



2151-C Low Profile Photoelectronic Plug-in Smoke Detectors

General Description

The 2151-C low-profile photoelectronic detector uses a state-of-the-art optical Sensing chamber. This detector is designed to provide open area protection and to be used with compatible UL listed control panels only. The capability of plugging this detector into a variety of special bases makes it more versatile than equivalent direct-wired models.

Two LEDs on each detector provide local 360° visible alarm indication. The LEDs flash RED color every 5 seconds in normal mode. The LEDs latch on in alarm. LEDs will double blink every 5 seconds when a trouble condition exists indicating that the detector sensitivity is outside the listed limit. Remote LED annunciator capability is standard. The alarm can be reset only by a momentary power interruption. This detector may be tested by activating the internal reed switch with a magnet.

Agency Listings



Appearance

FIGURE 1. Bottom and Side Views Showing Position of Test Magnet and Test Module.

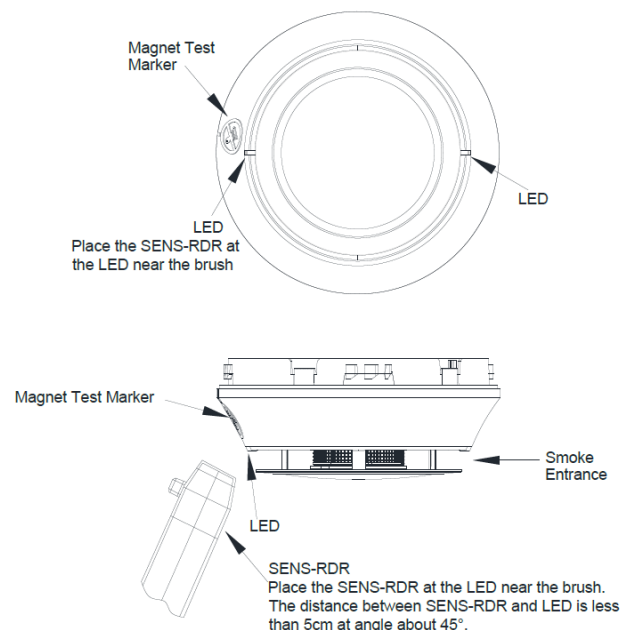
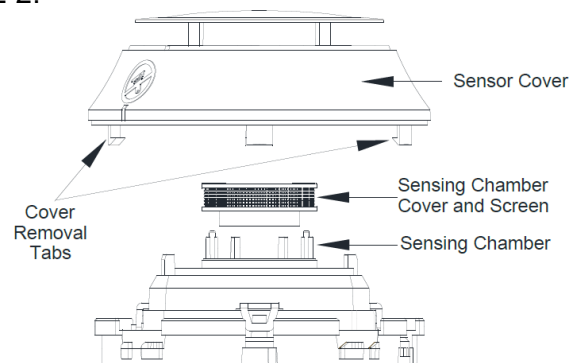


FIGURE 2.



Specifications

Model	2151-C
Height	2.0 inches (51 mm) installed in B401-W
Diameter	4.0 inches (102 mm) with B401-W
Weight	3.3 oz. (94 g)
Operating Temperature Range	32°F to 122°F (0°C to 50°C)
Operating Humidity Range	10% to 93% Relative Humidity noncondensing
Operating Voltage*	8.5 to 35VDC (Only for 2-wire application)
Standby Current	120μA
Latching Alarm	Reset by momentary power interruption.
Sensitivity	1.51 ~ 2.89%/ft
Max. Air Velocity	300ft/min

*Note: For 4-wire application, please refer to the base manual for operating voltage.

Model	B401-W	B401RN
Base Diameter	4.0 inches (102 mm)	4.0 inches (102 mm)
Base Height	0.8 inches (20 mm)	1.1 inches (28 mm)
Weight	0.12 lb. (54 g)	0.2 lb. (96 g)
Mounting	50 mm box / 60 mm box	50 mm box / 55 mm box / 60 mm box
Operating Temperature Range	0°C to 50°C (32°F to 122°F)	0°C to 50°C (32°F to 122°F)
Operating Humidity Range	10% ~ 93% Relative Humidity	10% ~ 93% Relative Humidity, Noncondensing
Electrical Ratings - includes base and detector		
System Voltage	12/24 VDC	24 VDC
Maximum Ripple Voltage	4 Volts peak-to-peak	4 Volts peak-to-peak
Start-Up Capacitance	≤ 0.02μF	≤ 0.02μF
Standby Ratings	8.5 VDC ~ 35 VDC; ≤120 μA	20 VDC ~ 29 VDC; ≤120 μA
Alarm Ratings	10 mA ~ 130 mA*	17 mA ~ 36 mA
Reset Voltage	≥2.5 VDC	≥1.4 VDC
Reset Time	≤ 0.3 Seconds	≤ 0.3 Seconds
Start-up Time	≤ 34.0 Seconds	≤ 34.0 Seconds
Relay Contact Ratings (Resistive) Form C	NA	1.0 A @ 30 VDC

*Note: Alarm current MUST be limited by the control panel.

Ordering Information

Model	Product Description	Agency	UOM
2151-C	Low-profile Photoelectronic Detector, white color	UL	EA.
B401RN	Relay Detector Base, white color	UL	EA.
B401-W	Plug-in Detector Base, white color	UL	EA.





Smoke Detectors for Fire Alarm Systems

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S35728

Investigated to UL 268 (8th ed.)
Products Suitable for Ducts, D(I) and D(ST) are investigated to UL 268A

Detector Model	Application	Type	Compatibility Restrictions	Velocity Range (fpm)		date of Manufacture	Time of Manufacture Firmware Version	Firmware Version Update
				Min	Max			
2151-C, 2151-C-IV, 882-C and 882-C-IV	OAP	P	D2	0	300	-	-	-

Base Model	Related Detector	Control Unit Compatibility Restrictions
B401-W, B401-IV, B401RN, B401RN-IV	-	B3, B5

Investigated to UL 268 (7th ed.)
Products Suitable for Ducts, D(I) and D(ST) are investigated to UL 268A

Base Model	Related Detector	Control Unit Compatibility Restrictions
B501CN	Refer to manufacturer's installation instructions for compatible detector heads.	B2
B501IN	Refer to manufacturer's installation instructions for compatible detector heads.	B2

date of Manufacture identifies the manufacturing start date of all product models that will use the specific Time of Manufacture Firmware Version. The date of manufacture is noncoded and in the format YEAR (in 4 digits), MONTH (in letters), DAY (in 2 digits).

Time of Manufacture Firmware Version identifies a numerical and/or alphabetic series designation that is product and date-code specific and will only identify the Firmware Version at the time the product was manufactured. The numeric and/or alphabetic sequence is defined by the manufacturer.

Firmware Version Update is a numerical and/or alphabetic sequential identification that is product and date-code specific and sequentially identifies the Firmware Version Update from the previous version of firmware. The numerical and/or alphabetic sequence is defined by the manufacturer.

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