OSI-RI-FH

Intelligent Single-ended Reflective Imaging Beam Smoke Detector

The OSI-RI-FH delivers rapid installation, trouble-free detection, and a minimalist design for challenging open-area applications.



The OSI-RI-FH single-ended beam smoke detector is easy to install and adjust. Only the head unit needs to be wired, and the "eyeball" can be aimed without adjusting the detector mounting.

The OSI-RI-FH 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, malls, aircraft hangers, arenas and concert halls. The beam operates primarily on the principle of light obscuration using infrared. The OSI-RI-FH detector is a combined transmitter/receiver and is compatible with IFP Series and Farenhyt™ Series Black fire alarm control panels in IDP mode.

Fast and Easy Alignment
Aligning the imager to the reflector is extremely intuitive, fast, and accurate, thanks to the CMOS imager contained in a movable "eyeball" that can move vertically and horizontally. Four LED arrows help the user 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, Sunlight, and Foreign Object Intrusion
The receiver imager automatically tracks the reflector in case of building movement or support structure movement. This allows the OSI-RI-FH to be highly resistant to movement, eliminating the number one cause of false alarms and/or faults with traditional beam detectors.

Optical filtering, high-speed image acquisition and intelligent software algorithms provide the system with highly improved resistance to false alarms from sunlight, reflected sunlight or any other very bright light sources. 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 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.)

FEATURES AND BENEFITS

- Combined transmitter/receiver unit
- Wide 12° field of view
- Fast, easy, and intuitive beam alignment indicated by LED directional arrows
- 50° horizontal and 20° vertical beam adjustment
- Long range coverage of 16-328 ft (5-100m) is standard; no separate long-range kit required
- Automatic sensitivity threshold level setting
- Resistant to building movement; tolerates +/- 1° movement
- Resistant to strong light sources; does not alarm when saturated by sunlight
- Resistant to solid object intrusion
- Remote test station capable for electronic simulated smoke test from ground level
- Status LED indicators visible from the front and bottom
- Automatic drift compensation
- Paintable housing/cover
- Removable plug-in terminal blocks
- Built-in imager heater
- Optional reflector heater kit available

Honeywell

Farenhyt Series

OSI-RI-FH TECHNICAL SPECIFICATIONS

PHYSICAL

Dimensions (Detector): Height 6" (152.4 mm); Width 10" (254 mm); Depth 4.5" (114.3 mm)

Dimensions (Reflector): Height 9.06" (230 mm); Width 7.87" (200 mm)

Weight (Installed): 2.48 lbs (1.12 kg)

Weight (Shipping): 3.91 lbs (1.77 kg)

Wire Gauge for Terminals: 14 AWG (2.08 mm²)

ELECTRICAL

OSI-RI-FH

Operating Voltage Range:
Nominal: 24 VDC
Minimum: 15 VDC
Maximum: 32.0 VDC

Maximum Standby Current:
13 mA @ 32 VDC
14 mA @ 24 VDC
20 mA @ 15 VDC

Maximum Alarm Current (LED on):
22 mA @ 32 VDC
15 mA @ 24 VDC
22 mA @ 15 VDC

Maximum Devices per SLC Loop:
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 **Farenhyt** panels. Any non-beam devices, increased distances or higher gauge wiring on the circuit will decrease available current and total capacity of OSID-R detectors.
Available panel current:

- **IFP-2100:** 150ma Normal operating current
- **IFP-300:** 150ma Normal operating current
- **IFP-75:** 100ma Normal operating current

BEAMHKR

Voltage Range: 15 to 32 V

Maximum Current: 450 mA Max at 32 V

Power Consumption:
7.7 W @ 24 V
15 W @ 32 V

RTS151KEY

Voltage Range: 10.2 to 32 VDC

Current Range: 9 mA Min to 11 mA Max

ENVIRONMENTAL

Operating Temperature: UL-Listed for use from 32°F to 100°F (0°C to 37.8°C).

Application Temperature Range: -4°F to 131°F (-20°C to +55°C)

Humidity Range: 0 to 95% relative humidity, non-condensing

OPERATIONAL

Protection Range: 16 ft to 328 ft (5 m to 100 m)

Adjustment Angle: 20 degrees vertical, 50 degrees horizontal

Sensitivity Levels: Level 1 25%, Level 2 30%, Level 3 40%, Level 4 50%

Test/Reset Features: Local alarm test switch, local alarm reset switch, Remote test and reset switch (compatible with RTS151 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 NFPA 72.

AGENCY LISTINGS

UL: S911

FM: PR449231

CSFM: 7260-0559:0515

PRODUCT LINE INFORMATION

OSI-RI-FH: Intelligent imaging beam smoke detector including reflector

OSP-002: Laser alignment tool

OSP-004: Test filter, 10 pack

RTS151: Remote test station

RTS151KEY: Test and reset station with key lock, flush mount

BEAMHKR: Heater kit for the reflector

6500-MMK: Multi-mount accessory for ceiling or wall mounting with additional mounting adjustment

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This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice.

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