	-
7	LED Output			-	0	0	-
8	LED Output			-	0	0	-
9	LED Output			-	0	0	-
10	LED Output			-	0	0	-
11	LED Output			-	0	0	-
12	LED Output			-	0	0	-
13	LED Output			-	0	0	-
14	LED Output			-	0	0	-

11. Adjust **baud rate** for each LED annunciator if different than **9600 bps**. It is only necessary to change for long wire runs.

NOTES:

- If 4800 bps or 2400 bps transmission rates are selected, be aware that the display will be slower.
- If transmission errors frequently occur, it is recommended that a lower baud rate is selected.

12. Click **OK** to save all modifications or **Cancel** to exit without saving.

FACP ANNUNCIATOR CONFIGURATION PROCEDURE

- Enter the **Level 3 Menu password**.
- Press **RIGHT ARROW**, select **[5] Config. Data Edit**.
- Press **[2] System Data Edit, [4] Annunciator**.

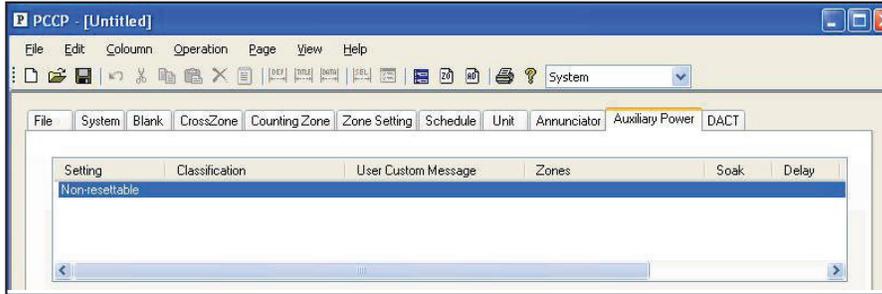
Auxiliary Power

To configure the auxiliary power:

1. From the **PCCP Main Menu**, click the  button.
2. Click the "**Auxiliary Power**" tab.

The "**Auxiliary Power**" screen displays.

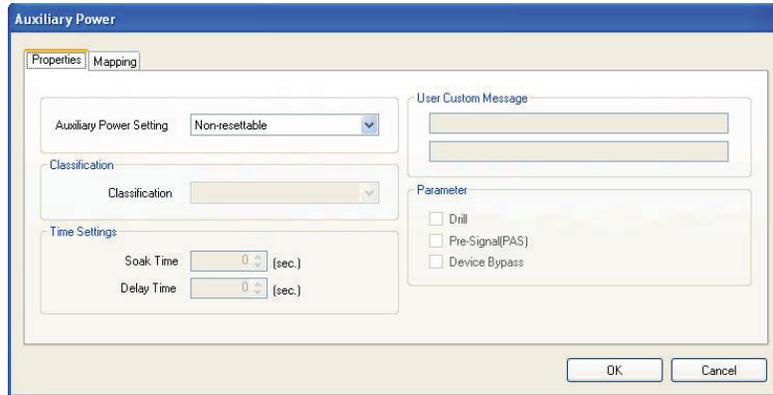
Figure 110. Auxiliary Power Screen



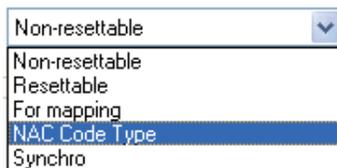
3. In the "**Setting**" field, double-click "**Non-resettable**".

The "**Auxiliary Power**" window displays.

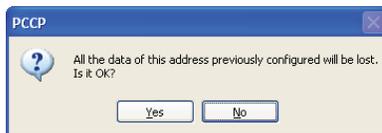
Figure 111. Auxiliary Power Screen



4. On the "**Properties**" tab, click the "**Auxiliary Power Setting**" drop-down arrow and select an option.



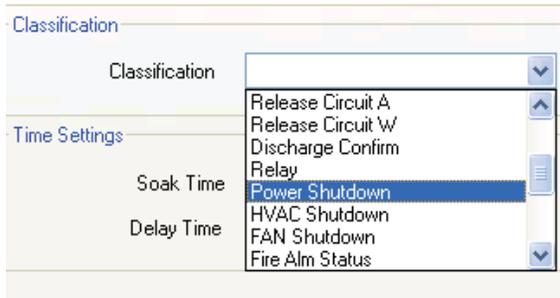
A confirmation dialog box displays as shown here:



5. Click **YES** to continue or **NO** to exit.

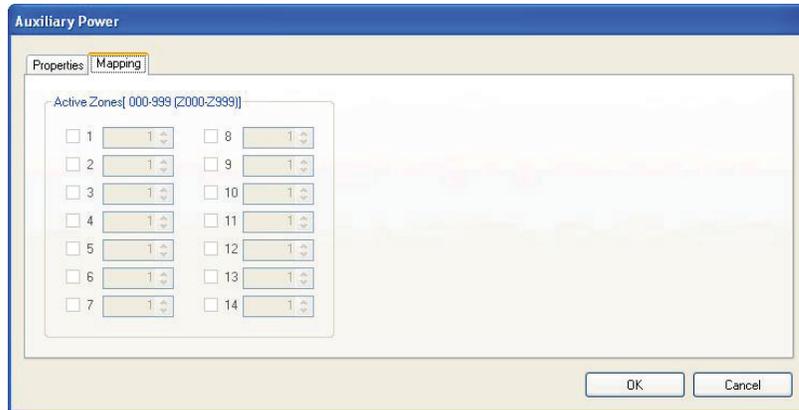
- In the "**Classification**" field, click on drop-down arrow and select an option.

Figure 112. Auxiliary Power Screen



- Adjust time settings, if necessary.
 - "**Soak Time**" output activation range is 1 to 999 seconds; default is "0".
NOTE: If "0" seconds is configured, the output is continuously activated.
 - "**Delay Time**" output activation range is 0 to 255 seconds; default = "0".
- In the "**User Custom Message**" field, enter a custom message up to twenty (20) characters per line.
- Select an applicable parameter option(s), if available ("**Drill**", "**Pre-Signal**", "**Device Bypass**").
- Click on the "**Mapping**" tab to map zones.

Figure 113. Auxiliary Power Screen



- Enter a **check mark** into each "**Zone No.**" field to map to a specific zone.
NOTE: Up to fourteen (14) active zones may be mapped to the Auxiliary power.
 - Click on the **UP/DOWN arrows** to select the software **zone number** (i.e., Z000-Z999).
- Click **OK** to save changes or **Cancel** to exit window.

FACP AUXILIARY POWER PROCEDURE:

- Enter the **Level 3 Menu password**.
- Press **RIGHT ARROW**, then **[5] Config. Data Edit**.
- Press **[2] System Data Edit**, then **[1] System Setting**.
- Press **RIGHT ARROW** several times to display **[15] AUX screen**.
- Press **[15] AUX**.

Viewing an Event Log

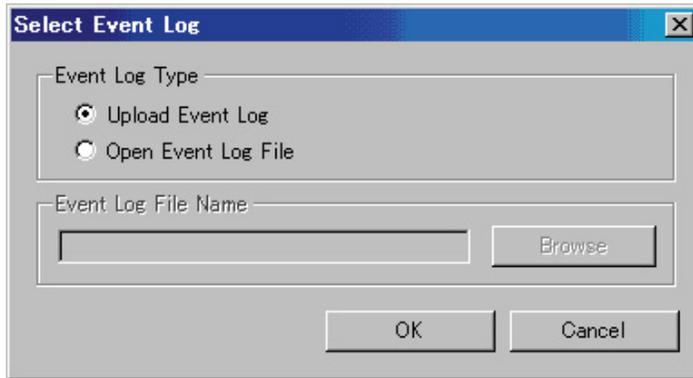
The *"Event Log List" option* allows you to either view a previously saved Event Log or to upload a recently created Event Log. All Event Logs should be saved for future reference.

To upload an event log:

1. From the **PCCP Main Menu**, click the  **button**.

The *"Select Event Log" dialog box* displays.

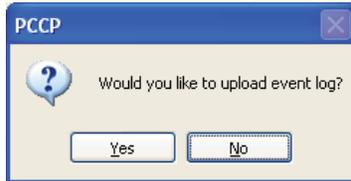
Figure 114. Event Log Screen



2. Click **OK** to upload.

The *"Upload Event Log" progress dialog box* displays.

Figure 115. Event Log Screen



3. Click **YES** to begin uploading or **NO** to exit function.

The upload progress bar displays.

Figure 116. Event Log Screen



4. Press **CANCEL** at any time to exit the upload or click the **OK button** after upload is completed.

The **Event Log window** displays.

Figure 117. Event Log Screen

No.	Date / Time (MM/DD/YYYY)	Classification	Status	Device Message	Address	Note
0001	07/05/2011 14:30:00		PCCP Logon	PCCP User Log O...		
0002	07/05/2011 14:02:00		Systems Normal	Systems Normal		
0003	07/05/2011 14:02:00		SYSTEM RESET	System Reset		Please...
0004	07/05/2011 14:01:00		ACK	Acknowledg...		
0005	07/05/2011 14:01:00	Fire Alm Status	Active On			0005
0006	07/05/2011 14:01:00	Control Output	Active On			0002
0007	07/05/2011 14:01:00	Control Output	Active On			0001
0008	07/05/2011 14:01:00	Alarm Input	Alarm On	1st FI	Lobby Pull St...	1027
0009	07/05/2011 14:01:00		Device Data Edit	Menu	Device Dat...	
0010	07/05/2011 13:59:00		Device Data Edit	Menu	Device Dat...	
0011	07/05/2011 13:58:00	Trouble Status	Active Off			0006
0012	07/05/2011 13:58:00	Alarm Input	Missing Device Off			1027
0013	07/05/2011 13:58:00		ACK	Acknowledg...		

Filtering Options

The **Filtering icons** are helpful when viewing a large Event Log where many different events have occurred. These icons allow you to limit the events that display either by type or by a range of dates/times. Refer to the table below for a brief description of the filtering icons.

Table 29: Event Log Filtering Icons

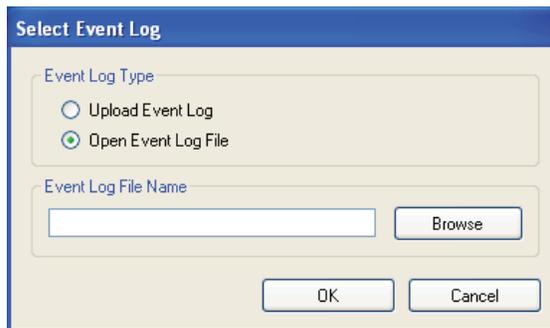
Icon	Description
	Displays all events; this is the default.
	Displays alarm events only.
	Displays trouble events only.
	Displays verify events only.
	Displays only those events that occurred within the specified time and/or date range.

5. Save and print the file for future reference.

To open a saved event log:

1. From the **PCCP Main Menu**, click the button.
2. Click the **"Open Event Log File" option**.

Figure 118. Event Log Screen



3. Click the **Browse button** and select the file you wish to open.

Config. Data Edit Utilities

The following utilities are only available through the PCCP software:

1. Mapping Lists
1. Maintenance List
2. Data Comparison

Device / Zone Mapping Lists

The FACP stores all mapping configuration information as well as device addresses. The PCCP's *"Create Mapping List"* function allows you to view this information by zone or device address. You may save a list that shows mapping of all zones and their respective assigned devices. Alternatively, you may choose to display a list of all initiating devices and their associated mapped output devices and zones. All lists are saved as a text (.txt) file which then may be uploaded and/or viewed.

To create a mapping list:

1. From the *Config. Data Edit - System window*, choose the *"Operation - Create Mapping List"* menu option.
2. Select **Zone** or **Address**.

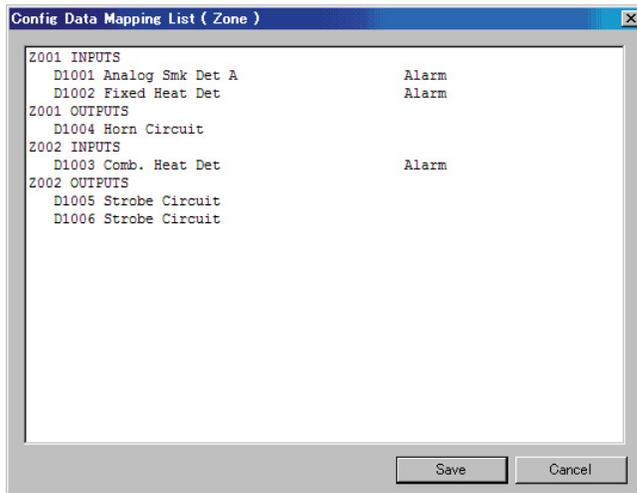
OR

Click the applicable *Operation Zone or Address*   icon.

EXAMPLE: For purposes of this manual, an *Operation Zone maintenance list* is shown since the procedure is similar.

The *"Config. Data Mapping List"* window displays.

Figure 119. Mapping List Screen



3. Click **SAVE** to save list or **CANCEL** to exit without saving.

Maintenance Lists

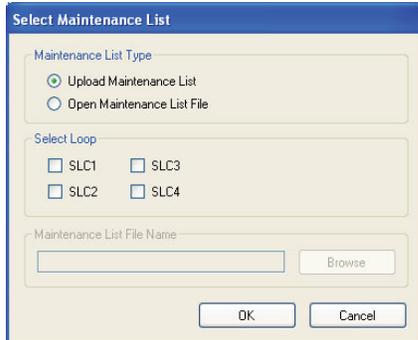
The "*Maintenance List*" option allows you to either view a previously saved Maintenance List or to upload a recently created Maintenance.

To upload/open a maintenance list:

1. From the *PCCP Main Menu*, click the *MAINTENANCE LIST* button.

The "*Select Maintenance List*" window displays.

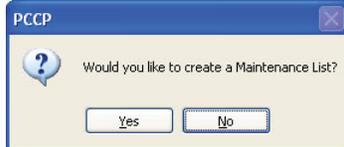
Figure 120. Maintenance List Screen



2. Select **UPLOAD**, and **SLC(s)** you wish to upload.
3. Click **OK** to create a list based on selection or **Cancel** if you wish to exit.

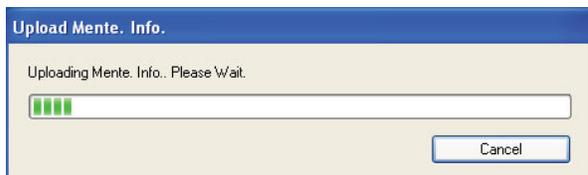
The following dialog box displays:

Figure 121. Maintenance List Screen



4. Click **YES** to create list or **NO** to exit.
 - If upload fails, a dialog box displays indicating the cause of the failure.
 - If upload is successful, progress bar displays.

Figure 122. Maintenance List Screen

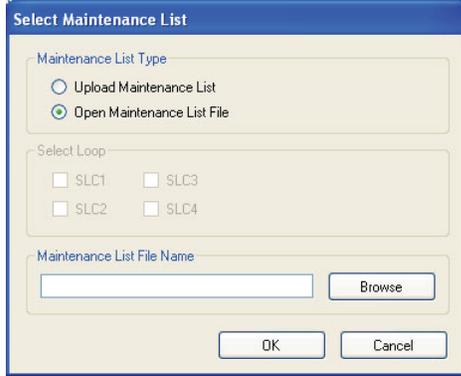


To open a maintenance list previously saved:

- From the **PCCP Main Menu**, click  button.

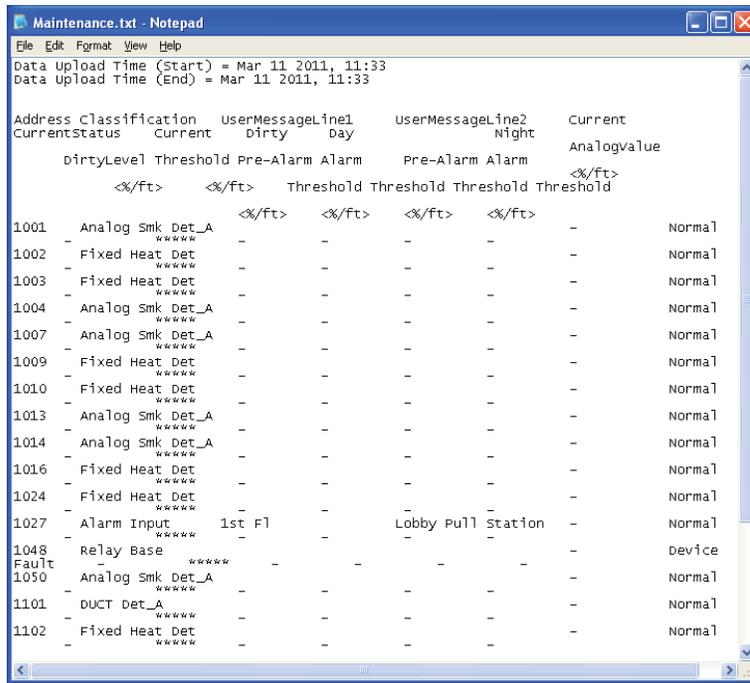
The **"Select Maintenance List"** window displays.

Figure 123. Maintenance List Screen



- Click **OPEN**, select the applicable SLC(s), then **BROWSE** to located list file name previously saved.
- Click **OK**.

Figure 124. Maintenance List Screen



Data Comparison

The *"Data Comparison" function* allows you to compare a configuration file currently installed to an archived file to verify its accuracy and completeness. If differences are found, they display in *"red" text* in the lower window.

To compare configuration files:

1. Choose the *"Operation - Compare Data" menu option*.

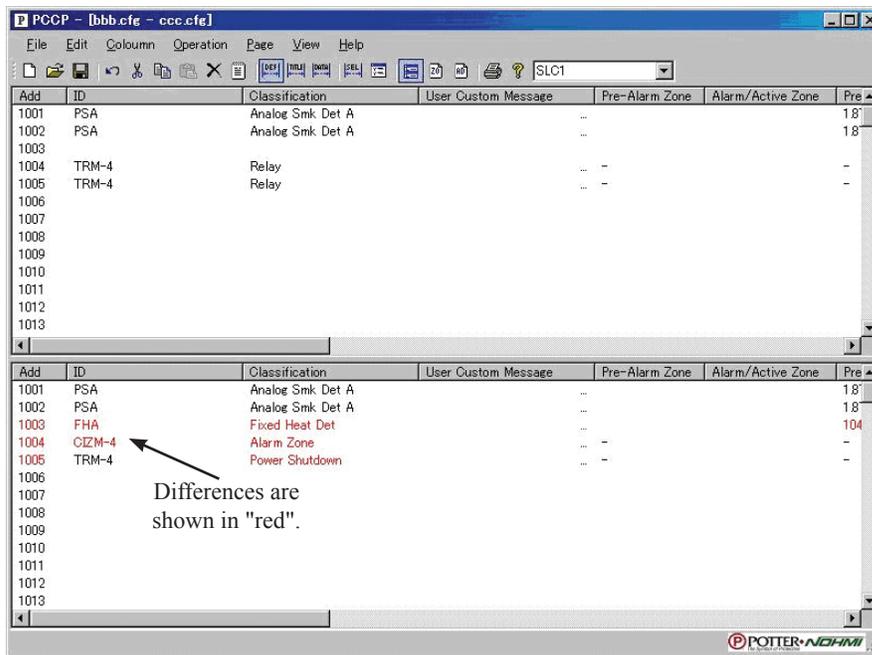
OR

Click *Data Compare*  icon.

The file *"Open" dialog box* displays.

2. Select the applicable directory to locate saved configuration file(s).
3. Click *"Open"* to display the two files.

Figure 125. Data Compare Windows



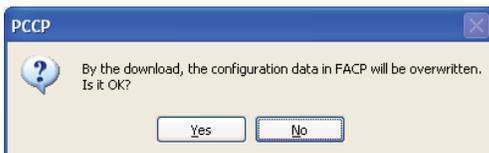
Downloading Configuration Data

The final step in programming is to download the configuration file to the panel.

To download a configuration file to the FACP:

1. From the **PCCP's Main Menu**, click the  **button**. The following warning message displays:

Figure 126. Download Configuration File Dialog Box



2. Click **YES** to continue or **NO** to exit without proceeding.

3. Select the configuration data file from the "File - Open" dialog box, and click **OPEN**.

The "Input Download Password" dialog box displays.

Figure 127. Input Download Password Prompt



4. Enter the PCCP download password (default = 0000000000 or ten zeroes), and click **OK**.

The "Download Config. Data" progress bar displays.

5. If download is successful, a confirmation message displays.
OR
If download is not successful, a failure message displays.

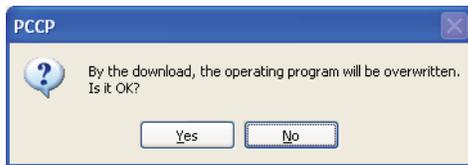
Downloading Operating Program

This option allows you to download periodic software updates when needed. Upgrades will be released to authorized distributors responsible for providing field upgrades.

To download software updates:

1. From the **PCCP Main Menu**, click the  button. The following warning message displays:

Figure 128. Download Operation Program Dialog Box



2. Click **YES** to continue.
OR
Click **NO** to exit without completing.
3. Select the *Operating Program (*.mot)* to download, and click **OPEN**.
4. When prompted, enter the *PCCP Download Password*.

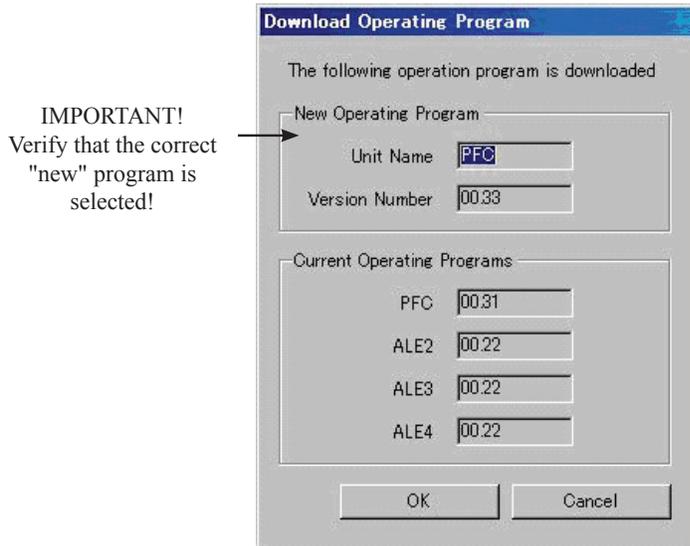
Figure 129. Input Download Password Prompt



5. Click **OK** to continue.

The "**Download Operating Program**" dialog box displays.

Figure 130. Download Operating System Screen



NOTES:

- Verify that the "*New Operating*" program name and version are correct.
- Refer to program installation instructions for other considerations.

6. Click **OK** to begin download.

The FACP begins overwriting the current Operating Program; once completed, the system starts initializing automatically.

7. The following message displays once download is completed.

Figure 131. Program Download Successful Message



NOTES:

- DO NOT turn off FACP power during download! If power is lost, the Operating Program will be lost.
- If the LAMP TEST, SIGNAL SILENCE, SYSTEM RESET, GENERAL ALARM, FIRE DRILL, or ENTER keys are operated, or if Fire Alarm signals are initiated, during upload/download of the Event Log, Maintenance List, Configuration Data, or Operating Program, the upload/download is aborted and must be restarted.
- While the program is downloading to the ALE-127s, the "*SLC# Board TBL*" (where "#" represents 2, 3, or 4) is overwritten by the program management.

Appendix A: Basic Operating Instructions

These instructions must be framed and displayed next to the PFC-8500/8060 panel in accordance with NFPA 72 fire code for Local Protected Fire Alarm Systems. Test the system in accordance to NFPA 72.

Operation	Process
Normal Standby	The green AC POWER LED illuminates and the user defined message displays on the LCD. If the AC power is removed for more than 15 seconds , the green AC POWER LED will extinguish.
Activating Keypad	The keypad activates by either entering the Level 1 pass code or enabling the Key Switch . None of the keys on the keypad will operate without activating the keypad.
Pre-Discharge / Discharge	The red Pre-Discharge/Discharge LED will flash red when the system is in a count down timer for an agent release and will illuminate steady when an output has latched to a discharge condition. Additional pre-discharge events will only display on the LCD display.
Agent Release Abort	If the system is being used as an agent releasing panel and a pre-discharge timer is programmed, press the ABORT SWITCH to abort the release. For ULI installations , push the ABORT SWITCH to countdown the timer to 10 seconds and then stop. Releasing and reactivating the Abort will set the timer to 10 seconds . <i>Activating the Manual Release will OVERRIDE the Abort.</i> NOTE: There is up to a five-second (5) delay between when the ABORT button is pressed and when the Abort interrupts the release.
Alarm Condition	The red ALARM LED illuminates and the device in alarm displays on the LCD with the user defined text. The ALM queue displays the total number of devices in alarm. The local buzzer continues to sound until the ACK button is pressed.
General Alarm	The red General Alarm LED activates when the system is programmed for <i>Two Stage Operation</i> and the system has reached an evacuation phase.
Silencing Alarm	When the system is in Alarm, push the red SIGNAL SILENCE button to shut off the notification circuits (i.e., strobes and horns). This button is only active when the keypad is activated.
Resetting Alarm	Press the SYSTEM RESET button after the condition that caused the alarm has been identified and corrected; this resets the system to the Normal Standby mode.
Supervisory Condition	The amber SUPERVISORY LED illuminates when a supervisory condition is detected, and the LCD displays the device address and any user defined text. Press the ACK button to acknowledge the event and to silence the local buzzer.
Restoring Supervisory Condition	If the Supervisory condition is non-latching , the condition clears once the device is restored to the normal position, If the Supervisory condition is latching , the activated device must be restored and SYSTEM RESET pressed.
Trouble Condition	The amber TROUBLE LED illuminates when a fault condition occurs, and the local buzzer will sound until the fault is removed or the ACK button is pressed to acknowledge the trouble condition. If the buzzer is acknowledged and the fault is not removed within 24 hours , the buzzer will resound.
Silencing Trouble(s)	Press the ACK button to silence a Trouble condition.
Battery Trouble	The amber BATTERY TROUBLE LED illuminates when the battery voltage or current is removed for more than 15 seconds . Restore the batteries or replace the fuse.
Ground Fault	The amber GROUND FAULT LED illuminates when a conductor contacts an earth ground; the LCD displays information indicating where the fault is located.
Testing and Maintenance	Test this system monthly or more frequently as required by the AHJ. Before conducting any testing, contact the building personnel and the monitoring facility as applicable. When testing a system configured for releasing, activate the releasing disconnect switch to prevent accidental discharge of a suppression system. Test the circuits as outlined in the Installation Manual, 5403556. Test in accordance with NFPA 72 Inspection, Testing and Maintenance Chapter(s) and any local requirements. The batteries should be marked with the date of installation and replaced every four years or sooner if battery trouble occurs. Batteries should be checked with a tester acceptable to the AHJ such as a Stone Technologies model STC612A or equivalent. In case of a fuse replacement, refer to the Installation Manual, 5403556 for the proper rating. Contact the agency below for service or operational questions.
For Service Call:	

Appendix B: System Testing and Maintenance

Acceptance Test

The control panel is required to be installed in accordance with local and state building codes and NFPA 72 (*National Fire Alarm Code*) or in accordance of CAN/ULC-S524M (*Standard for the Installation of Fire Alarm Systems*). At the conclusion of each original installation or modification of this system, the control panel and related system is required to be inspected and tested in accordance with NFPA 72 or CAN/ULC-S524M to verify compliance with the applicable standards.

Testing should be conducted by Potter factory trained fire alarm technician(s) in the presence of a representative of the Authority Having Jurisdiction (AHJ) and the building owners representative. Refer to NFPA 72 (*National Fire Alarm Code*), Inspection Testing and Maintenance or CAN/ULC-S536 (*Standard for the Inspection and Testing of Fire Alarm Systems*).

Periodic Testing and Service

Periodic testing and maintenance of the control panel, all initiating devices, all notification appliances and any other associated equipment is essential to ensure the system will operate as designed in emergency situations. Service and test the control panel according to the schedules and procedures outlined in the following documents:

- NFPA 72, Inspection, Testing and Maintenance or CAN/ULC-S524M (*Standard for the Installation of Fire Alarm Systems*).
- Service manuals and instructions for any and all peripheral devices installed in the system. It is very important that any and all trouble conditions (or faults) be corrected immediately.

Operational Checks

- During interim periods between formal testing and at regular intervals the control system should be subjected to the following operational performance checks. The Authority Having Jurisdiction (AHJ) should be consulted for requirements on frequency of system testing.
- Check that the green AC power LED is lit.
- Check that all amber LED's are off.
- Using the system menu's, perform a Lamp Test function. Verify that all LED's and LCD segments operate.
- Before proceeding (1) Notify the fire department and the central alarm receiving station if transmitting alarm status conditions; (2) Notify facility personnel of the test so that alarm-indicating devices are disregarded during the test period; and (3) When necessary, bypass activation of alarm notification appliances and speakers (if installed) to prevent sounding of evacuation signals.
- Activate an input device (*i.e., manual station, heat or smoke detector*), and check that all notification appliances function.
- Notify Fire Department, central alarm receiving station and /or building personnel when finished with testing the system.
- The test of ground fault must be measured in below 10k ohms impedance.

Battery Maintenance

The system has been designed to use maintenance-free sealed lead acid batteries. These sealed lead acid batteries do not require any additional water or electrolyte. The system will keep all batteries fully charged by the system's power supply modules float charger. A typical discharged battery will recharge at 1.0 A and reaches the float voltage of 27.3 VDC within 48 hours.

Replacement Recommendations

The batteries are to be replaced at least once every four years or more frequently if specified by local AHJ and manufacturer recommendations. Batteries should be dated at the installation. Minimal replacement battery capacity displays on the control panel marking label. The batteries are required to be UL recognized batteries with a date of manufacture permanently marked on the battery. The battery is to be tested at least annually and if the battery is showing signs of failure, it should be replaced. Immediately replace a damaged or leaking battery, and always replace batteries in pairs.

Proper Handling / First Aid Procedures**NOTICE**

Batteries contain Sulfuric Acid which can cause severe damage to eyes and skin if contact is made.

- In the event a battery leaks and contact is made with the Sulfuric Acid, immediately flush eyes and/or skin with water for at least 15 minutes. Water and household baking soda provides a good neutralizing solution for Sulfuric Acid.
- If Sulfuric Acid makes contact with eyes, seek immediate medical attention.
- Ensure proper handling of the battery to prevent short-circuits.
- Take care to avoid accidental shorting of the leads from uninsulated work surfaces, tools, jewelry and coins.
- If a battery is shorted, the battery and any connected equipment may be damaged. Additionally, a short may injure personnel.

Control Panel Fuses

The control panel has two (2) fuses on the board. One is for the AC power over current protection and the second is for battery protection.

AC Fuse

The AC fuse is screened onto the main board and is one of two (2) fuses depending on the input voltage to the transformer. It is labeled as "**FI**" and is located on the lower right corner of the board. The table below shows the amperages and voltages of the AC fuse by each installation's input voltage.

Table 30: AC Fuse Rating	
PFC-8060	
120 V	3.15 Amp, 250 V
230 V	1.6 Amp, 250 V
PFC-8500	
120 V	5.0 Amp, 250 V
230 V	3.15 Amp, 250 V

Battery Fuse

The battery fuse is located directly above Contact #3. This fuse is either an **8 Amp or 12 Amp** depending on the model of the control panel. The fuse provides over current and reverse polarity protection; ratings are shown below:

Table 31: Battery Fuse Rating	
PFC-8060	8 Amp, 250 V
PFC-8500	12.0 Amp, 250 V

Appendix C: Compatible Devices Table

This section provides a listing of all NAC appliances, two-wire (2-wire) smoke detectors, releasing and SLC circuit devices, DACT/DACR compatibility and other device compatibilities.

Table 32: Device/Module Compatibilities	
Module/Device	Compatibilities
NAC Appliances	Refer to Potter document “5403592-A NAC Compatibility Document”.
Two-Wire (2-Wire) Smoke Detectors	None listed with the control panel; all devices listed the Conventional Input Zone Module (CIZM), please refer to CIZM Installation Sheet.
Releasing Circuit Devices <i>(all VDC devices, only one per circuit)</i>	Nohmi - Koatsu – R85M14, R85M10-N Skinner – 73218BN4UNLVNOC111C2 Skinner – 73212BN4TNLVN0C322C2 Victaulic – 753-E Series Viking – 11591, 11601, 11602, 13843 and 13844
SLC Devices	PSA – Photoelectric Smoke Detector PSHA – Photoelectric/Heat Smoke Detector FHA – Fixed Temperature Heat Detector RHA – Rate of Rise/fixed Temperature Heat Detector AIB – Addressable Isolator Base ARB – Addressable Relay Base ASB – Addressable Sounder Base MCM – Miniature Contact Module SCM-4 – Single Contact Module DCM-4 – Dual Contact Module TRM-4 – Twin Relay Module MOM-4 – Monitored Output Module CIZM-4 – Conventional Input Zone Module SCI – Short Circuit Isolator
DACT / DACR	The DACT transmits in Ademco Contact ID and Security Industries Association’s Digital Communication Standards (SIA-DCS). Each account may be configured for Contact ID or SIA-DCS independent of the other accounts setting. Therefore, Account 1 could be Contact ID and Account 2 could be SIA-DCS or vice versa. Conversely, both accounts could be the same reporting type.
Receivers	Silent Knight Model 9500 / 9800 Sur-Gard III
RS-485	LED-AN – LED Remote Annunciator LCD-AN – LCD Remote Annunciator
Printer	Keltron Model V90

Appendix D: Control Panel Menu Tree Reference

