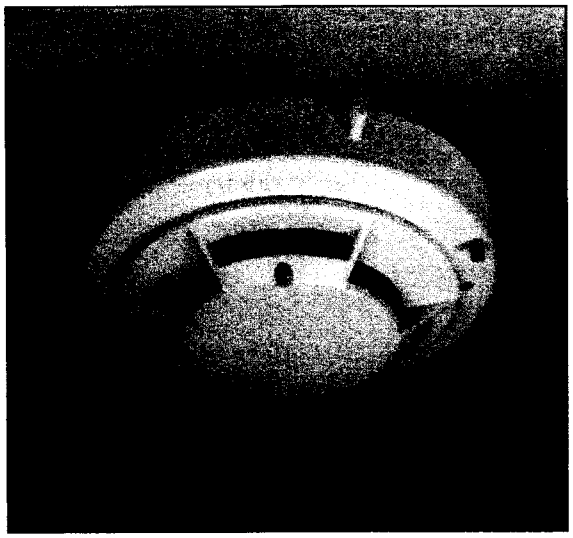
PROFESSIONAL FIRE SYSTEMS
Division of Hochiki America Corporation

SLK-24F PHOTOELECTRIC SMOKE DETECTOR



Standard Features

- Low Profile, 1.5" High
- 2 or 4 wire base compatibility
- Highly Stable operation
- RF/Transient protection
- Low Standby Current, 45 µA nominal
- Built-in power/alarm LED
- Non-directional smoke chamber
- Vandal resistant security locking feature
- Built-in Magnetic detector sensitivity feature
- Compatible with PFS SIH-24F Ionization Detectors
- Relay bases available

Light Source	GaAl as infrared emitting diode
Rated Voltage:	17.6 - 33.0 VDC
Working Voltage:	15.0 - 36.3 VDC
Maximum Allowable Voltage:	42 VDC
Supervisory Current	45 µA Max. @ 24 VDC
Surge Current	200 µA Max. @ 24 VDC
Alarm Current	150mA Max. @ 24 VDC
Ambient Temperature	32°F - 120°F (0°C - 49°C)
Test Feature	Use magnet; equivalent to 4-6% obscuration
Mounting:	45, 40, 30

Applications

The SLK-24F can be used in all areas where Photoelectric Smoke Detectors are required. It is best suited for smoldering or flaming fires.

HSB, HSC-4R, HSC-R, or YBA-M Style bases may be used with the SLK-24F. Current compatible devices are SLK-24FH, SLK-24FL, and SIH-24F.

Operation

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

Signals are processed in the comparator, and when two consecutive signals exceeding the basic 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 lights continuously during the alarm period.

Engineering Specifications

The contractor shall furnish and install where indicated on the plans, dual-chamber, photoelectric smoke detectors Hochiki America Model SLK-24F. 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 Hochiki America, SLK-24FH, combination photoelectric / heat detector. The base shall limit the alarm current available to detectors. Base shall be appropriate twist-lock base HSB, HSC-4R, HSC-R, or YBA-M Style.

The smoke detector shall have a flashing status LED for visual supervision. When the detector is actuated, the flashing LED will latch on steady at full brilliance. The detector may be reset by actuating the control panel reset switch.

The sensitivity of the detector shall be capable of being measured.

The vandal-resistant, security locking feature shall be used in those areas as indicated on the drawing. The locking feature shall be field removable when not required.

It shall be possible to perform a functional test of the detector without the need of generating smoke. The test method shall simulate effects of products of combustion in the chamber to ensure testing of detector circuits.

To facilitate installation, the detector shall be non-polarized.

Voltage and RF transient suppression techniques shall be employed to minimize false alarm potential.

Auxiliary SPDT relays shall be installed where indicated.

Product Listings

Underwriters Laboratories
Factory Mutual
CSFM #7257-410:107

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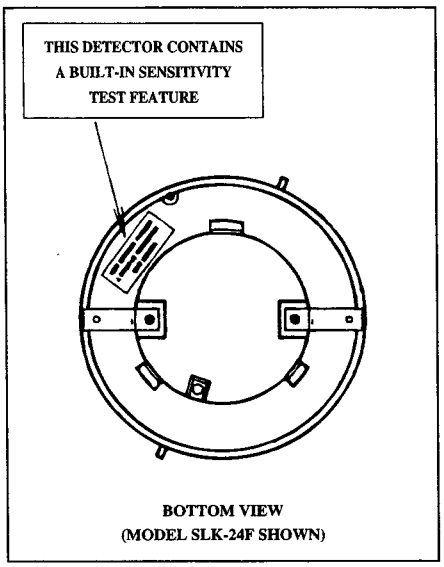
SENSITIVITY TEST PROCEDURE
FOR DETECTORS WITH BUILT-IN SENSITIVITY TEST FEATURE

IMPORTANT NOTE:
This method of sensitivity testing is only intended for Hochiki America smoke detector models SIH-24F and SLK Series that contain a label as shown on the right identifying this specific function. DO NOT attempt to use this method of sensitivity testing on detectors without this label.



BOTTOM VIEW
(MODEL SLK-24F SHOWN)

TEST DEVICE:
Testing is performed with the Hochiki America Alarm Test Magnet (Part Number 0700-00960) shown below.


TOP VIEW SIDE VIEW

TEST PROCEDURE

1. With detector wired to appropriate initiating circuit or current limited power source and with normal applied power, place magnet as shown in Figure 1.
2. Wait at least six seconds. Detector SHOULD alarm and LED should light.
3. Place magnet on detector as shown in Figure 2 (opposite side).
4. Wait at least six seconds. Detector SHOULD NOT alarm.
5. If detector does not alarm when magnet is positioned as in Figure 1 or does produce an alarm when magnet is positioned as in Figure 2 detector is not within specified sensitivity limits and may require service. See Technical Bulletin HA-88 (November 93) for more information.

   NOTE: CONDUCT TESTING ONLY UNDER NORMAL STANDBY CONDITIONS. ABNORMAL OR LOW POWER CONDITIONS MAY AFFECT SENSITIVITY. ALWAYS RESET POWER PRIOR TO TESTING OF NEXT UNIT. MAGNET PLACEMENT IDENTICAL FOR ALL DETECTORS WITH BUILD-IN SENSITIVITY TEST FEATURE.

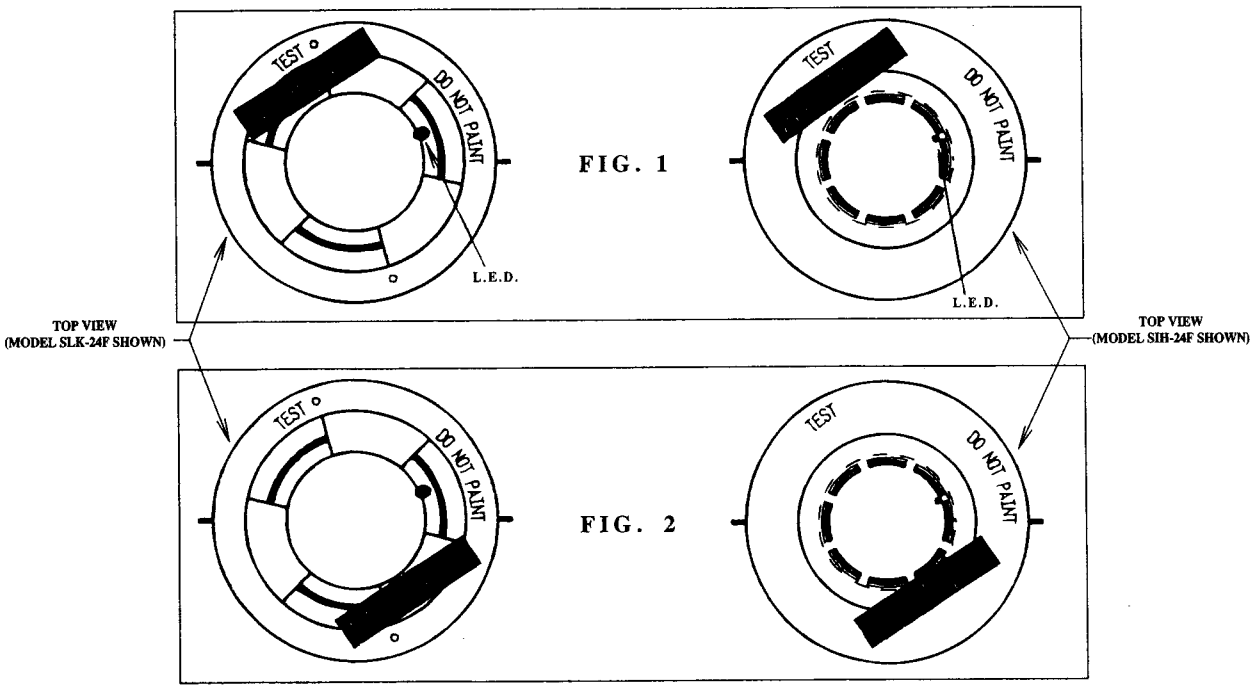


FIG. 1

FIG. 2

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