

1-800-SENSOR2

PHOTOELECTRONIC SMOKE DETECTOR

WITH PLUG-IN TERMINAL WIRING



FEATURES:

- 12/24 VDC operation in one unit
- 2-wire and 4-wire models available
- Aesthetically pleasing design
- Geometrically optimized photoelectronic sensing chamber
- Visual alarm and power indicator
- Plug-in terminal block for easy installation and maintenance
- Optional supervised electronic thermistor heat sensors rated at 135°F
- Built-in test switch
- Field sensitivity metering of detector to meet the requirements of NFPA 72
- Easy maintenance — replaceable insect screen
- Built-in tamper-resistant feature
- 3-year warranty



SYSTEM SENSORTM
A DIVISION OF PITTMAY

3825 Ohio Avenue, St. Charles, IL 60174, 1-800-SENSOR2 (736-7672), Fax 708-377-6495
An ISO 9001 Certified Company

GENERAL DESCRIPTION

System Sensor's 300 Series Photoelectronic Smoke Detectors feature a plug-in wiring system with 12 and 24 volt operation in one aesthetically pleasing housing design. All models contain a patented optical chamber for exceptional reliability. Installation is simple and cost effective — prewire the plug-in terminal block and snap the detector into place. Two- and four-wire models are available.

SPECIFICATIONS

Size:	5.5" diameter × 2.75" h (14 cm × 6.985 cm)
Shipping Weight:	0.7 lb. (310 gm)
Operating Temperature Range:	
Non-thermal Models:	0° to +49°C (32° to 120°F)
Thermal Models:	0° to +38°C (32° to 100°F)
Operating Humidity Range:	10% to 93% relative humidity noncondensing
Air Velocity Rating:	3000 ft./min. (15 meters/sec.)
	Caution — Detectors subjected to continuous velocities above 300 fpm may require more frequent maintenance.
Sensitivity:	3% (+.6 / −.7) per foot obscuration
Wiring:	14 – 22 AWG, twisted pair recommended
Mounting:	Single gang, 3½" or 4" octagon, or 4" square with plaster ring
Spacing:	Install per NFPA 72 and local requirements. On smooth, flat ceilings, spacing of 30 feet may be used as a guide.
Test Features:	1. Test port – Insert 0.1 inch maximum diameter allen wrench or screwdriver into test port on detector housing. 2. Test module – Using a standard voltmeter interface, insert MOD400R plug into detector's module port. Fulfills calibrated sensitivity test per NFPA 72.
Heat Sensor:	135°F fixed temperature electronic thermistors (2)

ELECTRICAL RATINGS

	<u>2312/24B / 2312/24TB</u>	<u>2300B / 2300TB</u>
System Operating Voltage:	12/24 VDC (8.5–35 VDC)	12/24 VDC (8.5–35 VDC)
Maximum Ripple Voltage:	30% of nom. (peak to peak)	30% of nom. (peak to peak)
Standby Current:	120 µA maximum	120 µA maximum
Alarm Current:	50 mA maximum	4.2 VDC minimum at 10 mA.* 6.6 VDC maximum at 100 mA.* *Alarm current must be limited to 100 mA maximum by the control panel. If used, the RA400Z Remote Annunciator operates within the specified detector alarm currents.
Reset Voltage:	0.8 VDC minimum	2.5 VDC minimum
Reset Time:	0.3 sec. maximum	0.3 sec. maximum
Start-up Time:	34 sec. maximum (after 60 sec. reset)	34 sec. maximum (After 60 sec. reset)
EOL relay:	A77-716B (12/24 volt)	

ALARM INITIATION CONTACT RATINGS (2312/24TB / 2312/24B)

Resistive or inductive load (60% power factor):
Form A: 2.0A @ 30 VAC/DC

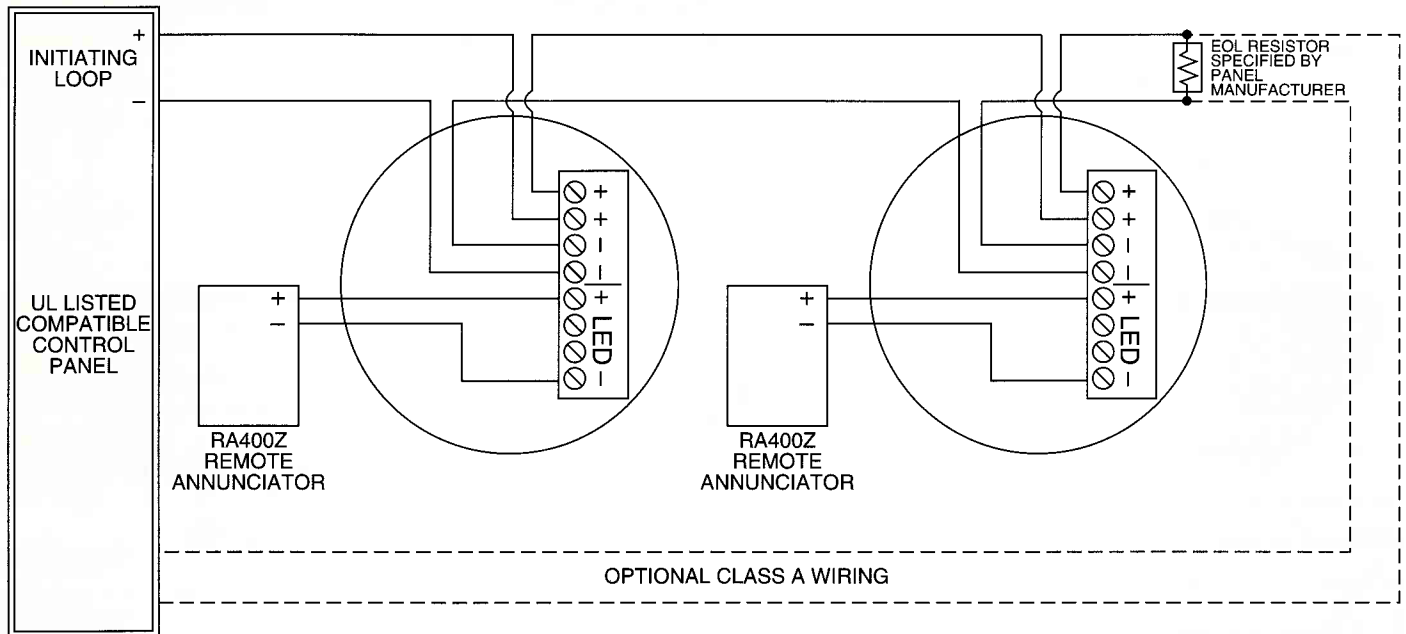
AGENCY LISTINGS

UL:	268 (S911)
CSFM:	7272-1209:142
FM:	OW5A9.AY

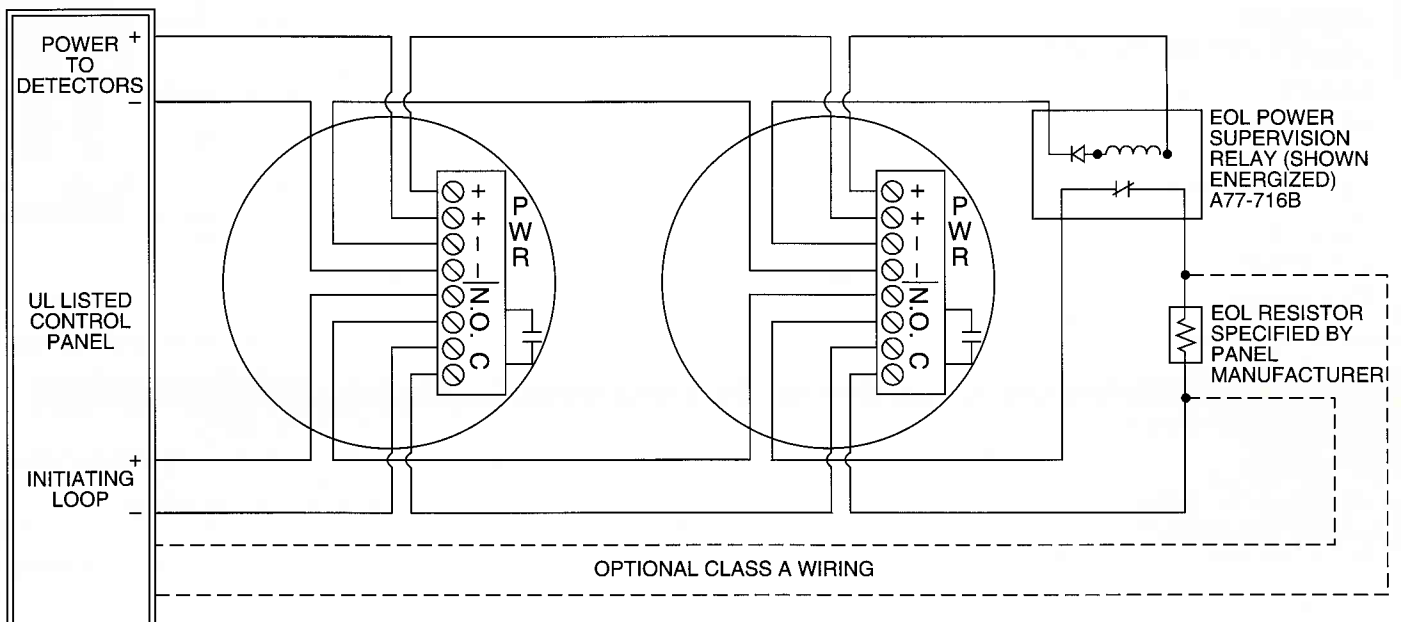
ENGINEERING SPECIFICATIONS

Smoke Detector shall be a photoelectric type (Model 2300B or 2312/24B) or a combination photoelectric/thermal with dual electronic heat sensors rated at 135°F (Model 2300TB or 2312/24TB) as manufactured by System Sensor. Wiring connections shall be made by means of a plug-in terminal block. Detector shall have a power/alarm LED which will blink in standby. The detector shall have a sensitivity of 3% $\pm$ 0.7 % per foot 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 without the need of generating smoke. Detector circuitry shall perform a self-test on the sensing chamber and internal electronics every 40 seconds. If circuitry fails, the detector LED shall stop blinking. 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.

300 SERIES WIRING GUIDE

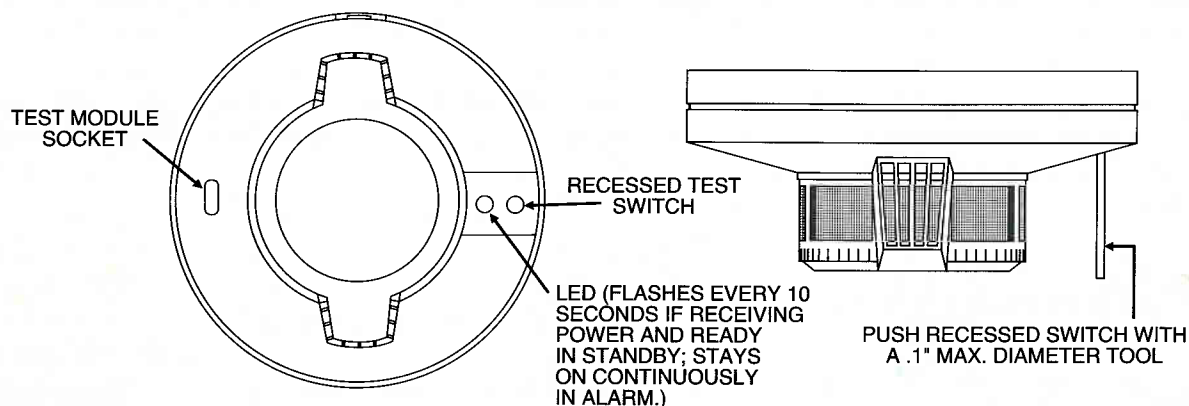


■ 2300B, 2300TB Wiring Diagram



■ 2312/24B, 2312/24TB Wiring Diagram

TESTING THE 300 SERIES PHOTOELECTRONIC SMOKE DETECTOR



A78-2334-00



- 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).

ORDERING INFORMATION

Part No.	Description
2312/24B	Photoelectronic, 4-wire, 12/24 VDC, plug-in terminal block
2312/24TB	Photoelectronic, 4-wire, 12/24 VDC, thermistors, plug-in terminal block
2300B	Photoelectronic, 2-wire, 12/24 VDC, plug-in terminal block
2300TB	Photoelectronic, 2-wire, 12/24 VDC, thermistors, plug-in terminal block
A77-716B	EOL power supervision relay module, 12/24 VDC
MOD400R	Sensitivity test module
RS23	Replacement screen for 300 Series smoke detectors (12 pack)
J2300TB	Shorting plug for 300 Series head removal
T17-174-07	Replacement terminal block, 2-wire
T17-174-08	Replacement terminal block, 4-wire

SYSTEM SENSOR WORLDWIDE MANUFACTURING & DISTRIBUTION

Corporate Headquarters:
System Sensor
3825 Ohio Avenue
St. Charles, IL 60174, USA
Telephone: 708-377-6580
FAX: 708-377-6495

In the United Kingdom:
System Sensor Limited
Horsham Gates III, North
Horsham, West Sussex
RH13 5PJ, United Kingdom
Telephone: 44 1403 276500
FAX: 44 1403 276501

In Italy:
System Sensor
Pittway Tecnologica, S.p.A.
Via Caboto, 19
34147 Trieste, Italy
Telephone: 39 40 381887
FAX: 39 40 382137

In the Far East:
System Sensor Far East Sales Office
Pittway Far East LTD
Suite 706, World Shipping Centre
7 Canton Road
Tsimshatsui, Kowloon, Hong Kong
Telephone: 852-730-9090
FAX: 852-736-6580