POTTER
The Symbol of Protection

IPA-4000

Fire Alarm Control Panel

Features

- 4,064 addresses available on this analog addressable system
- Additional system capacity achieved via multi-point SLC modules
- 1500 software zones
- NFPA 72 Compliant Smoke Sensitivity Test Built-In
- System Operates as Class A or Class B for SLC, P-Link and NACs
- 10 Amp Power Supply, Expandable to 315 amps
- 6 NACS, Regulated, Rated at 3 Amps each, expandable to 192
- 4 Input/Output (I/O) Circuits for system flexibility rated at 1 Amp each, ideal for manual release and abort
- Strobe Synchronization and System Wide Sync for Potter/AMSECO®, Gentex®, Cooper Wheelock® and System Sensor® strobes
- Dedicated Alarm, Supervisory and Trouble Relays
- 4,000 Event History Buffer
- Cabinet will house up to 18 AH batteries
- Optional two line DACT with UD-2000 that can report General, Zone or Point Information
- Built in IP communicator
- Ethernet Port for Programming and Network Connectivity
- E-Mail System Status, Reports and Event Information
- Product includes 5 year warranty
- UUKL Listed for Smoke Control

ASSEMBLED IN THE USA

NYC Fire Dept.
Certificate of Approval
6266

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Description

The IPA-4000 is an expandable analog/addressable releasing fire alarm system with a total system capacity of 4,064 addresses. Additional capacity on the system is achieved using multi-point SLC modules The control panel utilizes the exclusive Potter protocol that includes a complete line of sensors and modules. The system is expandable with a total of thirty-one additional addressable Signaling Line Circuits (SLC) each with a maximum of 127 devices. Each SLC may be comprised of any combination of smoke sensor, heat detectors or modules and allows for a total of 50 ohms of impedance and may use any wire compliant with the National Electrical Code (NEC).

The IPA-4000 has a 10 Amp power supply with six Notification Appliance Circuits (NACs) and four Input/Output (I/O) circuits. The NACs are rated at 3 Amps each and the I/Os are rated at 1 Amp each. Each output is regulated and power limited. In addition, each output is uniquely programmable and may be configured for steady signal, strobe synchronization, constant power, door holder power, or releasing. The strobe synchronization includes Potter/AMSECO, Gentex, System Sensor and Cooper/Wheelock and with the exclusive Quadrasync each output may have a unique brand and all strobes will flash together. The I/Os are designed for inputs such as manual release stations and abort switches that will not require polling and react nearly instantaneously.

The IPA-4000 is listed for releasing of fire suppression systems. The software allows cross zones, counting zones, and timers for suppression. The system is capable of multiple release outputs across multiple hazards. In addition, the PSN-1000 may be used to extend releasing capability. The NACs may be expanded using the PSN-1000 series intelligent power supplies. Each PSN-1000 adds another 10 Amps of power, 2 additional input circuits and the IPA-4000 will support up to 31 power supplies. The system will synchronize the strobes system wide. In addition, the PSN-1000E has space to allow the installation of up to six PAD100-SLCE SLC loop expansion cards. The cards mount on a stacker bracket that allows access to all SLC circuit connections.

Technical Specifications

Dimensions	18 15/16"W x 27 5/16"H x 4 7/16"D
AC Mains	5.0 Amps @ 120 VAC 50/60 HZ 3.0 Amps @ 240 VAC 50/60 HZ
Enclosure	16 gauge cold rolled steel with removable locked door with Lexan viewing window
Battery	Standby Current-130 mA Alarm Current-220 mA • 10 Amps power for NACs, I/O, and P-Link • 3 Amps per NAC, regulated • 1 Amp per I/O circuit, regulated • Battery Charger range 8-55 Ah • Battery Charger voltage 27.3 VDC • P-Link maximum current of 1 Amp
Temperature and Humidity Range	32° to 120° (0°C to 49°C) with a maximum humidity of 93% non-condensing.
Standards	• NFPA 12, 12A, 13, 15, 16, 17, 17A, 70, 72, 92, 750, and 2001 • ANSI/UL 864 - Local (L), Remote Station (RS), Central Station (CS), Propriety (PPU), Auxiliary (AUX).Type of Service: Automatic (A), Manual (M), Water flow (WF) Sprinkler Supervisory (SS) Type of Signaling: Digital Alarm Communicator (DAC), March Time (March), Non Coded (NC), Reverse Polarity (Rev Pol), Other Technologies (OT) • IBC (International Building Code)

SLC Loop Accessories

The control panel may be connected with up to 4,064 addressable devices or modules in any combination. The SLC is not restricted by any special wire requirements and may be wired with any wire that complies with the NEC.

SLC Loop Devices

Device	Description
PAD Series-PD	Analog Photoelectric Smoke Detector is a smoke detector with a listed obscuration of 1.1 to 3.5%/foot. UL 268 7th Edition.
PAD Series-PHD	Combination Analog Photoelectric Smoke/Heat Detector – a smoke detector with a listed obscuration of 1.1 to 3.5 %/foot obscuration and a fixed temperature range of 135° to 185° F heat detector. Smoke detection compliant with UL 268 7th Edition.
PAD Series-PCD	Combination Photoelectric Smoke/Carbon Monoxide Detector. Smoke detection compliant with UL 268 7th Edition. Carbon Monoxide detection compliant with UL 2075.
PAD200-PCHD	Combination Photoelectric Smoke/Heat/Carbon Monoxide Detector. Smoke detection compliant with UL 268 7th Edition. Heat detection with a fixed temperature range of 135° to 185° F and UL 521 7th Edition compliant. Carbon Monoxide detection compliant with UL 2075.
PAD Series-HD	Analog Fixed Temperature (135° - 185°F) or Rate-of-Rise Heat Detector (software selectable).
PAD Series-DUCTR	Addressable Duct Smoke Detector with Form C Relay rate at 10Amps @ 250/120VAC or 8 Amps at 30VDC.
PAD Series-DUCT	Addressable Duct Smoke Detector.
PAD100-6DB	6” round base that is mountable to an electrical box and wired for connection to the PAD100/200 devices.
PAD100-4DB	4” round base that may be mounted to an electrical box and wired for connection to the PAD100/200 devices.
PAD100-IB	Isolator base that interrupts a short in a SLC and prevents the short from affecting protected devices on the loop and used for connection to the PAD100/200 devices.
PAD100-RB	Addressable Relay Base that contains one relay controlled by the SLC. Relay at rated at 2 amps at 30 VDC or 0.5A at 125VAC. For PAD100/200 devices only.
PAD100-SB	Addressable Sounder Base that contains an addressable sounder module which allows for configuration of local, group, and/or all call. For PAD100/200 devices only.
PAD Series-CD	Addressable CO gas detector.
PAD200-DD	Addressable photoelectric smoke detector for use in DUCT/DUCTR enclosure.
PAD300-DD	Addressable photoelectric smoke detector for use in DUCT/DUCTR enclosure or pendant mount applications.
PAD100-LFSB	Addressable Low Frequency Sounder Base that contains an addressable sounder module which allows for configuration of local, group, and/or all call. The LFSB complies with the Low Frequency Signal Requirements (520 Hz) and used for connection to the PAD100/200 devices.
PAD100-SPKB	Speaker base is a wall or ceiling mount speaker capable of 25 or 70.7 VRMS and is field selectable from 1/8W to 4W and used for connection with the PAD100/200 devices.
PAD300-6DB	6” round base which is mountable to an electrical box and wired for connection to the PAD300 devices.
PAD300-4DB	4” round base which is mountable to an electrical box and wired for connection to the to the PAD300 devices.
PAD300-IB	Isolator base that interrupts a short in a SLC and prevents the short from affecting protected devices on the loop. Used for connection to the PAD300 devices.
PAD300-RB	Addressable Relay Base that contains one relay controlled by the SLC. The Relay is rated 2 amps at 30 VDC or 0.5A at 125VAC and used for connection to the PAD300 devices
PAD300-SB	Addressable Sounder Base that contains an addressable sounder module which allows for configuration of local, group, and/or all call; and used for connection to the PAD300 devices.
PAD300-LFSB	Addressable Low Frequency Sounder Base that contains an addressable sounder module which allows for configuration of local, group, and/or all call. The LFSB complies with the Low Frequency Signal Requirements (520 Hz) and used for a connection to the PAD300 devices.

Modules

Device	Description
PAD100-MIM	Micro Input Module provides a small foot print contact module for mounting inside an enclosure.
PAD100-PSSA	Single Action Addressable Pull Station.
PAD100-PSDA	Dual Action Addressable Pull Station.
PAD100-SIM	Single Input Module is a standard contact module with an LED that mounts into a 4” square electrical box.
PAD100-DIM	Dual Input Module is a device that can monitor two distinct inputs with a single device or in a Class A mode.
PAD100-TRTI	Two Relay Two Input module provides two form C relays that are individually controlled by the control panel. Each relay is rated for 2 amps at 30VDC or 0.5 amps at 125VAC. Also provides two contact inputs.
PAD100-NAC	Notification Appliance Circuit module is an addressable remote appliance circuit controlled by the panel.
PAD100-ZM	Zone Module is used to connect conventional 2-wire smoke detectors to the system.
PAD100-IM	Module interrupts a short on the SLC and prevents the short from affecting protected devices on the loop.
PAD100-RM	Relay Module that provides one form C relay controlled by the control panel. Relay is rated for 2 amps at 30VDC or 0.5 amps at 125VAC.
PAD100-LED	Module provides a single addressable LED that is controlled by the control panel.
PAD100-SM	Speaker Module provides switching for two audio channels.
PAD100-LEDK	Addressable LED and key switch that mounts in a single gang box.
PAD100-DRTS	DUCTR Remote Test Switch that mounts in a single gang box and optionally supervised.
PAD100-OROI	One Relay One Input Module provides one form C relay and one input. The relay is rated at 2 amps at 30VDC or 0.5 amps at 125VAC.

SLC Features

The Potter protocol is a digital protocol with a proven design for reliability and noise immunity. The system does not require special cable or conductors for connection of the Signaling Line Circuit as long as the cable is compliant with NFPA 70 and NFPA 72. The system allows for Class A or Class B installations as well as "T-Taps."Each loop is capable of 127 points, with a max wiring distance of 10,000 ft.

Sensor Features

The sensors through the fire alarm control panel provide a real time status as to the condition of the system. The smoke detector sensitivity, heat detector temperature level and drift compensation are all programmable options. The system also allows for a day/night mode where the panel automatically adjusts the sensitivity depending on the time of day. To assist in the reduction of false alarms, the smoke detectors also have a maintenance warning that sends a trouble signal when a detector is dirty to the point that it can no longer maintain the programmed sensitivity.

User Interface

The fire alarm control panel has a 4 x 40 LCD display to provide information to the system status. The keypad has navigation keys to allow manipulation of the Menu on board the panel. The panel is shipped standard with the following LEDs:

- AC Power - Green
- Alarm - Red
- Earth Fault - Amber
- Supervisory - Amber
- Silenced - Amber
- Trouble - Amber
- Pre-Release - Amber
- Release - Red

The common buttons include a Silence, Reset, Acknowledge, and Drill. All of the buttons are accessible once the locked door is opened.

P-Link

The IPA-4000 has a proprietary communication protocol that communicates through a RS-485 connection to field devices. Up to 64 devices may be connected to a single P-Link connection. The P-Link includes the communication terminals and regulated 24 VDC connection for the field devices. The field devices may be any of the following:

PAD100-SLCE-Analog/Addressable loop expansion module (maximum of 31 per IPA-4000)

RA-6075R – 2 x 16 LCD annunciator with a key pad in a locked metal enclosure.

RA-6500R(F) – 4 x 40 LCD annunciator with a key pad in a locked metal enclosure. Flush mount version available.

LED-16(F) – 16 LED annunciator with common indicators in a locked metal enclosure. Flush mount version available.

PSN-1000(E) – 10 amp, remote intelligent power supply with 6 NACs, 2 Inputs and a P-Link repeater. This panel is listed in conjunction with the IPA-4000 as releasing circuits.

CA-6500 – Class A convertor that converts the SLC, NACs and P-Link connection

UD-2000 – UL listed, Dual line telephone alarm communicator

DRV-50 – LED driver expander, used to connect up to 50 LEDs in a graphic display

FCB-1000 – Fire communication bridge, provides remote mounting of the Ethernet connection

FIB-1000 – Fiber interface module, used to extend P-Link to multi-mode fiber (2 required)

RLY-5 – Relay module, provides 5 form C relay contacts rated at 3.0 amps 24VDC/125AC

SPG-1000 – Serial parallel gateway, allows for the connection to a serial or parallel printer

The **FIB-1000**, **FCB-1000** and the **SPG-1000** may be installed in the stacker bracket or ordered with the optional rack mount enclosure.

MC-1000 Multi-Connect allows up to sixty-three IPA series panels to share a single reporting technology.

IDC-6 – Initiating device circuit provides 6 programmable inputs

AE-2 – Two card expansion cabinet

AE-8 – Eight card expansion cabinet

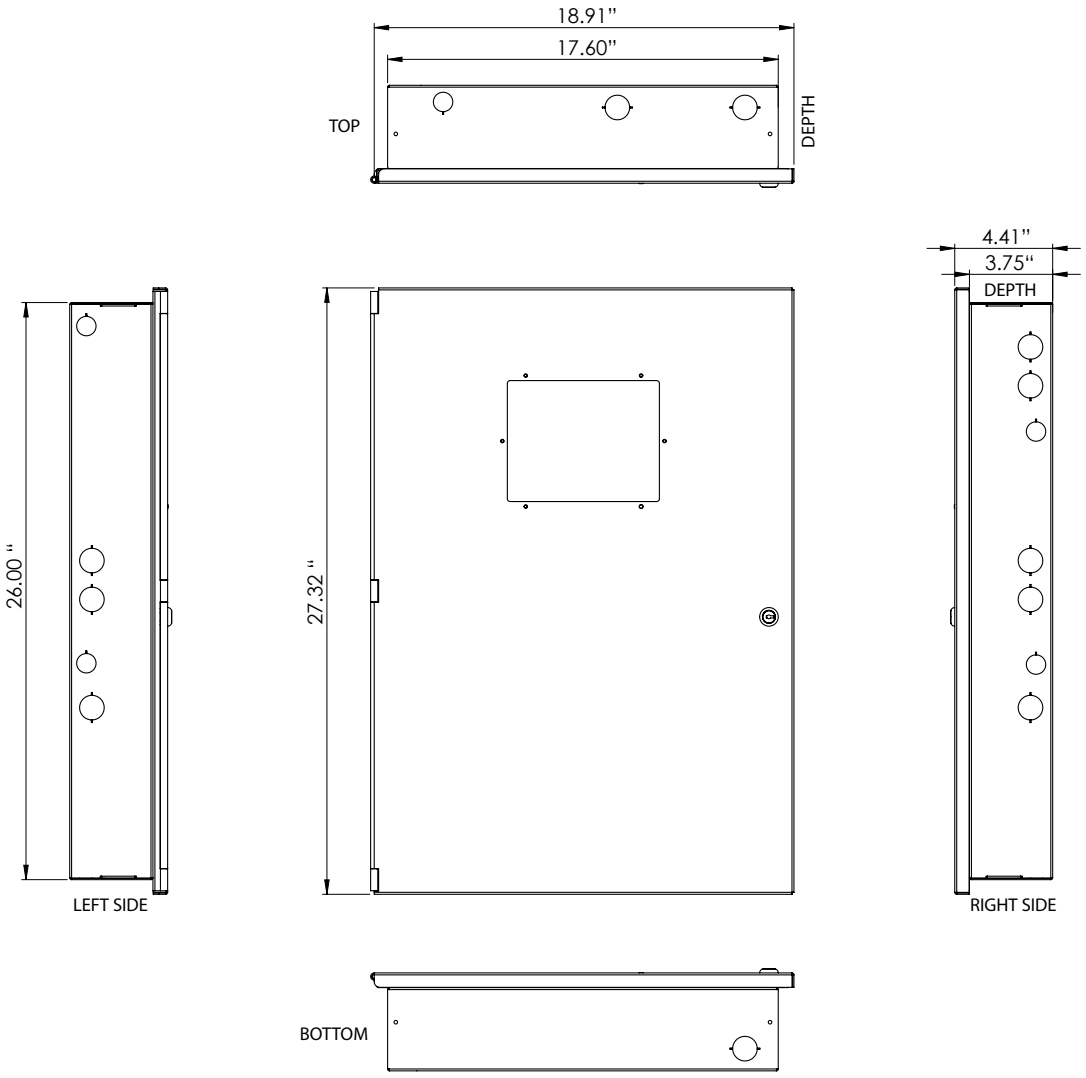
AE-14 – Fourteen card expansion cabinet

Ethernet/I.P. Connection

The IPA-4000 is shipped standard with an Ethernet connection. This connection is the programming port and may be connected to a building Wide Area Network (WAN) or Local Area Network (LAN). Once connected to the Internet, the panel may be selectively programmed to e-mail alarm conditions, trouble conditions, supervisory conditions, test, Event History and detector status. An e-mail may be sent to the panel and the panel will e-mail the event history, detector status, configuration file or server status to an authorized E-mail account. In addition, reminders may be set to send an e-mail for service, testing or other conditions.

In addition, the Ethernet connection is UL listed as an IP communicator. The IP communicator is listed to report to the UL listed Sur-Gard III IP receiver. The IP communicator replaces the traditional less reliable alarm communicator transmitter that utilized telephone lines. The IP communicator is an active method of connection and communication to the monitoring station.

Dimensions



Compatible Releasing Devices

Note: For releasing applications please order the Potter EOLD (3005012) for circuits connected to a releasing solenoid or actuator.

Brand	Description
Skinner	73218BN4UNLVN0C112CZ 73212BN4TNLVN0C322C2
Victaulic	753-E Series
Mini Max	MX123 & MX200 w/ 8876677 & 889323
Viking	11591, 11601, 11602, 13843, & 13844
TLX	PA0036

Ordering Information

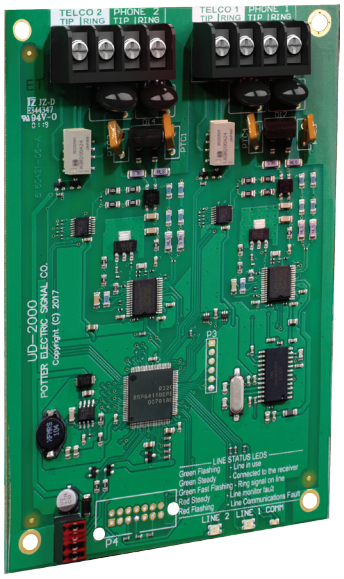
Model	Description	Stock No.
IPA-4000	Fire Alarm Releasing Control Panel	3992717
	Replacement Board IPA-4000	3992740

UD-2000

Digital Alarm Communicator

Features

- Allows for communication to Monitoring Station
- Communicates using SIA-DCS or Ademco Contact ID Protocols
- For use with IPA, AFC, and ARC series Addressable Panels and PFC-4064 Conventional Panel
- Status LEDs indicate operation of DACT card
- Installs with ease behind main panel LCD display via User Interface bracket
- Device address is set internally to address 1
- Includes two (2) RJ45 phone cords



Description

The UD-2000 Digital Alarm Communicator Transmitter (DACT) provides for up to two (2) phone lines for communication to a monitoring station. The UD-2000 communicates using the SIA-DCS or Ademco Contact ID 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 DACT is provided with terminal blocks for each phone line and two RJ45 cords. In order for the DACT to work properly, it must be installed on a plain old telephone service (POTS) line or equivalent deemed by the authority having jurisdiction. The DACT must be installed before any other equipment to ensure it can seize the phone line.

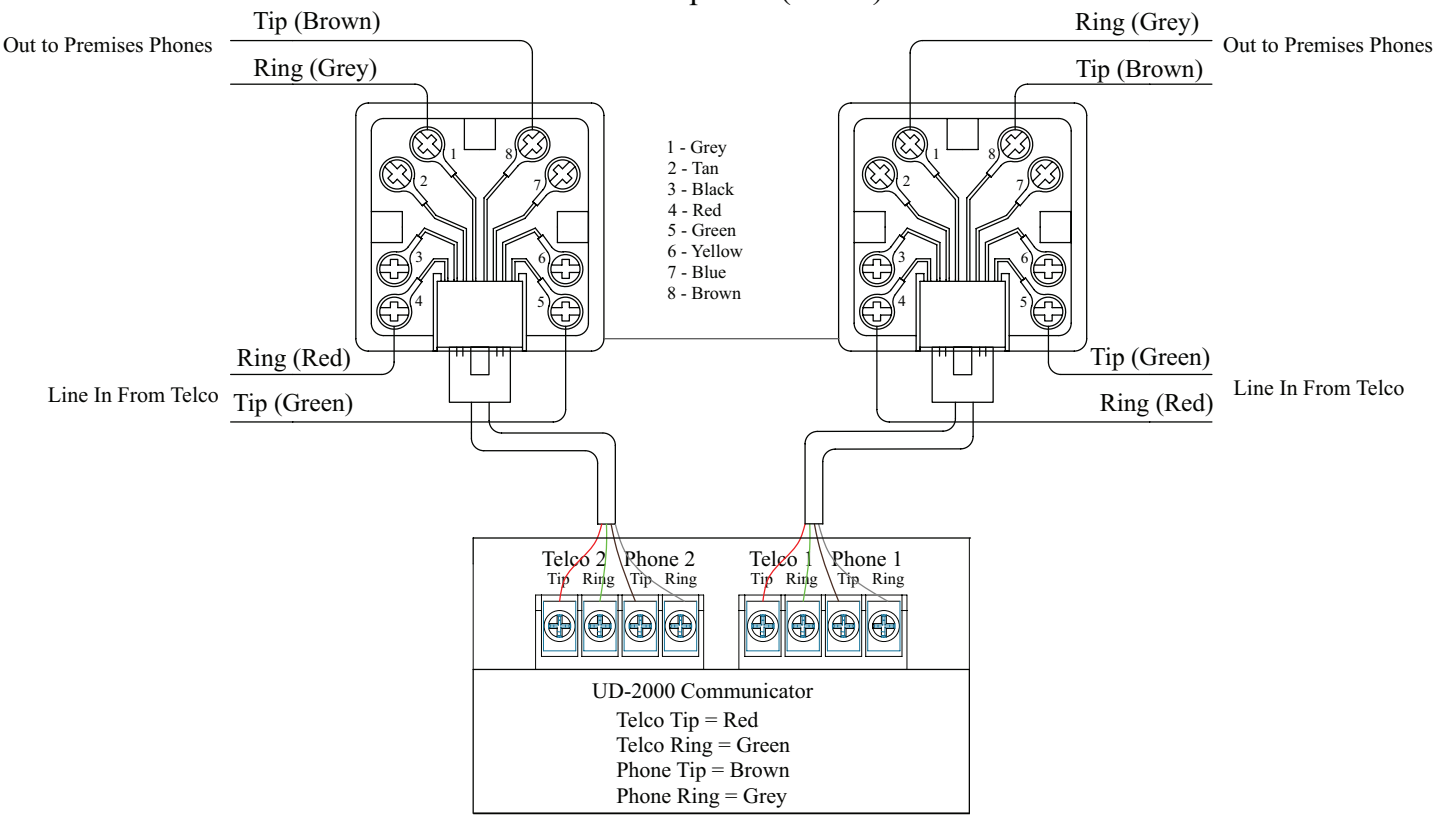
Phone lines are high voltage and should be run in a separate conduit from other circuits. The wire conductors connecting the DACT to the phone system should be 26 AWG or larger.

Technical Specifications

Operating Voltage	22.0-24.0V
Standby Current	16mA
Alarm Current	23mA
Max UD-2000s per panel	1
Dimensions	4”W * 6”H * 1-5/8”D
Operating Tempuratures	0°C - 49°C (32°F- 120°F)
Operating Humidity Range	10% - 93% @ 30°C (86°F) (non-condensing)
Mounting Options	In FACP Behind keypad
Shipping Weight	0.47 lbs

RJ31X Phone Jack to UD-2000

Plain Old Telephone (POTS) lines



NOTICE

Install in accordance with compatible fire alarm control panel installation manual

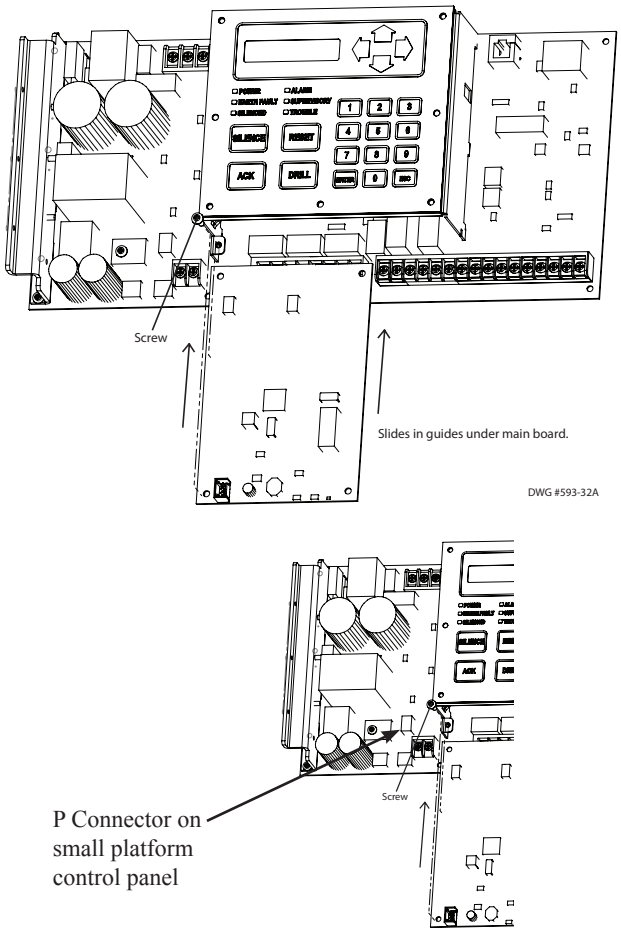
Installation

The UD-2000 DACT is connected to the control panel using the provided four-wire cable connection (P/N 5210514) between P4 and UD-2000 P1. The connection is power limited and supervised.

1. Power system down.
2. Slide the UD-2000 into the card guides located under the User Interface bracket.
3. Secure the UD-2000 to the User Interface bracket using the provided #6-32x3/8" screw
4. Install the provided four-wire conductor jumper between UD-2000 P1 and P4.

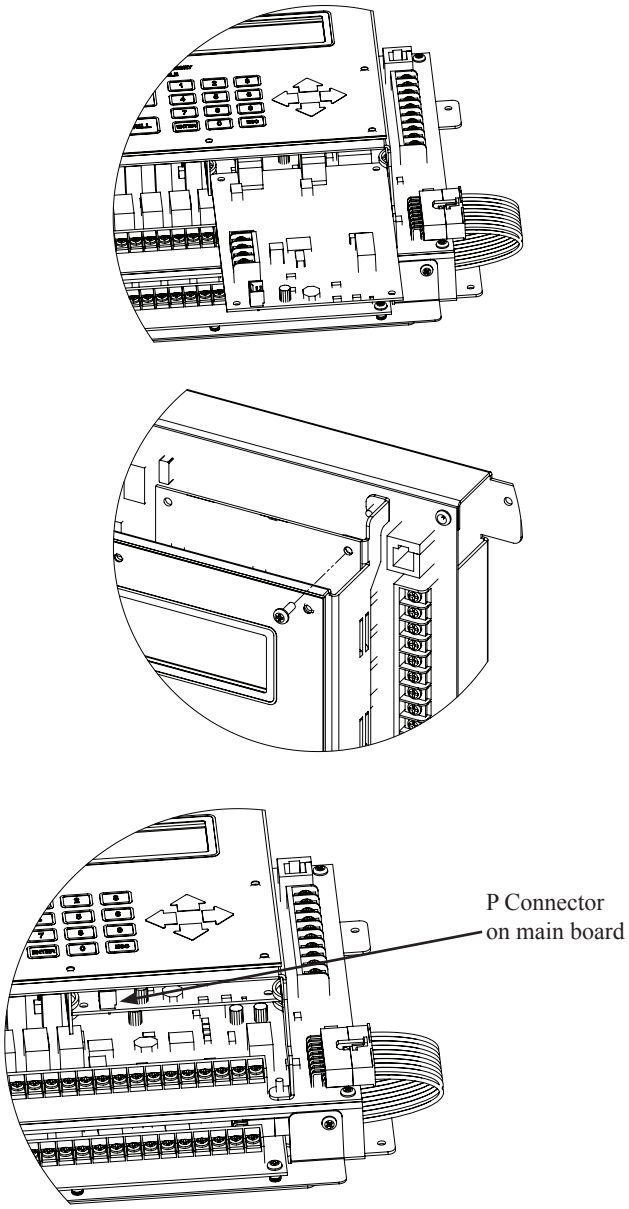
UD-2000 DACT Installation on Small Platform Panel

Fig 1



UD-2000 DACT Installation on Large Platform Panel

Fig 2



Ordering Information

Model	Description	Stock No.
UD-2000	Digital Alarm Communicator	3992769

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PSN Series
Power Supplies

Features

- PSN-64 has 6 amps regulated with 4 outputs
- PSN-106 has 10 amps regulated with 6 outputs
- May be configured as up to three class “A” Style “Z” notification circuits
- Two Trouble relays (5A at 30VDC) General System Trouble (programmable for AC delay) Low AC Trouble with optional delay settings
- Diagnostic LED’s Status LED’s for Active NAC and NAC Trouble conditions.
- Quadrasync feature synchronizes horns/strobes from AMSECO, Gentex, Cooper-Wheelock and System Sensor
- May be connected to any manufacturers UL864 listed FACP/ Unit for activation and supervision
- Configurable output circuits (DIP switch sets options for each circuit)
- Reference EOL allows 2K – 27K EOL value to be used
- Pass Thru mode allows the outputs to match the input signal from FACP

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Description

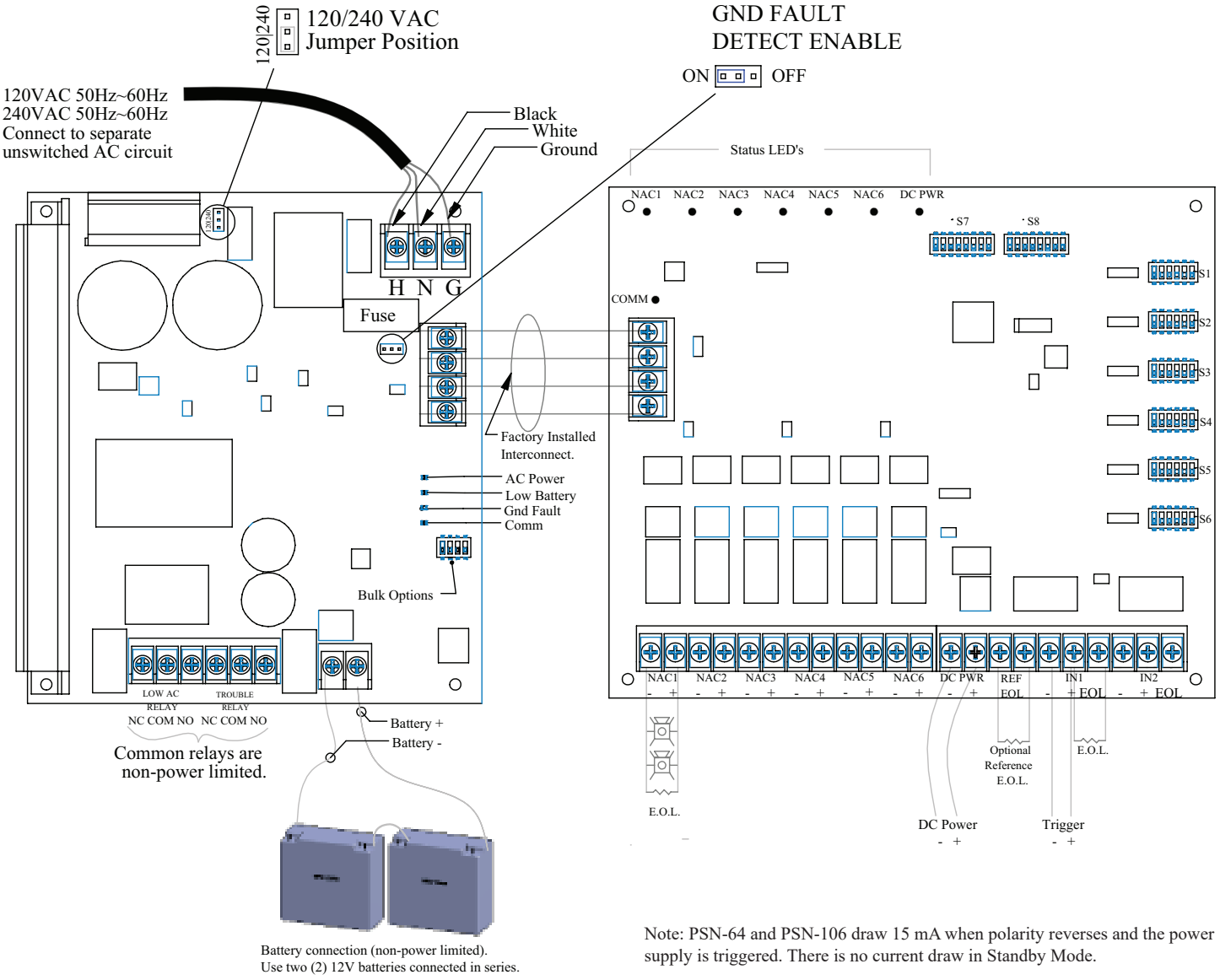
The PSN series of notification power supplies offers reliable notification power with unprecedented versatility. The power supplies offer either 6 or 10 amps of continuous power through 4 or 6 outputs respectively. Each output is rated at 3 amps and it may be used continuously without any derating. The power supply operates on either 120 VAC or 220 VAC power input and has a regulated 24 VDC output. In addition, the power supply can charge up to 55 AH batteries and leads the industry in housing up to 18 AH batteries. The cabinet is constructed out of 18 gauge cold rolled steel and has a durable red powder coat finish. In addition, a key lock is provided for securing the door. Ample electrical knockouts are provided on the sides and the top, allowing the installer options for running wires and maintaining the correct separations.

The power supply offers an industry leading Quadrasync function that allows for multiple strobe circuits of different brands to be synchronized to flash at the same time. The power supply can have four different brands each connected to its own circuit and all the strobes flash together. Each output can independently be configured to provide one of four synchronizations or steady power. This provides unequivocal flexibility in new and retrofit installations. The power supply can be configured to synchronize AMSECO®, Gentex®, Wheelock® and System Sensor® strobe devices. Each output can be configured to the same sync protocol or set independently. In addition, the power supply has an input Pass Thru mode which allows the outputs to follow the input signal from a non-supported synchronization protocol. The power supply will recognize the type of input being supplied and pass this through to the outputs with the same pattern. This input pass through can be selected on each output independently. The power supply contains simple dipswitch programming and LED indicators providing the installer the ability to correct any possible faults. A Trouble Memory is provided to allow an installer to review past troubles and make the necessary repairs. Each output has an LED to pinpoint the exact circuit where a trouble may have occurred. Relays are provided for monitoring the general system and AC failure. Each output and be independently configured for various applications and installations. Each output can be independently configured for Class A or Class B operation, constant power, ANSI Temporal Code 3, Single, Multiple or Combo Inputs or Door Holder Power.

Technical Specifications

Size (H x W x D)	16 1/8” W x 16 ¾” H x 3 ½” D
Enclosure	Eighteen (18) gauge sheet steel with hinged, locked door
Power Input	120VAC @ 60Hz 220/240VAC @ 50Hz 5.1 Amps @ 120 VAC 2.5 Amps @ 240 VAC
Current	75mA Standby & Alarm (no external load)
Input Voltage Trigger	15mA @ 8 – 33 VDC
Terminals	18-12 AWG
Temperature	32° F to 120°F (0°C to 49°C) with a maximum humidity of 93% non-condensing
NAC Output	3 Amp max per NAC, Regulated
Battery Charging	27.3 @ 1A, can support 7 – 55Ah batteries

PSN-106 Wiring Diagram



Battery connection (non-power limited).
Use two (2) 12V batteries connected in series.

Note: PSN-64 and PSN-106 draw 15 mA when polarity reverses and the power supply is triggered. There is no current draw in Standby Mode.

Ordering Information

Model	Description	Stock No.
PSN-106	10 A Power Supply, 6 NAC Circuits, Red Enclosure	3006437
PSN-106B	10 A Power Supply, 6 NAC Circuits, Black Enclosure	3006446
PSN-64	6 A Power Supply, 4 NAC Circuits, Red Enclosure	3006436

Engineering Specifications

The contractor shall supply and install the Potter PSN power supply. The power supply shall operate on either 120 or 240 VAC input. The panel shall be capable of continuous load power without any degradation to the main supply or the distribution board. The cabinet shall be capable of housing up to 18AH batteries and the panel shall be capable of charging up to 55 AH batteries in an external cabinet.

The panel shall have dip switches for simplistic configuration of the system and LEDs to provide visual indication to the installer of the status of the system. The dip switches shall allow for AC power delay selection, Class A/B operation per output, Door Holder Power options, constant auxiliary power, trigger input type, ANSI Code 3 Temporal Code, Pass Thru (input tracking), AMSECO® sync, Gentex® Sync, System Sensor® Sync or Wheelock® sync. The LEDs shall provide indication of communication between the power supply and distribution circuit assemblies. The LEDs shall have distinct flash patterns to provide further indication of the troubles present. The panel shall have selectable Trouble Memory to provide the installer an indication that a past trouble existed on a circuit for diagnostic purposes.

Each output of the power supply shall be capable of 3 amps of continuous power without degradation overtime. The power supply shall provide for multiple circuits of strobe appliances. The power supply shall synchronize the flashes of any of the above listed strobe appliances on a per circuit basis. Up to four different strobe circuits may be connected and all the strobes shall flash in unison as required by UL 864. In addition to this Quadrasync feature, the panel shall allow any of the four above mentioned sync patterns as an input and pass this signal through and synchronize the outputs to match the input flash pattern.

PAD100-DIM

Dual Input Module

Features

- Single module with dual contact monitoring inputs
- Two (2) Class B or one (1) Class A monitoring inputs
- SLC Class A, Class X & Class B
- Mounts in a standard 4” or double gang box
- Wiring terminals accessible when mounted in box
- All wiring terminals accept 22 to 12 AWG
- Product includes a 5 year warranty
- UUKL Listed for Smoke Control

NOTE: This addressable module does not support 2-wire smoke detectors.

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Description

The PAD100-DIM uses one (1) SLC loop address when monitoring two (2) Class B circuits or one (1) Class A circuit. The module mounts on either a 4” square or double gang box. The module is capable of monitoring two (2) separate class B circuits making it ideal for monitoring sprinkler waterflow and valve tamper switches when they are located in the same proximity. The PAD100-DIM includes one red LED to indicate the module’s status. In normal condition, the LED flashes when the device is being polled by the control panel. When an input is activated, the LED will flash at a fast rate.

Application

The PAD100-DIM is compatible with Potter’s IPA and AFC/ARC series addressable fire alarm control panels. The PAD100-DIM is an interface module used to monitor dry contact devices such as sprinkler waterflow, valve tamper switches, or conventional pull stations. The module is capable of monitoring two separate Class B or one Class A circuits.

Setting the Address

Each addressable SLC device must be assigned an address. The address is set using the DIP switch located on the PAD100-DIM. When the PAD100- DIM is used to monitor two individual Class B circuits a single device address is assigned, each input is then identified as a sub-point of the module address. For example, if the address number is assigned as “8”, the first input will be “8.1” and the second input will be “8.2”.

Before connecting a device to the SLC loop, take the following precautions to prevent potential damage to the panel or device:

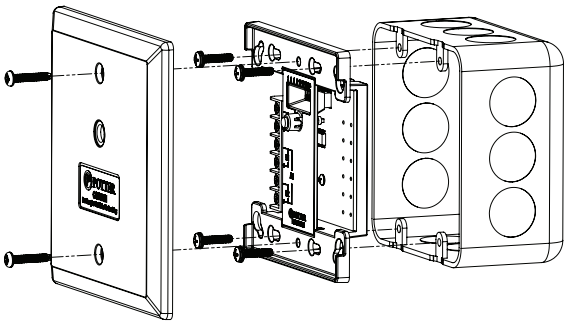
1. Power to the device is removed.
2. Field wiring is correctly installed.
3. Field wiring has no open or short circuits.

Technical Specifications

Operating Voltage	24.0V
Max SLC Standby Current	240µA
Max SLC Alarm Current	240µA
Max Wiring Resistance of IDC	100 Ω
Max Wiring Capacitance of IDC	1µF
EOL Resistor	5.1K Ω
Operating Temperature Range	32 to 120ºF (0 to 49ºC)
Operating Humidity Range	0 to 93% (non-condensing)
Max no. of Module Per Loop	127 units
Dimensions	4.17” (106mm)L × 4.17” (106mm)W × 1.14” (29mm)D
Mounting Options	Standard 4” Square or Double Gang Box
Shipping Weight	0.6 lbs

Installation Using Compatible Electrical Box

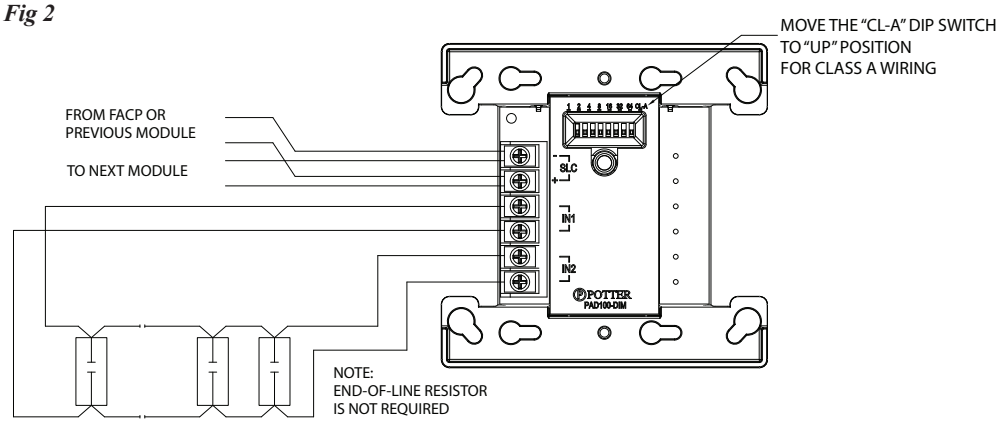
Fig 1



Wiring Diagrams

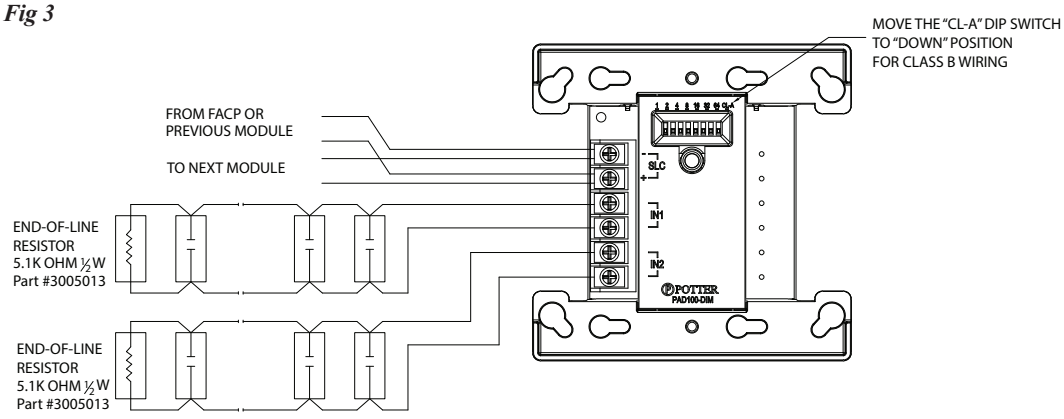
PAD100-DIM With One Class A Circuit

Fig 2



PAD100-DIM With Two Class B Circuits

Fig 3



Ordering Information

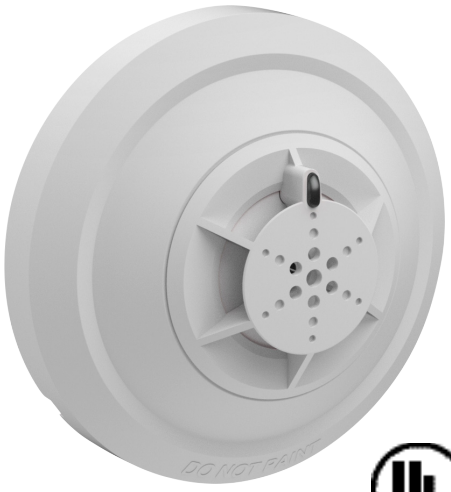
Model	Description	Stock No.
PAD100-DIM	Dual Input Module	3992703

PAD300-HD

Heat Detector

Features

- Selectable Rate of Rise and/or Fixed Heat Detector
- Low Profile
- Reliable Detection Technology
- LED Alarm Indicator
- Ambient Temperature Listing of 32°F to 150°F
- Simple DIP Switch Address Setting, No Programming Tool Required
- Magnetic Test Switch
- Product includes 5-year warranty
- UUKL Listed for Smoke Control



0328-0538

Description

The PAD300-HD is a listed analog addressable rate of rise and/or fixed temperature heat detector compatible with any fire alarm control panel that has the Potter Addressable Device (PAD) protocol. The heat sensing portion utilizes a proven thermistor for accurate and reliable heat detection. The detector and base (not included) are made of a durable plastic in an off-white to blend in with the ceiling.

The PAD300-HD is UL listed with a selectable fixed temperature point from 135° to 185° Fahrenheit and can be used for rate of rise applications. See detector spacing limitations below. This flexibility allows the installer to cover a wide variety of applications with a single unit.

The PAD300-HD and the control panel communicate over a proven and robust digital communication path and the system analyzes the information at the particular device. The total polling speed is less than five (5) seconds, well under the UL requirements.

The detector is compatible with any of the PAD300 series detector bases and simply twists on. The PAD300-HD is addressed using DIP switches in the rear of the detector and can be easily programmed in the field without special tools.

Setting the Address

Each addressable device on the SLC loop must have a unique address from 1 to 127 to function properly. The address is set using DIP switches.

Before connecting a device to the SLC loop, take the following precautions to prevent potential damage to SLC or device. Verify the following:

1. Power to the device is removed.
2. Field wiring is correctly installed.
3. Field wiring has no open or short circuits.

Technical Specifications

Operating Voltage	24 VDC
Detector Current Draw	300 µA
Alarm Indicator	1 LED
Alarm Set-point Range	135°F to 185°F (57°C to 85°C)
Rate of Rise Detection (Selectable Option)	15°F/min. (8.3°C/min.)
Installation Temperature Range	32°F to 150°F (0°C to 66°C)
Operating Relative Humidity Range	0% to 93% (Non-condensing)
Start-up Time	Max. 1 sec.
Maximum Number of Addresses Per Loop	127
Maximum Number of Lighted Indicators in Alarm Per Loop	30
Color	Eggshell White
Weight (Without Base)	68 g (2.4 oz)
Dimensions (Without Base)	Height: 1.5 in (38 mm) Diameter 3.93 in (100mm)

PAD300-HD

Heat Detector

Operation

The PAD300-HD is an analog addressable detector that uses one address on the Signaling Line Circuit (SLC) of a compatible fire alarm control panel. The unit communicates with the control panel as it is polled. The LED flashes every time the unit is polled and it will flash at a fast rate if the unit is in an active status. The polling LED can be turned off if desired for less conspicuous operation.

The PAD300-HD with the PAD300-4DB or PAD300-6DB has a low profile to blend into the surrounding environment. The system has a maximum of 30 LEDs that can be turned on simultaneously. If the system already has 30 LEDs on, the PAD300-HD will operate even though the LED will not illuminate.

Spacing

The ANSI/UL listed spacing limitations of PAD300-HD smooth ceiling are dependent on alarm set point.

Alarm Set-Point	Rate of Rise Spacing	Fixed Temperature Spacing
135°F to 185°F (57°C to 85°C)	Max. 70 ft.	Max. 70 ft.

Compatible Bases

All bases will mount on a single gang, 3-1/2” octagon, 3-1/2” square, double gang, 4” octagon, 4” square, 50mm c/c, 60mm c/c and 70mm c/c boxes.

Device	Description	Stock No.
PAD300-4DB	4” Detector Base	3992781
PAD300-6DB	6” Detector Base	3992782
PAD300-IB	6” Base with an Isolator Module Included	3992783
PAD300-RB	6” Base with One Form-C Relay Contact 2A @ 30VDC, 0.5A @ 125VAC	3992784
PAD300-SB	6" Base with sounder module included. Sound pattern is provided from external source	3992785
PAD300-LFSB	6” Base with 520Hz sounder module included. Sound pattern is provided from external source	3992786

Ordering Information

Model	Description	Stock No.
PAD300-HD	Heat Detector	3992776

PAD300-PD

Photoelectric Smoke Detector

Features

- Low profile, less than 2 inches with the base
- Wide selectable sensitivity range of 1.1 to 3.5%/foot
- Detector communicates sensitivity to control panel
- UL listed smoke calibration and sensitivity
- Optional locking tab to prevent unwanted removal
- Simple DIP switch address setting, no programming tool required
- Magnetic test switch
- LED alarm indicator
- Product includes 5-year warranty
- UUKL Listed for Smoke Control
- UL268 7th edition compliant

0328-0541

Description

The Photoelectric Smoke Detector is a listed Analog Addressable smoke detector compatible with fire alarm control panels that utilize the Potter Addressable Device (PAD) protocol. The PAD300-PD is a low profile smoke detector with a wide sensitivity range. The detector and base are made of a durable plastic in an off-white color to blend in with the ceiling.

The PAD300-PD has a sensitivity range of 1.1 to 3.5 % per foot and is UL listed. The PAD300-PD features drift compensation and has built in dirty detector warning as well. The PAD300-PD and the control panel communicate over a proven and robust digital communication path and the system analyzes the information at the particular device. The total polling speed is less than five (5) seconds, well under the UL requirements.

The detector is compatible with any of the PAD300 series detector bases and simply twists on. The PAD300-PD is addressed using DIP switches in the rear of the detector and can be easily programmed in the field without special tools.

Setting the Address

Each addressable device on the SLC loop must have a unique address from 1 to 127 to function properly. The address is set using DIP switches.

Before connecting a device to the SLC loop, take the following precautions to prevent potential damage to SLC or device. Verify the following:

1. Power to the device is removed.
2. Field wiring is correctly installed.
3. Field wiring has no open or short circuits.

Technical Specifications

Operating Voltage	24 VDC
Detector Current Draw	300 µA
Alarm Indicator	1 LED
Alarm Set-point Range	1.1 to 3.5%/ft (3.6 to 11%/m)
Installation Temperature Range	32 to 120 ° F (0 to 49 ° C)
Operating Relative Humidity range	0% to 93% (Non-condensing)
Start-up Time	Max. 1 sec.
Maximum Number of Addresses Per Loop	127
Maximum Number of Lighted Indicators in Alarm Per Loop	30
Color	Eggshell White
Weight (without base)	91g (3.2oz)
Dimensions (without base)	Height: 1.42 in (36mm) Diameter: 3.93 in (100 mm)

Air Velocity Ratings

The PAD300-PD has an Open Area of Protection air velocity rating of 0 to 300 feet per minute.

The system has a maximum of 30 LEDs that can be turned on simultaneously. If the system already has 30 LEDs on, the PAD300-PD will operate even though the LED may not illuminate.

Operation

The PAD300-PD is an analog addressable detector that uses one address on the Signaling Line Circuit (SLC) of a compatible fire alarm control panel. The unit communicates with the control panel as it is polled. The LEDs flash every time the unit is polled and they will flash at a fast rate if the unit is in an active status. The polling LED can be turned off if desired for less conspicuous operation.

The PAD300-PD with the PAD300-4DB or PAD300-6DB has a low profile of less than two (2) inches to blend into the surrounding environment. The detector includes an insect screen to prevent foreign objects from reaching the chamber and can be cleaned to restore operation of a dirty detector.

Detector Sensitivity

The PAD300-PD and the compatible control panel work in tandem to keep the sensitivity consistent. As the detector is installed over time, the detector compensates for the dirt in the unit until it is out of range. At that time, the panel will indicate a dirty detector. The detector will then have to be cleaned or replaced.

The PAD300-PD can be programmed to provide a maintenance alert prior to reaching the dirty detector level which will allow for intervention prior to the detector going into trouble. This allows for detector replacement or cleaning prior to a nuisance trouble occurs.

NOTE: As required by NFPA, do not install the detectors until all construction is complete and the work area has been thoroughly cleaned. If the detectors have been installed in a construction environment, they should be cleaned or replaced before the system is placed into service.

Spacing

The PAD300-PD is UL listed with a recommended maximum spacing of 30 feet. Refer to NFPA 72 for specific information regarding detector spacing, placement and special applications.

Compatible Bases

All bases will mount on a single gang, 3-1/2” octagon, 3-1/2” square, double gang, 4” octagon, 4” square, 50mm c/c, 60mm c/c and 70mm c/c boxes.

Device	Description	Stock No.
PAD300-4DB	4” Detector Base	3992781
PAD300-6DB	6” Detector Base	3992782
PAD300-IB	6” base with an isolator module included	3992783
PAD300-RB	6” base with one Form-C relay contact. 2A @ 30VDC, 0.5A @ 125VAC	3992784
PAD300-SB	6" base with sounder module included. Sound pattern is provided from external source	3992785
PAD300-LFSB	6” base with 520Hz sounder module included. Sound pattern is provided from external source	3992786

Ordering Information

Model	Description	Stock No.
PAD300-PD	Photoelectric Smoke Detector	3992775

PULL STATION SERIES

DIE-CAST METAL MANUAL PULL STATIONS

- UL and cUL Listed, FM Approved, CSFM Listed, MEA Approved, ADA Compliant
- Single or Dual Action
- Terminal connectors
- 10 Amp Snap Action Switch
- Gold plated SPST contacts
- Optional auxiliary contacts
- Mounts on standard single gangbox
- Surface backboxes available
- High-gloss red enamel finish
- Glass breakrod
- Made in the U.S.A.

Description

The Potter Pull Station Series offers a complete line of die-cast pull stations for a variety of applications focusing mainly on fire alarm systems. The pull stations are available in single or dual action models. All of the pull stations have a 10-amp snap action switch and a dedicated terminal block for the ease of wire connections. All of the metal is completely coated to inhibit corrosion and provide for a uniform and quality finish.

The standard models have a hex key reset, however a key reset is also available. The models are available with shallow and deep surface mount back boxes and as a weatherproof version.

Operation

The Potter single action series of pull stations operate by pulling the white operating handle straight down and the handle will lock into place. The dual action stations require the lifting of the front cover and then pulling the white operating handle straight down. The stations are reset by opening the front and placing the handle in the normal position.

Engineering Specifications

The contractor shall furnish and install the Potter series of pull stations as indicated. The pull station shall be die cast construction with a "T" type pull handle that is ADA compliant. Single action pull stations shall be a P32-1T. Dual action pull stations shall be the Potter P32-1T-LP. Any manual pull station installed in an outdoor or wet location shall be a RMS-1T-WP weather proof unit. The contact shall be a single pole, single throw switch rated at 1 amp 30V DC/125V AC. The device shall have a terminal block for ease of wiring. Once activated, the pull station shall be reset by opening the front cover. Opening of the cover in a normal state shall initiate an alarm.

Specifications

Switch Rating: 1 Amp @ 30 VDC
10 Amps @ 125 VAC
Pull Station Dimensions: 4-3/4" H x 3-1/4" W x 7/8" D
Color: Red with raised white letters, white pull bar with raised red letters

For special application manual stations see bulletin #8910014.
For explosion proof manual stations see bulletin #8880014.

Ordering Information

Type	Model Number	Stock Number	Contact Type
Single Action	P32-1T	1000447	SPST
	RMS-2T	1000477	DPST
	RMS-6T	1000478	DPDT
	RMS-1T-KL	1000451	SPST
	RMS-1T-KO	1000450	SPST, key operated, no pull
Weather Proof	RMS-1T-WP	1000401	SPST
Dual Action	P32-1T-LP	1000476	
Weather Proof Dual Action	RMS-1T-WP-LP	1000403	
Accessories			Notes
Dual Action	RMS-LP	1000480	Converts single action to dual action
Back Box	P32-BB	1000444	Surface mount back box
Back Box	P32-DBB	1000445	Deep surface mount back box
Glass Rods	RMS-GB	1000470	Replacement glass rods (10 per pkg)

S/HS-WP Series

Outdoor Strobes and Horn/Strobes

Features

- Fixed 75cd strobe
- Includes the WPBB surface-mount (standard) or WPLPBB Low Profile (LP) enclosure
- WPBB/LP made of clear Lexan® - provides maximum visibility and reliability, allowing full 75cd output
- Super-Slide® Bracket – Ease of supervision testing
- Checkmate® - Instant voltage verification
- Synchronize strobe and/or horn with AVSM module
- Switch selection for high/low dBA
- Switch for chime, whoop, mechanical, and 2400Hz tone
- Input terminals accept 18 to 12 AWG
- Switch for continuous or temporal 3 tone (not available on whoop)
- Tamperproof re-entrant grill
- 5 year warranty

LP Version **Standard**

SIGNALING UL LISTED

S3247

Application

The S/HS-WP Series Outdoor Signals are wall mount, low profile strobes and horn/strobes that offer dependable audible and visual alarms for warning and emergency notification in outdoor locations.

Description

The S/HS-WP Series Outdoor Signals are 24VDC strobes and horn/strobes equipped with a fixed 75 candela strobe.

This series of outdoor signals are available in two different versions. The standard version includes a surface-mount back box (WPBB) to install directly on a wall. The Low Profile (LP) versions includes a low profile back box (WPLPBB) designed to be installed on a flush-mounted electrical box. The weatherproof enclosure is made of clear Lexan® which provides maximum visibility and reliability for effective visible signaling, allowing full 75cd output.

The S/HS-WP series strobe has a minimal operating current and a minimum flash rate of 1Hz regardless of input voltage. The strobe is synchronized using Gentex sync. protocol or the AVSM Sync. Module.

The S/HS-WP Series is equipped with a universal 4” mounting bracket which incorporates the popular Super-Slide® feature that allows the installer to easily pre-wire the system and test for supervision. The product also features a locking mechanism that secures the signal to the bracket without showing any screws and the Checkmate® - Instant Voltage Verification Feature which allows the installer to check the voltage drop, current draw, and match against the blue print.

Product Listings

- ANSI/UL 464 and 1638
- Complies with American with Disabilities Act (ADA)
- Complies with IBC / IFC / IRC

Technical Specifications

Operating Voltage	Nominal 24VDC (16-33VDC)
Operating Temperature	-31°F - 150°F (-35° - 66°C)
Dimensions	LP Version - 5.75” H x 4.75” W x 3.25” D Standard - 5.75” H x 4.75” W x 4.18”D
Wiring Connections	Terminals accept 18 - 12 AWG
Mounting	LP Version – Single gang, double gang, or 4” square back box Standard Version - Surface mount back box included
Shipping Weight	2.05 lbs.

S-24-WP, 75 Candela, Outdoor Strobe Includes Standard or LP Enclosure			
Model Number	Stock Number	Body Color	WP Enclosure
S-24WR-WP	4890050	Red	Standard
S-24WW-WP	4890051	Off-White	Standard
S-24PWR-WP	4890052	Red-Plain	Standard
S-24PWW-WP	4890053	Off-White-Plain	Standard
SLP-24WR-WP	4890054	Red	Low Profile
SLP-24WW-WP	4890055	Off-White	Low Profile
SLP-24PWR-WP	4890056	Red-Plain	Low Profile
SLP-24PWW-WP	4890057	Off-White-Plain	Low Profile

Model Designations

"W" = Wall Mount

"R" = Red Face Plate

"W"=Off - White Face Plate

"P"= Plain (Note: Plain units are non-returnable)

"LP"= Low Profile (WPLPBB Enclosure)

Strobe Current Ratings	
Candela	75 cd
24 VDC	112 mA
UL Max	170 mA

NOTE: For unfiltered FWR ratings, see installation manual.

HS-24-WP Series, 75 Candela, Outdoor Horn /Strobe Includes Standard or LP Enclosure					
Model Number	Stock Number	Body Color	Reverberant dBA at 10', per ANSI/UL 464	In Anechoic Room dBA at 10'	WP Enclosure
HS-24WR-WP	4890060	Red	70-82	100	Standard
HS-24WW-WP	4890061	Off-White	70-82	100	Standard
HS-24PWR-WP	4890062	Red-Plain	70-82	100	Standard
HS-24PWW-WP	4890063	Off-White-Plain	70-82	100	Standard
HSLP-24WR	4890064	Red	70-82	100	Low Profile
HSLP-24WW	4890065	Off-White	70-82	100	Low Profile
HSLP-24PWR	4890066	Red-Plain	70-82	100	Low Profile
HSLP-24PWW	4890067	Off-White-Plain	70-82	100	Low Profile

Horn Decibel and Current Ratings			
Horn Setting	Minimum dBA at 10', Per UL 464 (HIGH)	Minimum dBA at 10', Per UL 464 (LOW)	Regulated 24VDC Max. Operating Current, at High Setting (mA)
Temporal 3 2400Hz	78	71*	28
Temporal 3 Mechanical	76	70*	25
Temporal 3 Chime	70*	66*	15
Continuous 2400Hz	81	74*	28
Continuous Mechanical	80	72*	25
Continuous Chime	70*	66*	15
Whoop	82	69*	56

*Operating the horn in this mode at this voltage will result in not meeting the minimum ANSI/UL 464 reverberant sound level required for public mode fire protection service. These settings are acceptable only for private mode fire alarm use. Use the high dBA setting for public mode application (not applicable when using the chime tone. The chime tone is always private mode).

Tone Switch Locations

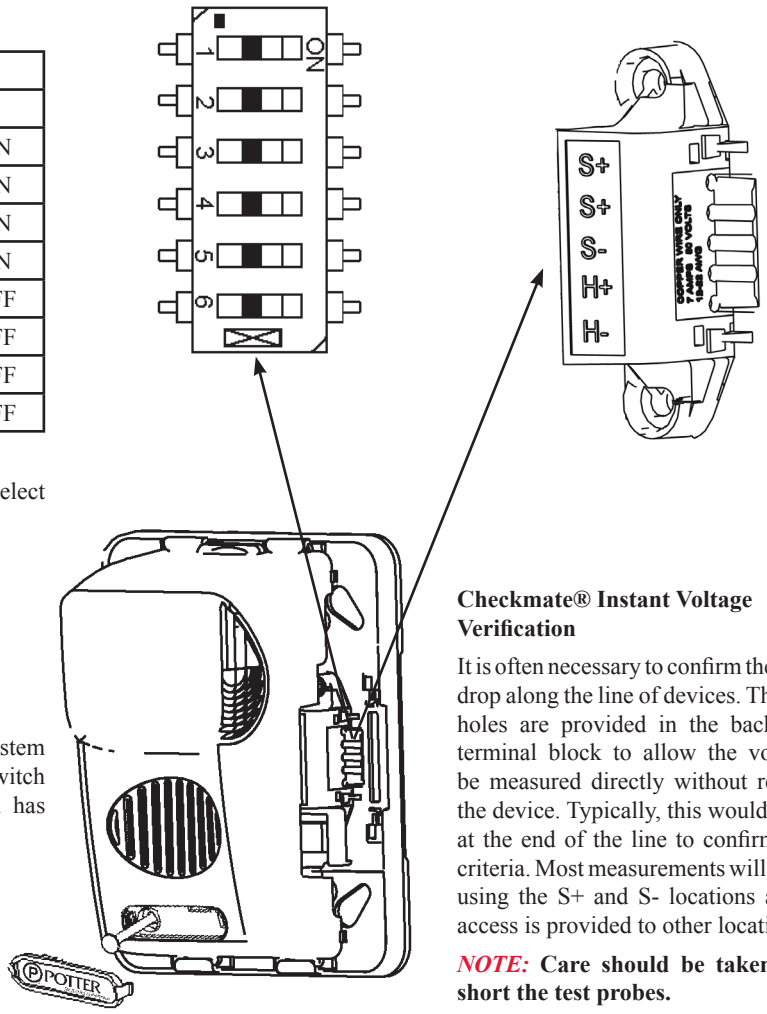
Tone	Switch Position		
	3	4	5
Mechanical Temporal 3	ON	ON	ON
Mechanical - Continuous	OFF	ON	ON
2400Hz - Temporal 3	ON	OFF	ON
2400Hz - Continuous	OFF	OFF	ON
Chime - Temporal 3	ON	ON	OFF
Chime - Continuous	OFF	ON	OFF
Whoop	ON	OFF	OFF
Whoop	OFF	OFF	OFF

NOTES:

- Switch Positions 1 and 2 in the OFF position to select isolated horn and strobe power inputs
- Switch Position 6 ON = HIGH dBA
- Switch Position 6 OFF = LOW dBA

Super Slide® Mounting Bracket

Allows the installer to pre-wire the system, test for system supervision, remove the signal head until occupancy, switch out signals without changing mounting brackets and has locking edge connector for snap-in-place installation.



Checkmate® Instant Voltage Verification

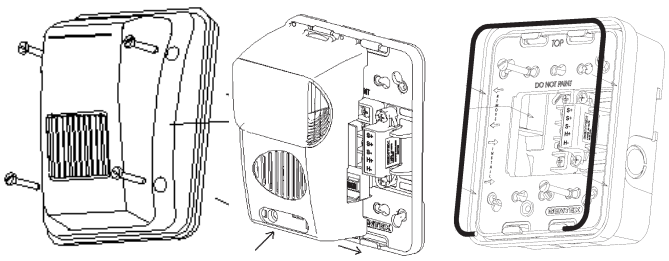
It is often necessary to confirm the voltage drop along the line of devices. The access holes are provided in the back of the terminal block to allow the voltage to be measured directly without removing the device. Typically, this would be done at the end of the line to confirm design criteria. Most measurements will be taken using the S+ and S- locations although access is provided to other locations.

NOTE: **Care should be taken to not short the test probes.**

Mounting Outdoor Enclosure

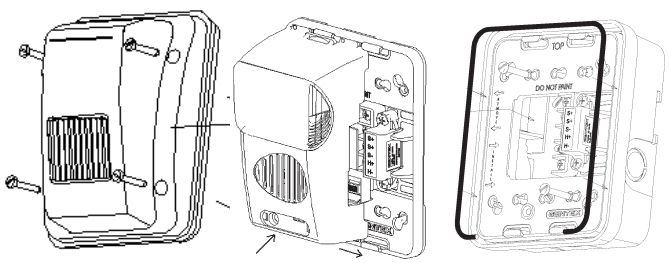
Super Slide® Mounting Plate:

Mounts to WPBB Outdoor Enclosure

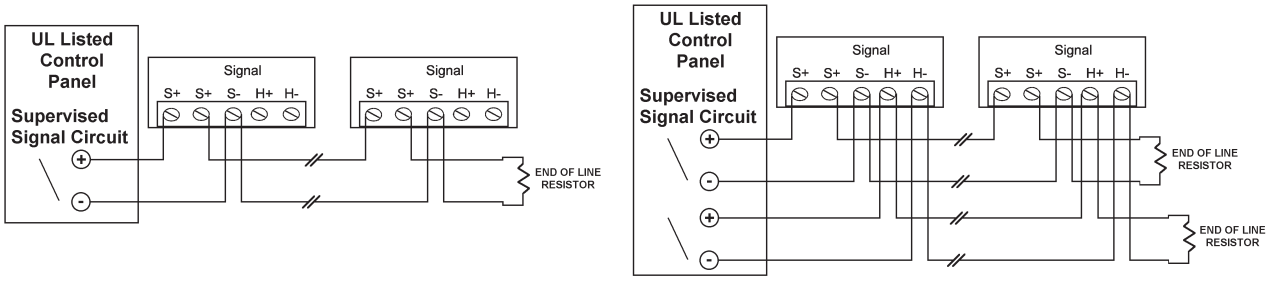


Super Slide® Mounting Plate:

Mounts to WLPBB Outdoor Enclosure



Wiring Diagrams



NOTES:

- All strobes are designed to flash as specified with continuous applied voltage. Strobes should not be used on coded or pulsing signaling circuits. However, use of the AVSM control module or Gentex synchronization protocol is permitted to synchronize the strobe, horn and/or mute the horn.
- **FOR SYNCHRONIZATION WIRING INFORMATION, REFERENCE AVSM CONTROL MODULE DATA SHEET (8830050) AND/OR AVSM CONTROL MODULE MANUAL FOR SYNCHRONIZATION MODULE WIRING DIAGRAMS. AVSM CONTROL MODULE DATA SHEET AND MANUAL CAN BE OBTAINED AT http://pottersignal.com OR CALL POTTER ELECTRIC AT 1-800-325-3936.**

Architect and Engineering Specifications

The audible and/or visible signal shall be Potter S/HS-WP Outdoor Series or approved equal and shall be listed by Underwriters Laboratories Inc. per ANSI/UL 1638 and/or ANSI/UL 464.

The notification appliance (combination audible/visible) shall produce a peak sound output of 100dBA or greater at as measured in an anechoic chamber. The signaling appliance shall also have the capability to silence the audible signal while leaving the visible signal energized with the use of a single pair of power wires. Additionally, the user shall be able to select either continuous or temporal tone output with the temporal signal having the ability to be synchronized.

The audible/visible and visible signaling appliance shall also maintain a minimum flash rate of 1Hz or up to 2 Hz regardless of power input voltage. The appliance shall have an operating current of 112mA or less for the 75Cd strobe circuit. The appliance shall also be capable of meeting the candela requirements of the ADA (75cd).

The appliance shall be polarized to allow for electrical supervision of the system wiring. The unit shall be provided with a mounting bracket with terminals with barriers for input/output wiring and be able to mount to a single gang or double gang box or double workbox without the use of an adapter plate. The unit shall have an input voltage range of 16-33 volts with either direct current of full wave rectified power for 24 volt models.

The appliance shall be capable of testing supervision without disconnecting wires. Also the appliance shall be capable of mounting to a surface back box. The unit shall also be able to verify voltage at the unit without removing unit.

The appliance has extended temperature range of -31° to 150°F (-35° to 66° C). The appliance shall satisfy virtually all outdoor and severe environment applications. The WPBB enclosure includes a gasket that must be inserted between the box and mounting bracket. There are drain holes in the back box to allow for drainage, the seal on the WPBB enclosure is not water tight. The WPLPBB enclosure includes a weather seal for mounting to wall and intended for use with universal electrical box. To allow for drainage, bottom edge of enclosure is not water tight.

PE-LFHN, PE-LFHS Series

Low Frequency Sounders and Sounder Strobes

Features

- Meets NFPA 72 fire and CO low frequency sounder codes for sleeping rooms in a single device
- LED Technology for Energy Efficiency:
- Versatile Settings and Horn Patterns:
  - 2 field-selectable candela settings: 110, 177 cd
  - 3 horn patterns (Continuous, T3, T3/T4) for
- Strobe synchronization with Potter fire alarm control panels and power supplies. Ability to mix xenon and LED strobes in the same field of view.
- 5 year warranty

FM APPROVED

UL LISTED

Description

The Potter low frequency sounders and sounder strobes meet NFPA 72 low frequency sounder requirements for sleeping rooms for both fire alarm and carbon monoxide (CO) signaling. In a single device, the low frequency sounders feature both low and high candela settings and alarm signals for dual applications - T3 (fire) and T4 (CO) tones.

High Efficiency, LED Technology

The PE series of LED strobes utilize LED technology and optical design to improve efficiency and reduce overall power consumption. All strobe model feature 110 and 177 candela settings.

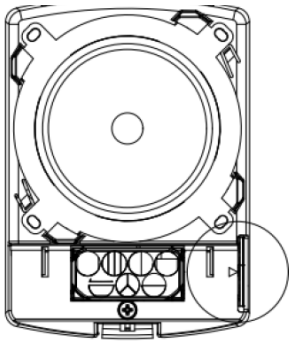
Product Listing:

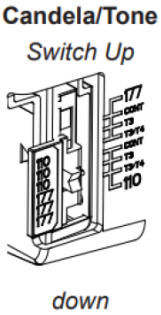
- UL Listed
- FM Approved
- CSFM

Technical Specifications

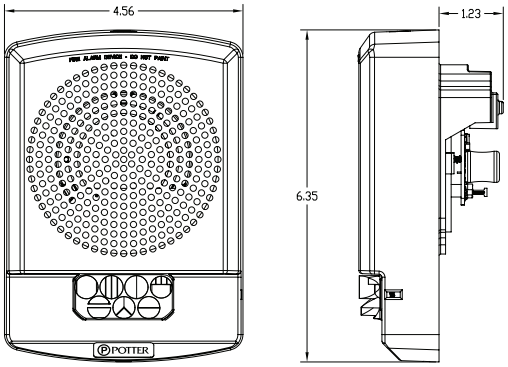
Mounting Options (Indoor Only)	Mounting plate included with all models. Wall-Mount Applications: • PE-SPKBB backboxes • Single-gang backboxes • 4” square backboxes
Wire Gauge	# 12 through # 18 AWG
Operating Temp	32°F to 122°F (0°C to 50°C) maximum humidity 93%
Dimensions	Wall: 6.26”H x 4.56”W x 1.54”D
Operating Voltage	24 VDC/VFWR: 16 - 33 VDC/VFWR
Strobe Output Rating	UL 1971: Field selectable candela 110, 177 cd
Weight	1.10 lbs. (499 g.)
Synchronization Models	Strobes can be synchronized with Potter fire alarm control panels and power supplies using Wheelock® sync protocol.

PE-LFHN and PE-LFHS Switch Locations





Dimensions



Horn Only Current Draw

Model	Horn Setting	16.0 - 33.0V (Max Current*)
PE-LFHN	Continuous	0.098
	Code 3	0.098
	Code 3/Code 4	0.098

Settings

The 520 Hz tone is generated within the appliance itself. When the selector switch is set to continuous the product is listed for coded operations. The T3/T4 pattern or other pattern must be generated by the FACP according to the alarm condition sensed by the panel (fire or CO alarm). When the device is set for T3/T4, the appliance can switch from T3 to T4 based upon the condition sensed by the FACP.

Notes:

- When the application requires T4; field devices must be set to T3/T4 Horn setting and in the Potter Programming Software the corresponding circuit be set to Wheelock T4

Horn Strobe Current Draw

Model	Regulated Voltage Range VDC	110 cd (Max Current)*	177 cd (Max Current)*
PE-LFHS	16.0 - 33.0	0.164	0.256
	16.0 - 33.0	0.164	0.256

*RMS current ratings are per UL maximum RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16-33V). For strobes the UL max current is usually at the minimum listed voltage. For audibles the max current is usually at the maximum listed voltage.
For unfiltered FWR ratings, see installations instructions.

PE-LFHN/PE-LFHS 24V Reverberant dBA Per UL 464

Description	16.0 V	24.0 V	33.0 V
Continuous	80	80	80
Code 3	80	80	80
Code 3/Code 4	80	80	80

Specification & Ordering Information

Model Number	Part Number	Mounting	Strobe Candela	Red	White	Lettering
Sounders						
PE-LFHNR-N	4871010	Wall		X		No Lettering
PE-LFHNW-N	4871011	Wall			X	No Lettering
PE-LFHNR	4871012	Wall		X		FIRE
PE-LFHNW	4871013	Wall			X	FIRE
Sounder Strobes						
PE-LFHSW	4871014	Wall	110, 177		X	FIRE
PE-LFHSR	4871015	Wall	110, 177	X		FIRE

Accessories					
Model Number	**Part Number**	**Description**	**Mounting**	**Red**	**White**
PE-SPKBB-R	4871024	PE Series Backbox	Wall	X	
PE-SPKBB-W	4871025	PE Series Backbox	Wall		X

Architect & Engineering Specifications

The low frequency sounders and sounder strobe appliances shall be the Potter PE-LFHN and PE-LFHS series or approved equals. The sounders shall be UL Listed under UL 464 for Fire Protective Service. Sounders equipped with strobes shall be listed under UL1971 for Emergency Devices for the Hearing Impaired and UL 1638. The series shall be Restriction of Hazardous Substances (RoHS) compliant and contain no mercury or other hazardous substances. In addition, the sounder strobes shall meet the requirements for FCC Part 15 and ICES-003. All inputs shall be compatible with standard reverse polarity supervision of circuit wiring by a Fire Alarm Control Panel (FACP) with the ability to operate from 16 to 33 VDC.

The PE-LFHS sounder strobe shall produce a flash rate of one (1) flash per second over the Regulated Voltage Range and shall incorporate the Light Emitting Diode (LED) as the light source with a rugged Lexan® lens. The strobe shall be of a low current design. The LED strobe flash duration shall be 20 ms or less. The strobe intensity of PE-LFHS model shall have field selectable of 110 and 177 candela. The audible shall have a minimum of 3 modes of operation: T3 (fire), Continuous, and T3/T4 Sync Control.

The PE-LFHN and PE-LFHS shall be designed with a low profile design for indoor surface or flush mounting. Mounting options shall include PE-SPKBB backboxes, single-gang backboxes, and 4” square backboxes for wall models. The sounder and sounder strobe shall incorporate a mounting plate with a snap-on grill cover and shall mount to standard electrical hardware requiring no additional trimplate or adapter. Removal of an appliance shall result in a supervision fault condition by the Fire Alarm Control Panel (FACP). All notification appliances shall be backwards compatible.

The PE-LFHN and PE-LFHS wall models shall have a low profile measuring 6.35”H x 4.56”W x 1.54”D. Finish shall be red or white. Text for FIRE and No Lettering shall be available.

When synchronization is required, the appliance shall be compatible with Potter fire alarm control panels and power supplies, with built-in Wheelock® sync protocol. The strobes shall not drift out of synchronization at any time during operation. If the sync protocol fails to operate, the strobe shall revert to a non-synchronized flash rate and still maintain one (1) flash per second over its Regulated Voltage Range.

PE-HN, PE-HS, PE-ST Series

Horns, Horn/Strobes, and Strobes

Features

- LED Technology for Energy Efficiency:
  - Industry's lowest current draw, ensuring energy efficiency.
  - Requires fewer power supplies and smaller wire gauge, reducing wire runs.
- 6 field-selectable settings for both wall and ceiling models.
  - Wall: 15 cd - 185 cd / Ceiling: 15 cd - 177 cd
- 3 horn patterns (Continuous, T3, T3/T4) for fire and CO signaling in one device.
- Strobe synchronization with Potter fire alarm control panels and power supplies. Ability to mix xenon and LED strobes in the same field of view.

FM APPROVED

UL LISTED

Description

The Potter PE Series feature advanced LED technology with a range of low and high candela settings for indoor wall and ceiling-mount applications. Crafted with a low-profile design, these devices seamlessly complement building interiors. Rich in features, the devices offer 6 candela settings and 3 horn patterns within a single unit. Installation is simplified with pre-wire/pre-test capabilities via a hinged mounting plate. Wall models follow a single-gang design, allowing tool-free setting changes. The PE Series is designed for 24V operations. The PE-HN can also be used in 12V applications.

High Efficiency, LED Technology

The PE series of LED strobes utilize LED technology and optical design to improve efficiency and reduce overall power consumption. Strobe models offer six candela settings (15, 30, 75, 1010, 135, 185 cd for wall models and 15, 30, 75, 110, 150, 177 cd for ceiling models).

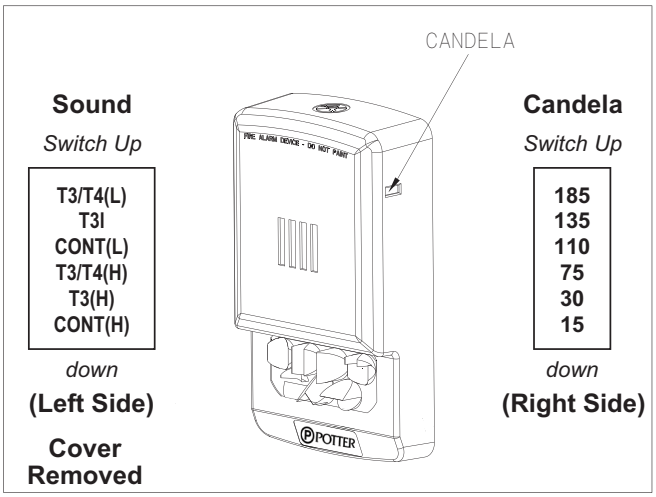
Product Listing:

- UL Listed
- FM Approved
- CSFM

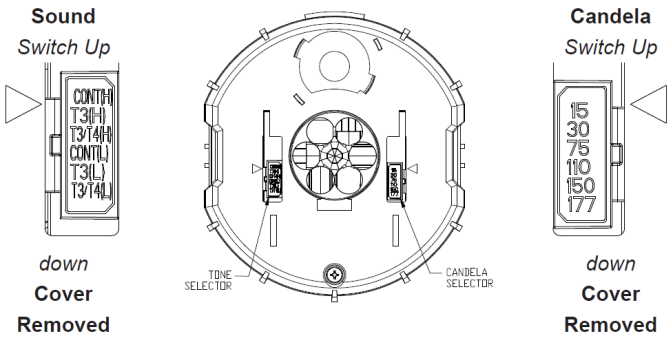
Technical Specifications

Mounting Options (Indoor Only)	Mounting plate included with all models. Wall-Mount Applications: • PE-HS and PE-ST are suitable for wall-mount applications only. • Wall mounting options include single-gang, PE-SBB backboxes, or to 4" square with an adapter kit. • PE-HN can be used for both wall and ceiling-mount applications. Ceiling-Mount Applications: • PE-HSC and PE-STC are designed for ceiling-mount applications only. • Ceiling mounting options include PE-SPKBB-C backboxes or to 4" square, 1 1/2" or 2 1/8"and Octagonal, 1 ½" or 2 1/8" deep.
Wire Gauge	# 12 through # 18 AWG
Operating Temp	32°F to 122°F (0°C to 50°C) maximum humidity 93%
Dimensions	Wall: 4.79"H x 2.76"W x 1.18"D Trimplate: 5.25"H x 4.58"W x 0.32"D Ceiling: 6.27" Diameter x 1.69"D
Operating Voltage	12 VDC/VFWR: 8 - 17.5 VDC/VFWR 24 VDC/VFWR: 16 - 33 VDC/VFWR (12 VDC PE-HN/PE-HNC only)
Strobe Output Rating	UL 1971, UL 1638, ULC S526. Selectable candela outputs for wall models (15, 30, 75, 110, 135, 185) and ceiling models (15, 30, 75, 110, 150, 177).
Synchronization Models	Strobes can be synchronized with Potter fire alarm control panels and power supplies using Wheelock® sync protocol.

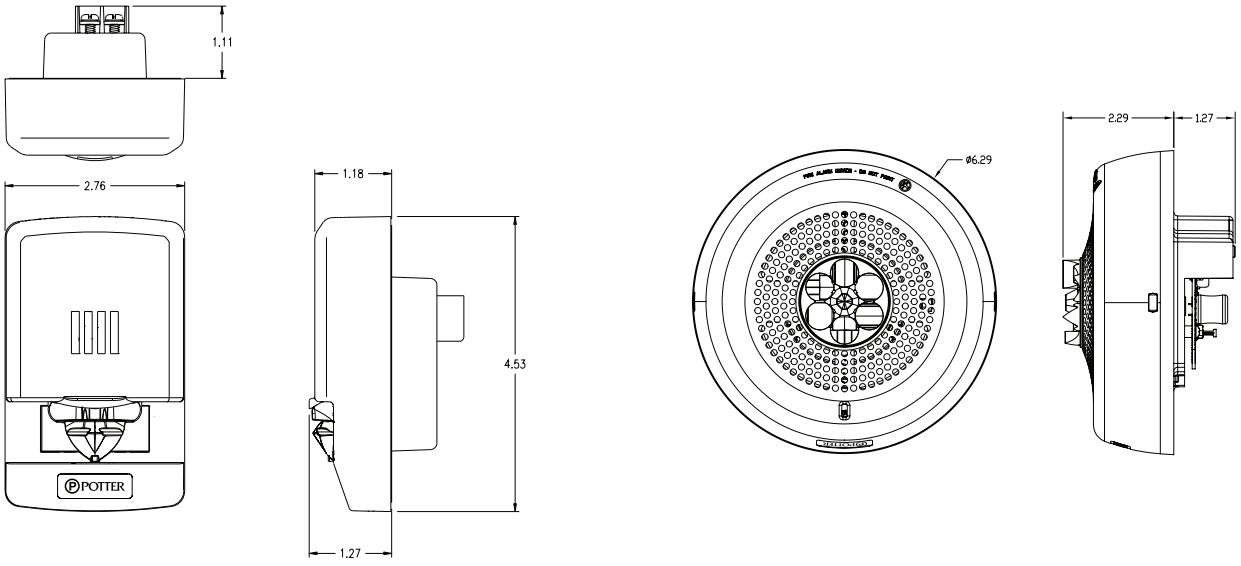
PE-HS and PE-ST Switch Locations



PE-HSC and PE-STC Switch Locations



Dimensions



Regulated Voltage Range VDC

Model Number	Regulated Voltage Range VDC	High dB	Low dB
PE-HN	8.0 - 17.5	0.025	0.020
PE-HN	16.0 - 33.0	0.028	0.021

PE-STR & PE-HS Strobe Current Ratings

24 VDC (16 - 33 Volts)								
Model Number	15 cd	30 cd	75 cd	110 cd	135 cd	150 cd	177 cd	185 cd
PE-ST	0.022	0.030	0.060	0.086	0.125			0.185
PE-STC	0.022	0.030	0.060	0.086		0.125	0.185	
At Anechoic High Continuous								
PE-HS	0.037	0.046	0.077	0.109	0.146			0.208
PE-HSC	0.037	0.046	0.077	0.109		0.146	0.208	
At Anechoic Low Continuous								
PE-HS	0.030	0.039	0.070	0.102	0.139			0.201
PE-HSC	0.030	0.039	0.070	0.102		0.139	0.201	

PE-HN & PE-HS Horn Ratings

PE-HN & PE-HS dBA Sound Output			
Description	Reverberant dBA Per UL 464		
	Volume	PE-HN @ 12V	PE-HN, PE-HS @ 24V
Continuous Horn	High	80	80
	Low	78	78

Notes:
When the application requires T4; field devices must be set to T3/T4 Horn setting and in the Potter Programming Software the corresponding circuit be set to Wheelock T4

Specification & Ordering Information

Model Number	Part Number	Mounting	Strobe Candela	Red	White	Lettering
Horn Strobes						
PE-HSR	4871006	Wall	15, 30, 75, 110, 135, 185	X		Fire
PE-HSW	4871007	Wall	15, 30, 75, 110, 135, 185		X	Fire
PE-HSRC	4871008	Ceiling	15, 30, 75, 110, 150, 177	X		Fire
PE-HSWC	4871009	Ceiling	15, 30, 75, 110, 150, 177		X	Fire
Strobes						
PE-STR	4871002	Wall	15, 30, 75, 110, 135, 185	X		Fire
PE-STW	4871003	Wall	15, 30, 75, 110, 135, 185		X	Fire
PE-STRC	4871004	Ceiling	15, 30, 75, 110, 150, 177	X		Fire
PE-STWC	4871005	Ceiling	15, 30, 75, 110, 150, 177		X	Fire
Horns						
PE-HNR	4871000	Wall		X		No Lettering
PE-HNW	4871001	Wall			X	No Lettering

Accessories					
Model Number	**Part Number**	**Description**	**Mounting**	**Red**	**White**
PE-SBB-R	4871022	PE Series Backbox	Wall	X	
PE-SBB-W	4871023	PE Series Backbox	Wall		X
PE-SPKBB-CR	4871026	PE Series Backbox	Ceiling	X	
PE-SPKBB-CW	4871027	PE Series Backbox	Ceiling		X

Architect & Engineering Specifications

The notification appliances shall be Potter PE-HS audible visual strobe appliances, PE-ST visual strobe appliances and PE-HN audible appliances for wall and ceiling-mount applications with a low-profile design or approved equals. The PE-HS and PE-ST strobes shall be listed for UL Standard 1971 (Emergency Devices for the Hearing-Impaired) for Indoor Fire Protection Service and UL 1638 (Visible Signaling Devices. The PE-HS and PE-HN Audibles shall be UL Listed under Standard 464 (Fire Protective Signaling). All models shall meet the requirements of FCC Part 15 and ICES-003. All inputs shall be compatible with standard reverse polarity supervision of circuit wiring by a Fire Alarm Control Panel (FACP) with the ability to operate from 16 to 33 VDC/ VFWR.

The PE-HS audible strobe and PE-ST strobe appliances shall produce a flash rate of one (1) flash per second over the Regulated Voltage Range and shall incorporate a Light Emitting Diode (LED) as the light source with a rugged Lexan® lens. The appliances shall be of low current design. The LED strobe flash duration shall be 20 ms. Where Multi-Candela appliances are specified, the strobe intensity shall have 6 field selectable settings at 15, 30, 75, 110, 135 and 185 candela for wall mount applications and 15, 30, 75, 110, 150 and 177 for ceiling applications. The selector switch for selecting the candela shall be tamper resistant. Appliances with candela settings shall show the candela selection in a visible location at all times when installed.

The audible shall have a choice of three (3) horn patterns (high & low output): Continuous, T3, and T3/T4 for fire (T3) and CO (T4) signaling.

The PE-HS audible strobe, PE-ST strobe, and PE-HN audible shall include a hinged mounting plate. Mounting options shall include PE-SBB backboxes, single-gang backbox and to 4” square with adapter kit for wall-mount models and PE-SPKBB backboxes, 4” square, 1 1/2” or 2 1/8”deep and 4” Octagonal, 1 ½” or 2 1/8”deep for ceiling models. Two wire appliance wiring shall be capable of directly connecting to the mounting base. Removal of an appliance shall result in a supervision fault condition by the Fire Alarm Control Panel (FACP). All notification appliances shall be backwards compatible.

The PE-HS, PE-HN, and PE-ST wall models shall have a low profile measuring 4.79”H x 2.76”W x 1.18”D. The PE-HSC and PE-STC ceiling models shall have a low profile measuring 6.27” Diameter with 1.69”D.

When synchronization is required, the appliance shall be compatible with Potter fire alarm control panels and power supplies with built-in Wheelock® sync protocol The strobes shall not drift out of synchronization at any time during operation. If the sync protocol fails to operate, the strobe shall revert to a non-synchronized flash-rate and still maintain (1) flash per second over its Regulated Voltage Range.