400 Series™ Direct-Wire Ionization Smoke Detector

SYSTEM SENSOR®

Models Available

1400, 2-Wire
1412B, 4-Wire
1424, 4-Wire

Accessories

A77-716B	End of line relay module, 12/24 VDC
RA400Z	Remote LED annunciator
MOD400R	Sensitivity test module
CRT400	Ionization cover removal tool
RS14	Replacement screen


1400 2-Wire Ionization Smoke Detector

Product Overview

12 or 24 volt operation

Removable cover and insect screen for easy cleaning

Visible LED blinks in standby, latches on in alarm

Twist-on mounting bracket with tamper option

Dual unipolar chamber design

Field sensitivity metering of detector to meet NFPA 72 requirements

SEMS screws for easy wiring

3-year warranty

Sealed against dirt, insects, and back pressure

S911 CS308 7271-1209:102

427-91-E VOL II 0Q7-A3.AY

All 400 Series ionization smoke detectors include a unique dual source, dual unipolar chamber detection design which will sense the presence of smoke particles produced by fast combustion as well as slow smoldering fires. This chamber exhibits increased stability, significantly reduces nuisance alarms, and provides better performance at higher air velocities.

The 400 Series meets the performance criteria required by UL/ULC. Additional key features include an LED which blinks in standby and latches on to indicate an alarm. Detectors feature convenient field testing and sensitivity metering. The model 1400 includes remote LED annunciator capabilities using the RA400Z.

Engineering Specifications

Smoke detector shall be an ionization type (model 1400, 1412B, or 1424) as manufactured by System Sensor. Wiring connections shall be made by means of SEMS screws. Detector will have a visible LED which will blink in standby and latch on in alarm. The detector shall have a sensitivity of 1.9 ± 0.6%/ft. as measured in the UL smoke box. The detector screen and cover should be easily removable for cleaning. It shall be possible to perform a sensitivity and functional test on the detector without the need of generating smoke. The detector shall have a mounting bracket that allows for mounting to a 3 1/2″ or 4″ octagon box or 4″ square electrical box.

Specifications

Height
3.12″ (8.1 cm)

Diameter
5.5″ (13.9 cm)

Shipping Weight
0.7 lbs.

Operating Temperature Range
32°F to 120°F (0°C to 49°C)

Operating Humidity Range
10% to 93% Relative Humidity (non-condensing)

Air Velocity Rating
1200 fpm maximum

Sensitivity
1.9 ± 0.6%/ft. nominal

Wiring
12-22 AWG, twisted pair recommended

Mounting
3 1/2″ or 4″ octagon box,
4″ square box with plaster ring,
50, 60, 75 mm boxes

Spacing
Install per NFPA 72 and local requirements. On smooth, flat ceilings, spacing of 30 feet may be used as a guide.

Electrical Ratings

	1400	1412B	1424
System Operating Voltage	12/24 VDC (8.5-35 VDC)	12 VDC (11.3-17.3 VDC)	24 VDC (20-29 VDC)
Standby Current	120 µA max.	120 µA max.	120 µA max.
Alarm	Two-wire control panels must be current limited 100 mA or less	77 mA	41 mA

Relay Contact Ratings

1 Form A Alarm:	2A @ 30 VAC/DC
1 Form C Auxiliary Alarm:	2A @ 30 VAC/DC; .6A @ 110 VDC; 1A @ 125 VAC

Ordering Information

Part Number	Description
1400	Ionization detector, 2-wire, 12/24 VDC, for control panels
1412B	Ionization detector, 4-wire, 12 VDC, for control panels
1424	Ionization detector, 4-wire, 24 VDC, for control panels
A77-716B	End of line relay module, 12/24 VDC
RA400Z	Remote annunciator (LED)
MOD400R	Sensitivity Test module (see below)
CRT400	Ionization cover removal tool
RS14	Replacement screen

The MOD400R Field Sensitivity Test Module can be used with any standard DC voltmeter or multimeter to check the sensitivity range of System Sensor's detectors (satisfies NFPA 72 requirement for sensitivity testing).

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