System Sensor
Ionization Smoke Detector

Description

The System Sensor 1400 dual-chamber ionization smoke detector is specifically designed to meet the performance requirements of fire detection/alarm systems. This detector uses a state-of-the-art unipolar sensing chamber. The detector is designed to provide open area detection and is compatible with FCI fire alarm control panels. The detector operation and sensitivity can be tested in place.

The detector has an LED which flashes every ten seconds indicating that power is being applied to the detector. The LED lights steadily when the detector is in alarm. A remote LED annunciator is available as an optional accessory.

The 1400 detector includes a tamper-resistant feature that, when used, prevents removal of the detector without the use of a tool.

Sensitivity testing is performed by inserting a tool into the recessed test switch opening.

Field metering of detector sensitivity may be performed with the aid of a voltmeter and test kit MOD 400R.

Specifications

Nominal sensitivity	1.5%/ft. obscuration
Operating voltage	8.5 - 35 VDC (24 VDC nominal)
Standby current	100 µA maximum
Operating temperature	32° to 120° F (0° to 49° C)
Operating humidity	10 % - 93 % relative humidity
Air velocity	1,200 ft. per minute maximum
Altitude	10,000 feet
Construction	Off-white flame retardant plastic
Diameter	5.5 inches (14 cm)
Height	3.12 inches (8.0 cm)
Weight	0.7 lb (310 gm)

Note: Alarm current is limited by the control panel initiating device circuit.

Ordering Information

Part Number	Description
1400	Ionization detector

1400

Features

- Unique dual unipolar sensor provides exceptional stability.
- Built-in tamper-resistant feature.
- Built-in test switch.
- Built-in visual alarm indicator.
- Remote LED option.
- Compatible with FCI control panels.
- Field metering of detector sensitivity.
- Removable insect screen and cover for field cleaning.
- Sealed against dirt, insects, and back pressure.
- Insect-resistant screening (.020"/.508mm openings).
- Convenient terminal strip wiring.

An ISO 9001-2000 Company

SIGNALING
UL LISTED   FM APPROVED   MEA Approved   c UL us LISTED

Mounting

- On a 4-inch square box with plaster ring and FCI supplied mounting bracket kit. Minimum depth 1.5 inches.
- On a 3.5 or 4-inch octagonal box. Minimum depth 1.5 inches.
- Directly to ceiling using plastic screw anchors.

Refer to N.F.P.A. 72, Chapter 2-3. "Smoke Sensing Fire Detectors" for spacing, location of detectors and other guidelines.

Installation

Line up the arrows on the detector with the arrows on the mounting bracket. Turn the detector clockwise until the detector clicks into place.

To use the tamper-proof feature, break the smaller tab at the scribed line in the tamper-proof tab located on the detector mounting bracket. Install the detector. To remove the detector from the bracket when using the tamper-proof feature, insert the blade of a small screwdriver into the hole on the side of the base and push the plastic lever away from the detector head. Turn the detector counter-clockwise for removal. NOTE: The decorative ring must be removed in order to remove a head after it has been made tamper-proof.

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.

Testing

Detectors may be tested in the following ways:

- A. Insert a tool into the test opening in the unit. For the complete procedure, refer to the Installation and Maintenance Instructions furnished with each detector.
- B. Field metering of detector sensitivity may be performed with the aid of a voltmeter and test kit 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 conformance with NFPA Standard 72. We recommend, at the least, an annual cleaning of the unit. The detector screen and cover assembly can be removed, revealing the sensing chamber. A vacuum cleaner can be used to remove dust from the screen, cover and sensing chamber. For the complete procedure, refer to the Installation and Maintenance instructions furnished with each detector.
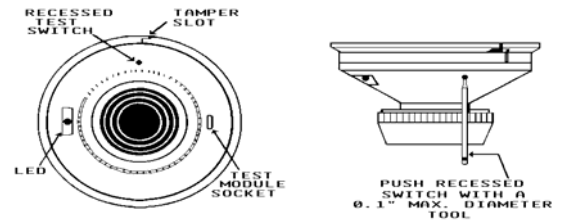
Views Showing Position of Test Magnet
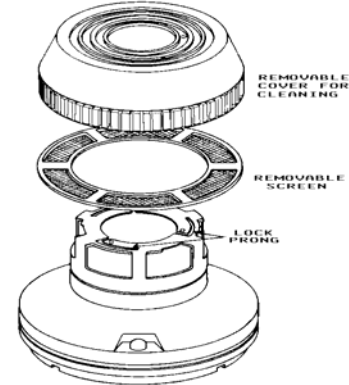
WARNING: To prevent detector contamination during construction, smoke detectors must be protected from dust and contamination until area is clean and dust free. See NFPA 72-5-3.7.1.3.