Product
Intelligent Pinnacle Laser Smoke Detector

Architect and Engineering Specifications
Intelligent pinnacle laser smoke detector shall be a System Sensor model number 7251. Smoke detector shall be an addressable intelligent laser smoke detector and shall connect with two wires to the fire alarm control panel signaling line circuit (SLC). The detectors shall use a laser diode and patented smoke sensing chamber, designed to amplify signals from smoke but diminish stray internal reflections and shall, on command from the control panel, send data to the panel representing the analog level of smoke density.

Detector shall be able to achieve sensitivities from 0.02 percent-per-foot to 2 percent-per-foot obscuration. Laser smoke detector shall provide point identification of the fire location through addressability, shall experience no delay in response time due to smoke dilution or smoke transportation time, and shall offer complete supervision of wiring and detector.

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 SLC loop. It responds to regular polls from the system and reports its type and status.

Each detector can have its sensitivity tested (required per NFPA 72 2007 Edition, Chapter 7 on *Inspection, Testing and Maintenance*) when installed/connected to a compatible addressable fire alarm control panel.

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 panel.

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/wall-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. 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