



SLK-A

PHOTOELECTRIC SMOKE DETECTOR

New design plus improved electronics means better protection.

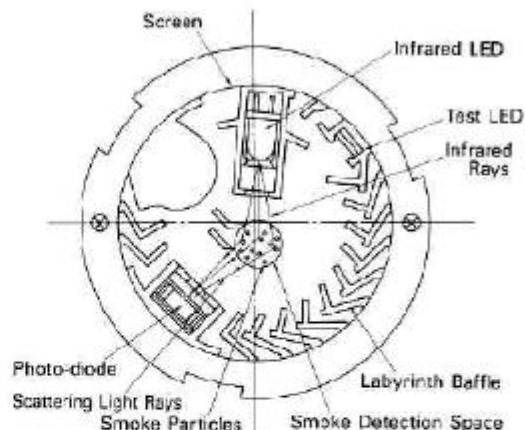
The constant problem of effective and economical fire protection has come closer to being solved with the introduction of Hochiki's SLK-A photoelectric smoke detector. This new design meets a wide range of installation requirements and is highly reliable and stable under extreme conditions. The new design incorporates the most advanced electronics for detection, supervision and control using the light scattering principle. The optical method of operation allows this detector to be sensitive to the presence of any velocity air flow conditions.

Many outstanding features

1. The SLK-A has a unique low profile which enables it to meet exacting interior design requirements without detracting from the appearance of the ceiling.
2. A complete functional test is accomplished through the use of a Test LED provided for this purpose and incorporated with the smoke chamber.
3. The design features a light source which lights in pulses rather than continuously so that very little power is consumed during operation. On the average, power is as negligible as $35 \mu\text{A}$. This permits use of more detectors with each control panel.
4. A built-in line filter is combined with time-delay circuitry to help maintain reliable around the clock operation and thereby make the entire system of detectors in an installation completely trustworthy.



5. All of the circuits in the detector head are metal shielded to afford the desired degree of operational efficiency and to be trouble free without being adversely influenced by outside noise or influenced if installed in areas subject to a strong electrical field.



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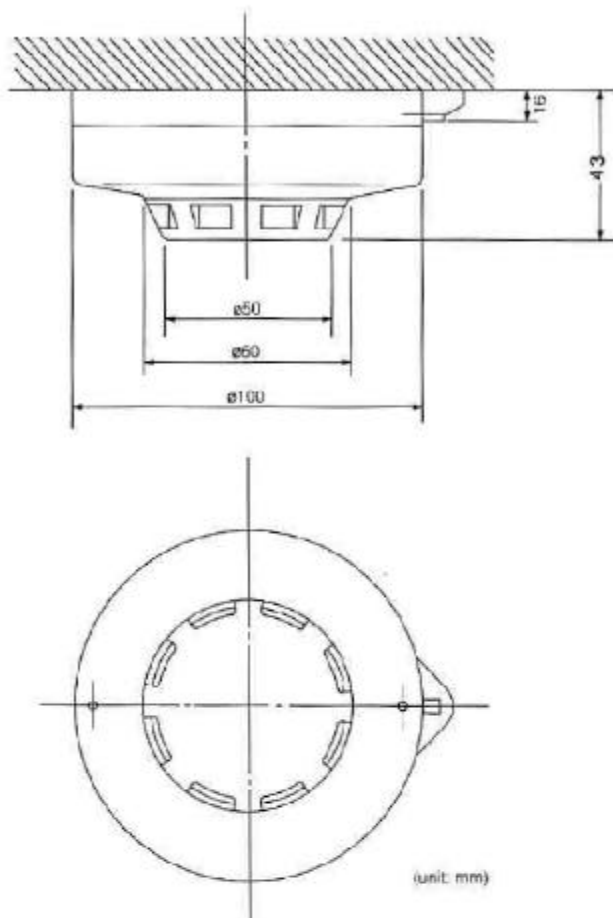
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Specifications

Line voltage to detector: .. Rated voltage DC 24 V
Working voltage DC 15~30 V

Current at normal condition: 35 μ A at 24 V
Allowable current at alarm condition: 250 mA Max.
Light source: Infrared LED
Ambient temperature: -20°C ~ +60°C
(-4°F ~ +140°F)
Mounting holes: 48 ~ 74 mm in pitch
Weight:..... 140 g with socket
Colour:..... White
SSL Certificate of Compliance Number 220
SSL Listing Number.....afp 600

Operation

The unit is comprised of an LED light source and silicon photo diode receiving element. Normally, the receiving element receives no light from the pulsating light source. In event of fire, smoke enters the detector and light is reflected from the smoke particles to the receiving element, where it is converted into an electronic signal. Signals are compared in the comparator and when two signals exceeding the threshold level are received in series within a specified period of time, the time delay circuit triggers the SCR switch to activate the alarm signal.

Applications

SLK-A's sensitive detection system enables it to display full performance in a smoldering fire. Its high impedance combined with low power consumption characteristics and its high operational stability gives it an extremely wide range of uses. It can be connected to a fire alarm control panel using a 2-wire loop circuit with end-of-line resistor or using a 4-wire loop circuitry for 24 V applications. The Hochiki Common Mounting Base makes it freely interchangeable with all other Hochiki detectors.

Typical wiring diagram

Model YBC-R/3A (without lamp): Wiring should be made as shown. Model YBF-RL/4AH4 (with lamp): In this arrangement, any detector in the group will operate the alarm indicator lamp.

Refer to the diagram for wiring detectors with and without a remote lamp. In the case of disconnection-wiring, an end-of-line resistor must be wired to the last base in the line.

