



PS-24H

PHOTOELECTRIC/HEAT SMOKE DETECTOR



P/N: 97883

Features

- Heat Detector: 135°F latching sensor w built-in guard
- Light Source: GaA1 as infrared emitting diode
- Rated Voltage: 17.6 - 33.0 VDC
- Maximum Allowable Voltage: 42 VDC
- Supervisory Current: 45µA Max. at 24 VDC
- Surge Current: 160mA Max. at 24 VDC
- Alarm Current: 150mA Max. at 24 VDC
- Ambient Temperature: 32°F - 120°F (0°C - 49°C)
- Test Feature: Automatic Sensitivity window verification test meets outlined requirements in NFPA 72, Chapter 2&7, for inspection, Testing and Maintenance
- Service Use: National Fire Alarm Code NFPA 72
- Mounting: SB Series Detector Base
- Low profile, 2.2" high (with base)
- Highly stable operation, RF/Transient protection
- Two built-in power/sensitivity supervision/alarm LEDs
- Non-directional smoke chamber
- Vandal resistant security locking feature

The PS-24H can be used in all areas where Photoelectric Smoke Detectors are required. The wide range smoke chamber makes the PS-24H well suited for fires ranging from smoldering to flaming fires.

SB Series bases may be used with the PS-24H.

The PS-24H photoelectric smoke detector utilizes two bicolored LEDs for indication of status. In a normal standby condition, the LEDs flash green every 3 seconds. When the detector senses that its sensitivity has drifted outside its UL listed sensitivity window, the LEDs will flash Red every 3 seconds. When the detector senses smoke and goes into alarm, the status LED will latch on Red.

The detector utilizes an infrared LED light source and silicon photo diode receiving element in the smoke chamber. During a normal standby condition, the receiving element receives no light from the pulsing LED light source. In the event of a fire, smoke enters the detector smoke chamber and light is reflected from the smoke particles to the receiving element. The light received is converted into an electronic signal.

Signals are processed and compared to a reference level. And when two executive signals exceeding the reference level are received within a specified period of time, the time delay circuit triggers the SCR switch and the LED's light continuously during the alarm period.

Engineering Specifications

The contractor shall furnish and install where indicated on the plans, Model PS-24H photoelectric smoke detectors. The combination detector head and twist-lock base shall be UL listed compatible with a UL listed fire alarm panel.

The base shall permit direct interchange with PS-24 photoelectric detector type smoke detector. The base shall be appropriate twist-lock base SB Series. In the event of partial or complete retrofit, the PS-24 may be used in conjunction with, or as a replacement for, detectors (PS-24 and PS-24H) on SB Series base applications.

The smoke detector shall have two flashing status LEDs for visual supervision. When the detector is in standby condition the LEDs will flash Green. When the detector is outside the UL listed sensitivity window the LEDs will flash Red. When the detector is actuated, the flashing LEDs will latch on Red. The detector may be reset by actuating the control panel reset switch.



The sensitivity of the detector shall be capable of being measured. It shall be possible to perform a functional test of the detector without the need of generating smoke. The sensitivity of the detector shall be monitored automatically and continuously to verify that it is operating within the listed sensitivity range.

To facilitate installation, the detector shall be non-polarized. Voltage and RF transient suppression techniques shall be employed to minimize false alarm potential. Auxiliary SPDT relays shall be installed where indicated.

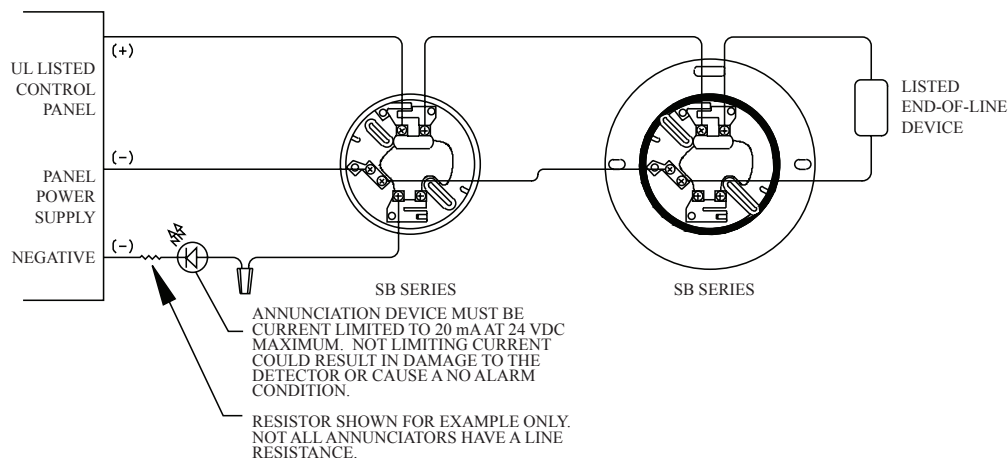
The vandal-resistant, security locking feature shall be used and shall be field-removable when not required.

Voltage and R/F transient suppression techniques shall be employed to minimize false alarm potential. Specifications subject to change without notice.

PS-24H Sensitivity Test Feature

The PS-24H Photoelectric Smoke Detector has a built-in automatic sensitivity test feature.

1. In normal condition, both LEDs flash green.
2. When the sensitivity drifts outside of its sensitivity limits, both LEDs flash red.
3. In the alarm state, both LEDs are red continuously.
4. When the sensitivity drifts outside of its sensitivity limits and both LEDs flash red, the device needs to be cleaned or returned to the factory for cleaning.



Ordering Information		
Model Number	Description	P/N
PS-24H	Detector, Photoelectric/Heat, Conventional	97883
SB-46	Smoke Detector Base	18637
SB-81R	Smoke Detector Base w/Relay 81 mA draw	18638

Note: Approvals/Listings maintained 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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