

Xtralis OSID Reflective Imaging Smoke Conventional Beam Detector

FEATURES

- ✓ Combined transmitter and receiver unit
- ✓ Receiver consists of a CMOS imaging CCD
- ✓ Wide 12° field of view
- ✓ Intuitive beam alignment indicated by directional arrows
- ✓ Single IR wavelength
- ✓ Resistant to large solid intruding objects
- ✓ Automatic sensitivity threshold level setting
- ✓ 50° horizontal and 20° vertical beam alignment
- ✓ Highly resistant to building movement; tolerates +/- 1° movement
- ✓ Resistant to strong light sources; does not alarm when saturated by sun
- ✓ Built-in image heater is standard
- ✓ Electronic simulated smoke test from ground level
- ✓ Standby, fault and alarm LED indicators visible from the front and bottom
- ✓ Long range coverage of 5-100m, no separate long range kit required
- ✓ Automatic drift compensation
- ✓ Paintable cover
- ✓ Removable plug-in terminal blocks
- ✓ Optional heater kit available for the reflector



PRODUCT DESCRIPTION

The OSI-R is a 4-wire conventional reflector-type linear optical beam smoke detector designed to operate as a component of fire alarm systems. The beam operates primarily on the principle of light obscuration utilising an Infra-Red beam. Optical beam smoke detectors are particularly appropriate for protecting buildings with large open spaces such as warehouses, atriums etc. The OSI-R detector is a combined transmitter/receiver unit that can be directly connected to a conventional detector circuit.

Resistant to Building Movement

The Infra-Red transmitter and receiver Imager generates a beam of light towards a high efficiency reflector. The reflector returns the beam to the receiver where an analysis of the received signal is made. The change in the strength of the received signal is used to determine the alarm condition. The receiver imager has a wide FOV of 12° and tracks automatically the reflector in case of building movement or movement of its support structure. It is virtually impossible for the receiver to lose the reflector out of its side of view without any structural damage being caused to the building. As a result of this operation the OSI-R eliminates the number one cause of false alarms and/or faults with traditional beam detectors.

Resistant to Sunlight

Optical filtering, high-speed image acquisition and intelligent software algorithms provide the OSI-R system with higher levels of stability and with greater resistance to high level lighting variability. As such the detector has a better resistance to sunlight and intruding objects in its field of view. The detector will not alarm when saturated by sunlight, reflected sunlight or any other very bright light sources. In worst case the detector will go in to trouble and hence solving another cause of false alarms with traditional basic photocell receiver beam detectors. Thanks to the smoke imaging techniques the detector will not alarm for partial and sudden blockage.

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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 moveable “eyeball” – an adjustable lens assembly that can move +/- 20° in the vertical direction and 50° in the horizontal direction.

Four LED 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 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.)

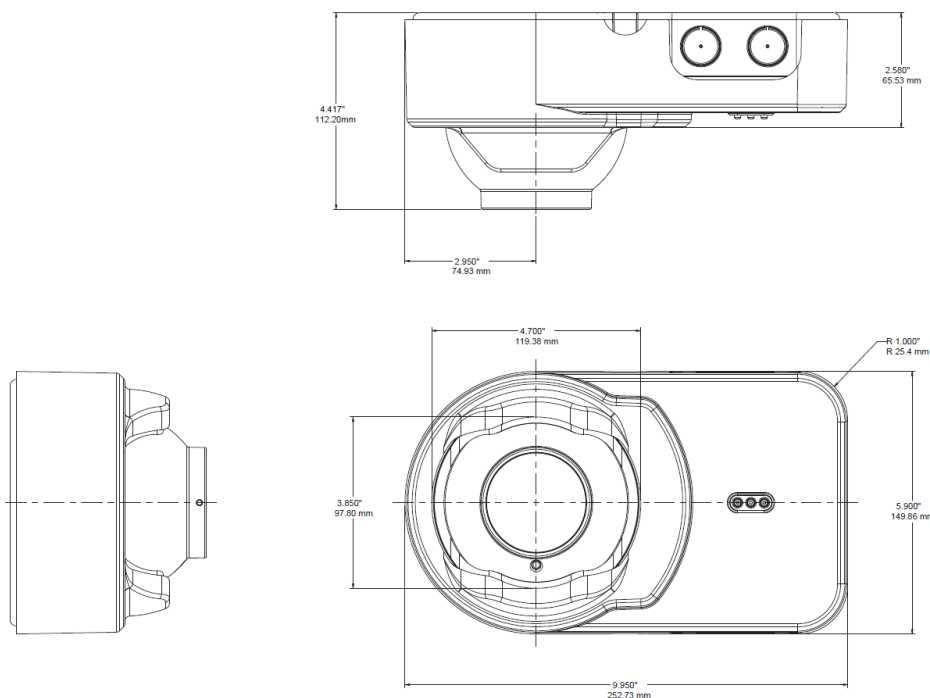
TECHNICAL SPECIFICATIONS

Operating Voltage Range	10.2 to 32Vdc (12 or 24Vdc nominal)
Maximum Standby Current	7mA @ 32Vdc 11mA @ 24Vdc 20mA @ 12Vdc 50mA @ 10.2Vdc
Maximum Alarm Current (LED on)	11mA @ 32Vdc 15mA @ 24Vdc 24mA @ 12Vdc 54mA @ 10.2Vdc
Application Temperature Range	-20°C to +55°C Product UL listed for use from 0°C to 37.8°C
Humidity	0 to 95% Relative Humidity (non-condensing)
Weight	1.12kg
Wire Gauge for Terminals	14 AWG (2.08mm ²)
Detector Dimensions	254mm W × 152.4mm H × 114.3mm D
Reflector Dimensions	200mm x 230mm
Protection Range	5m to 100m
Adjustment Angle	20° vertical, 50° horizontal

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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	Alarm: Local red LED and remote output Trouble: Local yellow LED and remote trouble output Normal: Local flashing green LED
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



APPROVALS

- ✓ UL
- ✓ ULC
- ✓ FM Approved*
- ✓ SAI Global Certificate No. SMK40640-2

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