

# 2300 Series

## Photoelectronic Smoke Detector with Electronic Heat Sensing



System Sensor's new 2300 Series Photoelectronic Smoke Detector with Electronic Heat Sensing features 12 and 24 volt operation in one unit. Model 2300T (2-Wire) and Model 2312/24T (4-Wire) are designed with pleasing aesthetics; the housing is 15% smaller than many competitive units. Thermistor technology coupled with System Sensor's patented optical chamber make this new series detector exceptionally reliable. Installation is simple and cost effective — pre-wire the harnesses and snap the detectors into place.

- One Unit Features Both 12 and 24 VDC Operation
- 2-Wire and 4-Wire Models Available
- Aesthetically Pleasing Low Profile Design
- Geometrically Optimized Photoelectronic Sensing Chamber
  - Built-in Signal Processing
  - Superior Signal-to-Noise Ratio
  - 3% Nominal Sensitivity
- Thermistor Heat Sensors
- Wiring Harness for Easy Pre-wire of Units
  - Cost Effective
  - Helps Prevent Construction Damage/Theft
- Visual Alarm and Power Indicator
- Built-in Test Switch
- Field Metering of Detector Sensitivity
- Easy Maintenance — Replaceable Insect Screen
- Built-in Tamper-resistant Feature
- 3-Year Warranty

**SYSTEM SENSOR™**  
A DIVISION OF PITTWAY

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**MEA**  
approved



  
MADE IN THE U.S.A.

# General Specifications

Diameter:	5.5 inches	(13.9 cm)
Height:	2.5 inches	(6.4 cm)
Weight:	0.7 lb	(310 gm)
Operating Temperature Range:	0° to +49°C	(32° to 120°F)
Operating Humidity Range:	10% to 90% Relative Humidity	
Latching Alarm:	Reset by momentary power interruption.	
Test Feature:	Insert 0.1 inch maximum diameter allen wrench or screwdriver into test hole on detector housing.	
Maximum Air Velocity:	3000 Ft./Min. (15 Meters/Sec.)	
	Caution — Detectors subjected to continuous velocities above 300 fpm may require more frequent maintenance.	
Sensitivity:	3% (+.3 / -.7)	
Spacing:	Install per NFPA 72E, NFPA 74, and local requirements.	
Listings:	UL 5911; CSFM 7257-1209:142; MEA 427-91-E; FM Approved	

## Electrical Ratings:

System Voltage	nominal:	<b>2312/24T</b>	12 or 24 VDC
	minimum:		8.5 VDC
	maximum:		35 VDC
Maximum Ripple Voltage:			30% of nom. (peak to peak)
Start-up Capacitance:			0.02 $\mu$ F Maximum
Standby Current:			120 $\mu$ A Maximum
Alarm Current:			10mA Minimum, 50mA Maximum

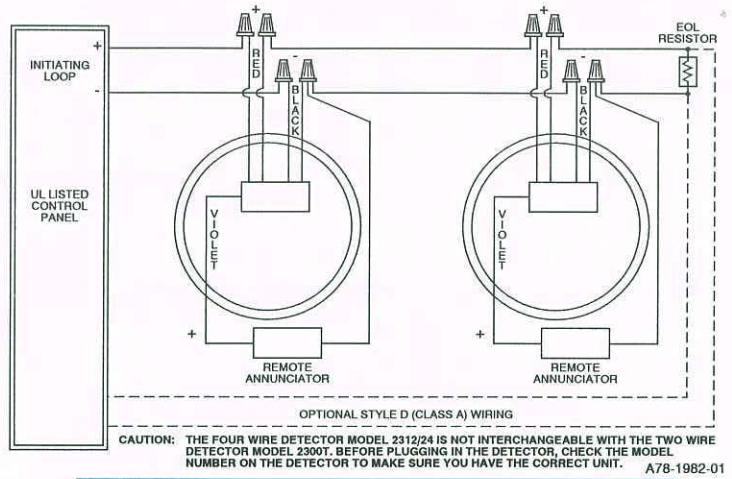
Reset Voltage:	0.8 VDC Minimum
Reset Time:	6 Sec. Maximum
Start-up Time:	34 Sec. Maximum (After 60 Sec. Reset)
EOL relay:	A77-716-01 (12 volt) A77-716-02 (24 volt)

## Relay Contact Ratings (2312/24T only):

Resistive or inductive load (60% power factor):

Form A:	2.0A @ 30 VAC/DC
Form C:*	0.6A @ 110 VDC, 2.0A @ 30 VAC/DC 1.0A @ 125 VAC, 2.0A @ 30 VAC/DC

\*For Canadian installations, relay contact rating is 2.0A @ 30 VAC/DC



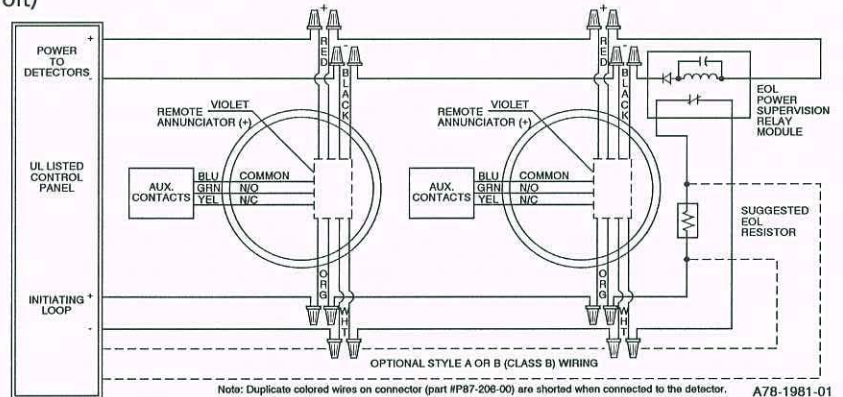
WIRING DIAGRAM FOR 2300T DETECTOR

## 2300T

12 or 24 VDC
8.5 VDC
35 VDC
30% of nom. (peak to peak)
0.02 $\mu$ F Maximum
120 $\mu$ A 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.

2.5 VDC Minimum
6 Sec. Maximum
34 Sec. Maximum (After 60 Sec. Reset)



WIRING DIAGRAM FOR 2312/24T DETECTOR

# Ordering Information

Part No.	Description
2312/24T	Photoelectric, 4-Wire, 12 or 24 VDC, Thermistors, Molex Connector
2300T	Photoelectric, 2-Wire, 12 or 24 VDC, Thermistors, Molex Connector
A77-716-01	Relay Module, 12 VDC (24 Pack)
A77-716-02	Relay Module, 24 VDC (24 Pack)
MOD400R	Test Module for 300 and 400 Series Detectors
RS23	Replacement Screen for 300 Series Smoke Detectors (12 Pack)
J2300	Shorting Plug for 300 Series Head Removal
T2300	Replacement Thermistors for 300 Series (2 Pack)
P87-206-00	Replacement 4-Wire Molex Connector for 2312/24T
P87-206-01	Replacement 2-Wire Molex Connector for 2300T
I56-490-XX	Installation Instructions for 2300T
I56-431-XX	Installation Instructions for 2312/24T

## Distributed by: