

SOE-24V/SOE-24H PHOTOELECTRIC SMOKE & SMOKE/HEAT DETECTOR



SOE-24V



SOE-24H

STANDARD FEATURES

- High signal-to-noise ratio and sensitivity stability are effective in a wide range of environmental conditions
- Wide viewing angle alarm indicators
- Automatic drift compensation and maintenance indication
- Built-in magnetic test feature
- Break-away, hidden locking feature for use with NS bases
- Optimized reduction to false alarms and enhanced reaction time to real fires

DETECTOR SPACING

Smoke sensor spacing shall be in compliance with NFPA 72. For smooth ceilings and in the absence of specific performance-based design criteria, the distance between smoke sensors shall not exceed a nominal spacing of 30 ft. (9.1m) or all points on the ceiling shall have a sensor within a distance equal to or less than 0.7 times the nominal 30 ft. (9.1m) spacing. Sensors shall be located within a distance of one-half the nominal spacing, measured at right angles from all walls or partitions extending upward to within the top 15 percent of the ceiling height. For additional instructions see NFPA 72

DESCRIPTION

The SOE-24 Series of detectors are reliable, high-quality, UL 268 7th Edition listed Photoelectric Smoke Detectors allowing them to be used in all open areas where smoke detection is required. The SOE-24V is a photoelectric only detector. The SOE-24H is a combination smoke and UL 521 7th Edition listed heat detector. The new multi-spectrum smoke categorization technology detects smoldering and flaming fires, including polyurethane fuels, while reducing nuisance cooking alarms.

OPERATION

The SOE-24V Photoelectric Smoke Detector utilizes a green/red LED for indication of status. In a normal standby condition the LED flashes green every 3 seconds. When the detector senses that its sensitivity has drifted outside the UL listed sensitivity window the LED will flash Red every 3 seconds. When the detector senses smoke and goes into alarm the status the LED will latch on Red.

The detector utilizes an IR-LED and Blue LED to distinguish smoke characteristics.

The SOE-24H adds a heat sensing element to also detect 135°F temperature.

PRODUCT LISTINGS



California State
Fire Marshal
7272-0410-0509

Specifications subject to change without notice.

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SOE-24V/SOE-24H PHOTOELECTRIC SMOKE & SMOKE/HEAT DETECTOR

SOE-24V Conventional Photoelectric Smoke Detector

Sensing Element	Smoke	IR LED, Blue LED, Photodiode
Supply Voltage	Operating Voltage Range	8-35VDC
	Absolute Max Voltage	42VDC
	Maximum Voltage Ripple	8200mVAC
	Maximum Input Capacitance	0.01uF
	Current Consumption	Standby Current
	Minimum Allowable Alarm Current	5mA
	Maximum Allowable Alarm Current	150mA
Startup	Time	25s (Max)
	Current	160uA (Max)
Reset	Time	100ms (Min)
	Voltage	2.5V (Min)
Compatible Bases	NS4-100, NS6-100, NS4-220, NS6-220, NS4-221, NS6-221, NS4-224, NS6-224 HSC-220R, HSC-221R, HSC-224R, HSC-4R, HSC-4R12 *W suffix (not listed above) indicates white color	
Operating Temperature Range	32°F ~ 120°F	
UL Listed Ambient Temperature	32°F ~ 120°F	
Storage Temperature Range	-22°F ~ +140°F	
Operating Humidity Limit	<95%RH at 104°F, <85%RH at 140°F	
Dimension	3.94" diameter x 1.69" tall	
Color	Ivory	
Weight	3.53 oz.	
Air Velocity Range	0-4000 fpm	
Sensitivity Range	1.82-3.16%/ft	
Testing	Test with Smoke Sabre aerosol cans or the Testfire 1000/1001 or 2000/2001 with TS3 smoke capsules * Refer to Conventional Detectors Technical Bulletin Rev 07/21	



SOE-24H Conventional Photoelectric Smoke and Heat Detector

Sensing Element	Heat	Thermistor
	Smoke	IR LED, Blue LED, Photodiode
Supply Voltage	Operating Voltage Range	8-35VDC
	Absolute Max Voltage	42VDC
	Maximum Voltage Ripple	8200mVAC
	Maximum Input Capacitance	0.01uF
	Current Consumption	Standby Current
	Minimum Allowable Alarm Current	5mA
	Maximum Allowable Alarm Current	150mA
Startup	Time	25s (Max)
	Current	160uA (Max)
Reset	Time	100ms (Min)
	Voltage	2.5V (Min)
Heat Sensitivity Range	135°F	
Compatible Bases	NS4-100, NS6-100, NS4-220, NS6-220, NS4-221, NS6-221, NS4-224, NS6-224 HSC-220R, HSC-221R, HSC-224R, HSC-4R, HSC-4R12 *W suffix (not listed above) indicates white color	
Operating Temperature Range	32°F ~ 117°F	
UL Listed Ambient Temperature	32°F ~ 117°F	
Storage Temperature Range	-22°F ~ +140°F	
Operating Humidity Limit	<95%RH at 104°F, <85%RH at 140°F	
Dimension	3.94" diameter x 2.16" tall	
Color	Ivory	
Weight	3.53 oz.	
Air Velocity Range	0-4000 fpm	
Sensitivity Range	1.80-3.16%/ft	
Testing	Test with Smoke Sabre aerosol cans or the Testfire 1000/1001 or 2000/2001 with TS3 smoke capsules * Refer to Conventional Detectors Technical Bulletin Rev 07/21	

