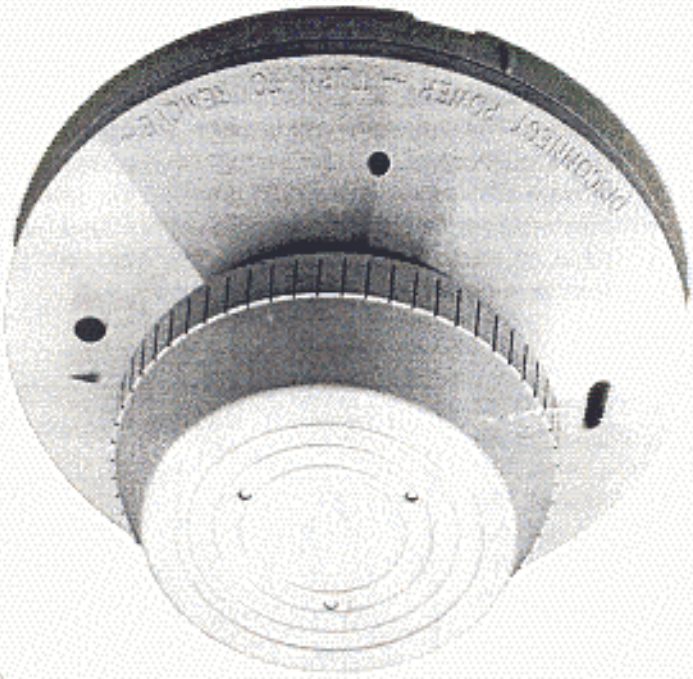
MIRCOM®

2-WIRE IONIZATION SMOKE DETECTOR MIR-1400A



Features

- Unique dual unipolar sensor
- Exceptional stability
- Factory preset at 1.5% normal sensitivity
- Withstands wind gusts up to 2500 feet-per-minute without false alarming
- Removable cover for field cleaning
- Visible LED "blinks" in standby
- Sealed against dirt, insects and back pressure
- 3 year warranty
- 8.5-35 VDC operating range
- Field metering of detector sensitivity
- Built-in test switch
- Low standby current
- Built-in tamper-resistant feature
- Designed for direct surface or electrical box mounting
- Remote LED option
- Insect-resistant screening
- SEMS screws for easy wiring

Description

The MIR-1400A ionization type smoke detector is specially designed to meet the stringent performance requirements of industrial and municipal fire detection/ alarm systems. The design of the detector emphasizes ease of installation and field maintenance.

All MIR-1400A ionization smoke detectors contain a unique dual source, dual unipolar chamber detection design which will sense the presence of smoke particles produced by fast combustion as well as slow smouldering fires. This chamber exhibits increased stability, significantly reduces nuisance alarms and provides better performance at higher air velocities. The MIR-1400A is designed to meet the performance criteria required by U.L.C. Additional key features include a blinking LED standby status indicator, an easily visible alarm indication and provision for convenient field test and metering.

Application

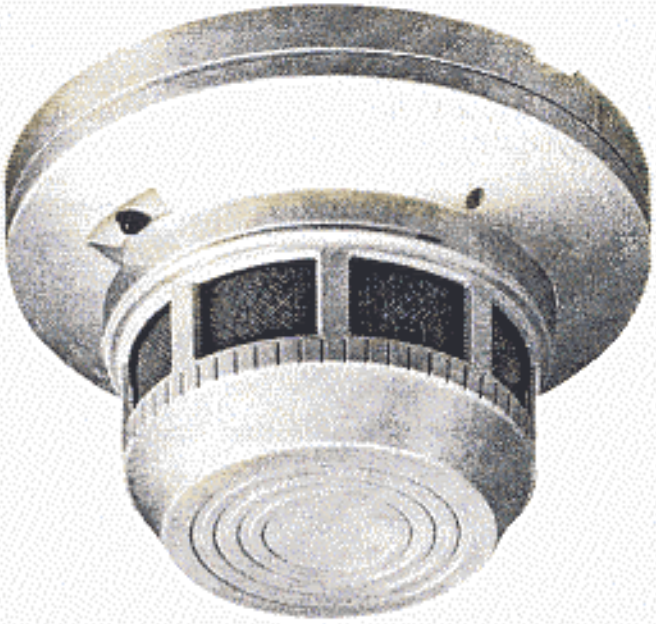
The MIR-1400A ionization detector is designed to be compatible with all Mircom Fire Alarm Control Panels. It is a low voltage detector and can be intermixed on the same detection circuits. It is recommended that no more than 30 detectors of any combination or type be used on any one (1) circuit. The detector is ULC listed and may be used where incipient products of combustion can be anticipated as a source, dependent on the particular environmental conditions. It is recommended that good engineering judgement is applied regarding location and spacing.

ULC

CATALOGUE NUMBER 5125

MIRCOM®

2-WIRE PHOTOELECTRIC SMOKE DETECTOR MIR-2400A



Features

- Unique optical sensing chamber
- Superior signal-to-noise ratio
- Built-in signal processing
- 3.0% nominal sensitivity
- Removable cover for field cleaning
- Visible LED "blinks" in standby
- Sealed against dirt, insects and back pressure
- 3 year warranty
- 8.5-35 VDC operating range
- Field metering of detector sensitivity
- Built-in test capability
- Low standby current
- Twist-on mounting bracket with tamper option
- Designed for direct surface or electrical box mounting
- Insect-resistant screening
- SEMS screws for easy wiring

Description

The MIR-2400A photoelectric type smoke detector is specially designed to meet the stringent performance requirements of industrial and municipal fire detection/alarm systems. The design of the detector emphasizes ease of installation and field maintenance.

All MIR-2400A photoelectric smoke detectors contain a unique optical sensing chamber designed to sense the presence of smoke particles produced by a wide range of combustion sources and meet the performance criteria designated by ULC. A new custom integrated circuit incorporates signal processing to reduce false alarms and sample/hold circuitry to provide easy field metering of sensitivity.

The MIR-2400A photoelectric detector is designed to be compatible with all Mircom Fire Alarm Control Panels. See Installation manual for panel to determine maximum number of detectors per zone. Easy to install and maintain, this detector is designed for direct surface mounting (mounting bracket included), or mounting to a 4" octagon or smaller box. Easy-to-wire screw terminals allow fast and simple field wiring of in, out and remote annunciator connections.

Application

Use for protection of life and property. Photoelectric detectors are recommended in areas where slow smouldering fires are likely to ignite. In areas where small combustion particles are usually present from fork-lift trucks, cooking stoves, etc., they are less likely than ionization detectors to produce false alarms.

The MIR-2400A has been designed to seal the sensing chamber from back pressure air flow, dust, dirt, and insects. The back of the detector is sealed and the chamber is protected by a fine mesh (.20"/.508 mm) screen. If cleaning is required, it is easy to remove the cover (with a tool) and obtain access to the screen and chamber to perform a thorough cleaning.

Architect/Engineer Specifications

The detector shall be of the photoelectric type. The detector shall have a nominal sensitivity as measured in a ULC smoke box, and a signal to noise ratio of 2.0 nominal. It shall be possible to perform calibrated sensitivity and functional operating tests on the detector without generating an aerosol. Functional testing will exercise the sensing chamber, and critical operating circuits.

ULC

CATALOGUE NUMBER 5126

MIRCOM®

LOW PROFILE PLUG-IN SMOKE DETECTORS 100 SERIES

Standard Features

- Sleek, low-profile design
- Same housing design for both ion and photo models
- Compatible with 400 Series product
- Two LEDs blink in standby, providing 360 visibility
- Field sensitivity metering of detector to meet the requirements of NFPA 72
- Broad range of adapter bases available with built-in shorting spring

Description

Mircom's 100 Series Plug-in Smoke Detectors offer superb performance and reliability in a profile which is just 1.6 . (4.2 cm) deep. Model 1151 (ionization sensor) and Model 2151 (photoelectronic sensor) share the same sleek low-profile design and 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. Their 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 interchangeable ion and photo heads, a variety of mounting bases, and a full line of accessories.

Ionization

All 100 Series ionization smoke detectors include a single source, dual chamber design that senses smoke particles. This chamber exhibits excellent stability, significantly reducing nuisance alarms, and provides good performance at higher air velocities.

Photoelectronic

All 100 Series photoelectronic 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.

Specifications

Operating Voltage/ Alarm Current:	See Adapter Base Selection Guide following
Standby Current:	
Ion:	40 µA Standby
Photo:	85 µA Standby
Sensitivity:	.97 ±.47%/ft. Ion 3% ±.7%/ft. Photo
Shipping Weight:	3.6 oz. (104 g)
Size:	1.66 . h. (4.22 cm) 4.1 ./104 mm dia. unflanged base 6.1 ./155 mm dia. flanged base
Construction:	Flame retardant thermoplastic
Temperature:	32F to 120F (0 to 49C)
UL Listed Velocity Range:	
Ion:	0 – 1200 fpm
Photo:	0 – 3000 fpm
Humidity Range:	10% – 93% RH noncondensing

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.

MEA approved MSFM approved

CATALOGUE NUMBER 5116

MIRCOM®

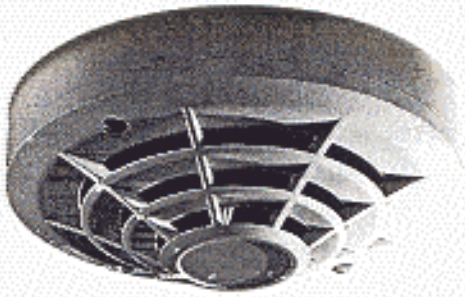
INTELLIGENT ANALOG SENSORS MIX-200 SERIES

Mircom's MIX-200 Series intelligent plug-in smoke detectors with integral communication provide features that surpass conventional detectors. Detector sensitivity is continuously monitored and reported to the FX-2000 Fire Alarm Control Panel.

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.

Intelligent Low Profile Analog Ionization Smoke Sensor (MIX-1251)

The Intelligent Analog Ionization Smoke Sensor is constantly monitored to measure any change in its sensitivity due to the environment (dirt, aging, temperature, humidity, etc.) It can give an advance indication to the FX-2000 analog control panel of the need for maintenance and can be specific as to where the maintenance is needed. It can be mounted in a number of different bases. See the Ordering Information for a list of these bases and their descriptions.



Intelligent Analog Thermal Sensor (MIX-5251P/MIX-5251RP)

The Intelligent Analog Thermal Sensors contain a dual thermistor sensing circuit for fast response. They provide open area protection with 50 foot spacing. The sensors rapid response characteristic virtually eliminates the thermal lag which is characteristic of conventional heat detectors and insures operation as soon as the temperature reaches its set point (MIX-5251P), or upon a temperature rise of 15°F per minute (MIX-5251RP). It can be mounted in a number of different bases.See the Ordering Information for a list of these bases and their descriptions.

Intelligent Low Profile Analog Photoelectronic Smoke Sensor (MIX- 2251)

The Intelligent Analog Photoelectronic Smoke Sensor is constantly monitored to measure any change in its sensitivity due to the environment (dirt, aging, temperature, humidity, etc.) It can give an advance indication to the FX-2000 analog control panel of the need for maintenance and can be specific as to where the maintenance is needed. It can be mounted in a number of different bases. See the Ordering Information for a list of these bases and their descriptions.

Intelligent Low Profile Analog Photoelectronic Smoke Sensor with Thermal (MIX-2251T)

The MIX-2251T has the same features as the MIX-2251 and includes a 135°F thermal sensor. It can be mounted in a number of different bases. See the Ordering Information for a list of these bases and their descriptions.

FM APPROVED

CATALOGUE NUMBER 5904

MIRCOM®

PINNACLE™ INTELLIGENT LASER SMOKE DETECTOR MIX-7251

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

Description

Pinnacle™ model 7251 is an intelligent, laser-based photoelectric smoke detector featuring extensive on-board signal processing capabilities designed to improve smoke response. Pinnacle also 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% to 2% 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.

Other advantages of Pinnacle over other high sensitivity detection methods are:

- Pinpoint identification of the fire location resulting from addressability
- No delay in response because of smoke dilution or smoke transportation time as in aspirated systems
- 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

FM APPROVED

CATALOGUE NUMBER 5918

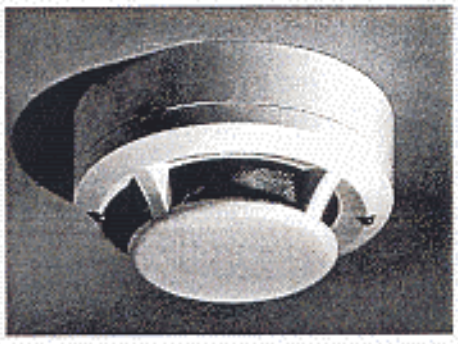
MIRCOM®

MOUNTING BASES

200 SERIES

Mircom's mounting bases and kits provide a variety of ways to install detectors in any application.

The MIX-200 Series detectors can be mounted in either flanged or flangeless bases depending on the junction box selection.



B501 Flangeless Mounting Base

The B501 is standard base with no flange.

B501BH Sounder Base

The B501BH Sounder Base provides a built-in sounder which can be used for evacuation purposes.

B210LP Flanged Mounting Base

The B210LP is a low profile mounting base with a flange.

B224RB Relay Base

The B224RB Relay Base provides one form C relay contact for control of auxiliary functions such as damper control and elevator recall

B224BI Isolator Base

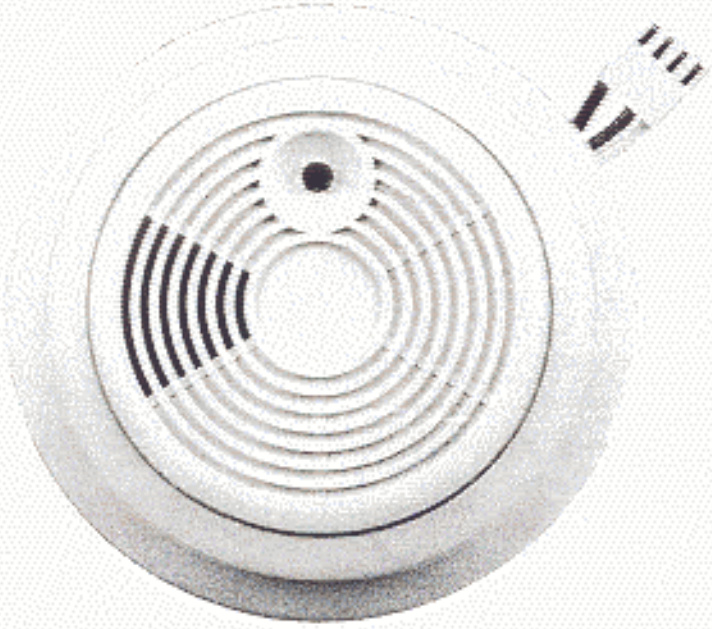
The B224BI Isolator Base allows loops to continue to operate under fault conditions and automatically restore when the fault is removed.

FM APPROVED

CATALOGUE NUMBER 5906

MIRCOM®

120VAC IONIZATION SMOKE ALARM 4919A



Feautres

- Small compact size
- "Ceiling white" colour
- Easy plug-in connector for wiring
- Mounting bracket has large opening for feeding wires
- New design eliminates the need for a gasket
- Stainless steel chamber
- Powered directly from 120VAC, 60 Hz
- Loud 85 dB alarm horn
- Solid state power-on indicator lamp (LED)
- Insect-resistant screen minimizes nuisance alarms
- Interconnectable - up to 12 units
- Mounts to any box up to 4" octagon size and does not require screw removal
- Special shielding for RF immunity

Description

BRK's Model 4919A is a 120VAC powered ionization smoke detector designed for both single and multiple station use, up to 12 units. It's small, compact design and white colour make it easier to handle and more attractive in new homes. The dual ionization sensor keeps false alarms to a minimum. The detector has its own 85 dB electronic alarm horn, power on LED and test switch. It is interconnectable and comes with a plastic bracket that mounts easily to any standard junction box up to 4" octagon. Model 4919A comes with a plug-in connector for easy installation.

Model 4919A is designed so that when an interconnected system sounds its alarm horn, the detector sensing smoke will turn off its LED while other interconnected detectors LEDs remain on. NOTE: All interconnected units must receive power from the same fuse or breaker.

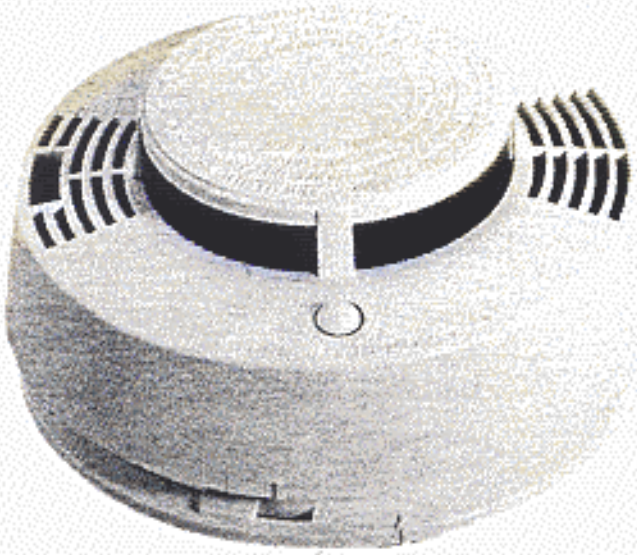
Specifications

The smoke detector shall be powered by a 120VAC, 60 Hz power source and shall be listed at .060A max. in standby condition. The detector shall have a solid state dual chamber ionization sensor. The detector shall have a solid state dual chamber ionization sensor. The sensor shall be protected by an insect-resistant screen. The detector shall be capable of operating between 40° and 100° F (4° - 38° C) and relative humidity between 10% and 90%. A built-in test switch shall electronically simulate the presence of smoke and test all detector functions. A built-in power on indicator light shall glow when the detector is receiving AC power. The detector shall have an electronic alarm horn that is a minimum of 85 dB. It shall be capable of being mounted to any box up to 4" octagon size. It shall have a plug-in connector and be capable of interconnection with eleven other identical units. The smoke detector shall be a BRK model 4919A or equal.

CATALOGUE NUMBER 5411

MIRCOM®

120VAC PHOTOELECTONIC SMOKE ALARM 5919A



Features

- Photoelectronic sensing chamber
- Fully insect screened sensing chamber
- Interconnectable up to 18 multiple station BRK alarms
- "Quick-Connect" wiring harness
- Oversized mounting bracket
- Red LED/Light indicates unit is receiving AC power
- 85 dB piezo alarm horn
- Manual test button

Description

The BRK Electronics Cat. No. 5919A is a 120V AC powered photoelectronic unit designed for both single and multiple station use, up to 18 units. Its sensor operated on the scattered light principle, and electronically compensates for ambient light conditions. The unit has its on 85 dB electronic alarm horn, powered-on LED and test button. It is interconnectable and comes with a plastic bracket that mounts easily to 3" and 4" octagon, 4" square or single gang boxes. The 5919A comes with a plug-in connector.

This detector is designed so that, when interconnected, if any one of the units senses smoke, its LED will turn off and its alarm will sound. All other interconnected units will sound an alarm but their LEDs will remain on. NOTE: All interconnected units must receive power from the same fuse or breaker.

Specifications

The smoke alarm shall be powered by a 120V AC, 650 Hz. power source and shall be listed at .025A in standby condition. The alarm shall have a solid state photoelectronic sensor that operated on the scattered light principle. It shall be protected by an insect-resistant screen. The sensor shall sample the air at the alarm every 5 seconds and shall be designed to trigger an alarm if prescribed levels of smoke enter its chamber. The alarm shall electronically compensate for ambient light conditions and shall be cable of operating properly between 40° and 100°F (4°-38°C) and relative humidity between 10% and 90%. A built-in test button shall mechanically simulate the presence of smoke. A built-in light-emitting diode shall glow when AC power is being received. The alarm shall have an electronic alarm horn. It shall have a plug-in connector and be capable of interconnection with eleven other identical units.

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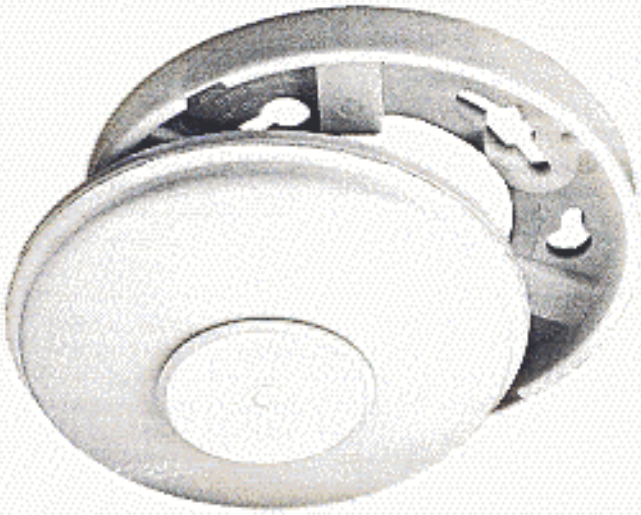
CATALOGUE NUMBER 5412

MIRCOM®

HEAT DETECTORS

MIR-600 SERIES



Description

Mircom's MIR-600 Series Heat Detectors are attractive, durable and feature combination rate-of-rise and fixed temperature operation. Mircom's MIR-600 heat detectors are available in 135°F(57°C) and 200°F (93°C) temperature ratings. Rate-of-rise detects heat by quickly responding to a rapid temperature increase. Rate-of-rise units have a wide spacing allowance of 50-foot centers. See specification table for details. Fixed temperature reacts to heat by responding to a specific temperature setting. Mircom's MIR-600 Series detectors use the same reliable pneumatic rate-of-rise element of former models, but offer added aesthetic appeal.

The pneumatic rate-of-rise element responds to a rapid rise in temperature, approximately 15°F (8°C) per minute, by expansion of air within the sealed chamber faster than it can escape through a calibrated vent. The resultant increase in pressure depresses the diaphragm, causing the electrical contact to close the circuit. The fixed temperature element uses a fusible alloy. When activated, the external heat collector drops away to provide quick visual confirmation that the element has operated. The units protrude only 1-3/8 inch from the ceiling surface with a junction box mounting. They have pleasing contours and an all-white finish that conforms to ceiling aesthetics.

MIR-600 Testing Methods

Models 601/621 and 602/622 can be tested by the application of quick heat from any convenient source. A portable hair dryer is recommended. However, do not apply heat that exceeds the fixed temperature rating of the detector. Models 603/623 and 604/624 cannot be tested. However, the fusible alloy element is generally considered so reliable that testing is not necessary.

Features

- Dual Action Rate-of-Rise and Fixed Temperature Models available
- One or Two, Normally Open Contacts available
- Easy Installation
- Visual indication
- Operation Testing
- Complementary, low profile white exterior finish

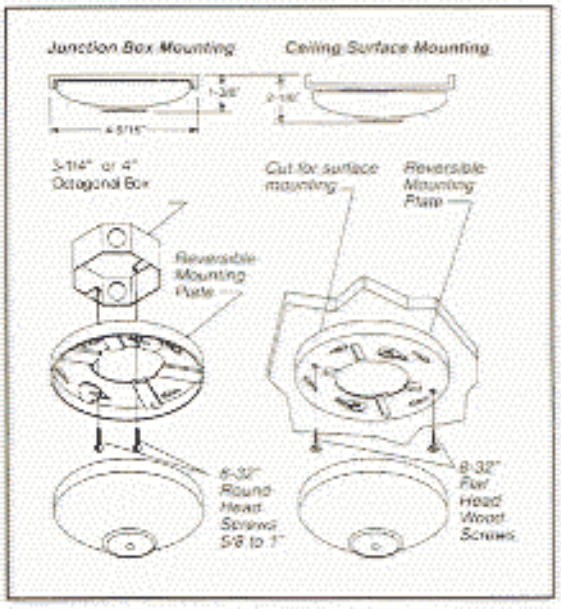
Installation

Each detector includes a patented reversible mounting plate. In one position, it easily attaches to 4" junction box, 3 1/4" octagon box or plaster ring.

In reverse, the plate can be used for open wiring without a junction box. A 1/4" space between detector and mounting surface allows for wire connections. All mounting screws are concealed.

The detector simply attaches to the mounting plate with a push and twist motion. No tools are required. The mounting plate is molded of white self-extinguishing thermoplastic rated at 221°F (105°C). The plate is extremely strong yet adapts to uneven mounting surfaces.

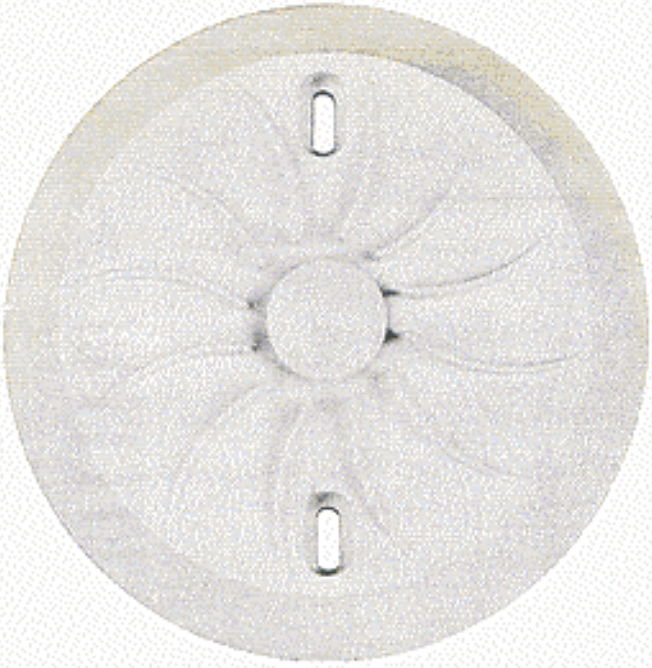
Mounting Diagram



CATALOGUE NUMBER 5110

MIRCOM®

FIXED TEMPERATURE HEAT DETECTOR — Model TD Series



Using a bimetal disc as a heat sensing element, an alarm is initiated when the air temperature exceeds the unit's rated level. Only when the air temperature decreases below the rated level will the detector automatically reset.

ORDERING INFORMATION

Model	Description
TD 135	Fixed Temperature self restoring heat detector. 135°F (57°C). Ideal for applications where the ambient temperature is not expected to exceed 100°F.
TD 200	Fixed Temperature self restoring heat detector. 200°F (94°C). Ideal for applications where the ambient temperature is expected to exceed 100°F but not beyond 150°F.

FEATURES:

- ULC Listed
- Self Restoring
- Complementary, low profile white exterior
- Mounts onto standard octagon or square box with trim plate
- Automatic reset

DESCRIPTION

A neutral white exterior and an unobtrusive, low profile housing make the TD heat detector blend onto any ceiling. The plastic housing fits onto any standard octagon or square electrical box with a trim plate. The unit will protrude no more than 1" below surface of the finishing ceiling.

SPECIFICATIONS

The thermal detector shall be a Mircom Model TD 135 or TD 200 as appropriate. The unit shall be a fixed temperature self restoring type, designed for low profile mounting. The detector shall be constructed of neutral white, fire resistant thermoplastic material. Operation shall consist of the closing of N.O. contact to initiate an alarm detection circuit. When the air temperature returns below the detectors rating, the contact will return to the normal position.

Coverage: 225 Square feet.

Spacing: 15 feet centers, 7.5 feet from wall.

Note: The coverage and spacing figures given here are intended as a guide only. Heat detectors must always be spaced and installed as per the specific requirements outlined in the ULC codes as well as all other applicable national and local code requirements.

CATALOGUE NUMBER 5112