

SIH-24F IONIZATION SMOKE DETECTOR



Shown with 6" base.

STANDARD FEATURES

- Low profile, 1.5"
- 2 or 4 wire base compatibility
- Highly stable operation
- RF/Transient protected
- Low standby current, 40µA nominal
- Built-in power/alarm LED
- Non-directional smoke chamber
- Vandal resistant security locking feature
- Built-in magnetic detector sensitivity test feature
- Interchangeable with SLK-24F, SLK-24FH, SLK-24FL Photoelectric detectors
- Relay bases available
- Meets outlined requirements in the NFPA 72 Inspection Testing and Maintenance, Chapter 7

PRODUCT SPECIFICATIONS

| | | |
|--------------------------|--|--------|
| Radioactive Source | AM-241 | 0.5uCi |
| Rated Voltage | 15.0 - 30.0 VDC | |
| Working Voltage | 15.0 - 36.3 VDC | |
| Supervisory Current | 40uA @ 24 VDC | |
| Surge Current | 200uA @ 24 VDC | |
| Alarm Current | 150mA @ 24 VDC | |
| Ambient Temperature | 32°F to 120°F | |
| Sensitivity Test Feature | Magnetically activated dual reed switch sensitivity test | |
| Color & Case Material | Ivory ACS | |
| Mounting | Refer to HA Conventional Detector Base Data Sheet | |

APPLICATIONS

The SIH-24F has responsive, yet highly operational stability that gives it an extremely wide range of uses. The SIH-24F can be used in areas where early warning of trouble from superheated or flaming combustibles is expected. The SIH-24F is also constructed to be effectively used where outside RF and other electrical interference is expected to be encountered.

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

OPERATION

The SIH-24F ionization smoke detector has two chambers: a sampling chamber and a reference chamber. Smoke or invisible combustion gases can freely penetrate the sampling chamber, but the reference chamber is virtually closed to prevent easy entry. With both chambers ionized by a single radioactive source, a very small current flows. The presence of visible smoke or invisible gasses have a great influence upon the current flow in the sampling chamber, causing a change in the voltage ratio between the chambers. This difference is then amplified inside the detector and when it becomes great enough, it causes the detector to trigger into alarm.

The SIH-24F includes a status LED which blinks approximately once each second to indicate the head is powered. The status LED lights continuously during the alarm period.

ENGINEERING SPECIFICATIONS

The contractor shall furnish and install where indicated on the plans, dual-chamber, ionization smoke detectors HOCHIKI America SIH-24F. The combination detector head and twist-lock base shall be UL listed as compatible with a UL listed fire alarm panel.

The base shall permit direct interchange with

Continued on back.

PRODUCT LISTINGS

Underwriters Laboratories: S1383
Factory Mutual: 1R1A2.AY
CSFM #: 7271-0410:135

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ENGINEERING SPECIFICATIONS, *continued*

HOCHIKI America's SLK-24F photoelectric detector, SLK-24FH combination photoelectric/heat detector, SLK-24FL low sensitivity photoelectric detector, and/or AL-AFE-135/190 fixed temperature heat detector. The base shall limit the alarm current available to detectors. Base shall be the appropriate twist-lock base HSB, HSC-4R, HSC-R, or YBA-M Style.

The smoke detector shall have a flashing 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 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 products of combustion in the chamber to ensure testing detector circuits.

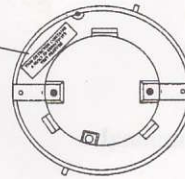
To facilitate installation, the detector shall be non-polarized. Voltage and RF transient suppression techniques shall be employed to minimize false alarm potential. Auxiliary SPDT relays shall be installed where indicated.

SIH-24F SENSITIVITY TEST PROCEDURE

NOTE: This method of sensitivity testing is only intended for HOCHIKI America smoke detector models SIH-24F, and SLK Series that contain a label which identifies this specific feature. See Figure 1. DO NOT attempt to use this method of sensitivity testing on detectors without this label.

Figure 1
Bottom View of
Identifying Label

THIS DETECTOR CONTAINS
A BUILT-IN SENSITIVITY
TEST FEATURE

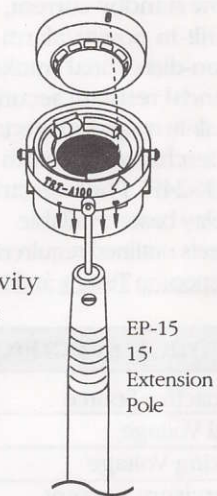


TEST DEVICES Sensitivity testing is performed with the Hochiki America Alarm Test Magnet, Part Number 0700-00960, (Figure 2A) *or* the Hochiki America TRT-A100 Smoke Detector Tester/Removal Tool (Figure 2B).

Figure 2A: Alarm Test Magnet



Figure 2B
TRT-A100 Sensitivity
Test Procedure



TEST PROCEDURE

1. With detector wired to appropriate initiating circuit or current limited power source and with normal applied power, place a magnet as shown in Figure 3.
2. Wait at least six seconds. Detector **SHOULD** alarm and LED should light.
3. Place magnet on detector as shown in Figure 4 (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 3 or does produce an alarm when magnet is positioned as in Figure 4, detector is not within specified sensitivity limits and may require service. See Technical Bulletin HA-88 (November '96) for more information.

Figure 3
SIH-24F: Placing
the Magnet

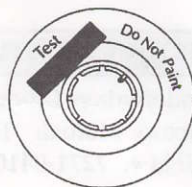
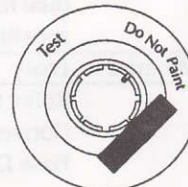


Figure 4
SIH-24F: The Magnet
on the Opposite Side



WARNING: 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 built-in sensitivity test feature.