



## Low-Profile Plug-in Intelligent Laser Smoke Detector

*Pinnacle™ model 7251 is an intelligent, laser-based photoelectric smoke detector featuring extensive on-board signal processing capabilities designed to improve smoke response.*



**PINNACLE™**

### Features

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- Ultra-high-sensitivity capability
- On-board drift compensation
- Transient rejection algorithms
- Environmental tracking
- Wide sensitivity range
- Rotary address switches
- Analog communications
- Sleek, low-profile design
- Low standby current
- Microprocessor design
- Superior EMI protection

**Pinnacle features** a patented smoke sensing chamber, designed to amplify signals from smoke but diminish stray internal reflections. By using a laser diode instead of a standard LED light source into the sensing chamber, Pinnacle is able to achieve sensitivities from 0.02 percent-per-foot to 2 percent-per-foot obscuration.

The detectors' extensive software processing includes multi-alert drift compensation, internal self diagnostics, and superior transient signal rejection algorithms to produce unprecedented stability at ultra high sensitivities over the complete temperature range.

Because Pinnacle is base-compatible with all other 200 Series detectors, system designers can seamlessly mix it with other standard detection technologies thereby reducing overall cost.

Unlike other high-sensitivity detectors, Pinnacle:

- Can pinpoint identification of the fire location through addressability.
- Experiences no delay in response time due to smoke dilution or smoke transportation time (as in aspirated systems).
- Offers complete supervision of wiring and detector.

Pinnacle is designed to protect valuable assets and operations where systems must remain online at all times. Many sensitive areas cannot tolerate even small amounts of smoke. Some ideal applications for Pinnacle include:

- Telecommunications switching facilities
- Cellular telephone infrastructure
- Integrated circuit fabrication facilities
- Computer rooms
- Traffic control centers
- Clean rooms

### Agency Listings

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**MSFM**  
approved

## Specifications

Electrical Specifications	
Voltage Range	15 – 32 volts DC peak
Standby Current (max. avg.)	230 $\mu$ A @ 24VDC (without communication) 330 $\mu$ A @ 24VDC (one communication every 5 sec. with LED enabled)
LED Current (max.)	6.5 mA @ 24VDC (on)
Physical/Operating Specifications	
Height	1.66" (4.2 cm)
Diameter	4.0" (10.2 cm)
Shipping Weight	5.6 oz. (159 g)
Operating Temperature Range	32° to 100°F (0° to 38°C)
Velocity Range	0 – 4000 fpm (0 to 20.3 m/s)
Operating Humidity Range	10% – 93% noncondensing
Self Diagnostics	Initiated by control panel Activated by test magnet
Smoke Sensitivity	9 levels: 0.02, 0.03, 0.05, 0.10, 0.20, 0.50, 1.00, 1.50, 2.00%/ft. obscuration (0.06, 0.10, 0.16, 0.33, 0.66, 1.65, 3.24, 4.85, 6.41%/m obscuration)
Drift Compensation	High sensitivity maintenance alert signal Low sensitivity maintenance alert signal Maintenance urgent signal



M02-09-00 Test Magnet with Telescoping Handle



RA100Z Remote LED

## Ordering Information

Part No.	Description		
7251	Low-profile intelligent plug-in laser smoke detector		
7251A	Low-profile intelligent plug-in laser smoke detector (Canadian model)		
200 Series Bases			
B501(A)*	4" Flangeless Mounting Base	B2005R(A)	Standard Sounder Base (Compatible with B501BH Series)
B501BP(A)	4" Flanged Mounting Base Bulk Pack	B2005(A)	Intelligent Addressable Sounder Base
B210LP(A)	6" Flanged Mounting Base	B224RB(A)	Relay Base
B210LPBP(A)	6" Flanged Mounting Base Bulk Pack	B224BI(A)	Isolator Base
200 Series Accessories			
SMB600	Surface Mounting Kit (flanged)	M02-04-01	Detector Test Magnet
F110	Accessory Flange Ring for 6" Base	M02-09-00	Telescoping Test Magnet (shown above)
F110BP	Accessory Flange Ring for 6" Base Bulk Pack	XR-2	Detector Removal Tool
F210	Accessory New Smaller Flange Ring for 6" Base	XP-4	Extension for XR-2 (5–15 ft.)
RA100Z(A)	Remote LED Annunciator (shown above)	DUST12	Dust Cover

\*(A) suffix denotes Canadian products



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