

# HM-FHSE, RHSE and HTSE-UL

## General

The HM-FHSE-UL, HM-RHSE-UL and HM-HTSE-UL Series thermal detectors are addressable sensors that use a state-of-the-art thermistor sensing circuit for fast response. These sensors provide protection for open areas and can be used use with addressable Fire Alarm Control Panels (FACPs).

The HM-FHSE-UL and HM-RHSE-UL sensors provide fixed temperature detection at 135°F (57°C). The HM-RHSE-UL sensor also responds to rate of rise conditions of greater than 15°F (8.3°C) per minute. The HM-HTSE-UL is a fixed, high-temperature detector that activates at 190°F (88°C). These thermal detectors provide addressable property protection for a variety of applications.

Comes with two LEDs on each sensor that provide a local, visible sensor indication. The remote LED annunciator capability is available using an optional accessory, the RA100Z.

## Installation

The HM-FHSE-UL Series of plug-in, intelligent thermal detectors use a detachable base to simplify installation, service, and maintenance. Installation instructions are shipped with each detector.

Mount base (all base types) on an electrical backbox which is at least 1.5" (3.81 cm) deep. For a chart of compatible junction boxes, see DF-60059.



HM-PTSE-UL in B210LP(A) Base

**NOTE:** Because of the inherent supervision provided by the SLC loop, end of line resistors are not required. Wiring "T-taps" or branches are permitted for Style 4 (Class "B") wiring only.

## FEATURES & BENEFITS

### SLC Loops:

- Two-wire SLC loop connection.
- Unit uses base for wiring.

### Addressing:

- Addressable by device.
- Rotary, decimal addressing:  
01-159 with MS-9600 series,  
01-99 with MS-9200 series.

### Architecture:

- Sleek, low-profile, stylish design.
- State-of-the-art thermistor technology for fast response.
- Integral communications and built-in device-type identification.
- Built-in tamper resistant feature.
- Built-in functional test switch activated by external magnet.

### Operation:

- Factory preset at 135°F (57°C) for the HM-FHSE-UL and HM-RHSE-UL; 190°F (88°C) for the HM-HTSE-UL.
- Rate-of-rise triggers at 15°F (8.3°C) per minute for the H355R(A).
- 360-degree viewing angle of the visual alarm indicators (two bicolor LEDs). LEDs blink red in Normal condition and steadily illuminate red in Alarm.
- Visible LEDs blink every time the unit is addressed.

### Mechanicals:

- Sealed against back pressure.
- SEMS screws for wiring of the separate base.
- Designed for direct-surface or electrical-box mounting.

- Plugs into separate base for ease of installation and maintenance.
- Separate base allows interchange of photoelectric, ionization and thermal sensors.

### Other system features:

- Remote test feature from the panel.
- Walk test with address display.
- Low standby current.
- 94-5V plastic flammability rating.

### Options:

- Remote LED output connection to optional RA100Z remote LED annunciator.
- Flanged surface mounting kit.

### Application

Use thermal detectors for protection of property.

### Construction

These detectors are constructed of off-white fire-resistant plastic. The HM-FHSE-UL Series plug-in, intelligent thermal detectors are designed to commercial standards and come with an appealing design.

### Operation

Each HM-FHSE-UL Series detector uses one of 159 (MS-9600 series) or 99 (MS-9200 series) possible addresses on a control panel SLC loop. It responds to regular polls from the control panel and reports type and status. If it receives a test command from the panel (or a local magnet test), the detector stimulates its electronics and reports an alarm. The LEDs blink when polled and the detector turns the LEDs on when commanded by the panel. The HM-FHSE-UL Series offer features and performance that represent the latest in thermal detector technology.

## HM-FHSE-UL, HM-RHSE-UL and HM-HTSE-UL Technical Specifications

| PARAMETER                  | SPECIFICATION  |
|----------------------------|--|
| Size                       | <ul style="list-style-type: none"><li>• 2.1" (5.3 cm) high; base determines diameter.</li><li>• B210LP(A): 6.1" (15.5 cm) diameter</li><li>• B501(A): 4.1" (10.4 cm) diameter</li><li>• B200SR(A): 6.875" (17.46 cm) diameter</li><li>• B224RB(A): 6.2" (15.748 cm) diameter</li></ul> |
| Shipping weight            | 4.8 oz. (137 g)  |
| Installation temperature   | <ul style="list-style-type: none"><li>• HM-FHSE-UL, HM-RHSE-UL: -4°F to 100°F (-20°C to 38°C).</li><li>• HM-HTSE-UL: -4°F to 150°F (-20°C to 66°C).</li></ul>  |
| Humidity range             | 10% to 93% relative humidity (noncon- densing)   |
| Voltage range              | 15 to 32 VDC peak  |
| Standby current            | 300 µA @ 24 VDC (one communication every five seconds with LED blink enabled)  |
| LED current                | 6.5 mA @ 24 VDC  |
| Mounting                   | B210LP(A) flanged base, included. See "Product Line Information: Intelligent Bases" if using a different base  |
| Fixed-temperature setpoint | 135°F (57°C) for the HM-FHSE-UL and HM-RHSE-UL; 190°F (88°C) for the HM-HTSE-UL  |
| Rate-of-rise detection     | Responds to greater than 15°F (8.3°C) per minute   |

# HM-FHSE-UL, HM-RHSE-UL and HM-HTSE-UL Technical Specifications

## Listings and Approvals

These listings and approvals apply to the modules specified in this. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL Listed:** S1059.
- **ULC Listed:** S1059.
- **MEA Listed:** 243-02-E.
- **FM Approved.**
- **CSFM:** 7272-0075:0194.

## Product Line Information

|            |  |
|------------|--|
| HM-FHSE-UL | Intelligent thermal sensor; 135° F (57° C); B210LP base included.                            |
| HM-RHSE-UL | Same as HM-FHSE-UL with rate of rise feature; B210LP base included.                          |
| HM-HTSE-UL | Intelligent, fixed, high-temperature thermal detector; 190° F (88° C); B210LP base included. |

**NOTE:** "A" suffix indicates ULC Listed model.

## Intelligent Bases

|           |  |
|-----------|--|
| B210LP(A) | Plug-in detector base (included); standard U.S. flanged low-profile mounting base.   |
| B210LPBP  | Bulk pack of B210LP; package contains 10. B501(A): Standard European flangeless mounting base. B501BP: Bulk pack of B501; package contains 10.   |
| B200SR(A) | Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone. Replaces B501BH series bases in retrofit applications.   |
| B224RB(A) | Plug-in System Sensor relay base. Screw terminals: up to 14 AWG (2.0 mm <sup>2</sup> ). Relay type: Form-C. Rating: 2.0 A @ 30 VDC resistive; 0.3 A @ 110 VDC inductive; 1.0 A @ 30 VDC inductive. |
| B224BI(A) | Plug-in System Sensor isolator detector base. Maximum 25 devices between isolator bases (see DF-52389).  |

**NOTE:** The detector's plug-in base can be changed off for special applications. For details about intelligent bases and their mounting, see DF-60059.

## Accessories

|             |   |
|-------------|---|
| F110        | Retrofit flange to convert B210LP(A) to match the B350LP(A) profile, or to convert older, high-profile bases to low-profile.    |
| F110BP      | Bulk pack of F110; package contains 15.   |
| F210        | Replacement flange for B210LP(A) base.  |
| RA100Z(A)   | Remote LED annunciator. 3 – 32 VDC. Mounts to a U.S. single-gang electrical box. For use with B501(A) and B210LP(A) bases only. |
| SMB600      | Surface mounting kit.   |
| M02-04-00   | Test magnet.  |
| M02-09-00   | Test magnet with telescoping handle.  |
| XR2B        | Detector removal tool. Allows installation and/or removal of detector heads from bases in high ceiling applications.            |
| XP-4        | Extension pole for XR2B. Comes in three, 5-foot (1.524 m) sections.   |
| T55-127-010 | Detector removal tool without pole.   |

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HM-FHSE, RHSE and HTSE-UL | Rev 01 | 03/19  
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