



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.

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 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. Other features include: low current draw, stable performance in high air velocities, built-in tamper resistant base design, remote LED option, removable cover and built-in test switch.

The 100 series is designed to meet the performance criteria designated by ULC. The sensing chamber is sealed against back pressure air flow. The chamber top is covered by a one piece molded screen which minimizes the entry of dirt and insects. This screen can be removed for cleaning. 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 57°C (135°F) fixed temperature thermal sensing on model 2151TA.

Agency Listings



100 Series Plug-in Smoke Detector Specifications

| | |
|--|---|
| Operating Voltage/Alarm Current | See Adapter Base Selection Guide following |
| Standby Current | 120µA Standby (when mounted in a B110LPA base) |
| Sensitivity | 1 – 3.18%/ft. |
| Height | 2.0" in B401 |
| 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 (as defined in NFPA 72), 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 |

| Adapter Base Selection Guide | | | | | |
|------------------------------|-----------|------------------------|--------------------------|-----------------|----------------------------|
| Base Model Number | Loop Type | Current Limit Resistor | Contact Type | Nominal Voltage | Current Draw on Alarm (mA) |
| B110LP | 2-wire* | No | — | 12/24VDC | 10–130 [†] |
| B110RLP | 2-wire* | Yes | — | 24VDC | 10–62 |
| B112LP | 4-wire | Yes | Form A&C | 24VDC | 17–36 |
| B114LP | 4-wire | Yes | Form A&C + A Supervisory | 120VAC | 75 mA AC Max |
| B116LP | 2-wire* | No | Form C | 24VDC | 20–100 [†] |
| B401 ^{††} | 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 |
| B110LP/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 National 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 | |
|-------------|---|
| F110 | Accessory Flange Ring for 6" Base |
| RA100ZA | Remote annunciator for 2 or 4 wire systems, 3–32V. Fits standard single gang electrical box. |
| SENS-RDRA | Hand-held sensitivity reader. |
| SMB600 | Surface mounting kit (flanged) |
| 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. |



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