



100 Series™ Low-Profile Plug-in Smoke Detectors



System Sensor 100 Series Plug-in Smoke Detectors offer superb performance and reliability in a profile which is just 2" (5.1 cm) deep.

Model 2151A (photoelectric sensor) and model 2151TA (photoelectric sensor with thermal) can be used with a variety of adapter bases in several wiring configurations and voltages. Features include: low current draw, stable performance in high air velocities, built-in tamper resistant base design, remote LED option, removable cover, built-in test switch and the ability to obtain sensitivity readings using the CSENS-RDRA infrared reader.

The 100 Series is designed to meet the performance criteria designated by ULC. Its sensing chambers are sealed against back pressure air flow, dirt and insects. This chamber is protected by a fine mesh screen, which can be cleaned or replaced. Additional key features include a variety of mounting bases and a full line of accessories.

All 100 Series photoelectric smoke detectors contain a unique optical sensing chamber designed to sense smoke particles produced by a wide range of combustion sources. A custom integrated circuit incorporates signal processing to reduce false alarms.

Model 2151A photoelectric detector's unique optical sensing chamber is engineered to sense smoke by a wide range of combustion sources. Dual electronic thermistors add 135°F fixed temperature thermal sensing on model 2151TA.

Features

- Sleek, low-profile design
- Compatible with 400 Series product
- Two LEDs blink in standby, providing 360° visibility
- Broad range of adapter bases available with built-in shorting spring
- Hand-held sensitivity reader available (Model CSENS-RDRA)



CSENS-RDRA Infrared Sensitivity Reader for use with 2151A/2151TA

Agency Listings



CS308

100 Series Plug-in Smoke Detector Specifications

Operating Voltage/Alarm Current	See Adapter Base Selection Guide following
Standby Current	85µA Standby
Sensitivity	1 – 3.18%/ft.
Height	2.0" in B401A
Diameter	4.1" installed in B401A; 6.2" installed in B110LPA
Shipping Weight	5.2 oz
Construction	Flame retardant thermoplastic
Temperature	Photo: 32°F to 120°F (0° to 49°C); Photo/thermal: 32°F to 100°F (0° to 38°C)
UL Listed Velocity Range	Photo: 0 – 3000 fpm (0 – 15.2 m/s)
Humidity Range	10% – 93% RH non-condensing
Smoke Detector Spacing	On smooth ceilings spacing of 30 feet (900 sq. ft.) may be used as a guide. Other spacing may be used depending on ceiling height, high air movements, and other conditions or response requirements.

Adapter Base Selection Guide

Note: The 400 series 6 inch bases, B401BA, B401BRA, B402BA, B404BA and B406BA, have been made compatible with the new 100 series for retrofit applications only. In addition, make sure to use the F110 flange for these bases.

Base Model Number	Loop Type	Current Limit Resistor	Contact Type	Nominal Voltage	Current Draw on Alarm (mA)
B110LPA/B401BA	2-wire*	No	—	12/24VDC	10–130**
B110RLPA/B401RA/ B401BRA	2-wire*	Yes	—	24VDC	10–62
B112LPA/B402BA	4-wire	Yes	Form A&C	24VDC	17–36
B114LPA/B404BA	4-wire	Yes	Form A&C + A Supervisory	120VAC	75 mA AC Max
B116LPA/B406BA	2-wire*	No	Form C	24VDC	20–100**
B401A	2-wire*	No	—	12/24VDC	10–130**
*Functionality contingent on panel compatibility **Must be limited by control panel †Flangeless base					
Relay Contact Ratings:	Resistive or Inductive (60% power factor) load.				
Form A:	2.0A at 30 VAC/DC				
Form C:	0.6A at 110VDC, 2.0A at 30VDC				
	1.0A at 125VAC, 2.0A at 30VAC				

Junction Box Selection Guide*

Base Model Number	Single Gang	3½" Octagon	4" Octagon	4" Square	50 mm	60 mm	75 mm
B401A	No	No	No	No	Yes	Yes	No
B110LPA/RLPA	Yes	Yes	Yes	Yes	No	No	No
B112LPA/B116LPA	Yes	Yes	Yes	Yes	Yes	Yes	Yes
B114LPA	No	No	Yes	Yes	No	No	No

*Box depth contingent on base and wire size. Refer to Canadian Electrical Code or local applicable codes for appropriate recommendations.

Ordering Information

Part No.	Description
2151A	Low-profile photoelectric detector. Must be mounted to one of the B100 Series or B400 Series bases listed in the Adapter Base Selection Guide.
2151TA	Low-profile photoelectric detector with thermal. Must be mounted to one of the B100 Series or B400 Series bases listed in the Adapter Base Selection Guide.

Accessories

RA400ZA	Remote annunciator for 2 or 4 wire systems, 3–32V. Fits standard single gang electrical box.
CSENS-RDRA	Hand-held sensitivity reader.
SMK400	Surface mounting kit provides for entry of surface wiring conduit. For use with B401 or B401R mounting bases only.
EOLR-1A	End of line relay for power supervision, 12/24 VDC systems.
M02-04-01	Test magnet.
M02-09-00	Test magnet with 32" telescoping handle.
XR-2B	Detector removal tool. Allows installation and/or removal of 100 Series detector heads from base in high ceiling installations when used with XP-4.
XP-4	Extension pole for XR-2B. Comes in three 5 ft. sections.
C58-227-01	Replacement dust cover for 100 Series smoke detectors.
RMK400	Recessed mounting kit (B401 sold separately).



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