



# PSHA

## ANALOG PHOTOELECTRIC SMOKE/HEAT DETECTOR



P/N 99237

### Features

- Photoelectric Smoke and Fixed Temperature Heat Sensor
- Wide sensitivity range of 1.05 to 3.82%/foot
- 135° Fahrenheit restorable Heat Detector
- Sensor communicates sensitivity to control panel
- UL listed smoke calibration and sensitivity
- Optional locking tab to prevent unwanted removal
- Simple and accurate address setting without mechanical switches
- LED for 360° Viewing



### Description

The combination Photoelectric Smoke/Heat Sensor is a listed Analog/Addressable smoke sensor and fixed temperature heat sensor compatible with any fire alarm control panel that has the Potter/Nohmi protocol. The PSHA is a low profile combination smoke/heat sensor with a wide sensitivity range. The heat sensing portion utilizes a proven thermistor for accurate and reliable heat detection. The sensor and base (not included) are made of a durable plastic in an eggshell white (off white) to blend in with the ceiling.

The PSHA has a sensitivity range of 1.05 to 3.82% per foot and is UL and cUL listed. The PSHA is also a 135° Fahrenheit restorable heat sensor. The PSHA can be configured for drift compensation and has built-in dirty detector warnings. The PSHA and the control panel communicate over a proven and robust digital communication path and the system analyzes the level of alarm at the particular device. The total polling speed is less than five (5) seconds, well under the UL requirements. The PSHA is listed to both UL 268 Smoke Detection Standard and UL 521 Heat Detection Standard.

The PSHA has a single LED that allows for 360° viewing. The sensor is compatible with any of the Potter/Nohmi bases and simply twists on. The PSHA is addressed using the hand held programmer or the control panel addressing function.

The system has a maximum of 13 LEDs that can be turned on simultaneously. If the system already has 13 LEDs on, the PSHA will operate even though the LED will not illuminate.

### Air Velocity Ratings

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

### Setting the Address

Each addressable module, smoke sensor, heat detector and combination sensor/detector must have the address set before connecting the device to the SLC loop. The address is set using the hand held device programmer or the addressing feature on the control panel.

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.

Document discrepancies and notify appropriate personnel.

### Operation

The PSHA is an analog/addressable combination 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 LED flashes every time the unit is polled and they will latch steady if the unit is in an active status.

The PSHA is a proven design being in service throughout the world. The PSHA with the AB-4 or AB-6 base has a low profile of about 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 entire unit can be cleaned with a simple vacuum. The thermistor provides reliable heat detection at a fixed temperature. The unit is reusable.



Specifications			
Working voltage range	22.0 to 24.0 V	Start-up time	Max. 1 sec.
Standby current (*)	250 µA	Maximum number of addresses per zone	127
Alarm indicator	1 LED	Maximum number of lighted indicators in alarm per zone	13
Alarm indicator current	1.2 mA DC	Color	Eggshell White
Alarm set-point range	1.05 to 3.82%/ft / 3.4 to 12.0%/m	Weight (without base)	85g (2.99oz)
Installation temperature range	32 to 115°F / 0 to 46°C	Dimensions (without base)	Height: 1.69 in (43 mm)
Operating relative humidity range	0% to 93% (Non-condensing)		Diameter: 4.0 inches (99 mm)
		Approvals / Listings	UL, ULC, CSFM

### Sensor Sensitivity

The PSHA 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.

Anytime the PSHA is being polled, the sensitivity may be viewed or printed from the control panel.

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 PSHA is UL/ULC 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.

Ordering Information		
Model Number	Description	P/N
PSHA	Analog Photoelectric Smoke/Heat Detector	99237
AB-6	6" Standard Analog Base	99234
AIB	Analog Isolator Base	99233
ARB	Analog Relay Base	99231

Note: Approvals/Listings maintained by and manufactured by Potter Electric Signal Company.

The seller makes no warranties, express or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose, except as expressly stated in the seller's sales contract or sales acknowledgment form. Every attempt is made to keep our product information up-to-date and accurate. All specific applications cannot be covered, nor can all requirements be anticipated. All specifications are subject to change without notice.



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