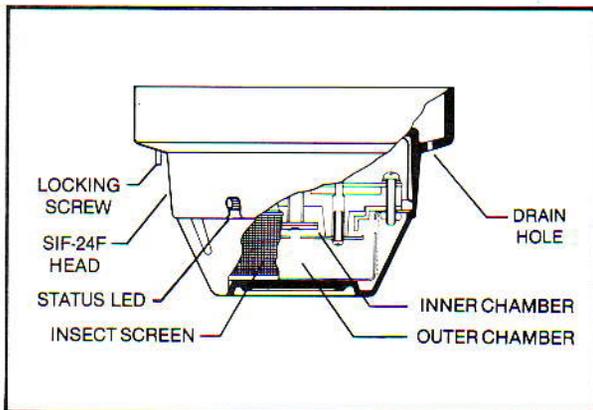


SIF-24F Ionization Smoke Detector

HOCHIKI AMERICA



MODEL SIF-24F



The SIF-24F is a dual chamber (Patent USA Re 30,3323) ionization type smoke detector head assembly. It detects both smoldering and flaming fires. It fits a variety of detector bases permitting connection to 2 or 4 wire initiating loops. Sensitivity may be checked with a TSI-A100 sensitivity monitor and detector operation may be checked with a magnetic head TSJ-A100.

The SIF-24F includes a built-in LED which blinks approximately once each second to indicate the head is powered. This LED also lights continuously when the detector is in alarm, latching on, and remaining lit until the detector is reset.

Operation

The SIF-24F Ionization Smoke Detector has two chambers: an outer sampling chamber and an inner balance chamber. Smoke or invisible combustion gases can freely penetrate the outer chamber, but the inner 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 outer 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, causes the detector to go into alarm.


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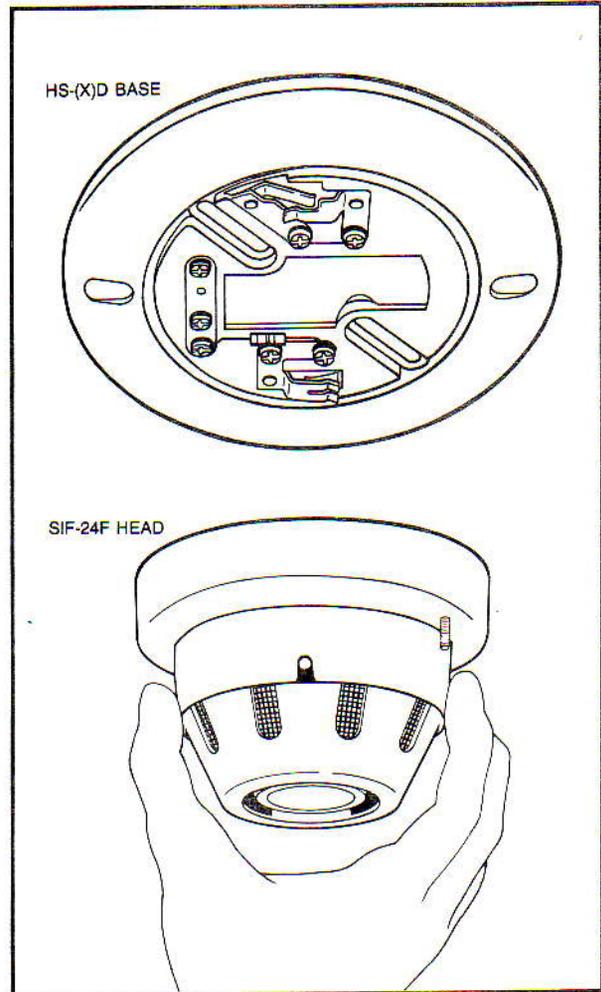
5415 Industrial Drive • Huntington Beach, CA 92649
(714) 898-0795 • FAX (714) 892-2809

Applications

The SIF-24F has responsive, yet high operational stability that gives it an extremely wide range of uses. It is best suited for use in areas where early warning of trouble from super-heated or flaming combustibles is expected. The detector's design allows use in a wide range of humidities, temperatures and air velocities. The SIF-24F is also constructed to be effectively used where outside RF and other electrical interference is expected to be encountered.

The SIF-24F with its HS-(X)D style base is electrically compatible with all other Hochiki America detectors, past and present. They can be inter-mixed with or used as replacements for our other detectors and their bases on the same system. As the SIF-24F is a normally open contact device, it can be used with other normally open contact devices like manual stations, panic switches, etc., as needed.

Current compatible detection devices with the SIF-24F utilizing the same base are the SLG-24F photoelectric smoke detector and the DCA or DFE RR/FT heat detectors. Only the smoke detectors have alarm LEDs. Special latching bases can be used with heat detectors to provide the alarm LED indicator.



General Data

RATED VOLTAGE:	18.8 — 27.7 VDC
WORKING VOLTAGE:	16-30 VDC
SURGE CURRENT:	160 μ A @ 24 VDC
NORMAL CURRENT:	35 μ A @ 24 VDC
ALARM CURRENT:	.15 AMPS MAX. @ 24 VDC
RADIOACTIVE SOURCE:	AM-241 1.0 μ Ci
AMBIENT TEMPERATURE:	+32 °F — 120 °F (0 °C-49 °C)
HUMIDITY:	95% RH MAX.
MOUNTING:	4" OCTAGONAL OUTLET BOX*
COLOR:	BONE WHITE

*The HS-(X)D Base also mounts to 3-O and 4-S boxes.

Engineering Specifications

The contractor shall furnish and install where indicated on the plans, dual-chamber, ionization smoke detectors Hochiki America Model SIF-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 SLG-24F photoelectric detector and with Hochiki America DCA or DFE heat detectors. The base shall limit the alarm current available to detectors to 20mA.

The smoke detector shall have a flashing status LED for visual supervision. When the detector is actuated, the flashing LED will latch on steady and 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 drawings. 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 all 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.