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.

Features

• 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

Specifications

Electrical Specifications	
Voltage Range	15 – 32 volts DC peak
Standby Current (max. avg.)	230 µA @ 24VDC (without communication) 330 µA @ 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)*	Flangeless Mounting Base	B224RB(A)	Relay Base
B210LP(A)	Flanged Mounting Base	B224BI(A)	Isolator Base
B501BH(A)	Standard Sounder Base	SMK400	Flangeless Surface Mounting Kit
B501BHT(A)	Temporal Tone Sounder Base	SMB600	Flanged Surface Mounting Kit
200 Series Accessories			
RA400Z(A) /RA100Z(A)	Remote LED Annunciator (shown above)	XR-2	Detector Removal Tool
M02-04-01	Detector Test Magnet	XP-4	Extension for XR-2 (5–15 ft.)
M02-09-00	Telescoping Test Magnet (shown above)	DUST12	Dust Cover

*(A) suffix denotes Canadian products