

FEATURES

- ✓ Maximum detection range of 150m for the OSI-10
- ✓ Status LEDs for Fire, Trouble and Power
- ✓ High false alarm immunity
- ✓ Dust and intrusive solid object rejection
- ✓ Easy alignment with large adjustment and viewing angles
- ✓ No need for precise alignment
- ✓ Tolerant of alignment drift
- ✓ Automatic commissioning in under ten minutes
- ✓ Dual wavelength LED-based smoke detection
- ✓ Three selectable alarm thresholds
- ✓ AS ISO 7240.23 Approved



PRODUCT DESCRIPTION

Open-area Smoke Imaging Detection (OSID) by Xtralis is an innovation in projected beam smoke detection technology. By using advanced dual wavelength projected beams and optical imaging technology for early warning smoke detection, OSID provides a low-cost, reliable and easy-to-install solution that overcomes typical beam detection issues such as false alarm incidents and alignment difficulties.

UNIQUE DETECTION TECHNOLOGY

The OSID system measures the level of smoke entering beams of light projected over an area of protection. A single OSID Imager can detect up to seven Emitters to provide a wide coverage area. Two innovations in smoke detection technology have been developed for the revolutionary OSID smoke detector.

DUAL WAVELENGTH PARTICLE DETECTION

The beam projected from each Emitter contains a unique sequence of ultraviolet (UV) and infrared (IR) pulses that are synchronized with the Imager and enable the rejection of any unwanted light sources. By using two wavelengths of light to detect particles, the system is able to distinguish between particle sizes. The shorter UV wavelength interacts strongly with both small and large particles while the longer IR wavelength is affected only by larger particles. Dual wavelength path loss measurements therefore enable the detector to provide repeatable smoke obscuration measurements, while rejecting the presence of dust particles or solid intruding objects.

OPERATION

Status information (Fire Alarm, Trouble and Power) is communicated through the Imager via Status LEDs, dedicated Trouble and Alarm relays, and the Remote Indicator interface. Specific Trouble (Fault) conditions are identified through coded flashes of the Trouble LED. An internal heating option is also provided on the Imager to prevent condensation on the optical surface, and a reset input enables an external signal to reset the device.

OPTICAL IMAGING WITH A CMOS IMAGING CHIP

An optical imaging array in the OSID Imager provides the detector with a wide viewing angle to locate and track multiple Emitters. Consequently, the system can tolerate a much less precise installation and can compensate for the drift caused by natural shifts in building structures. Optical filtering, high-speed image acquisition and intelligent software algorithms also enable the OSID system to provide new levels of stability and sensitivity with greater immunity to high level lighting variability.

TECHNICAL SPECIFICATIONS

Supply Voltage	20 to 30Vdc (24Vdc nominal)
Imager Current Consumption	Nominal (at 24Vdc): 4mA (1 Emitter) 7mA (7 Emitters) Peak (at 24Vdc) during training mode: 27mA
Emitter Current Consumption	Wired Version (at 24Vdc): 350µA Std Power, 800µA High Power Battery Version: Built-in 5 year Battery
Field Wiring	Cable Gauge – 0.2–4mm ² (26-12 AWG)
Alarm Threshold Levels	Low: Highest sensitivity/earliest alarm: 20% (0.97dB) Medium: Medium sensitivity: 35% (1.87dB) High: Lowest sensitivity/maximum immunity to nuisance smoke conditions: 50% (3.01dB)
Adjustment Angle	± 60° (horizontal) ± 15° (vertical)
Maximum Misalignment Angle	± 2°
Dimensions	198 mm x 130 mm x 96mm
Operating Conditions*	Temperature: -10°C to 55°C* Humidity: 10 to 95% RH (non-condensing) Please consult your FireSense office for operation outside these parameters IP44 for Electronics; IP66 for Optics Enclosure
IP Rating	Fire Alarm (Red)
Status LEDs	Trouble/Power (Bi-color Yellow/Green)

* = Maximum Distances measured for the Center Field of View of the Imager. For more details on distances for the Imager, see the OSID Product Guide.

PRODUCT DATA SHEET

OSID Smoke Detection

APPROVALS

- 3 SSL approved to AS7240.12-2007
- 3 ActivFire certified - Listing No. afp-2539

CONFIGURATION OPTIONS

OSID systems may be configured to suit a range of detection spaces by selecting the number of emitters and type of imager. Each type of imager differs by the lens used in the unit, which determines the field of view and range of the system.

Imager	Field of View		Detection Range				Max Number of Emitters
	Horizontal	Vertical	Standard Power		High Power		
			Min	Max	Min	Max	
10o	7o	4o	30m	150m	-	-	1
90o	80o	48o	6m	34m*	12m	68m*	7

* = Maximum Distances measured for the Center Field of View of the Imager. For more details on distances for the Imager, see the OSID Product Guide.

ORDERING CODES

OSI-10	Imager – 7o coverage
OSI-90	Imager – 80o coverage
OSE-SP	Emitter – Standard Power
OSE-SPW	Emitter – Standard Power, Wired
OSE-HPW	Emitter – High Power, Wired
OSID-INST	OSID Installation Kit
OSE-RBA	Replacement battery *This is an indent item - lead times may apply

EMITTER/IMAGER DIMENSIONS

