

## MRI-200 SERIES

### Intelligent Low Profile Detectors



Model MRI-2251TB Detector Mounted in a Model MRI-B210LP Base

### Description

Secutron's low profile addressable plug-in smoke and heat detectors with integral communications provide features that surpass conventional detectors. Sensitivity is continuously monitored and reported to the panel where the desired detector sensitivity can be programmed. Point ID capability allows each detector's address to be set with decade address switches, providing exact detector locations for selective maintenance when chamber contamination reaches an unacceptable level.

**Model MRI-2251B** photoelectric smoke detector provides a unique optical sensing chamber that senses smoke produced by a wide range of combustion sources.

**Model MRI-225BR** is a remote test capable detector for use with DNR(W) duct smoke detectors.

**Model MRI-2251TB** adds dual electronic thermistors to the MRI-2251B to provide 135°F (57°C) fixed temperature thermal sensing.

**Model MRI-2251TMB** is a photoelectric smoke detector with supplementary 135°F thermal. Also known as Acclimate™, it uses advanced on-board software to combine the signals from the photo and thermal elements. The MRI-2251TMB is a true multicriteria detector capable of rejecting nuisance sources, but still responding quickly to real fires. Acclimate has the capability of adjusting its sensitivity according to the type of environment that it is installed in.

### Features

- Sleek, low profile design
- Detectors are equipped with a built-in analog communications module
- Smoke detectors are available with photoelectric or ionization technology
- Photoelectric detectors are available with additional fixed temperature detection
- Heat detectors are available as fixed temperature or fixed temperature with rate-of-rise detection
- Dual LEDs indicate communications and activate steady when in alarm
- Low profile base provides easy interchangeability
- Low standby current
- Rotary address switches
- Magnetic test feature
- Superior EMI protection
- Sealed against dirt, insects, and back pressure

**Model MRI-1251B** ionization detector incorporates a unique single source, dual chamber design to respond quickly and dependably to a broad range of fires.

**Model MRI-5251B** uses an innovative thermistor sensing circuit to produce 135°F fixed temperature detection in a low profile package. These thermal detectors provide cost effective, intelligent property protection in a variety of applications.

**Model MRI-5251RB** provides both 135°F fixed and rate-of-rise thermal detection. These thermal detectors provide cost effective, intelligent property protection in a variety of applications.

**Model MRI-5251H** provides 190°F (88°C) fixed temperature detection for high temperature applications.



S6487  
(MRI-1251B,  
MRI-2251B/TB/TMB)  
S6486  
(MRI-5251B/RB/H)



S6960  
(MRI-1251B,  
MRI-2251B/TB/TMB)  
S6974  
(MRI-5251B/RB/H)



7271-1656:114  
(MRI-1251B)  
7272-656:112  
(MIX-2251B/TB/TMB)  
7270-1656:113  
(MIX-5251B/RB/H)



148-03-E  
(MRI-1251B)  
219-02-E  
(MRI-2251B/TB)  
390-02-E  
(MRI-5251B/RB/H)



**Model 7251** is an intelligent, laser-based photoelectric smoke detector featuring extensive on-board signal processing capabilities designed to improve smoke response. Also known as Pinnacle™, this intelligent detector is designed to protect valuable assets and operations where systems must remain online at all times.

Some ideal applications for Pinnacle include:

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

## Specifications

<b>Voltage Range</b>
15 - 32 volts DC peak
<b>Standby Current</b>
<b>Ion/Thermal:</b> 150 uA @ 24 VDC (without communication, LED off) 200 uA @ 24 VDC (one communication every 5 sec. with LED enabled)
<b>Photo/Photo with Thermal:</b> 250 uA @ 24 VDC (without communication, LED off) 300 uA @ 24 VDC (one communication every 5 sec. with LED enabled)
<b>Pinnacle:</b> 230 uA @ 24VDC (without communication) 330 uA @ 24VDC (one communication every 5 sec. with LED enabled)
<b>LED Current (max.)</b>
6.5 mA @ 24 VDC (on)
<b>Height</b>
2.0 inches (51 mm) 1.66 inches (42 mm) - Pinnacle
<b>Diameter</b>
6.1 inches (155 mm) Installed in B210LP Base 4.1 inches (104 mm) Installed in B501 Base 4.0 inches (102 mm) - Pinnacle
<b>Shipping Weight</b>
Heat: 4.8 oz. (137 g) Photo/Photo with Heat: 5.2 oz. (147 g) Ion: 5.4 oz. (154 g) Pinnacle: 5.6oz. (159 g)
<b>Relative Humidity</b>
10% - 93% noncondensing

<b>Thermal Ratings</b>
Fixed Temperature Setpoint: 135°F (57°C) Rate of Rise Detection: 15°F/min. (8.3°C/min.) High Temperature: 190°F (88°C)
<b>Operating Temperature Range</b>
Ion/Photo: 32°F to 120°F (0°C to 49°C) Photo with Thermal: 32°F to 100°F (0°C to 38°C) Thermal: -4°F to 100°F (-20°C to 38°C) High Temperature: -4°F to 100°F (-20°C to 66°C) Pinnacle: 32°F to 100°F (0°C to 38°C)
<b>UL Listed Velocity Range</b>
Ion: 0 - 1200 fpm (0 - 6.1 m/sec) Photo/Photo with Thermal: 0 - 4000 fpm (0 - 20 m/sec) Pinnacle: 0 - 4000 fpm (0 - 20 m/sec)
<b>Insect Screen Hole Size</b>
Photo: 0.016 inch (0.41mm) nominal Ion: 0.035 inch (0.89mm) nominal
<b>Self Diagnostics (Pinnacle™)</b>
Initiated by control panel Activated by test magnet
<b>Smoke Sensitivity (Pinnacle™)</b>
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)
<b>Drift Compensation (Pinnacle™)</b>
High sensitivity maintenance alert signal Low sensitivity maintenance alert signal Maintenance urgent signal

## Ordering Information

### Addressable Detectors

Model	Description
MRI-1251B	Intelligent Ionization Detector
MRI-2251B	Intelligent Photoelectric Detector
MRI-2251BR	Intelligent Photoelectric Detector. Remote test capable. For use with DNR(W) duct detectors.
MRI-2251TB	Intelligent Photoelectric Detector with 135°F Fixed Temperature Heat Detector
MRI-2251TMB	Intelligent Acclimate™ Multicriteria Smoke Detector
MRI-5251B	Intelligent Heat Detector, 135°F fixed temperature
MRI-5251RB	Intelligent Heat Detector, 135°F fixed temperature with rate-of-rise detection
MRI-5251H	Intelligent High Temperature Heat Detector, 190°F fixed temperature
7251	Intelligent Pinnacle™ Laser Smoke Detector

Add suffix "A" for Canadian model.

### Detector Base

Model	Description
B210LP*	Flanged Mounting Base; mounts on single gang box; 3-½" and 4" octagonal box; and 4" square box with 3" mud ring

\* Refer to Catalog Number 4001 for additional compatible B200 Series bases.