

DESCRIPTION

The PSD series photoelectric smoke detectors respond to a broad spectrum of both flaming and smoldering fire conditions. They incorporate state-of-the-art, solid-state, low-voltage circuitry and are designed for 2-wire and 4-wire installation with the proper base. High signal-to-noise ratio permits a significant reduction in light baffling, thereby improving smoke entry characteristics while reducing nuisance alarms.

Three separate detection identifications are required for alarm confirmation. This three level detection sequence reduces nuisance alarms. Each identification is made at two second intervals. Digital storage of the previous identifications provides positive and reliable detection.

Functional testing is accomplished by means of a test magnet. This magnet test meets the requirement of the U.L. Sensitivity Test Feature. In addition, the actual sensitivity of the detector may be measured in direct percent per foot obscuration with a sensitivity tester and standard voltmeter without the necessity of removing the detector.

The companion model PSD-7156 includes a thermistor heat detector with a 135° F setpoint and is independent of smoke detector circuitry.

The PSD photoelectric detectors may be interchanged with Model CPD-7051 ionization detectors. Optional bases are available for remote test, remote indication, 4-wire operation and/or control functions. See Table I. In addition, an MA-001 adapter is available to enable the PSD-7155 and PSD-7156 to mount in existing Model CPD series bases.



FEATURES

- **Low Profile Appearance**
- **High Air Velocity Rating**
- **Suitable for Mounting Inside Ducts**
- **Flashing LED for Visual Supervision**
- **Remote and Local Functional Test Capability**
- **In-place Sensitivity Measurement in Percent per Foot Obscuration**
- **Optional 135° F Thermistor Heat Detector**
- **Two and Four-wire Low Current Design**
- **Non-polarized**
- **Three Level Alarm Verification**
- **EMI/RFI Resistant**

APPROVALS

UL (Std 268)	S1913
C.S.F.M.	7272-1076:117
New York City MEA	346-92-E
Factory Mutual	0W3A2.AY

TECHNICAL SPECIFICATIONS

Nominal sensitivity	3.25 %/ft.
Standby voltage	10.2 - 36.8 VDC (24 VDC nominal)
Standby current	55 uA. (typical) 100 uA. peak @ 24 VDC
Operating temp.	32° to 100° F (0° to 38° C) per UL 268
Humidity	0 - 93% RH non-condensing
Air velocity	4,000 ft/minute max.
Area of coverage	30 ft. centers (900 sq. ft. max.) (smooth ceilings)
Storage temperature	-20° to 180° F (-29° to 82° C)
Finish	Off-white texture, high impact plastic.
Insect screen	Polyester, 0.0280" mesh size. 54% total open screen area.

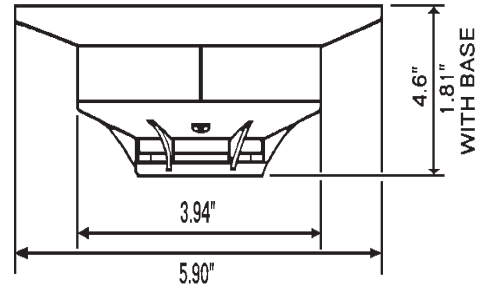
INSTALLATION

Installation is simple because of the nonpolarized connection. The detector mounts to the base by a twist-to-lock action. A removable locking tab secures the head to the base to provide a degree of vandal resistance. Units mount directly to a 3, 3.5 or 4-inch octagonal box, 3-inch round box, or 4-inch square box. No adapters required.

NOTE: The number of two-wire smoke detectors which can be accommodated per zone varies with different control panels. **Consult the control panel instruction manual to determine the capacity.**

Refer to N.F.P.A. 72, "Smoke Sensing Fire Detectors" for spacing, location of detectors and other guidelines.

Dimensional Data



MAINTENANCE

Cleaning programs should be adapted to the individual environment in conformance with NFPA Standard 72. We recommend, at the least, an annual cleaning of dust from the detector head by using the suction of a vacuum cleaner. **Refer to the installation instructions for the complete procedure.**

WARNING: To prevent detector contamination during construction, smoke detectors must be protected from dust and contamination until area is clean and dust free. See NFPA 72.

CAUTION: Do not attempt disassembly of the factory sealed smoke detector. This assembly is sealed for your protection and is not to be opened for servicing. Opening of the detector will void the warranty.

TABLE I - DETECTOR BASE OPTIONS

Model	Compatibility Identifier	Description
2-Wire	FE51A	Connects to 2-wire detection circuit via screw terminals.
2WRLT	FE52A	As above except has output for remote test and LED indicator.
2WRB	FE55A	Connects to 2-wire detection circuit via wire-leads. Has remote test feature, LED indicator and SPDT auxiliary relay rated 1 amp. @ 30 VDC. Minimum alarm current: .019 amp. (maximum of 1 per zone)
4WRB	N/A	Connects to 4-wire detection circuit via wire-leads. Equipped with SPDT auxiliary relay rated 2 amps. @ 30 VDC. Minimum alarm current .015 amp.

ORDERING AND TECHNICAL INFORMATION

Model	Compatibility Identifier	Description
PSD-7155	P55FE1	Photoelectric smoke detector.
PSD-7156	P56FE1	Photoelectric smoke detector with 135° F thermistor heat detector.
MA-001		Adapter to allow mounting to existing CPD series bases.
2WRM		Replacement relay component of 2WRB.
4WRM		Replacement relay component of 4WRB.
2040-24		End of line supervisory relay, 24 VDC.
RAI-2		Remote alarm indicator.
RCM-500		Remote alarm indicator/key test switch.

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