

# 100 Series™ Low-Profile Plug-in Smoke Detectors



## Models Available

- 2151 Photoelectric Detector
- 2151T Photoelectric Detector  
with thermal

2151T in B401 Base



## Product Overview

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

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 2151 (photoelectric sensor) and model 2151T (photoelectric sensor with thermal) can be used with a variety of different 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 UL. 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 2151** 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 2151T**.



S911



7272-1653:122



CS308



205-94-E



OX5A4.AY



1973

## Specifications

### Operating Voltage/Alarm Current

See Adapter Base Selection Guide following

### Standby Current

85µA Standby

### Sensitivity

1 - 3.18%/ft.

### Height

2.0" in B401

### Diameter

4.1" installed in B401  
6.2" installed in B110LP

### 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 response requirements.

## Adapter Base Selection Guide

Base Model Number	Loop Type	Current Limit Resistor	Contact Type	Nominal Voltage	Current Draw on Alarm (mA)
B110LP/B401†	2-wire*	No	—	12/24VDC	10–130**
B110RLP/B401R†/B401BR†	2-wire*	Yes	—	24VDC	10–62
B112LP/B402†	4-wire	Yes	Form A&C	24VDC	17–36
B114LP/B404†	4-wire	Yes	Form A&C + A Supervisory	120VAC	75 mA AC Max
B116LP/B406†	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
B401	NO	NO	NO	NO	YES	YES	NO
B110LP/RLP	YES	YES	YES	YES	NO	NO	NO
B112LP/B116LP	YES	YES	YES	YES	YES	YES	YES
B114LP	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

2151	Low-profile photoelectric detector. Must be mounted to one of the B100 Series or B400 Series bases listed in the Adapter Base Selection Guide.	2151T	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.
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### Accessories

F110	Retrofit replacement flange for B400 Series flanged bases.	XP-4	Extension pole for XR-2B. Comes in three 5 ft. sections.
RA400Z	Remote annunciator for 2 or 4 wire systems, 3-32V. Fits standard single gang electrical box.	C58-227-01	Replacement dust cover for 100 Series smoke detectors.
B401BH-2	Sounder base. Requires an external 24 VDC power supply. Mounts to 4" square electrical box (1½" minimum depth, 2½" recommended).	RMK400	Recessed mounting kit (B401 sold separately).
SENS-RDR	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-1	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.		

SENS-RDR Sensitivity Test Reader



## System Sensor Sales and Service

### System Sensor Headquarters

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### System Sensor Canada

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Fx: 905.812.0771

### System Sensor Europe

Ph: 44.1403.891920  
Fx: 44.1403.891921

### System Sensor in China

Ph: 86.29.8832.0119  
Fx: 86.29.8832.5119

### System Sensor in Singapore

Ph: 65.6273.2230  
Fx: 65.6273.2610

### System Sensor – Far East

Ph: 85.22.191.9003  
Fx: 85.22.736.6580

### System Sensor – Australia

Ph: 613.54.281.142  
Fx: 613.54.281.172

### System Sensor – India

Ph: 91.124.237.1770 x.2700  
Fx: 91.124.237.3118

### System Sensor – Russia

Ph: 70.95.937.7982  
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