



Product

Intelligent Multi-Criteria Acclimating Detectors

Architect and Engineering Specifications

Intelligent multi-criteria acclimating detector shall be a System Sensor model number 2251TMB. Addressable device shall be designed to monitor a space with a minimum of photoelectric and thermal technologies in single sensing device. The detector shall include the ability to adapt to its environment and choose appropriate sensing settings. The detector shall allow a wide sensitivity window, with no less than 1 to 4 percent per foot obscuration.

The device shall be capable of selecting appropriate sensitivity levels based on environment type: such as office, manufacturing, or kitchen, and then have ability to automatically change setting as environment changes, as when walls are moved or as occupancy changes. The detector shall be capable of automatically adjusting its sensitivity by means of drift compensation and smoothing algorithms. The device shall provide unique signals to indicate when 20% of the drift range is remaining, when 100% of drift range is used, and when there is a chamber fault to indicate unit requires maintenance. The device shall be able to indicate distinct smoke and heat alarms.

Intelligent multi-criteria detection device shall include the ability to combine the signals of thermal sensors with the signal of a photoelectric sensor to react quickly in event of fire situation.

The detectors shall provide address-setting means on the detector head using rotary switches. Because of the possibility of installation error, systems that use binary jumpers or DIP switches to set the detector address are not acceptable. The detectors shall also store an internal identifying code that the control panel shall use to identify the type of detector. Systems that require a special programmer to set the detector address (including temporary connection at the panel) are labor intensive and not acceptable. Each detector occupies any one of at least 99 possible addresses on the signaling line circuit (SLC) loop. It responds to regular polls from the system and reports its type and status.

The detectors shall provide a test means whereby they will simulate an alarm condition and report that condition to the control panel. Such a test may be initiated at the detector itself (by activating a switch) or initiated remotely on command from the control panel. There are three test methods: functional magnet, smoke entry aerosol, or direct heat method.

The detectors shall provide two LEDs to provide 360° visibility. The LEDs are placed into steady red illumination by the control panel indicating that an alarm condition has been detected. An output connection shall also be provided in the base to connect an external remote alarm LED, sounder base, and / or relay base (optional accessories). The external remote alarm can be interconnected to other sounder or relay bases for activating all devices in a space via a single alarming unit.

Two LEDs on the sensor are controlled by the panel to indicate sensor status. Coded signals, transmitted from the panel, can cause the LEDs to blink, latch on, or latch off. Refer to the control panel technical documentation for sensor LED status operation and expected delay to alarm.

The detectors shall be low profile ceiling-mount and shall be plug-in mounted into a twist-lock base. These detectors shall be constructed of off-white UV resistant polymer and shall be detachable from the mounting base to simplify installation, service and maintenance. Mounting base wiring connections shall be made by means of SEMS screws. The detector shall allow pre-wiring of the base and the head shall be a plug-in type. Mounting base shall be mounted on junction box which is at least 1.5 inches (3.81 cm) deep. Mounting base shall be available to mount to standard junction boxes. Suitable boxes include:

- 4.0" (10.16 cm) square box with and without plaster ring.
- 4.0" (10.16 cm) octagonal box.



- 3.5" (8.89 cm) octagonal box.
- Single-gang box.

Meets Agency Standards

- ANSI/UL 268 -Smoke Detectors for Fire Alarm Signaling Systems
- CAN/ULC-S529- Smoke Detectors for Fire Alarm Systems
- FM 3230-3250- Smoke Actuated Detectors for Automatic Fire Alarm Signaling