

Intelligent Single-ended Reflective Imaging Beam Smoke Detector

FEATURES

- ✓ Intelligent addressable Beam Detector
- ✓ Combined transmitter/receiver unit
- ✓ Wide 12° field of view
- ✓ Built-in imager heater
- ✓ 50° horizontal and 20° vertical beam adjustment
- ✓ Status LED indicators visible from the front and bottom
- ✓ Paintable housing/cover
- ✓ Removable plug-in terminal blocks
- ✓ Resistant to solid object intrusion
- ✓ Fast, easy, and intuitive beam alignment indicated by directional LED arrows
- ✓ Long range coverage of 5-100m is standard; no separate long-range kit required
- ✓ Highly resistant to building movement; tolerates +/- 1° movement
- ✓ Resistant to strong light sources; does not alarm when saturated by sunlight
- ✓ Automatic sensitivity threshold level settings and drift compensation
- ✓ Remote test station capable for electronic simulated smoke test from ground level
- ✓ Optional heater kit available for the reflector



PRODUCT DESCRIPTION

The SSF-OSI-RI intelligent addressable reflector-type linear optical beam smoke detector is uniquely suited for protecting large open areas with high ceilings, where spot-type smoke detectors are difficult to install and maintain. Ideal applications are warehouses, atriums, aircraft hangars, sporting arenas and concert halls. The beam operates primarily on the principle of light obscuration using infrared. The SSF-OSI-RI detector is a combined transmitter/receiver and is compatible with AFP-3030 fire alarm control panels in FlashScan® mode.

Fast and Easy Alignment

Aligning the imager to the reflector is extremely intuitive, fast, and accurate. Both the infrared transmitter and the CMOS imager are contained in a movable “eyeball” – an adjustable lens assembly that can move +/- 20° in the vertical direction and 50° in the horizontal direction.

Four LED directional arrows indicate the direction to move the lens, guiding the user to find the imager’s perfect alignment with the reflector.

Once the optimum alignment is found, indicated by all green arrows, the lens is locked with a slide lever. A paintable cover is then placed over the front to secure the lever in locked position.

Resistant To Building Movement

The infrared transmitter and receiver imager generates a beam of light towards a high-efficiency reflector. The reflector returns the beam to the receiver where the received signal is analyzed. The change in the strength of the received signal when smoke enters the area between the unit and the reflector is used to determine the alarm condition. The receiver imager has a wide 12° field of view that automatically tracks the reflector in case of building movement or support structure movement. This allows the SSF-OSI-RI to be highly resistant to movement, eliminating the number one cause of false alarms and/or faults with traditional beam detectors.

**Intelligent Single-ended Reflective
Imaging Beam Smoke Detector****Resistant To Sunlight**

Optical filtering, high-speed image acquisition and intelligent software algorithms provide the SSF-OSI-RI system with higher levels of stability and greater resistance to high level lighting variability. This provides better resistance to sunlight in its field of view, helping to prevent false alarms when saturated by sunlight, reflected sunlight or any other very bright light sources. Worst-case scenario, the detector will go into a trouble condition rather than alarm.

Resistant To Foreign Object Intrusion

Advanced smoke imaging techniques allow the detector to avoid false alarms from partial and sudden blockage from foreign object intrusion.

Time-Saving Automatic Sensitivity Setting

Unique in the market, the sensitivity of the detector is selected and set automatically at the optimum sensitivity based on the size of the reflector measured in the field of view.

Drift Compensation

The detector incorporates automatic drift compensation, whereby the detector will adjust its detection thresholds in line with any long-term signal reduction of the beam caused by dust or other contamination of the optical surfaces.

Equipped With Built-In Imager Heater

The imager ships standard with an internal heating option to prevent condensation on the optical surface. (External power supply required.)

APPROVALS

- ✓ UL Approved
- ✓ ULC Approved
- ✓ FM Approved*
- ✓ AS7240.12 and ActivFire approval pending

**Product is manufactured by System Sensor (Honeywell) who hold the FM approval.*

TECHNICAL SPECIFICATIONS

Detector Dimensions	152.4mm H x 254mm W x 114.3mm D
Reflector Dimensions	230mm H x 200mm W
Weight	1.12kg
Wire Gauge for Terminals	14 AWG (2.08mm ²)
Power	Loop Powered
Maximum Devices per SLC Loop	<p>The number of OSID-R devices are limited due to SLC current draw restrictions. Current draws listed above must be considered in coordination with any other devices on a circuit. In general, this limits the number of OSID-R detectors to up to 4 detectors per loop on a dedicated circuit on NOTIFIER panels.</p> <p>Any non-beam devices, increased distances or higher gauge wiring on the circuit will decrease available current and total capacity of OSID-R detectors.</p> <p><i>Please contact one of our staff for design assistance.</i></p>
Operating Temperature	UL-Listed for use from 0°C to 37.8°C
Application Temperature Range	-20°C to +55°C
Humidity Range	0 to 95% relative humidity, non-condensing
Protection Range	5m to 100m
Adjustment Angle	20° vertical, 50° horizontal
Sensitivity Levels	Level 1 25%, Level 2 30%, Level 3 40%, Level 4 50%
Fault Condition (Trouble)	Long-term drift reference out of 20% range, beam blockage or detector out of alignment, imager saturated.
Alignment Aid	LED directional arrows
Indicators	<p>Alarm: Local red LED and remote output</p> <p>Trouble: Local yellow LED and remote trouble output</p> <p>Normal: Local flashing green LED</p>
Test/Reset Features	Local alarm test switch, local alarm reset switch, Remote test and reset switch (Compatible with RTS151(A) and RTS151KEY(-A) test stations), OSID-R test filter.
Smoke Detector Spacing	On smooth ceilings, 30-60 feet between projected beams and not more than one-half that spacing between a projected beam and a sidewall. Other spacing may be used depending on the ceiling height, airflow characteristics, and response requirements. See AS1670.1.

DIMENSIONS

