

OSID-DE

OPEN-AREA SMOKE IMAGING DETECTION REFERENCE GUIDE



OSID-DE COMBINES DUAL WAVELENGTH (IR AND UV) BEAMS WITH CMOS IMAGING DETECTION

- AWARD WINNING OSID-DE RANGE

- AVAILABLE FIELDS OF VIEW AND DETECTION RANGES

- ONE-ON-ONE APPLICATION AND THEORY OF OPERATION

- TYPICAL MULTI-EMITTER APPLICATION




AWARD WINNING OSID-DE RANGE

OSID-DE (Open-area Smoke Imaging Detector) combines dual wavelength (IR and UV) beams with CMOS imaging detection. This technology features high tolerance to vibration and structural movement and OSID-DE differentiates better between smoke and environmental conditions than traditional beam detectors. OSID-DE operates in both pitch dark as well as bright sunlight.




One Imager (receiver) can have up to 7 Emitters and provides easy 3D coverage for atria etc.

Fast and easy installation and commissioning is achieved through the flexible ball & socket arrangement and the use of the laser alignment tool. Trouble shooting is simple thanks to the on-board memory and the OSID-DE Diagnostic SW package, both unique for this industry.

Below is an overview of this award winning OSID-DE range.

Ordering Code	Description	Product Image
OSI-10	Imager 8° FOV Distance 30-150 m with OSE-SP-01/W. This configuration is for a 1 on 1 system. The OSI-10 is not suited to work with High Powered Emitters.	
OSI-90	Imager 80° FOV Distance 6-34 m with OSE-SP-01/W. Distance 12-68 m with OSE-HPW. Distance 12-50 m with OSE-HP-01. The OSI-90 can operate with up to 7 Emitters.	
OSE-SP-01	Emitter battery powered-alkaline battery Using battery powered Emitters drastically reduce the wiring and installation costs.	
OSE-HP-01	Emitter High Power battery powered-alkaline battery Using battery powered Emitters drastically reduce the wiring and installation costs.	
OSE-SPW	Emitter Wired 24 Vdc A preferred solution when 24 Vdc is close by.	
OSE-HPW	Emitter High Power Wired 24 Vdc Allows to double the detection ranges of the OSI- 90.	
OSID-INST	OSID-DE Installation Kit Kit including laser alignment tool, test filter, PC cable, cleaning cloth, reflectors and manual.	
OSP-001	FTDI Cable 1.5m Allows to connect a PC and hence OSID-DE Diagnostic SW to the Imager. The FTDI cable can be extended with another 20 m using cable with an active USB amplifier.	
OSP-002	Laser Alignment tool A unique alignment tool for fast alignment. Aligns and locks the eyeball. Does also activate Emitters when locked.	
OSID-WG	Wire Guard A steel cage to protect OSID-DE Imagers and Emitters from vandalism and accidental damage.	
OSID-EHI	Imager Environmental Housing Custom designed IP 66, NEMA 4-4X protective and environmental housings protect OSID-DE Imagers from dust and water ingress in industrial environments.	
OSID-EHE	Emitter Environmental Housing Custom designed IP 66, NEMA 4-4X protective and environmental housings protect OSID-DE Emitters from dust and water ingress in industrial environments.	
OSE-ACF	Anti-condensation film for Emitters An easy applicable film that provide long time resistance to condensation on the acrylic Emitter lens.	
OSEH-ACF	Anti-condensation film for OSID-EH housings An easy applicable film that provide long time resistance to condensation on the glass fronts.	
OSID-DE Diagnostic Tool	Diagnostic software package A unique software program that allows visualisation of the Imager's view, quality of alignment and IR/UV real time graphs. The program also features real time logging capability for trouble shooting and site evaluation purposes.	
OSID-DE Selection Assistant	System selection tool The program is an intuitive Excel based program that for a given area will calculate 90° and 10° OSID-DE solutions as well offer a price comparison with traditional beams. It also gives the exact location to point the alignment laser tool for optimal FOV for the Imagers in multi-Emitter solutions.	

AWARD WINNING OSID-DE RANGE

Ordering Code	Description	Product Image
OSE-RBA	Emitter replacement battery Alkaline	
RTS151KEY	Imager Reset Station Flush Mount	
RTS151 KIT	Imager Reset Station Surface Mount	

AVAILABLE FIELDS OF VIEW AND DETECTION RANGES

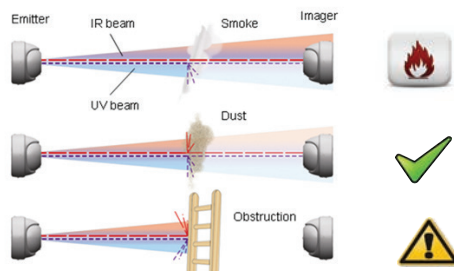
Image Lens Type	Usable Field of View		Detection Range				Max. Number of Emitters
	Horizontal	Vertical	Standard Power		High Power		
			Min	Max	Min	Max	
10°	7°	4°	98 ft (30 m)	492 ft (150 m)	328 ft (100 m)	656 ft (200 m) / 590 ft (180 m)*	1
90°	80°	48°	20 ft (6 m)	111 ft (34 m)**	39 ft (12m)	223 ft (68 m) / 164 ft (50 m)***	7

* For VdS compliant installations, use high power emitters with OSI-10 only up to 590 ft (180 m).

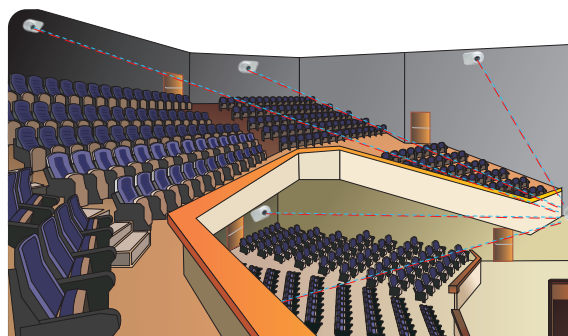
** Angular offset from Center Field of View for Imagers, refer to product Guide 15204.

*** Range with OSE-HP-01.

ONE-ON-ONE APPLICATION AND THEORY OF OPERATION



TYPICAL MULTI-EMITTER APPLICATION



TECHNICAL SPECIFICATIONS

General Specifications

Alarm Thresholds (Configurable)	Level 1 - 20% (0.97 dB) Highest Sensitivity Level 2 - 35% (1.87 dB) Medium Sensitivity Level 3 - 50% (3.01 dB) Low Sensitivity Level 4 - 65% (4.56 dB) Lowest Sensitivity, Industrial Mode
Alarm Latching (Configurable)	Latching / Non-latching configured via DIP switch
Status LEDs (Imager)	Red: Fire Alarm Bi-color Yellow/Green: Trouble or Normal
IP Rating	IP 40 for Electronics; IP 66 for Optics Enclosure
DIP Switch Configuration (Termination Card)	Configuration for alarm thresholds, number of Emitters and alarm latching/non latching

Electrical Specifications

Imager Supply Voltage	20-30 VDC (24 VDC nominal)
Emitter Supply Voltage	Wired versions: 20-30 VDC (24 VDC nominal) Battery versions: 1.9 - 3.2 VDC
Emitter Current Consumption	Externally-powered Emitter (at 24 VDC): Standard Power: 350µA High Power: 800µA Battery-powered Emitter (3 VDC)^{1,2}: Built-in 5 Year Replaceable Alkaline Battery (3 Year for OSE-HP-01) <i>Note: Battery life time only valid for use at room temperature.</i>
Cable Gauge	0.2 - 4 mm ² (26-12 AWG)
Trouble/Fault Relay	2 A @ 30 VDC, NO-C-NC Dry Relay Contacts
Fire Alarm Relay	2 A @ 30 VDC, NO-C-NC Dry Relay Contacts
Heater Input Power	24 VDC, 16 mA (400 mW)

Environmental Specifications

Operating Temperature	14°F to 131°F (-10°C to 55°C) ³
Humidity	10 to 95% RH, Non-condensing

Mechanical Specifications

Dimensions (WHD)	8.2 in x 5.4 in x 3.8 in (208 mm x 136 mm x 96 mm)
Weight	Imager: 610 g; Emitter (battery powered): 1.2 kg Emitter (wired): 535 g
Adjustment Angle	Horizontal: ±60°; Vertical: ±15°
Maximum Misalignment Angle	±2°

¹ Battery-powered Emitter is activated automatically when the alignment mechanism is in the locked position.

² Trouble LED indicates that the planned battery end of life is approaching and a Trouble (Fault) is signaled to the IDC when the battery has been operating for 5 years. The Trouble LED is activated when the battery is 13 months from the expected end of life but no Trouble (Fault) is signaled to the IDC. Smoke detection continues to function while there is sufficient residual battery power. A failed battery cannot cause a false alarm.

³ Product UL listed for use from 32°F to 100°F (0°C to 37.8°C).

OSID-DE AWARDS



ABOUT XTRALIS



Xtralis is a leading global provider of powerful solutions for the very-early and reliable detection of smoke, fire, and gas threats. Our technologies prevent disasters by giving users time to respond before life, critical infrastructure or business continuity is compromised.

We protect highly valuable assets and infrastructure belonging to the world's top governments and businesses.

To learn more, please visit us at www.xtralis.com.