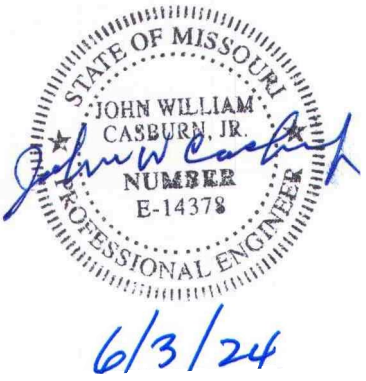
Submittal Catalog

For

LSCC Bldg 3

Prepared By:



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POTTER
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Potter AFC-1000
Battery & Voltage Drop
Calculations

Project Name:	LSCC BLDG 3	**Standby Hours:**	24
		Alarm Mins:	5
Installed By:	APS	**Efficiency Factor:**	20%
Designed By:	APS	**SLC Type:**	Class B
Date:	5/31/2024	**NAC Source Voltage:**	20.4

Model #: AFC-1000
Panel ID: FACP
Location: PUMP ROOM

Max Panel Current (amps): 10

User assumes all responsibility to ensure the quantities and current draw values in this worksheet are accurate prior to submittal.

Qty	Addressable Fire Alarm Part #	Description	Standby (amps) Each	Standby (amps) Total	Alarm (amps) Each	Alarm (amps) Total
1	AFC-1000	Analog Addressable FACP	0.130	0.130	0.220	0.220
			Panel Standby:	**0.130**	**Panel Alarm:**	**0.220**

	P-LINK (RS-485) (Both P-Link Circuits Combined)		Standby	Alarm
	UD-2000 / UD-1000	DACT Card	0.016	0.023
	RA-6075/R	LCD Annunciator	0.020	0.025
	RA-6500 (R/F)	Flush Mount LCD Annunciator	0.020	0.050
	LED-16 (F)	Flush Mount LED Annunciator	0.025	0.025
	LED-16 (F)*	LED Annunciator LED Power*	0.015	0.210
	CA-6500	Class A Module	0.060	0.100
	PSN-1000(E)	Power Expander	0.015	0.015
	NOHMI-SLCE-127**	SLC Expander (10 Max)	0.060	0.060
	PAD100-SLCE-127	SLC Expander (10 Max)	0.060	0.060
	IDC-6	Initating Zone Expander	0.020	0.020
	IDC-6	Initating Zone Expander Power*	0.020	0.270
	RLY-5	Relay Expander	0.025	0.035
	RLY-5	Relay Expander Power*	0.010	0.135
	DRV-50	LED Driver Module	0.025	0.025
	DRV-50	LED Driver Module LED Power*	0.010	0.215
	FCB-1000	Fire Communications Bridge	0.025	0.025
	FIB-1000	Fiber Interface Board	0.030	0.030
	MC-1000	Multi-Connect Expander	0.010	0.010
	SPG-1000	Serial Parallel Gateway	0.040	0.040
	NCE-1000	Network Card Ethernet	0.050	0.050
	NCF-1000	Network Card Fiber	0.095	0.095

****REQUIRED IF USING NOHMI PROTOCOL SLC DEVICES**

(Maximum current draw is 1 Amp per P-Link circuit, with 2 amps total) **P-LINK Standby:** **0.000** **P-LINK Alarm:** **0.000**

****Only enter quantity if PLINK power is being used to power devices***

	SLC Devices		Standby		Alarm	
		AFC / ARC / IPA Series - PAD100/200				
1	PAD-PD	Analog Photo Smoke	0.000300	0.000300	0.000300	0.000300
	PAD-PHD	Analog Photo Smoke/Heat	0.000300		0.000300	
	PAD-HD	Analog Fixed Temp Heat	0.000300		0.000300	
	PAD-CD	Analog Carbon Monoxide Detector	0.000300		0.000300	
	PAD-PCD	Analog Smoke/Carbon Monoxide Detector	0.000300		0.000300	
	PAD-PHCD	Analog Smoke/Heat/Carbon Detector	0.000300		0.000300	
4	PAD-DUCT	Addressable Duct Detector	0.000300	0.001200	0.000300	0.001200
	PAD-DUCTR*	Add. Duct Detector w/Relay	0.000500		0.000500	
	PAD100-DRTS	Duct Remote Test Switch	0.010000		0.015000	
1	PAD100-PSSA/PSDA	Add. Pull Station Single/Dual Action	0.000200	0.000200	0.000200	0.000200
22	PAD100-MIM	Micro Input Module	0.000200	0.004400	0.000200	0.004400
	PAD100-SIM	Single Input Module	0.000240		0.000240	
	PAD100-DIM	Dual Input Module	0.000240		0.000240	
4	PAD100-RM	Relay Module	0.000240	0.000960	0.000240	0.000960
	PAD100-OROI	One Relay One Input Module	0.000240		0.000240	
	PAD100-TRTI	Two Relay Two Input Module	0.000240		0.000240	
	PAD100-ZM*	Conventional Zone Module	0.000240		0.000240	
	PAD100-NAC*	Notification Appliance Circuit	0.000200		0.000200	
	PAD100-SM	Speaker Module	0.000200		0.000200	
	PAD100-IM	Isolator Module	0.000150		0.000150	
	PAD100-LED	LED Module	0.000240		0.000240	
	PAD100-LEDK	Addressable LED w/ Key Switch	0.000200		0.000200	
	PAD100-SB*	Addressable Sounder Base	0.000200		0.000200	
	PAD100-LFSB*	Addressable Low Frequency Sounder Base	0.000200		0.000200	
	PAD100-RB	Addressable Relay Base	0.000200		0.000200	
	PAD100-IB	Addressable Isolator Base	0.000150		0.000150	

	AFC / ARC / IPA Series - PAD300					
	PAD300-PD	Analog Photo Smoke	0.000300		0.000300	
	PAD300-PD-I	Analog Photo Smoke W/ Isolator	0.000300		0.000300	
	PAD300-PHD	Analog Photo Smoke/Heat	0.000300		0.000300	
	PAD300-PHD-I	Analog Photo Smoke/Heat/Isolater	0.000300		0.000300	
	PAD300-HD	Analog Fixed Temp Heat	0.000300		0.000300	
	PAD300-HD-I	Analog Fixed Temp Heat W/ Isolator	0.000300		0.000300	
	PAD300-CD	Analog CO2 Detector	0.000300		0.000300	
	PAD300-CD-I	Analog CO2 Detector W/Isolater	0.000300		0.000300	
	PAD300-PCD-I	Analog Smoke/CO2 Detector	0.000300		0.000300	
	PAD300-PCD	Analog Smoke/CO2 Detector W/Isolater	0.000300		0.000300	
	PAD300-PHCD	Analog Smoke/Heat/CO2 Detector	0.000300		0.000300	
	PAD300-PHCD-I	Analog Smoke/Heat/CO2 Detector W/ Isolater	0.000300		0.000300	
	PAD300-DD	Addressable Duct Detector	0.000300		0.000300	
	PAD300-SB***	Addressable Sounder Base	0.000200		0.000200	
	PAD300-LFSB***	Addressable Low Frequency Sounder Base	0.000200		0.000200	
	PAD300-RB*	Addressable Relay Base	0.000200		0.000200	
	PAD300-IB	Addressable Isolator Base	0.000150		0.000150	
	PFC-6000 / P Series					
	PSA	Analog Photo Smoke	0.000325		0.000325	
	PSHA	Analog Photo Smoke/Heat	0.000325		0.000325	
	RHA	Analog Rate of Rise Heat	0.000325		0.000325	
	FHA	Analog Fixed Temp Heat	0.000325		0.000325	
	DDA	Addressable Duct Detector	0.000325		0.000325	
	APS-SA/APS-DA	Addressable Pull Station Single/Dual Action	0.000325		0.000325	
	MCM	Mini Contact Input Module	0.000325		0.000325	
	SCM-4	Single Contact Input Module	0.000325		0.001000	
	DCM-4	Dual Contact Input Module	0.000325		0.001000	
	TRM-4	Twin Relay Output Module	0.000325		0.001000	
	CIZM-4 *	Conventional Zone Input Mod	0.000325		0.001000	
	MOM-4 *	Monitored Output Module	0.000325		0.001000	
	ARB *	Detector Base w/Relay	0.000325		0.000325	
	ASB *	Detector Base w/Sounder	0.000325		0.000325	
	SCI **	Short Circuit Isolator (Class A)	0.000325		0.002340	
	AIB **	Detector Base w/Isolator (Class A)	0.000325		0.002340	
	IM/IB/SCI/AIB Class B **	Current Draw from Install Manual				
		SLC Loop Alarm LED Current	0.000000	0.000000	0.036000	0.036000
	* Requires Aux Power (Configure Below)		**SLC Standby:**	**0.007060**	**SLC Alarm:**	**0.043060**

** See the installation manual for special considerations when installing IM, IB, AIB, SCI devices on Class B loops.

*** Requires Aux Sounder Base Power (Configure Below)

Ckt	Use	Description	Total	Total
1	Notification	CKT 1	0.00000	0.14400
2	Notification	CKT 2	0.00000	0.14400
3			0.00000	0.00000
4			0.00000	0.00000
5			0.00000	0.00000
6			0.00000	0.00000
		NAC Standby:	**0.00000**	**NAC Alarm:** **0.28800**

I/O Circuits (See I/O Configuration below)			Standby (amps)	Alarm (amps)
Ckt	Use	Description	Total	Total
1			0.00000	0.00000
2			0.00000	0.00000
3			0.00000	0.00000
4			0.00000	0.00000
		I/O Standby:	**0.00000**	**I/O Alarm:** **0.00000**

Battery Calculation Summary	Standby (amps)	Alarm (amps)
Panel Current:	0.13000	0.22000
P-Link Current:	0.00000	0.00000
SLC Device Current:	0.00706	0.04306
NAC Circuit Current:	0.00000	0.28800
I/O Circuit Current:	0.00000	0.00000
Total Standby:	**0.137060**	**Total Alarm:** **0.55106**
Standby Hours:	24	**Alarm Mins:** 5
AH Required:	**3.29**	**AH Required:** **0.05**

SLC Loop Type: Class B
Device Addresses Used: **32**
Device Addresses Available: **127**

Total Combined Standby & Alarm AmpHours Required: 3.34
Efficiency Factor: **20%**
Required Battery AmpHours: **4.01**
Battery AmpHours Provided: **18**

Note: The cabinet will house two 8 AH or 18 AH batteries. The charging circuit is rated for up to two 55 AH batteries.

NAC 1 **MAX Circuit Current (amps): 3** **Source Voltage Used (VDC): 20.4**

Usage: Notification **Description:** CKT 1

Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd
#16 Solid	5.08	20	0.203	0.144	20.37	16

Qty	Circuit Devices: Lookup Type	Circuit Devices: Description	Standby (amps): Each	Standby (amps): Total	Alarm (amps): Each	Alarm (amps): Total
1	Horn Strobes	Potter HS-24, 75cd, Hi db	0.000000	0.000000	0.144000	0.144000
		User can add devices on the fly				
		to these bottom 5 rows				
		(No lookup function)				
			Total Standby:	**0.00000**	**Total Alarm:**	**0.14400**

NAC 2 **MAX Circuit Current (amps): 3** **Source Voltage Used (VDC): 20.4**

Usage: Notification **Description:** CKT 2

Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd
#16 Solid	5.08	25	0.254	0.144	20.36	16

Qty	Circuit Devices: Lookup Type	Circuit Devices: Description	Standby (amps): Each	Standby (amps): Total	Alarm (amps): Each	Alarm (amps): Total
1	Horn Strobes	Potter HS-24, 75cd, Hi db	0.000000	0.000000	0.144000	0.144000
		User can add devices on the fly				
		to these bottom 5 rows				
		(No lookup function)				
			Total Standby:	**0.00000**	**Total Alarm:**	**0.14400**

NAC 3 **MAX Circuit Current (amps): 3** **Source Voltage Used (VDC): 20.4**

Usage: **Description:**

Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd
#12 Solid	2.01		0.000	0.000	20.40	16

Qty	Circuit Devices: Lookup Type	Circuit Devices: Description	Standby (amps): Each	Standby (amps): Total	Alarm (amps): Each	Alarm (amps): Total
		User can add devices on the fly				
		to these bottom 5 rows				
		(No lookup function)				
			Total Standby:	**0.00000**	**Total Alarm:**	**0.00000**

POTTER
The Symbol of Protection

AFC-1000

Fire Alarm Control Panel

Features

- 1,270 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
- Strobe Synchronization and System Wide Sync for Gentex®, AMSECO®, Cooper Wheelock® and System Sensor® strobes
- Dedicated Alarm, Supervisory and Trouble Relays
- 4,000 Event History Buffer
- 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

ASSEMBLED IN THE USA

FM APPROVED

NYC Fire Dept. Certificate of Approval 6256

7165-0328:0509

UL LISTED S735

Description

The AFC-1000 is an expandable analog/addressable releasing fire alarm system with a total system capacity of 1270 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. 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 AFC-1000 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 Gentex, AMSECO, System Sensor and Cooper/Wheelock and with the exclusive Quadrasync each output may have a unique brand and all strobes will flash together.

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 AFC-1000 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, 13,15, 16, 17, 17A, 70, 72, and 750 • 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 1,270 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. For use with the PAD100-DUCTR only.
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 AFC-1000 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

SLCE-127 -Nohmi addressable loop expansion module for retrofit applications.

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 AFC-100 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 AFC 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

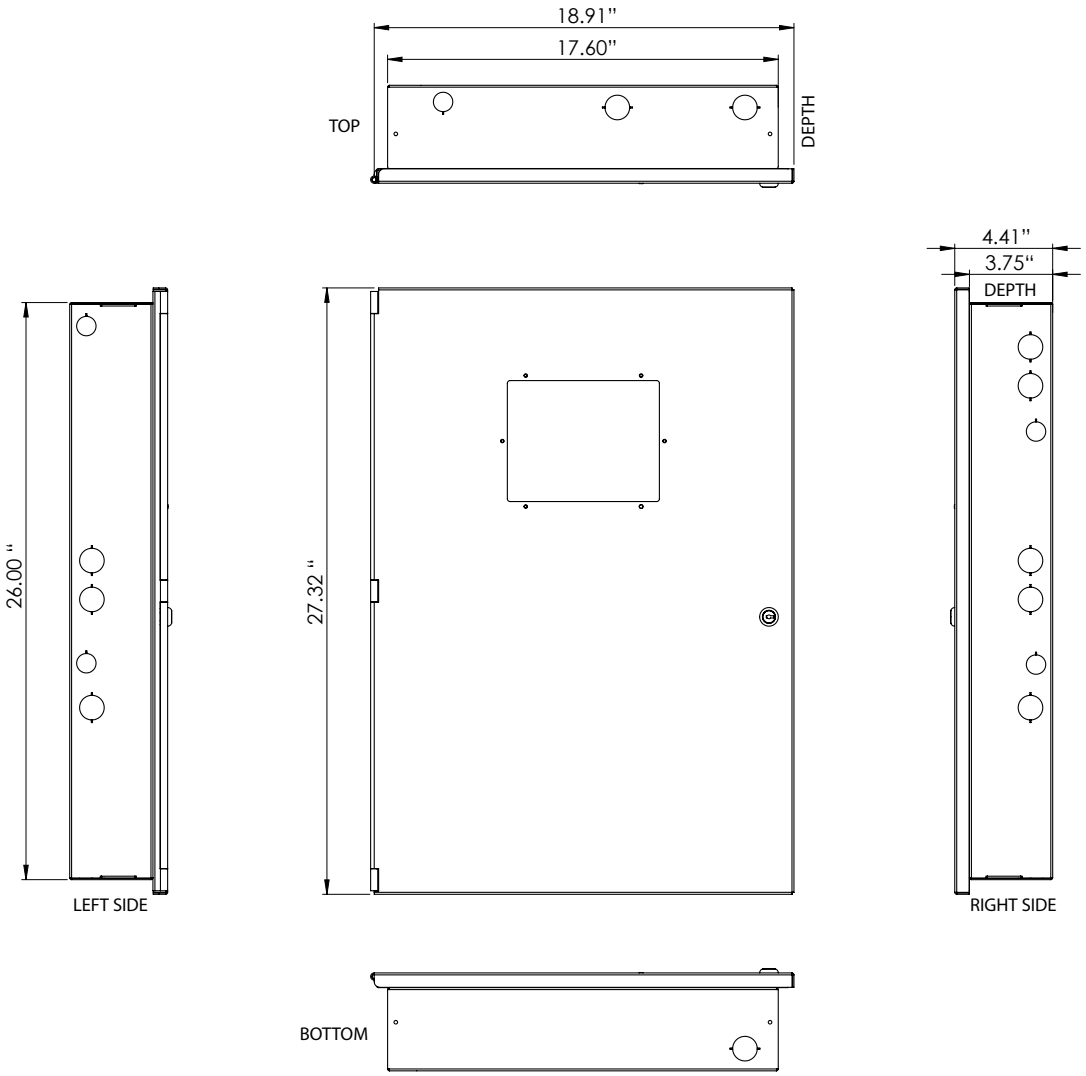
AE-14 – Fourteen card expansion cabinet

Ethernet/I.P. Connection

The AFC-1000 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



Ordering Information

Model	Description	Stock No.
AFC-1000	Fire Alarm Control Panel	3992754
	Replacement Board AFC-1000	3992758

POTTER
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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

SIGNALING
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LISTED

Description

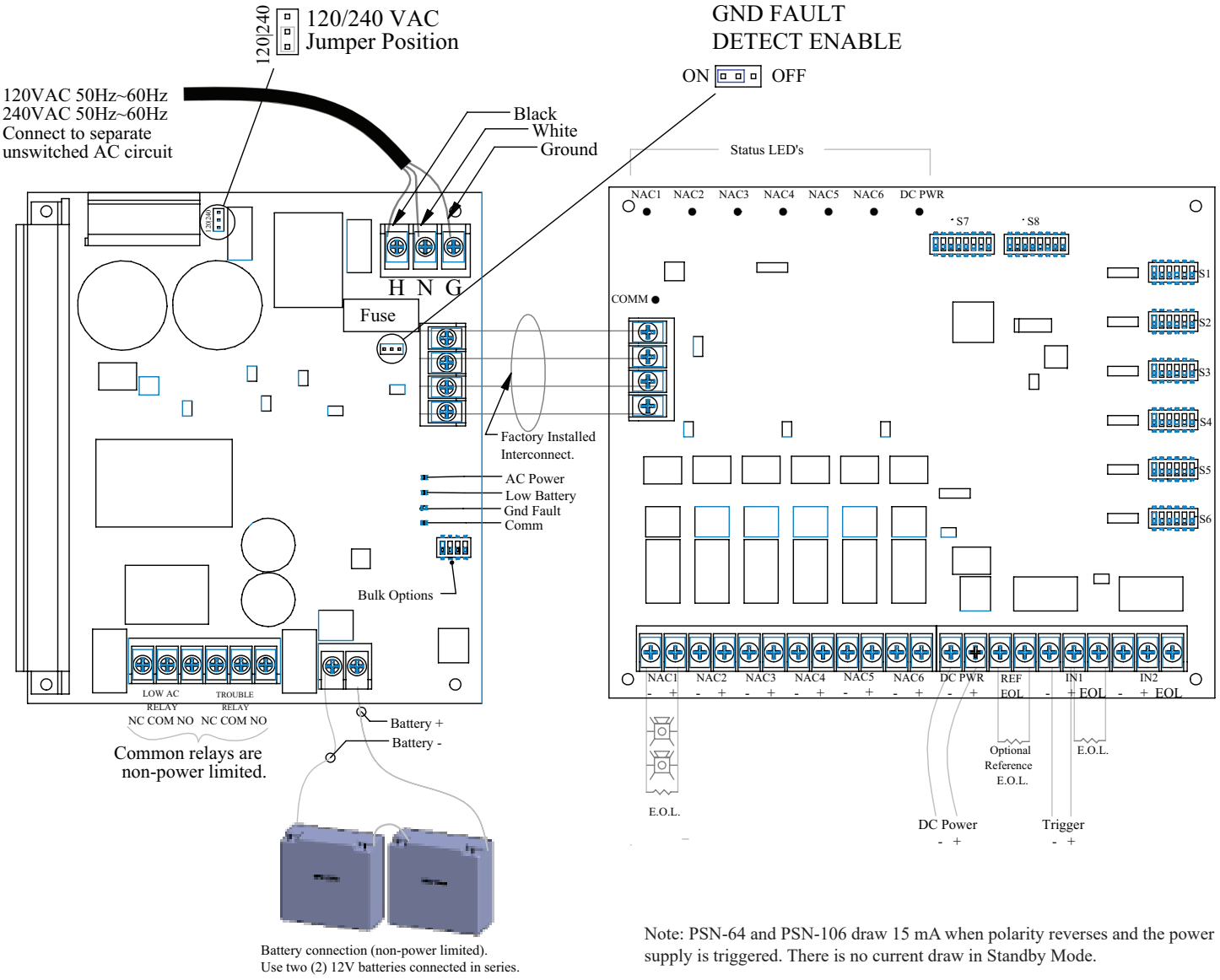
The PSN series of notification power supplies offers reliable notification power with unprecedented versatility. The power supplies offer either 6 or 10 amps of continuous power through 4 or 6 outputs respectively. Each output is rated at 3 amps and it may be used continuously without any derating. The 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” W 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.

RA-6075
LCD ANNUNCIATOR INSTALLATION

Features

Standby Current	20 mA
Alarm Current	25 mA
Operating Temperature	0°C-49°C (32°F-120°F) 10%-93% @ 30°C (86°F) non-condensing humidity
Maximum Wire Length	6500 FT
Maximum Annunciators	31
Dimensions (WxHxD)	8” x 6-1/4” x 1-5/8” (Cabinet)
Wire Gauge	14 AWG-22 AWG
Display	2 lines x 16 characters

Product includes 5 year warranty

LISTED
S2930 7165-0328:0195

Description

The RA-6075 is a LCD remote annunciator for the PFC-6075 and PFC-6030 addressable fire control panel. The RA-6075 communicates using a RS-485 connection to the main panel providing common indication of Alarms, Supervisory, Trouble and other system status and control functions.

The RA-6075 features a 32 character, 16x2 LCD display with LED’s for Power, Alarm, Supervisory, Trouble, and Silenced conditions. It can be mounted on a single gang electrical box or a four square electrical box. The annunciator is enclosed in a sheet metal enclosure and has a Potter lock securing the keypad.

Installation

The RA-6075 is connected to the PFC-6075 using a four wire RS-485 connection. The connection is power limited and supervised. Up to thirty-one (31) RA-6075 LCD annunciators can be connected using Class B or Class A wiring. Class A wiring requires an optional Class A Expander.

NOTICE

Install in accordance with compatible fire alarm panel.

Figure 1: RA-6075 Class B Wiring Example

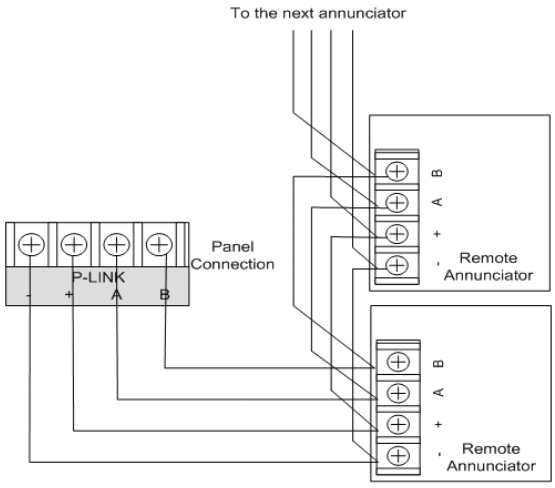
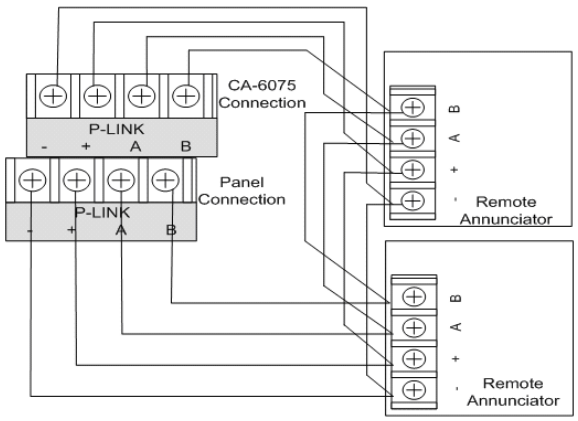


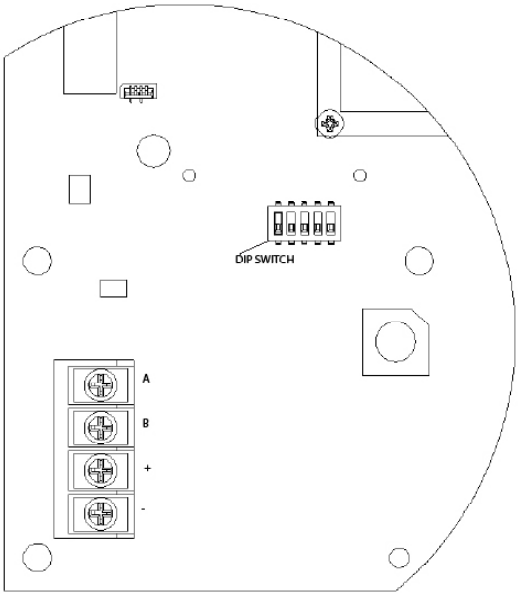
Figure 2: RA-6075 Class A Wiring Example



Address Settings

The RA-6075 address is set by dip switch S1 located on the back of the RA-6075. The address must be set in the range of 1 to 31 to be recognized by the control panel.

Figure 3: RA-6075 Class A (back panel view)



Dip Switch Settings

Refer to the table below for dip switch settings per Annunciator Address.

Annunciator Address	Dip Switch Settings				
	SW-1	SW-2	SW-3	SW-4	SW-5
1	On	Off	Off	Off	Off
2	Off	On	Off	Off	Off
3	On	On	Off	Off	Off
4	Off	Off	On	Off	Off
5	On	Off	On	Off	Off
6	Off	On	On	Off	Off
7	On	On	On	Off	Off
8	Off	Off	Off	On	Off
9	On	Off	Off	On	Off
10	Off	On	Off	On	Off
11	On	On	Off	On	Off
12	Off	Off	On	On	Off
13	On	Off	On	On	Off
14	Off	On	On	On	Off
15	On	On	On	On	Off
16	Off	Off	Off	Off	On

Annunciator Address	Dip Switch Settings				
	SW-1	SW-2	SW-3	SW-4	SW-5
17	On	Off	Off	Off	On
18	Off	On	Off	Off	On
19	On	On	Off	Off	On
20	Off	Off	On	Off	On
21	On	Off	On	Off	On
22	Off	On	On	Off	On
23	On	On	On	Off	On
24	Off	Off	Off	On	On
25	On	Off	Off	On	On
26	Off	On	Off	On	On
27	On	On	Off	On	On
28	Off	Off	On	On	On
29	On	Off	On	On	On
30	Off	On	On	On	On
31	On	On	On	On	On

PAD100-PD

Photoelectric Smoke Sensor

Features

- Low profile, less than 2 inches with the base
- Wide selectable sensitivity range of 1.0 to 3.7%/foot
- Sensor 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
- LED alarm indicator
- Product includes a 5 year warranty
- UUKL Listed for Smoke Control

Description

The Photoelectric Smoke Sensor is a listed Analog Addressable smoke sensor compatible with fire alarm control panels that utilize the Potter Addressable Device (PAD) protocol. The PAD100-PD is a low profile smoke sensor with a wide sensitivity range. The sensor and base (not included) are made of a durable plastic in an off-white color to blend in with the ceiling.

The PAD100-PD has a sensitivity range of 1.0 to 3.7 % per foot and is UL. The PAD100-PD features drift compensation and has built in dirty detector warning as well as. The PAD100-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 sensor is compatible with any of the PAD series sensor bases and simply twists on. The PAD100-PD is addressed using DIP switches in the rear of the sensor 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	1.0 to 3.7 %/ft 3.6-12 %/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)	101g (3.56oz)
Dimensions (without base)	Height: 1.35 in (34mm) Diameter: 3.93 in (100 mm)

Air Velocity Ratings

The PAD100-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 PAD100-PD will operate even though the LED may not illuminate.

Operation

The PAD100-PD is an analog addressable sensor 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 PAD100-PD with the PAD100-4DB or PAD100-6DB has a low profile of less than two (2) inches to blend into the surrounding environment. The sensor includes an insect screen to prevent foreign objects from reaching the chamber and the can be cleaned to restore operation of a dirty detector.

Sensor Sensitivity

The PAD100-PD and the compatible control panel work in tandem to keep the sensitivity consistent. As the sensor is installed over time, the sensor compensates for the dirt in the unit until it is out of range. At that time, the panel will indicate a dirty sensor. The sensor will then have to be cleaned or replaced.

The PAD100-PD can be programmed to provide a maintenance alert prior to reaching the dirty sensor level which will allow for intervention prior to the sensor going into trouble. This allows for sensor replacement or cleaning prior to a nuisance trouble occurs.

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

Spacing

The PAD100-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, double gang, octagon, 4” square or mud ring electrical box.

Device	Description	Stock No.
PAD100-4DB	4” Standard Base	3992731
PAD100-6DB	6” Standard Base	3992732
PAD100-IB	6” base with an isolator module included.	3992730
PAD100-RB	6” base with one Form-C relay contact. 2A @ 30VDC, 0.5A @ 125VAC	3992728
PAD100-SB	6" base with sounder module included. Sound pattern is provided from external source.	3992729
PAD100-SPKB	6” base with speaker included	3992762

Ordering Information

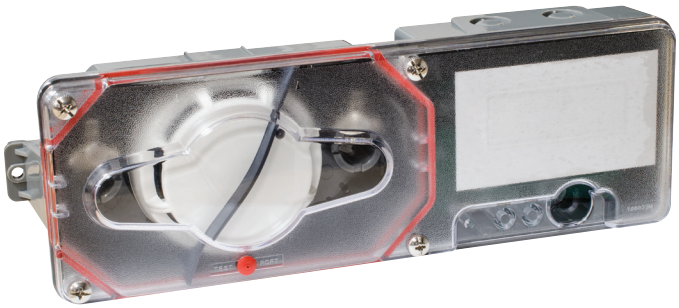
Model	Description	Stock No.
PAD100-PD	Photoelectric Smoke Sensor	3992733

PAD100-DUCT

Analog Addressable Duct Detector

Features

- Detects smoke in building HVAC ducts
- Ships complete with housing and head
- Compatible with addressable IPA and AFC/ARC series panels
- SLC in and out wire terminals
- SLC Class A, Class X & Class B
- Installation without removing the head
- Listed Air Velocity of 100 to 4,000 ft/minute
- No screens or filters in housing
- Durable plastic enclosure and clear cover
- Integrated cover tamper switch
- Utilizes simple snap in sampling tubes STN series
- Product includes a 5 year warranty
- UUKL Listed for Smoke Control



Description

The PAD100-DUCT is designed and built to meet all local requirements, as well as the NFPA regulations regarding duct smoke detectors. Air sampling is accomplished by two tubes which protrude into the duct. An exhaust tube of one standard length (7") is supplied in the installation kit with the smoke duct unit. Once the duct width has been determined the air intake sampling tubes must be ordered. Sampling tubes are supplied in three standard lengths: 2.5 ft., 5 ft., and 10 ft. and cut to size to fit the duct. Mounting the duct smoke unit is accomplished by the use of a template and 2 sheet metal screws, which are provided. Mounting can be achieved without the removal of the clear cover which is secured by 4 capture screws.

Application

The Potter Electric PAD100-DUCT duct smoke detector provides early detection of smoke and products of combustion present in air moving through HVAC ducts in commercial, industrial and residential applications. The PAD100-DUCT is compatible with the IPA and AFC/ARC series addressable fire alarm control panels.

Technical Specifications

Duct Detector Model Number	PAD100-DUCT
Operating Voltage	24 VDC
Current Draw	300 µA
Detector Head Model	PAD100-DD
Detector Head Type	Photoelectric
Alarm Set Point	Fixed at 2.5%/ft
Sensitivity Test Method	Self diagnostic test
Air Velocity	100 to 4000 ft./min
Ambient Temperature	32°F to 120°F (0°C to 49°C)
Humidity	10% to 85% Relative humidity (non-condensing)
Housing Material	Plastic backbox, clear plastic cover
Finish	Gray backbox with clear cover
Dimensions	13 1/2"L x 4 1/2" W x 2 1/4" H
Maximum Net Weight	2 lbs.
Sampling Tubes	2.5 ft., 5 ft., or 10 ft.

PAD100-DUCT

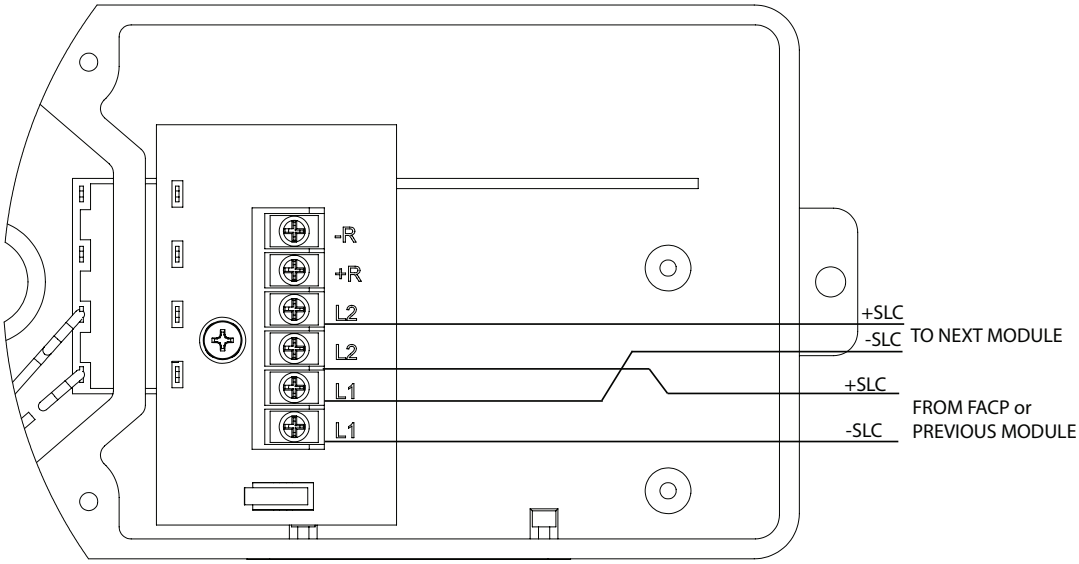
Analog Addressable Duct Detector

Engineering Specifications

Air duct smoke detectors shall be Potter Electric PAD100-DUCT Series. The detectors shall be listed by Underwriters Laboratories per UL 268A. The detectors shall operate at air velocities from 100 feet per minute to 4000 feet per minute. The duct detector housings shall be of plastic construction and complete mechanical installation may be performed without removal of detector cover. Visual indication of alarm and power must be provided on detector front. Detector heads shall not require additional filters or screens which must be maintained. The housing shall contain a detector base and PAD100-DD duct smoke detector head. Terminal connections shall be of the screw type and be a minimum of # 12 screw. All wiring must comply with local codes and regulations. Detector shall use the STN series of sampling tubes.

Wiring Diagram

Fig 1



Ordering Information

Model	Description	Stock No.
PAD100-DUCT	Analog Addressable Duct Detector	3992713

Model	Description	Stock No.
STN-2.5	2.5’ Sampling Tube	1000274
STN-5	5’ Sampling Tube	1000275
STN-10	10’ Sampling Tube	1000276

PULL STATION SERIES

SPECIAL APPLICATION 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 gang box
- Surface backboxes available
- Multiple colors and custom text available
- Glass break rod
- Made in the U.S.A.

Description

The Potter Special Application Pull Station Series offers a complete line of die-cast pull stations for a variety of applications with various colors and descriptions. The pull stations are available in single or dual action models, weather proof, explosion proof and multiple contact configurations. 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 pull stations are available in red, blue, green, yellow, white, black, gray, purple or orange. The wording on the pull stations is customizable with a large variety of standardized units. The standard models have a hex key reset, however a key reset is also available. An institutional model is available that is operated with a key only. The models are available with shallow and deep surface mount back boxes.

The weather proof and explosion proof models include the appropriate back box with the pull station. The explosion proof is also inherently weather proof.

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 installer shall furnish and install the Potter Special Application 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 RMS-1T. Dual action pull stations shall be the Potter RMS-1T-LP. Any units in an outdoor or wet location shall be an RMS-1T-WP. Explosion proof environments for Class 1 Groups B, C and D or Class 2 Groups E, F or G shall use the RMS-6T-EXP-WP. The contacts shall be a single pole, single throw switch rated at 1 amp 30 VDC/125 VAC. 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
1 Amp @ 125 VAC
Pull Station Dimensions: 4 ¾" H x 3 ¼" W x 7/8" D

For fire alarm pull stations see bulletin #8900097.

Ordering Information

Contact Type	Model
Single	RMS-1T
Dual	RMS-2T
Dual Form C	RMS-6T

Options (add behind model)	Select Color	Provide Wording (any language)
-LP Dual Action	Black, blue, green, grey, orange, purple, red, white, or yellow	Wording can be limited on the standard model. The -LP offers three lines of text. Screen charges may apply for custom wording. Contact customer service for details.
-WP Weather Proof		
-LP-WP Dual Action Weather Proof	Brass or chrome plated	
-EXP Explosion Proof		

Example:
A single contact, dual action, weather proof green pull station for "ACCESS CONTROL" would be ordered as follows: RMS-1T-LP-WP Green "ACCESS CONTROL"

*Explosion proof are listed for Class I-III Groups B-G and are weather and corrosion resistant.

Stock Number	Color	Model Number	Contact Type	Wording
1000600	Blue	RMS-1T Blue	SPST	DOOR RELEASE
1000609		RMS-1T Blue	SPST	EVACUATION
1000618		RMS-1T Blue	SPST	MEDICAL
1000619		RMS-1T Blue	SPST	RELEASING
1000614		RMS-1T-LP Blue	SPST, Dual Action	EMERGENCY EXIT
1000654		RMS-1T-LP Blue	SPDT, Dual Action	EMERGENCY SHUT OFF
1000630		RMS-6T-EXP Blue	DPDT, Explosion Proof	MAN DOWN
1000617	Red	RMS-1T Red	SPST	AGENT RELEASE
1000627		RMS-1T-WP-LP Red	SPST, Dual Action Weather Proof	AGENT RELEASE
1000655		RMS-1T-LP Red	SPST, Dual Action	FIRE SUPPRESSION RELEASE
1000653		RMS-1T-LP Red	SPST. Dual Action	FM200 RELEASE
1000651	Yellow	RMS-1T-LP Yellow	SPST, Dual Action	AGENT RELEASE
1000623		RMS-1T-LP-WP Yellow	SPST, Dual Action Weather Proof	DELUGE SPK RELEASE
1000636		RMS-6T-EXP Yellow	DPDT, Explosion Proof	EMERGENCY
1000611		RMS-1T Yellow	SPST	FIRE SUPPRESSION SYSTEM
1000615		RMS-1T-LP Yellow	SPST, Dual Action	FOAM SYSTEM RELEASE
1000624		RMS-1T-LP-WP Yellow	SPST, Dual Action Weather Proof	FOAM RELEASE
1000637		RMS-6T-EXP-LP Yellow	DPDT, Dual Action Explosion Proof	FOAM RELEASE
1000603		RMS-1T Yellow	SPST	GAS
1000682		RMS-1T-WP Yellow	SPST, Weather Proof	HAZ MAT
1000620		RMS-1T-WP Yellow	SPST, Weather Proof	PREACTION RELEASE

PAD100-MIM

Micro Input Module

Features

- One Class B contact monitoring input
- Small size allows mounting in most electrical boxes
- SLC Class A, Class X & Class B
- 6” Pigtail wiring connections
- Product includes a 5 year warranty
- UUKL Listed for Smoke Control

ASSEMBLED IN THE USA

FM APPROVED

Description

The PAD100-MIM is used to monitor the status of an initiating device(s) that contain a normally open set of dry contacts. The module is enclosed in a plastic case to protect against inadvertent shorts and ground faults. The case can be mounted using a single screw. The PAD100-MIM has a status indicator LED to indicate communication and alarm condition. In normal condition, the LED flashes when the device is being polled by the control panel. When the input is activated, the LED will flash at a fast rate.

Application

The micro input module (PAD100-MIM) is compatible with Potter’s IPA and AFC/ARC series addressable fire alarm control panels. Generally the PAD100-MIM is used to monitor pull stations and other devices where the module is installed in an electrical box or enclosure behind the device being monitored.

Technical Specifications

Operating Voltage	24.0V
Max SLC Standby Current	200µA
Max SLC Alarm Current	200µA
IDC Input Circuit Wiring	Class B
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	1.75” (44.5mm)L × 1.36” (34.5mm)W× .43” (11mm)D
Mounting Options	2-1/2” (64mm) deep single-gang box
Shipping Weight	0.3 lbs

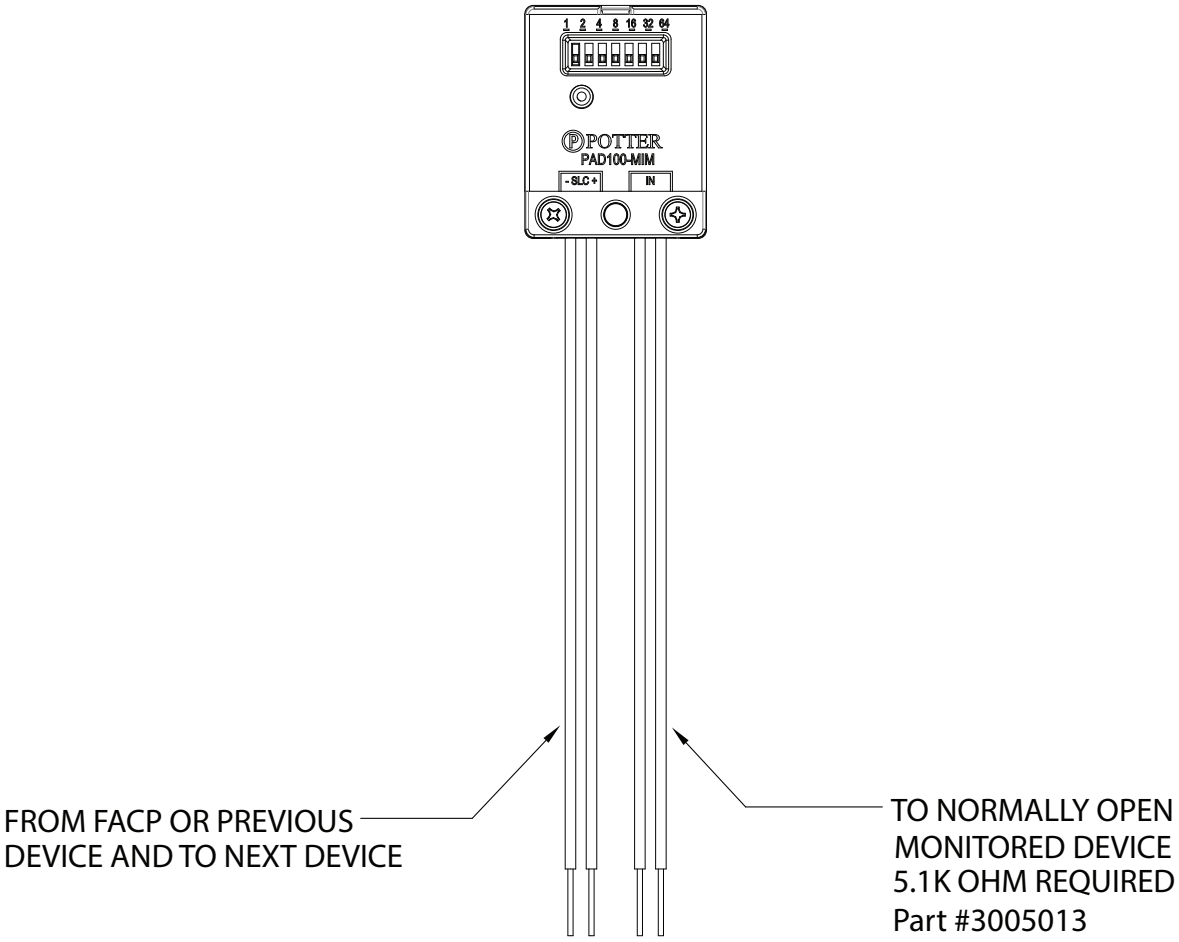
Setting the Address

Each addressable SLC device must be assigned an address. The address is set using the DIP switch located on the front of the PAD100-MIM. 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.

Wiring Diagram

Fig 1



Ordering Information

Model	Description	Stock No.
PAD100-MIM	Micro Input Module	3992700

Indoor Selectable-Output Strobes and Horn Strobes for Ceiling Applications

System Sensor L-Series audible visible notification products are rich with features guaranteed to cut installation times and maximize profits with lower current draw and modern aesthetics.

Features

- Plug-in design with minimal intrusion into the back box
- Tamper-resistant construction
- Automatic selection of 12- or 24-volt operation at 15 and 30 candela
- Field-selectable candela settings on ceiling units: 15, 30, 75, 95, 115, 150, and 177
- Horn rated at 88+ dBA at 16 volts
- Rotary switch for horn tone and two volume selections
- Universal mounting plate for ceiling units
- Mounting plate shorting spring feature checks wiring continuity before device installation
- Electrically Compatible with legacy SpectrAlert and SpectrAlert Advance devices
- Compatible with MDL3 sync module
- Listed for ceiling mounting only

The System Sensor L-Series offers the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry with lower current draws and modern aesthetics. With white and red plastic housings, wall and ceiling mounting options, System Sensor L-Series can meet virtually any application requirement.

The entire L-Series product line of ceiling-mount strobes and horn strobes include a variety of features that increase their application versatility while simplifying installation. All devices feature a plug-in design with minimal intrusion into the back box, making installations fast and foolproof while virtually eliminating costly and time-consuming ground faults.

To further simplify installation, the L-Series utilizes a universal mounting plate so installers can mount them to a wide array of back boxes. With an onboard shorting spring, installers can test wiring continuity before the device is installed.

Installers can also easily adapt devices to a suit a wide range of application requirements using field-selectable candela settings, automatic selection of 12- or 24-volt operation, and a rotary switch for horn tones with two volume selections.

Agency Listings

SIGNALING UL LISTED
S5512
S4011

FM APPROVED
FM approved except for ALERT models
3057383

7125-1653:0504
7135-1653:0503

L-Series Specifications

Architect/Engineer Specifications

General

L-Series ceiling-mount strobes and horn strobes shall mount to a standard 4 × 4 × 1½-inch back box, 4-inch octagon back box, or double-gang back box. Two-wire products shall also mount to a single-gang 2 × 4 × 17⁄8-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, L-Series products, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt-rated notification appliance circuit outputs shall operate between 8.5 and 17.5 volts; 24-volt-rated notification appliance circuit outputs shall operate between 16.5 and 33 volts. Indoor L-Series products shall operate between 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified unfiltered power supply. Ceiling strobes and horn strobes shall have field-selectable candela settings including 15, 30, 75, 95, 115, 150, and 177.

Strobe

The strobe shall be a System Sensor L-Series Model _____ listed to UL 1971 and shall be approved for fire protective service. The strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

Horn Strobe Combination

The horn strobe shall be a System Sensor L-Series Model _____ listed to UL 1971 and UL 464 and shall be approved for fire protective service. The horn strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system. The horn shall have two audibility options and an option to switch between a temporal three pattern and a non-temporal (continuous) pattern. These options are set by a multiple position switch. The horn on horn strobe models shall operate on a coded or non-coded power supply.

Synchronization Module

The module shall be a System Sensor Sync•Circuit model MDL3 listed to UL 464 and shall be approved for fire protective service. The module shall synchronize L-Series strobes at 1 Hz and horns at temporal three. Also, while operating the strobes, the module shall silence the horns on horn strobe models over a single pair of wires. The module shall mount to a 4 11⁄16 × 4 11⁄16 × 2 1⁄8-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

Physical/Electrical Specifications	
Standard Operating Temperature	32°F to 120°F (0°C to 49°C)
Humidity Range	10 to 93% non-condensing
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12 VDC or regulated 24 DC/FWR[1]
Operating Voltage Range[2]	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Operating Voltage Range (MDL3)	8.5 to 17.5V (12 V nominal) or 16.5 to 33 V (24V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Ceiling-Mount Dimensions (including lens)	6.8" diameter × 2.5" high (173 mm diameter × 64 mm high)
Ceiling-Mount Surface Mount Back Box Skirt Dimensions (SBBCRL, SBBCWL)	6.9" diameter x 3.4" high (175 mm diameter x 86 mm high)

Notes:

1. Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.
2. P, S, PC, and SC products will operate at 12 V nominal only for 15 and 30 cd.

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

		8–17.5 Volts	16–33 Volts	
	Candela	DC	DC	FWR
Candela Range	15	87	41	60
	30	153	63	86
	75	N/A	111	142
	95	N/A	134	164
	115	N/A	158	191
	150	N/A	189	228
	177	N/A	226	264

UL Max. Horn Current Draw (mA RMS)

		8–17.5 Volts	16–33 Volts	
Sound Pattern	dB	DC	DC	FWR
Temporal	High	39	44	54
Temporal	Low	28	32	54
Non-Temporal	High	43	47	54
Non-Temporal	Low	29	32	54
3.1 KHz Temporal	High	39	41	54
3.1 KHz Temporal	Low	29	32	54
3.1 KHz Non-Temporal	High	42	43	54
3.1 KHz Non-Temporal	Low	28	29	54
Coded	High	43	47	54
3.1 KHz Coded	High	42	43	54

UL Max. Current Draw (mA RMS), Ceiling Horn Strobe, Candela Range (15–177 cd)

	8–17.5 Volts		16–33 Volts						
DC Input	15cd	30cd	15cd	30cd	75cd	95cd	115cd	150cd	177cd
Temporal High	103	167	71	90	143	165	187	217	254
Temporal Low	96	165	54	71	137	161	185	211	249
Non-Temporal High	106	173	71	90	141	165	187	230	273
Non-Temportal Low	95	166	54	71	124	161	170	216	258
3.1K Temporal High	111	164	69	94	147	163	184	229	257
3.1K Temporal Low	103	163	54	88	143	155	185	212	252
3.1K Non-Temporal High	111	172	69	94	144	164	202	229	271
3.1K Non-Temporal Low	103	169	54	88	131	155	187	217	259

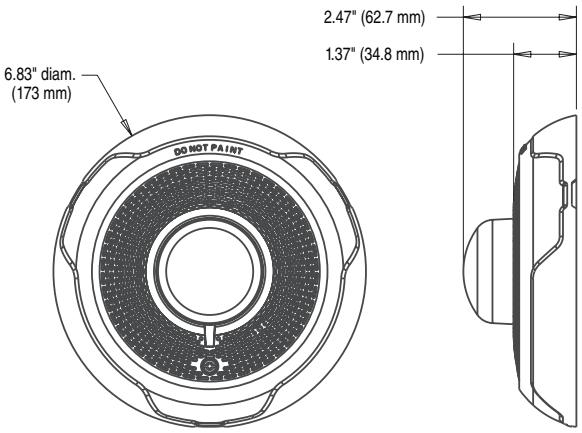
	16–33 Volts						
FWR Input	15cd	30cd	75cd	95cd	115cd	150cd	177cd
Temporal High	107	135	179	198	223	254	286
Temporal Low	78	101	151	172	199	229	262
Non-Temporal High	107	135	179	198	223	254	286
Non-Temportal Low	78	101	151	172	199	229	262
3.1K Temporal High	108	135	179	200	225	255	289
3.1K Temporal Low	79	101	150	171	196	229	260
3.1K Non-Temporal High	108	135	179	200	225	255	289
3.1K Non-Temporal Low	79	101	150	171	196	229	260

Horn Strobe Tones and Sound Output Data

Horn Strobe Output (dBA)

			8–17.5 Volts	16–33 Volts	
Switch Position	Sound Pattern	dB	DC	DC	FWR
1	Temporal	High	84	89	89
2	Temporal	Low	75	83	83
3	Non-Temporal	High	85	90	90
4	Non-Temporal	Low	76	84	84
5	3.1 KHz Temporal	High	83	88	88
6	3.1 KHz Temporal	Low	76	82	82
7	3.1 KHz Non-Temporal	High	84	89	89
8	3.1 KHz Non-Temporal	Low	77	83	83

L-Series Dimensions



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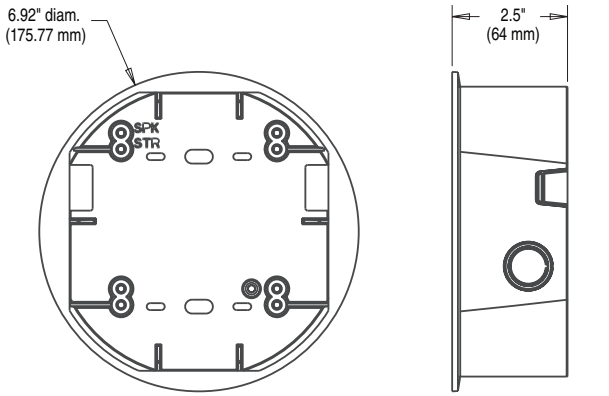
Ceiling-Mount Horn Strobes



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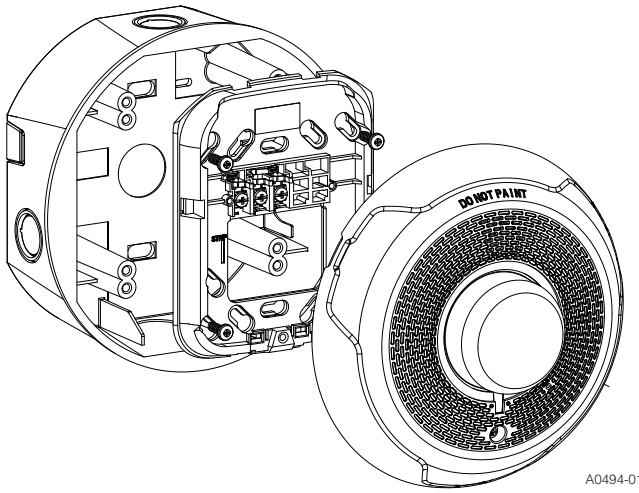
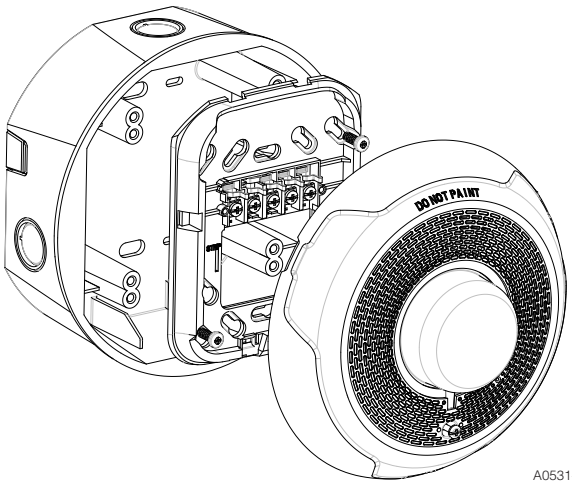
Ceiling Surface Mount Back Box



A0494-01

2-Wire Ceiling Mount Horn Strobes with Ceiling Surface Mount Back Box



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4-Wire Ceiling Mount Horn Strobes with Ceiling Surface Mount Back Box

L-Series Ordering Information

Model	Description
Ceiling Horn Strobes	
PC2RL	2-Wire, Horn Strobe, Red
PC2WL	2-Wire, Horn Strobe, White
PC4RL	4-Wire, Horn Strobe, Red
PC4WL	4-Wire, Horn Strobe, White

Model	Description
Ceiling Strobes	
SCRL	Strobe, Red
SCWL	Strobe, White
SCWL-CLR-ALERT	Strobe, White, ALERT
Accessories	
TRC-2	Universal Ceiling Trim Ring Red
TRC-2W	Universal Ceiling Trim Ring White
SBBCRL	Ceiling Surface Mount Back Box, Red
SBBCWL	Ceiling Surface Mount Back Box, White

For a ceiling-listed horn-only device, see AVDS865 “Indoor Selectable-Output Horns, Strobes, and Horn Strobes for Wall Applications”.

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