AS2042-00 / AS2043-00 / AS2044-00

CONVENTIONAL PHOTOELECTRIC SMOKE DETECTORS

Made in USA

Standard Features

- UL Listed
- Computer-designed non-directional smoke chamber
- 360° view of detector status LED
- Low profile, 2" high (with base)
- 2 or 4 wire base compatibility.
- Highly stable operation, RF/Transient protection
- Low standby current, 59µA at 24VDC
- One built-in power/sensitivity supervision/alarm LED
- Automatic Sensitivity window verification function meets outlined requirements in NFPA 72, Chapter 2 and 7, Inspection, Testing and Maintenance

Technical Specifications

Nominal Rated Voltage	12 or 24VDC
Working Voltage	35VDC
Maximum Voltage	42VDC
Standby Current	59µA @ 24 VDC
Surge Current	160µA max @ 24 VDC
Alarm Current	40mA max @ 24 VDC
Air Velocity Range	0 - 4000FPM
Light Source	GaAlAs Infrared Emitting Diode
Case Material	Bone PC / ABS Blend
Operating Temperature	32ºF - 120ºF (0ºC - 49ºC)
Operating Humidity	up to 93%, non-condensing

Ordering Codes

AS2042-00	Conventional Photoelectric Smoke Detector with Magnetic Test Feature - Ivory Color
AS2043-00	Conventional Photoelectric Smoke Detector with Magnetic Test Feature - White Color
AS2044-00	Conventional Photoelectric Smoke Detector without Magnetic Test Feature - White Color
AS2050-00	Conventional 4" Base
AS2051-00	Conventional 6" Base

Application

The AS2042 / 43 / 44 are a reliable, high quality photoelectric smoke detectors. The computer-designed smoke chamber makes the AS2042, 43 & 44 well suited for detecting smoldering fires as well as fast-flaming fires.

Operation

The AS2042 / 43 / 44 photoelectric smoke detectors utilizes one bi-colored LED for indication of status. In a normal standby condition, the LED flash Green every 3 seconds. When the detector senses that its sensitivity has drifted outside the UL listed sensitivity window the LED will flash Red every 3 seconds. When the detector senses smoke and goes into alarm the status LED will latch on Red.

The detector utilizes an infrared LED light source and silicon photo diode receiving element in the smoke chamber. In a normal standby condition, the receiving element receives no light from the pulsing LED light source. In the event of a fire, smoke enters the detector smoke chamber and light is reflected from the smoke particles to the receiving element. The light received is converted into an electronic signal.

Fire Judgment signals are processed and compared to a reference level, and when five consecutive signals exceeding the reference level are received within a specified period of time, the time delay circuit triggers the SCR switch to activate the alarm signal. The status LED light continuously during the alarm period.

Engineering Specifications

The contractor shall furnish and install where indicated on the plans, Avenger Fire Detectors Model AS2042, AS2043 & AS2044 photoelectric smoke detectors. The combination detector head and twist-lock base shall be UL listed compatible with a UL listed fire alarm panel. The base shall permit direct interchange with Avenger Smoke Detectors AS2042, AS2043 & AS2044 photoelectric smoke detector and AS2020, AS2021 Avenger Heat Detectors. The base shall be appropriate twist-lock base AS2050-00 or AS2051-00.

The smoke detector shall have two flashing status LEDs for visual supervision. When the detector is in standby condition, the LEDs will flash Green. When the detector is outside the UL listed sensitivity window the LEDs shall flash Red. When the detector is actuated, the flashing LEDs shall latch on Red. The detector may be reset by actuating the control panel reset switch. The sensitivity of the detector shall be capable of being measured. The sensitivity of the detector shall be monitored automatically and continually to verify that it is operating within the listed sensitivity range.

To facilitate installation, the detector shall be non-polarized. Voltage and RF transient suppression techniques shall be employed to minimize false alarm potential.

Automatic Sensitivity Test Feature

The AS2042, AS2043, and AS2044 Photoelectric Smoke Detector have a built-in automatic sensitivity test feature:

1. In normal condition, both LED's flash green.

2. When the sensitivity drifts outside of its sensitivity limits, both LED's flash red.

3. In the alarm state both LED's are red continuously.

4. When the sensitivity drifts outside of its sensitivity limits and both LED's flash red, the device needs to be cleaned or returned to the factory for cleaning or calibration.