

# SD355(A), SD355T(A)

## Addressable Photoelectric Smoke Detectors



Addressable Devices

### General

The **SD355(A)** and **SD355T(A)** addressable, low-profile plug-in photoelectric detectors use a state-of-the-art photoelectric sensing chamber with communications to provide open area protection and are used exclusively with Fire•Lite's Addressable Fire Alarm Control Panels (FACPs). The **SD355T(A)** adds thermal sensors that will alarm at a fixed temperature of 135°F (57°C). Since these detectors are addressable, they will help emergency personnel quickly locate a fire during its early stages, potentially saving precious rescue time while also reducing property damage. Two LEDs on each sensor light to provide a local, visible sensor indication. Remote LED annunciator capability is available as an optional accessory (P/N **RA400Z**).

### Features

#### SLC loop:

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

#### Addressing:

- Addressable by device.
- Direct Decade entry of address: 01 – 99 with MS-9200 and MS-9200UD and MS-9200UDLS, and 01 – 159 with MS-9600, MS-9600LS, and MS-9600UDLS.

#### Architecture:

- Unique single-source, dual-chamber design to respond quickly and dependably to a broad range of fires.
- Sleek, low-profile design.
- Integral communications and built-in type identification.
- Built-in tamper-resistant feature.
- Removable cover and insect-resistant screen for simple field cleaning.

#### Operation:

- Withstands air velocities up to 4,000 feet-per-minute (20 m/sec.) without triggering a false alarm.
- Factory preset at 1.5% nominal sensitivity for panel alarm threshold level.
- Visible LED “blinks” when the unit is addressed (communicating with the fire panel) and latches on in alarm.

#### Mechanicals:

- Sealed against back pressure.
- Direct surface mounting or electrical box mounting.
- Mounts to: single-gang box, 3.5" (8.89 cm) or 4.0" (10.16 cm) octagonal box, or 4.0" (10.16 cm) square electrical box (using a plaster ring — included).

#### Other system features:

- Fully coated circuit boards and superior RF/transient protection.
- 94-V0 plastic flammability rating.
- Low standby current.

#### Options:

- Remote LED output connection (P/N **RA400Z**).



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**SD355 with  
B350LP base**



6935pho1.jpg

**SD355T with  
B350LP base**

### Applications

Use photoelectric detectors in life-safety applications to provide a broad range of fire-sensing capability, especially where smoldering fires are anticipated. Ionization detectors are often better than photoelectric detectors at sensing fast, flaming fires.

### Construction

These detectors are constructed of off-white LEXAN®. SD355(T) plug-in, low-profile smoke detectors are designed to commercial standards and offer an attractive appearance.

### Installation

SD355(T) plug-in detectors use a detachable mounting base to simplify installation, service and maintenance. Mount base on box which is at least 1.5 inches (3.81 cm) deep. Suitable boxes include:

- 4.0" (10.16 cm) square box with plaster ring.
- 4.0" (10.16 cm) octagonal box.
- 3.5" (8.89 cm) octagonal box.
- Single-gang box.

**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.

## Operation

Each SD355(T) uses one of 99 possible addresses on the MS-9200, MS-9200UD and MS-9200UDLS and up to 318 (159 on each loop) on the MS-9200 series Signaling Line Circuit (SLC). It responds to regular polls from the system and reports its type and status.

The SD355(T) addressable photoelectric sensor's unique unipolar chamber responds quickly and uniformly to a broad range of smoke conditions and can withstand wind gusts up to 4,000 feet-per-minute (20 m/sec.) without sending an alarm level signal. Because of its unipolar chamber, the SD355(T) is approximately two times more responsive than most photoelectric sensors. This makes it a more stable detector.

## Detector Sensitivity Test

Each detector can have its sensitivity tested (required per NFPA 72, Chapter 7 on *Inspection, Testing and Maintenance*) when installed/connected to a MS-9200, MS-9200UD, MS-9200UDLS, or MS-9600, MS-9600LS and MS-9600UDLS addressable fire alarm control panel. The results of the sensitivity test can be printed off the MS-9200, MS-9200DLS, MS-9200UD, MS-9600, MS-9600LS or MS-9600UDLS for record keeping.

## Specifications

**Voltage range:** 15 – 32 VDC (peak).

**Standby current:** 300 µA @ 24 VDC.

**LED current:** 6.5 mA @ 24 VDC (latched "ON").

**Air velocity:** 4,000 ft./min. (20 m/sec.) maximum.

**Diameter:** 6.1" (15.5 cm) installed in B350LP base.

**Height:** 2.1" (5.33 cm) installed in B350LP base.

**Weight:** 3.6 oz. (102 g).

**Operating temperature range: for SD355(A):** 0°C to 49°C (32°F to 120°F); **for SD355T(A):** 0°C to 38°C (32°F to 100°F).

**Temperature:** 0°C – 49°C (32°F – 120°F).

**Relative humidity:** 10% – 93%, non-condensing.

## Listings

Listings and approvals below apply to the SD355(A) and SD355T(A) detectors. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- UL Listed, file S1059
- ULC Listed, file S6963
- CSFM approved: file 7272-0075:194
- MEA approved: file 243-02-E
- FM approved

## Product Line Information

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

**SD355:** Addressable photoelectric detector; B350LP base included.

**SD355A:** Same as SD355 with ULC Listing (B350LPA base included).

**SD355T:** Same as SD355 but with *thermal* element; B350LP base included.

**SD355TA:** Same as SD355T with ULC Listing (B350LPA base included).

**B350LP(A):** Plug-in detector base. **Dimensions:** 6.1" (15.5 cm). **Mounting:** 4.0" (10.16 cm) square box with or without plaster ring, 4.0" (10.16 cm) octagonal box, 3.5" (8.89 cm) octagonal box, or single-gang box. All mounting boxes have a minimum depth of 1.5" (3.81 cm).

**B224RB(A):** Plug-in System Sensor *relay* detector base. **Diameter:** 6.2" (15.75 cm). **Mounting:** 4.0" (10.16 cm) square box with or without plaster ring, 4.0" (10.16 cm) octagonal box, or 3.5" (8.89 cm) octagonal box. All mounting boxes have a minimum depth of 1.5" (3.81 cm).

**B224BI(A):** Plug-in System Sensor *isolator* detector base. Maximum 25 devices between isolator bases (*see DF-52389*). **Diameter:** 6.2" (15.75 cm). **Mounting:** 4.0" (10.16 cm) square box with or without plaster ring, 4.0" (10.16 cm) octagonal box, or 3.5" (8.89 cm) octagonal box. All mounting boxes have a minimum depth of 1.5" (3.81 cm).

**B501BH-2(A):** Plug-in System Sensor *sounder* detector base. **Diameter:** 6.0" (15.24 cm). **Mounting:** 4.0" (10.16 cm) square box with or without plaster ring. Mounting box has a minimum depth of 1.5" (3.81 cm).

**B501BHT-2(A):** Plug-in System Sensor *temporal tone* sounder detector base.

### ACCESSORIES:

**RA400Z(A):** Remote LED annunciator. 3 – 32 VDC. Mounts to a U.S. single-gang electrical box. *For use with B501(A) and B350LP(A) bases only.*

**SMK400:** Surface mounting kit provides for entry of surface wiring conduit. *For use with B501(A) base only.*

**RMK400:** Recessed mounting kit. *For use with B501(A) base only.*

**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.

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