2151

Description

The System Sensor 2151 low profile photoelectronic smoke detector is specifically designed to meet the performance requirements of the fire detection/alarm systems. The 2151 detector uses a state-of-the-art optical sensing chamber and is designed so that if the LED fails, it will not cause an alarm. The detector is designed to provide open area detection, and when installed in a two-wire base, is compatible with the Gamewell-FCI fire alarm control panels. The detector's operation and sensitivity can be tested in place.

The 2151 detector is designed with plug-in construction and plugs into the same base as the 1151 ionization smoke detector, making both models interchangeable. Bases are available for the following types of operation.

- two-wire
- four-wire
- 120 VAC four-wire
- an audible sounder

Two visible LEDs on each detector flash approximately every ten seconds indicating that the power is being applied to the detector. The LEDs light steadily when the detector is in alarm. A remote LED annunciator is available as an optional accessory.

The 2151 is UL® Listed for mounting inside ducts up to a velocity of 3,000 FPM.

To perform functional testing, place a test magnet against the cover. The LED on the detector should light within 30 seconds.

To perform the field metering of the detector sensitivity, use a voltmeter and Test Kit, Part Number, MOD 400R.

Mounting

The 2151 can be mounted on the following:

- On a 4-inch square box with or without a plaster ring. Minimum depth 1.5 inches.
- On a 3.5-inch octagonal box. Minimum depth 1.5inches.

Installation

To install the detector, do the following:

1. Place the detector into the detector base.
2. Turn the detector clockwise until the detector locks into place.
3. To use the tamper-proof feature, break the smaller tab on the scribed line in the tamper proof tab located on the detector mounting bracket.
4. Install the detector.

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System Sensor
Low Profile, Photoelectronic



2151

Features

- Built with a low-profile construction.
- Offers an easy plug-in of the head to base.
- Designed with a tamper-resistant feature.
- Includes a Test Switch.
- Shows a 360° view angle of the alarm LEDs.
- Compatible with Gamewell-FCI control panels.
- Uses an audible sounder base (optional).
- Supports the field metering of detector sensitivity.
- Provides a removable insect screen and cover for field cleaning.
- Has an insect-resistant screening (020"/.508 mm openings).

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Installation (Continued)

5. If you use the tamper-proof feature, to remove the detector from the base, insert the blade of a small screwdriver into the hole on the side of the base.
6. Push the plastic lever away from the detector head.
7. This action allows the detector to be rotated counter-clockwise so that you can remove it.

NOTE: To remove the head when using the tamper-proof feature, remove the decorative ring.

The tamper-proof feature may be defeated permanently by breaking the plastic lever from the base.

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

For information on the spacing, the location of detectors and other guidelines, refer to NFPA 72, Chapter 5-3, “Smoke Sensing Fire Detectors.”

Testing

Detectors may be tested in the following ways:

- Place a test magnet against the detector as directed in the installation instructions. The detector should go into alarm within 30 seconds.
- To perform field metering of detector sensitivity, use a voltmeter and Test Kit, Part Number: MOD 400R.

For the complete procedure, refer to the Installation and Maintenance instructions furnished with each detector.

Maintenance

Cleaning programs should be adapted to the individual environment in compliance with NFPA Standard 72. Gamewell-FCI recommends at least an annual cleaning of the unit. The detector screen and cover assembly can be removed, revealing the sensing chamber. Use a vacuum cleaner to remove dust from the screen, the cover and the sensing chamber. For the complete procedure, refer to the Installation and Maintenance instructions furnished with each detector.

Specifications

Sensitivity:	3.0 %/ft. (nominal)
Operating Voltage:	8.5 - 35 VDC (24 VDC nominal)
Standby Current:	120 uA maximum
Operating Temperature:	32° to 120° F (0° to 49° C)
Operating humidity:	10 % - 93 % relative humidity
Air velocity:	3,000 feet per minute maximum
Construction:	Off-white flame retardant plastic
Diameter:	6.2 inches (15.5 cm) (flanged base)
Height:	1.7 inches (4.2 cm)
Weight:	3.6 oz. (104 g)

Ordering Information

Part Number	Description
2151	Photoelectronic detector
B110LP	Base, Two-wire
301BL4	Base, four-wire, 24 VDC operation Form A & C.
301BL4AC	Base, four-wire, 120 VAC operation Form A, C & Supv.
B401BH	Base, four-wire, with audible sounder
RA-400Z	Remote alarm indicator
PAM-1	End-of-line relay, 24 VDC Form B Test Kit.