

OSID - Smoke Imaging Detection



STANDARD FEATURES

- Maximum detection range of 492 ft. (150 meters) 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
- Simple DIP switch configuration
- Dual wavelength LED-based smoke detection
- Simple and easy maintenance requirements
- Conventional alarm interface for straightforward fire system integration
- Three selectable alarm thresholds

PRODUCT LISTINGS

- UL / ULC
- AFNOR
- CE - EMC and CPD
- VdS
- ActivFire
- CSFM Approved

ORDERING INFORMATION

OSI-10 - Imager: 7° coverage
OSI-45 - Imager: 38° coverage
OSI-90 - Imager: 80° coverage
OSE-SP - Emitter: Standard Power
OSE-SPW - Emitter: Standard Power, Wired
OSE-HPW - Emitter - High Power, Wired
OSID-INST - OSID Installation Kit
OSP-001 - FTDI Cable 1.5m
OSP-002 - Laser Alignment Tool

DESCRIPTION

The OSID (Open-area Smoke Imaging Detection) by Xtralis is a new innovation in projected beam smoke detection technology. By using advanced dual wavelength projected beams and optical imaging technology, 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.

OPERATIONS

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.

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.

Optical Imaging with 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.

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SPECIFICATIONS

Supply Voltage	24 to 30 VDC (24 VDC Nominal)
Supply Current Imager	Nominal: 8 mA (1 Emitter) – 10 mA (7 Emitters) Peak: during training mode: 31 mA
Supply Current Emitter	Nominal: 350 uA (Std Power) 800 uA High Power Battery Version: Built-in 5 Year Battery
Dimensions	7.8"W (198mm) x 5.1"H (130mm) x 3.7"D (96mm)
Operating Temperature	14 - 131°F (-10 - 55°C)
Maximum Humidity	10 – 95% RH (non-condensing)
Alarm Threshold Levels	Low – Highest sensitivity/earliest alarm: 20% (0.97 dB) Medium – Medium sensitivity: 35% (1.87 dB) High – Lowest sensitivity / maximum immunity to nuisance smoke conditions: 50% (3.01 dB)
Adjustment Angle	60°(horizontal), 15°(vertical)
Maximum Misalignment Angle	2°
Alarm Settings	Alarm levels: Alert, Action, Fire 1 and Fire 2 Alarm delays: 0 – 60 seconds
IP Rating	IP44 for Electronics IP66 for Optics Enclosure
Status LEDs	Fire Alarm (Red) Trouble/Power (Bi-color Yellow/Green)

CONFIGURATION OPTIONS

Imager	Field of View		Detection Range				Max. Number of Emitters
	Horizontal	Vertical	Standard Power		High Power		
			Min	Max	Min	Max	
10°	7°	4°	98 ft. (30 m)	492 ft. (150 m)	--	--	1
45°	38°	19°	49 ft. (15 m)	197 ft. (60 m)	98 ft. (30 m)	393 ft. (120 m)	7
90°	80°	48°	20 ft. (6 m)	** 111 ft. (34 m)	39 ft. (12 m)	** 223 ft. (68 m)	7

DIMENSIONS

