

PAD100-PD
PAD100-PHD
PAD100-HD
PAD100-CD

Photoelectric Smoke Detector
Photoelectric Smoke / Heat Detector Combination
Heat Detector
Carbon Monoxide Detector

(ANSI/UL 268 Listed)
(ANSI/UL 268 and ANSI/UL 521 Listed)
(ANSI/UL 521 Listed)
(ANSI/UL 2075 Listed)

1. Description

This document provides instructions for mounting and wiring the Detector Bases PAD100-IB, PAD100-RB and PAD100-SB. The following detectors are compatible with Detector Bases PAD100-IB, PAD100-RB and PAD100-SB.

- PAD100-PD: Photoelectric Smoke Detector
- PAD100-PHD: Photoelectric Smoke / Heat Detector
- PAD100-HD: Heat Detector
- PAD100-CD: Carbon Monoxide Detector

2a. Field Wiring Diagram(s) for PAD100-IB

Typical field wiring diagrams for the Signaling Line Circuit (SLC) are shown in FIGURE 1. The SLC supports NFPA wiring Class B, A and X.

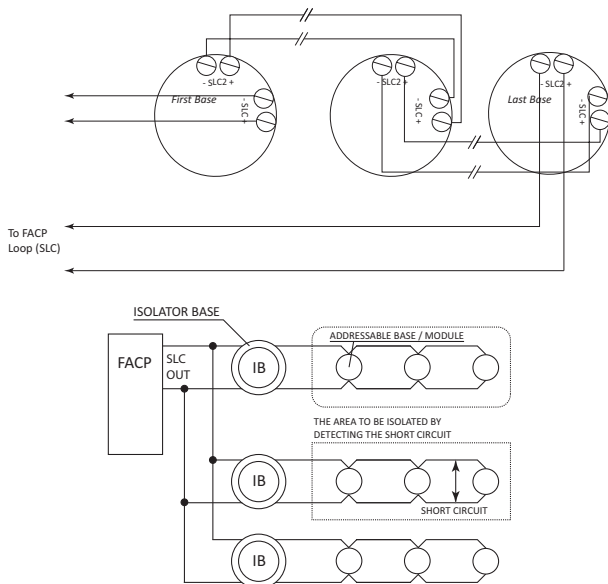


FIGURE 1: Wiring (Class B) Using PAD100-IB

FIGURE 1 is typical of NFPA Class B SLC (S+, S-) Wiring using the PAD100-IB base. In Class A (FIGURE 2) arrangement two separate conductors would return from the last detector base to a listed compatible Fire Alarm Control Panel (FACP). In Class X, it is required to use PAD100-IB (Addressable Isolator Bases (FIGURE 3)).

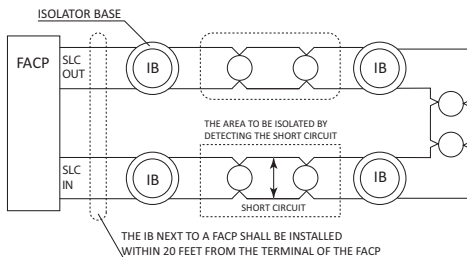


FIGURE 2: Wiring (Class A) Using PAD100-IB

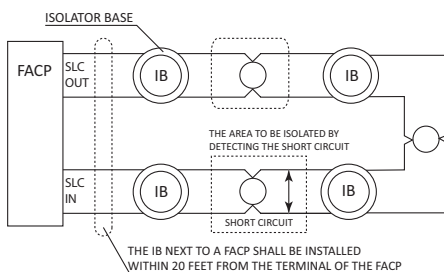


FIGURE 3: Wiring (Class X) Using PAD100-IB

2b. Field Wiring Diagram(s) for PAD100-RB

Typical field wiring diagrams for the Signaling Line Circuit (SLC) are shown in FIGURE 4. The SLC supports NFPA wiring Class B, A and X.

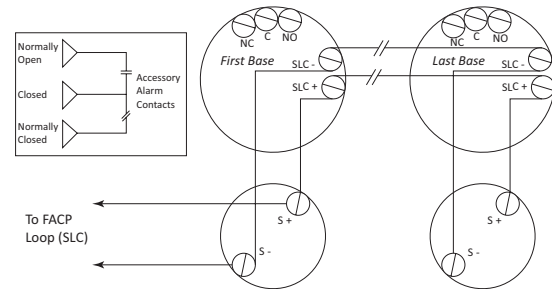


FIGURE 4: Wiring (Class B) Using PAD100-RB

FIGURE 4 is typical of NFPA Class B SLC (S+, S-) Wiring using the PAD100-RB base. In Class A arrangement two separate conductors return from the last detector base to a listed compatible Fire Alarm Control Panel (FACP). In Class X, it is required to use PAD100-IB (Addressable Isolator Bases). The typical field diagram is in Field Wiring Diagram(s) for PAD100-IB section of this manual.

2c. Field Wiring Diagram(s) for PAD100-SB

Typical field wiring diagrams for the Signaling Line Circuit (SLC) are shown in FIGURE 5. The SLC supports NFPA wiring Class B, A and X.

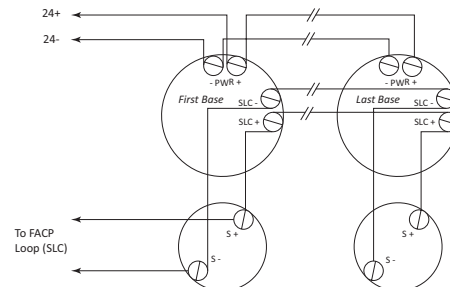


FIGURE 5: Wiring (Class B) Using PAD100-SB

FIGURE 5 is typical of NFPA Class B SLC (S+, S-) Wiring using the PAD100-SB base. In Class A arrangement two separate conductors would return from the last detector base to a listed compatible Fire Alarm Control Panel (FACP). In Class X, it is required to use PAD100-IB (Addressable Isolator Bases). The typical field diagram is in Field Wiring Diagram(s) for PAD100-IB section of this manual.

3. Wiring Instruction

- To ensure proper installation of the detector head to the base, wires shall be dressed properly at the time of installation
- When using PAD100 Bases, observe the correct polarity of SLC wiring.

NOTICE:

- THE WIRING TO BE USED SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 300.3(B) OF THE NATIONAL ELECTRICAL CODE, NFPA 70, AS WELL AS ARTICLE 210.
- THIS EQUIPMENT SHOULD BE INSTALLED IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 72.

CAUTION! Break wire runs to provide supervision for connections made to each wire pair.

Detector Base Mounting

PAD100-IB, PAD100-RB and PAD100-SB should be mounted directly on the electrical box. The PAD100-IB, PAD100-RB and PAD100-SB mounting holes are configured for a single gang, 4" octagon or 4" square box. Use a box for each base and run the power circuit to all base locations.

Use 12 to 22 AWG conductors to connect to terminals of bases. It is recommended that the SLC conductors be color-coded to avoid wiring errors and assist in system troubleshooting. Improper SLC connections may prevent the system from operating normally. Disconnect power to the SLC until the detectors are installed.

1. Wire the detector bases according to Field Wiring Diagrams.
2. Use the dip switches (SECTION 11) to set address(es) (1 - 127) for each detector head.

NOTICE:

- THE PAD100-IB, PAD100-RB AND PAD100-SB OBTAINS THE ADDRESS FROM THE DETECTOR HEAD.
 - THE DETECTORS AND THE PAD100 MODULES MUST HAVE INDIVIDUAL ADDRESS(ES).
3. To install the detector head onto the base, match the detector heads to the base using the alignment feature and twist clockwise until the detector heads snap into place (FIGURE 6).

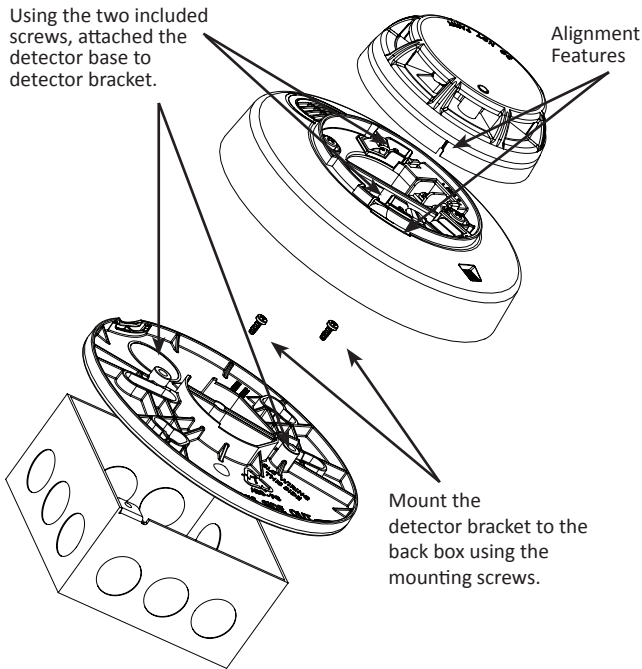


FIGURE 6: Assembly of Detector

4. After all detector heads, addressable bases and modules have been installed, apply power to the FACP.
5. Test the detectors as described in the Testing Section of this manual.
NOTICE: DO NOT INSTALL DETECTOR HEADS UNTIL AREA HAS BEEN THOROUGHLY CLEANED TO REMOVE CONSTRUCTION DEBRIS, DUST, ETC., AS REQUIRED BY NFPA 72.

4. Spacing Limitations

NOTICE: REFER TO NFPA 72 FOR SPECIFIC INFORMATION REGARDING DETECTOR SPACING, MOUNTING LOCATION AND SPECIAL APPLICATIONS.

PAD100-PD, PAD100-PHD: Photoelectric Smoke Detector

PAD100-PD and PAD100-PHD are ANSI/UL listed on maximum 30ft spacing limitation with alarm set point from 135°-174° F on smooth ceiling. Refer to NFPA 72 for specific information regarding detector spacing, placement and special applications.

PAD100-HD: Heat Detector

The ANSI/UL listed spacing limitations of PAD100-HD smooth ceiling are dependent on alarm set point.

Alarm Set-Point	Rate of Rise Spacing	Fixed Temperature Spacing
135° to 174° F (57° to 79° C)	Maximum 60 ft.	Maximum 60 ft.
175° to 185° F (80° to 85° C)	Maximum 15 ft.	Maximum 15 ft.
135° to 160° F (57° to 71° C)	Maximum 70 ft.	Maximum 70 ft.

5. Testing

Testing shall be performed periodically to determine if each detector operates properly. Detectors will offer maximum performance when tested in compliance with NFPA 72.

NOTICE: REFER TO FIRE ALARM CONTROL PANEL (FACP) MANUAL FOR OPERATION OF DIRTY VALUE READ / PRINT, ALARM SIMULATION AND WALK TEST.

Operational Testing

When PAD100-PD, PAD100-PHD, PAD100-HD and PAD100-CD are under normal conditions in standby mode, the alarm indicator LEDs will pulse approximately once every 4 seconds.

NOTICE: WHEN A PANEL IS CONFIGURED TO NOT FLASH LEDS, THE LEDS ON THE DETECTORS WILL NOT FLASH AT ANY TIME.

Sensitivity Testing (Dirty Value Read / Print)

The sensitivity drift value (Dirty Value) of the smoke detector can be checked at the FACP. The Dirty Value can be read and printed out at the FACP.
NOTICE: DETECTOR COMPENSATES SENSITIVITY UNTIL LIMIT OF COMPENSATION. WHEN COMPENSATION RATE REACHES LIMIT, A TROUBLE SIGNAL WILL BE INDICATED ON THE FACP.

Functional Testing

NOTICE: BE SURE TO DIS-ENGAGE ALL ALARM SIGNAL SERVICES, RELEASING DEVICES AND EXTINGUISHING SYSTEMS, PRIOR TO PERFORMING THE FOLLOWING TEST, EXCEPT AUTOMATIC TESTING BY THE FACP. BE SURE TO RE-ENGAGE THESE SYSTEMS WHEN ALL TESTING IS COMPLETE.

Walk Test

The FACP must be placed into Walk Test Mode and follow the steps below. Use the appropriate steps outlined below for the detector that is to be tested.

CAUTION! FAILURE TO ALARM DURING A TEST INDICATES A DEFECTIVE DETECTOR. REPLACE DETECTOR IMMEDIATELY.

- a. PAD100-PD and PAD100-PHD Smoke Detectors: Use a ANSI/UL listed aerosol such as Home Safeguard Model 25S or SDi Smoke Centurion as acceptable to the Authority Having Jurisdiction (AHJ).
- b. PAD100-PHD and PAD100-HD Heat Detectors:
NOTICE: TAKE CARE DURING THE HEATING OF THE DETECTOR TO AVOID OVERHEATING THE PLASTIC HOUSING.
 - Use of a low powered heat gun is acceptable.
 - **CAUTION!** Do not heat over 210°F (98.9°C).
 - Maintain a minimum of 1 foot between the detector and the heat gun nozzle.
 - Heat the detector for a minimum of 10 seconds.
 - FACP will indicate with alarm when a sufficient amount of heat has been applied. LED indicator will continuously flash while detector is in alarm.
- c. PAD100-CD: Carbon Monoxide Detectors: Use the Home Safeguard Model HO-CO2 Aerosol with Home Safeguard Model Versa-Test Head VT1 or the SDI Solo C6 Aerosol with SDI Solo 330 Dispenser as acceptable to the Authority Having Jurisdiction (AHJ).

NOTICE: NEVER USE EXHAUST FROM VEHICLE TO TEST CO PORTION OF DETECTOR. EXHAUST MAY CAUSE PERMANENT DAMAGE TO DETECTOR AND VOIDS THE WARRANTY.

6. Maintenance

The detector should be cleaned as needed. Detectors installed in environments more prone to dust may need cleaning based on build-up of dust. The Dirty Value Report provides an indication when the detectors should be cleaned.

NOTICE:

- THE DETECTOR IS NOT WASHABLE, DO NOT SUBMERGE THE DETECTOR IN WATER. WATER CAN AFFECT THE SENSOR, CAUSING PERMANENT DAMAGE.
- DO NOT SPRAY CLEANING CHEMICALS OR INSECT SPRAYS DIRECTLY ON OR NEAR THE DETECTOR. DO NOT PAINT OVER THE DETECTOR. DOING SO MAY CAUSE PERMANENT DAMAGE.

- a. PAD100-PHD, PAD100-HD and PAD100-CD: When cleaning is needed, clean cover using a soft cloth.
 - DO NOT vacuum or use compressed air, water, cleaners or solvents to clean the detector.
 - DO NOT disassemble the detector to clean.
 - If the detector is not operating properly after cleaning, replace detector.
- b. PAD100-PD: When cleaning is needed, follow the below steps to remove dust on the detector
 1. Turn off electrical power to the PAD100-PD.
 2. Remove the detector from the base. Do not remove the base from the wall.
 3. Remove cover from detector by removing the two screws (T10) on back of detector (FIGURE 7).

NOTICE: Do not use a power driver when removing /installing screws.

Remove the two screws (T10) on back of detector to remove detector cover.

NOTICE: Do not use a power driver when removing / installing screws.

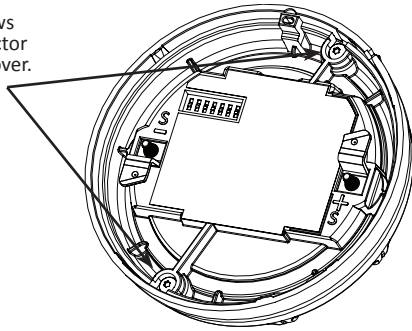


FIGURE 7: Removing Detector Cover (PAD100-PD only)

- Remove optic cage (FIGURE 8) from detector circuit board by gently gripping the sides of the optic cage base and lifting from detector circuit board.
- Remove optic cage from optic cage base, by gently squeezing the three connector arms and very gently lifting from optic cage base (FIGURE 8).

Gently squeeze the three connector arms to remove cage for cleaning

NOTICE: DO NOT remove the metal bug screen that is around the optic cage.

NOTICE: Avoid touching circuit board. When cleaning is needed, use clean compressed air.

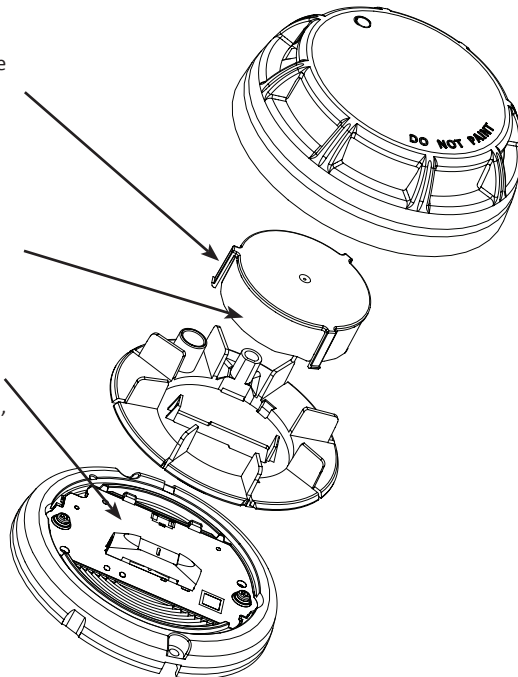


FIGURE 8: Remove Optic Cage from Detector for Cleaning (PAD100-PD only)

- Using clean compressed air, blow out any dust and debris from the center of the optic cage.
 - DO NOT vacuum or use water, cleaners or solvents to clean the detector.
 - DO NOT disassemble any other parts of the detector to clean, other than optic cage.
 - If the detector is not operating properly after cleaning, replace detector.
- After cleaning with clean compressed air, replace the optic cage by lining up the three connector arms and the guide pin into the optic cage ring and gently pushing until it clicks (FIGURE 9).

NOTICE: USE GUIDE PIN FOR PROPER ALIGNMENT OF REPLACING OPTIC CAGE INTO OPTIC CAGE BASE.

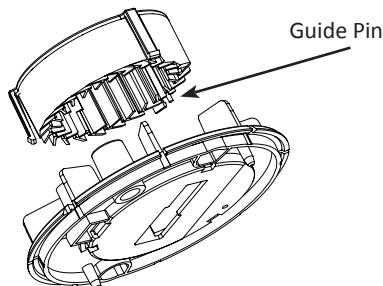


FIGURE 9: Replace Optic Cage into Optic Cage Base

- Line up the two pins on the back of the optic cage base to the pin holes on the circuit board to place the optic cage base on the circuit board (FIGURE 10)

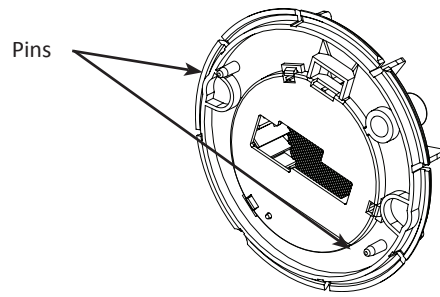


FIGURE 10: Pins on Back of Optic Cage Base

- Place cover back on detector, using the LED indicator light on base and cover to guide the correct placement. When the cover and base are lined up correctly, the units will fit together.
- Replace the two screws (T10) on the back of the product. **NOTICE:** Do not use a power driver when removing /installing screws. Tighten screws between 4 and 6 in-lbs.

7. Locking Feature

The PAD100-PD, PAD100-PHD, PAD100-HD, PAD100-CD include a tamperproof feature that locks the detector and does not allow removal without the use of a tool.

- Once the detector has been installed the detector locks into the base. To remove the detector from the base, insert a small screwdriver into the slot on the detector (FIGURE 11) and push the plastic tab while simultaneously turning the detector head counter-clockwise.

Insert small screwdriver into slot to remove detector from base

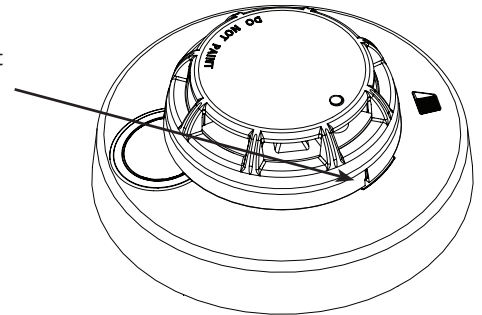
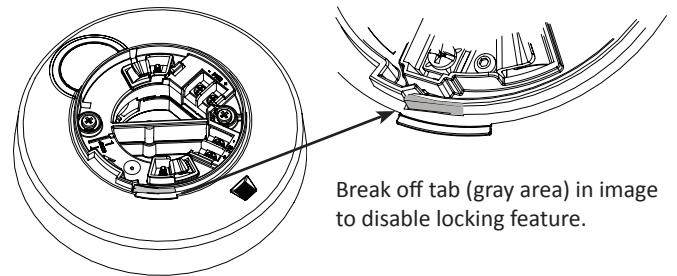


FIGURE 11: Locking Feature

- The locking feature can be disabled. To disable the locking feature, break off the locking tab before installation (FIGURE 12).



Break off tab (gray area) in image to disable locking feature.

FIGURE 12: Disable Locking Feature

8. Detector Base Options

Model	Description
PAD100-6DB	6 inch detector base. See manual number: 550-0622-000
PAD100-4DB	4 inch detector base. See manual number: 550-0622-000
PAD100-IB	6 inch detector base with short circuit isolator
PAD100-RB	6 inch detector base with relay module
PAD100-SB	6 inch detector base with sounder module

9. WARNING

- Detector will not operate without electrical power. Fire can cause power interruption, discuss with a fire protection specialist for additional safeguards.
- Do not open PAD100-PHD, PAD100-HD, PAD100-CD detector for cleaning. If the detector is opened, product warranty becomes void.
- If the detector does not work properly, do not try and fix it yourself. This will void your warranty. For technical assistance, contact Potter Electric Signal Company at 866-956-1211 for instructions to return a detector that does not operate properly.
- Detector will not sense fires that start in areas where smoke or heat cannot reach the detector. Smoke or heat from fires in walls, roofs or on the opposite side of closed doors may not reach the detector.
- Keep supplied dust cover in place during installation and construction. Remove dust cover prior to operation.
- Dust cover is not a substitute for removal of detector during new construction or remodeling.
- The detector cannot detect smoke when the dust cover is in place.
- Never use an open flame of any kind to test your device. You may ignite and damage the detector.
- Do not cover, tape or otherwise block the openings of your detector. The openings are designed to allow air to pass through the detector, thus sampling the air around the detector.
- FOR PAD-100SB ONLY: DO NOT stand close to the device when the alarm is sounding. Exposure at close range could result in hearing damage.
- Detectors are not to be used with detector guards unless the combination has been evaluated by a nationally recognized testing laboratory and found suitable for that purpose.
- To ensure proper operation, store detector within the recommended ranges. Allow the detector to stabilize to room temperature before applying power.
- If the detector ever fails to test properly, replace it immediately. Products under warranty may be returned to the manufacturer for replacement, see LIMITED WARRANTY.
- For technical assistance, contact Potter Electrical Signal Company at 1-866-956-1211

10a. Specifications / Ratings for Use with Detectors: PAD100-PD, PAD100-PHD, PAD100-HD, PAD100-CD

No.	Item	PAD100-PD	PAD100-PHD	PAD100-HD	PAD100-CD		
1	Working Voltage Range	24 VDC					
2	Standby Current (*)	300 µA					
3	Alarm Indicator	1 LED					
4	Alarm Indicator Current	1.4 mA					
5	Alarm Set-Point Range (**)	1.0-3.7 %/ft. (3.6-12%/m)	1.0-3.7 %/ft. (3.6-12%/m) / 135° to 174°F (57° to 79° C)	135° to 174° F (57° to 79° C)	175° to 185° F (80° to 85° C)	135° to 160° F (57° to 71° C)	Fixed 70, 150, 400 PPM
6	Installation Temperature Range	32° to 120° F (0° to 49° C)	32° to 115° F (0° to 46° C)	32° to 100° F (0° to 38° C)	32° to 150° F (0° to 66° C)	32° to 100° F (0° to 38° C)	32° to 100° F (0° to 38° C)
7	Operating Relative Humidity Range	0% to 93% (non-condensing)					
8	Start-up Time	1 second					
9	Maximum Number of Addresses per SLC Loop	127					
10	Maximum Number of Lighted Indicators in Alarm per SLC Loop	30					
11	Weight (without base)	101 g (3.56 oz)	102 g (3.6 oz)	82 g (2.89 oz)		92 g (3.25 oz)	
12	Dimensions (without base)	Height	1.35 in (34 mm)	1.94 in (49 mm)	1.94 in (49 mm)		1.43 in (36 mm)
		Diameter	3.93 in. (100 mm)				
13	Approvals / Listings	ANSI/UL 268	ANSI/UL 268, 521	ANSI/UL 521		ANSI/UL 2075	
14	Permitted Mounting Location(s)	Ceiling, Wall	Ceiling, Wall	Ceiling, Wall		Ceiling, Wall	

10b. Specifications / Ratings for Use with Detector Bases: PAD100-IB

No.	Item	PAD100-IB	
1	Working Voltage Range for SLC	24 VDC	
2	Standby / Alarm Current for SLC (*)	150 µA	
3	Active Current (Including Indicator)	3.8 mA	
4	Active Indicator	1 LED	
5	Applicable SLC Wiring Style	Class B, Class A, Class X	
6	Maximum Number of PAD100-IB per SLC Loop	127	
7	Installation Temperature Range	32° to 150° F (0° to 66° C)	
8	Operating Relative Humidity Range	0% - 93% (non-condensing)	
9	Weight (without detector head)	87 g (3.07 oz)	
10	Dimensions (without detector head)	Height	0.75 in (19 mm)
		Diameter	6.3 in (166 mm)
11	Approvals / Listings	ANSI/UL 864	

* The standby current is the current that the device consumes when the device is in a non-activated condition and where no communication current is transmitted to the FACP.

** Reference spacing requirements in Section 4.

10c. Specifications / Ratings for Use with Detector Bases: PAD100-RB

No.	Item	PAD100-RB	
1	Working Voltage Range for SLC	24 VDC	
2	Standby / Alarm Current for SLC (*)	200 µA	
3	Auxiliary Contact Rating	2 A @ 30 VDC, 0.5 A @ 125 VAC	
4	Installation Temperature Range	32° to 150° F (0° to 66° C)	
5	Operating Relative Humidity Range	0% - 93% (non-condensing)	
6	Start-up Time	1 Second	
7	Maximum Number of PAD100-RB per SLC Loop	127	
8	Weight (without detector head)	87 g (3.07 oz)	
9	Dimensions (without detector head)	Height	0.75 in (19 mm)
		Diameter	6.3 in (166 mm)
10	Approvals / Listings	ANSI/UL 268	

10d. Specifications / Ratings for Use with Detector Bases: PAD100-SB

No.	Item	PAD100-SB	
1	Working Voltage Range for SLC	24 VDC	
2	Standby / Alarm Current for SLC (*)	200 µA	
3	Active Current for PWR	40 mA	
4	Standby Current for PWR	4 mA	
5	PWR Input Voltage Range	16-33 VDC	
6	Sound Pressure Level	85 dBA minimum	
7	Installation Temperature Range	32° to 150° F (0° to 66° C)	
8	Operating Relative Humidity Range	0% - 93% (non-condensing)	
9	Start-up Time	1 Second	
10	Maximum Number of PAD100-SB per SLC Loop	127	
11	Weight (without detector head)	87 g (3.07 oz)	
12	Dimensions (without detector head)	Height	0.75 in (19 mm)
		Diameter	6.3 in (166 mm)
13	Approvals / Listings	ANSI/UL 268 & ANSI/UL 464	

* The standby current is the current that the device consumes when the device is in a non-activated condition and where no communication current is transmitted to the FACP.

11. PAD Protocol Dip Switch Settings

The following information is for setting the dipswitches on the PAD100-PD, PAD100-PHD, PAD100-HD and PAD100-CD detectors and modules.

Setting the Address: All PAD protocol detectors and modules require an address prior to connection to the panel's SLC loop. Each PAD device's address (i.e., detector and/or module) is set by changing the dip switches located on the device. PAD device addresses are comprised of a **seven (7) position dip switch** used to program each device with an address ranging from 1-127 (FIGURE 15).

The below examples (FIGURE 13 and FIGURE 14) illustrate a PAD device's dip switch settings. The first example (FIGURE 13) illustrates a device not addressed where all dip switch settings are in the default OFF position. The second example (FIGURE 14) illustrates an addressed PAD device via the dip switch settings.



FIGURE 13: Enlarged View of PAD Device with Dip Switch Setting Unaddressed

All dip switches are shown in the OFF position



FIGURE 14: Enlarged View of PAD Device with Dip Switch Setting Addressed

Shows this PAD device's address is #42. Dip Switch 1, 4, 16 and 64 are OFF. Dip Switch 2, 8 and 32 are ON.

1	2	4	8	16	32	64	1	2	4	8	16	32	64	1	2	4	8	16	32	64	1	2	4	8	16	32	64	1	2	4	8	16	32	64
1	Gray	White	White	White	White	White	27	Gray	White	White	White	White	White	53	Gray	White	White	White	White	White	78	White	White	White	White	White	103	Gray	White	White	White	White	White	
2	White	Gray	White	White	White	White	28	White	Gray	White	White	White	White	54	White	Gray	White	White	White	White	79	White	White	White	White	White	104	White	White	White	White	White	White	
3	White	White	Gray	White	White	White	29	White	White	Gray	White	White	White	55	White	White	Gray	White	White	White	80	White	White	White	White	White	105	White	White	White	White	White	White	
4	White	White	White	Gray	White	White	30	White	White	White	Gray	White	White	56	White	White	White	Gray	White	White	81	White	White	White	White	White	106	White	White	White	White	White	White	
5	White	White	White	White	Gray	White	31	White	White	White	White	Gray	White	57	White	White	White	White	Gray	White	82	White	White	White	White	White	107	White	White	White	White	White	White	
6	White	White	White	White	White	Gray	32	White	White	White	White	White	Gray	58	White	White	White	White	White	Gray	83	White	White	White	White	White	108	White	White	White	White	White	White	
7	White	White	White	White	White	White	33	White	White	White	White	White	White	59	White	White	White	White	White	White	84	White	White	White	White	White	109	White	White	White	White	White	White	
8	White	White	White	White	White	White	34	White	White	White	White	White	White	60	White	White	White	White	White	White	85	White	White	White	White	White	110	White	White	White	White	White	White	
9	White	White	White	White	White	White	35	White	White	White	White	White	White	61	White	White	White	White	White	White	86	White	White	White	White	White	111	White	White	White	White	White	White	
10	White	White	White	White	White	White	36	White	White	White	White	White	White	62	White	White	White	White	White	White	87	White	White	White	White	White	112	White	White	White	White	White	White	
11	White	White	White	White	White	White	37	White	White	White	White	White	White	63	White	White	White	White	White	White	88	White	White	White	White	White	113	White	White	White	White	White	White	
12	White	White	White	White	White	White	38	White	White	White	White	White	White	64	White	White	White	White	White	White	89	White	White	White	White	White	114	White	White	White	White	White	White	
13	White	White	White	White	White	White	39	White	White	White	White	White	White	65	White	White	White	White	White	White	90	White	White	White	White	White	115	White	White	White	White	White	White	
14	White	White	White	White	White	White	40	White	White	White	White	White	White	66	White	White	White	White	White	White	91	White	White	White	White	White	116	White	White	White	White	White	White	
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16	White	White	White	White	White	White	42	White	White	White	White	White	White	68	White	White	White	White	White	White	93	White	White	White	White	White	118	White	White	White	White	White	White	
17	White	White	White	White	White	White	43	White	White	White	White	White	White	69	White	White	White	White	White	White	94	White	White	White	White	White	119	White	White	White	White	White	White	
18	White	White	White	White	White	White	44	White	White	White	White	White	White	70	White	White	White	White	White	White	95	White	White	White	White	White	120	White	White	White	White	White	White	
19	White	White	White	White	White	White	45	White	White	White	White	White	White	71	White	White	White	White	White	White	96	White	White	White	White	White	121	White	White	White	White	White	White	
20	White	White	White	White	White	White	46	White	White	White	White	White	White	72	White	White	White	White	White	White	97	White	White	White	White	White	122	White	White	White	White	White	White	
21	White	White	White	White	White	White	47	White	White	White	White	White	White	73	White	White	White	White	White	White	98	White	White	White	White	White	123	White	White	White	White	White	White	
22	White	White	White	White	White	White	48	White	White	White	White	White	White	74	White	White	White	White	White	White	99	White	White	White	White	White	124	White	White	White	White	White	White	
23	White	White	White	White	White	White	49	White	White	White	White	White	White	75	White	White	White	White	White	White	100	White	White	White	White	White	125	White	White	White	White	White	White	
24	White	White	White	White	White	White	50	White	White	White	White	White	White	76	White	White	White	White	White	White	101	White	White	White	White	White	126	White	White	White	White	White	White	
25	White	White	White	White	White	White	51	White	White	White	White	White	White	77	White	White	White	White	White	White	102	White	White	White	White	White	127	White	White	White	White	White	White	
26	White	White	White	White	White	White	52	White	White	White	White	White	White																					

NOTE: Each gray box indicates that the dip switch is ON and each white box indicates the dip switch is OFF.

FIGURE 15: PAD Device Dip Switch Addresses Table (Addresses 1-127)

LIMITED WARRANTY

For a period of 5 years from the date of manufacture (or as long as required by applicable law), Potter Electrical Signal Company, LLC warrants to you the original purchaser that your appliance will be free from defects in workmanship and materials under normal use and service.

This warranty does not apply and is void if damage or failure is caused by: accident, abuse, misuse, abnormal use, faulty installation, liquid contact, fire, earthquake or other external cause; operating the appliance outside Potter Electrical Signal Company, LLC's published guidelines; or service, alteration, maintenance or repairs performed by anyone other than Potter Electrical Signal Company, LLC. This warranty also does not apply to: consumable parts, such as batteries; cosmetic damage, including but not limited to scratches or dents; defects caused by normal wear and tear or otherwise due to the normal aging of the appliance, or if any serial number has been removed or defaced from the appliance.

TO THE EXTENT PERMITTED BY LAW, THIS WARRANTY AND THE REMEDIES SET FORTH HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL, WRITTEN, STATUTORY, EXPRESS OR IMPLIED. POTTER ELECTRICAL SIGNAL COMPANY, LLC DISCLAIMS ALL STATUTORY AND IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND WARRANTIES AGAINST HIDDEN OR LATENT DEFECTS TO THE EXTENT PERMITTED BY LAW. TO THE EXTENT SUCH WARRANTIES CANNOT BE DISCLAIMED, SUCH IMPLIED WARRANTIES SHALL APPLY ONLY FOR THE WARRANTY PERIOD SPECIFIED ABOVE. PLEASE NOTE THAT SOME STATES (COUNTRIES AND PROVINCES) DO NOT ALLOW LIMITATION ON HOW LONG AN IMPLIED WARRANTY (OR CONDITION) LASTS. SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. EXCEPT AS PROVIDED IN THIS WARRANTY AND TO THE EXTENT PERMITTED BY LAW, POTTER ELECTRICAL SIGNAL COMPANY, LLC WILL NOT BE LIABLE FOR ANY DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR ARISING IN CONNECTION WITH THE SALE, USE OR REPAIR OF THE APPLIANCE, OR UNDER ANY OTHER LEGAL THEORY, INCLUDING BUT NOT LIMITED TO LOSS OF USE, LOSS OF REVENUE, LOSS OF ACTUAL OR ANTICIPATED PROFITS, LOSS OF THE USE OF MONEY, LOSS OF BUSINESS, LOSS OF OPPORTUNITY, LOSS OF GOODWILL, AND LOSS OF REPUTATION. THE MAXIMUM LIABILITY OF POTTER ELECTRICAL SIGNAL COMPANY, LLC SHALL NOT IN ANY CASE EXCEED THE PURCHASE PRICE PAID BY YOU FOR THE APPLIANCE. PLEASE NOTE THAT SOME STATES (COUNTRIES AND PROVINCES) DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

If a defect in workmanship or materials causes your appliance to become inoperable within the warranty period, you must return the appliance to Potter Electrical Signal Company, LLC postage prepaid to: Potter Electrical Signal Company, LLC, 1609 Park 370, Hazelwood MO 63042. You must prove to the satisfaction of Potter Electrical Signal Company, LLC the date of purchase of your appliance. You must also enclose a return address. Warranty service may only be performed by Potter Electrical Signal Company, LLC personnel at Potter Electrical Signal Company, LLC's facilities in Hazelwood, Missouri. You must also pack the appliance to minimize the risk of it being damaged in transit. If we receive an appliance in a damaged condition as the result of shipping, we will notify you and you must seek a claim with the shipper.

If you submit a valid claim to Potter Electrical Signal Company, LLC during the warranty period, Potter Electrical Signal Company, LLC will, at its option, repair your appliance or furnish you with a new or rebuilt appliance without charge to you except for postage required to return the appliance to us. Potter Electrical Signal Company, LLC will not reimburse you for repairs or replacement parts provided by other parties. Your repaired or replacement appliance will be returned to you free of charge and it will be covered under the warranty for the balance of the warranty period, if any. When a product or part is replaced, any replacement item becomes your property and the replaced item becomes property of Potter Electrical Signal Company, LLC. For additional warranty and product information go to www.pottersignal.com.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE (OR BY COUNTRY OR PROVINCE). BY THIS WARRANTY, POTTER ELECTRICAL SIGNAL COMPANY, LLC DOES NOT LIMIT OR EXCLUDE YOUR RIGHTS EXCEPT AS ALLOWED BY LAW. TO FULLY UNDERSTAND YOUR RIGHTS, YOU SHOULD CONSULT THE LAWS OF YOUR COUNTRY, PROVINCE OR STATE.

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