RAPIX DALI-2 IP65 Long Range Occupancy Sensor
with Light Level sensor and Switch Input
DATA SHEET

Order Code	DGOZ-SEN-PRLLSW-IP
Overview	An IP-rated long range / high ceiling occupancy sensor with light level measurement and switch input. Also includes DALI-2 Application Controller to allow advanced control functions. Suitable for DALI and DALI-2 systems.

Features	• Occupancy detector and light level (lux) sensor suitable for high ceilings.
	
	• Connection to allow an external switch or voltage-free contact input, supporting push button switch, toggle switch, or the voltage-free relay contacts of an external occupancy sensor.
	
	• Connects directly to a DALI line and powered from the line.
	
	• DALI-2 Certified, multi-master.
	
	• Low current draw from a DALI line.
	
	• IP65 rating with suitable sealing of mounting and entry holes.
	
	• Grey colour box with 25 mm knock-outs for conduit fitting.
	
	• The internal Application Controller is optional, and if used:
	    ○ Supports small systems, RAPIX Zero-Commissioning, and additional resilience when used in a RAPIX Lighting Control System;
	    ○ Actions for the occupancy sensor and light sensor are configurable. Examples include occupancy mode, vacancy mode, light level maintenance, sunset switch. Fade on, fade off and dwell times are configurable;
	    ○ Actions for the switch input are configurable. Examples include toggle dimmer, memory dimmer, long press fade, double tap and many other configurations;
	    ○ Powerful enable/disable rules;
	    ○ Support for multiple Zones - being collections of DALI Groups and/or DALI Short Addresses;
	    ○ Supports DALI and RAPIX Scenes.

Typical Applications	Car parks, high ceiling areas and areas subject to washdown.

DALI System Commissioning

This product is set up using any DALI-2 commissioning software that supports DALI-2 Control Device instance types 1, 3 and 4. For the higher resilience of RAPIX and to use the built-in Application Controller, the free *RAPIX Addressing* or *RAPIX Integrator* software should be used.

DALI-2 Instances

This product has 3 instances:

Instance 0	Type 4 Light Level
Instance 1	Type 3 Occupancy Sensor
Instance 2	Type 1 Push Button

Instance 2 is always present. If no external switch is connected, then instance 2 will not generate events and will read as 'not pressed'.

Auxiliary Input

By default, the auxiliary input is defined as a DALI-2 Push Button Switch (Instance Type 1). This input can also function as Instance Type 2 (Absolute input) and Instance Type 3 (Occupancy Sensor). DALI commands can change the Instance Type of the Auxiliary Input.

RAPIX Commissioning software uses a Template programming system which automatically selects the appropriate instance type for the selected function.

RAPIX Zero-Commissioning

This product supports RAPIX Zero-Commissioning. If there is no setup by DALI-2 or RAPIX Software, then:

- The switch input transmits DALI Broadcast On/Off/Fade; and

- If desired, the occupancy sensor can be enabled to operate as a 15 minute occupancy function, which transmits DALI broadcast On/Off. When used for this function, the OFF operation of the switch input allows an exit delay.

Easy-Check

Unprogrammed sensors are easily located: A green indicator behind the lens is illuminated when the occupancy sensor has no setup, and RAPIX Zero-Commissioning has not been activated.

Installation Locations

This sensor enclosure and lens are manufactured from UV stabilised plastics and are suitable for mounting and use in car parks, cool rooms, high ceiling loading docks, transport facilities, and similar.
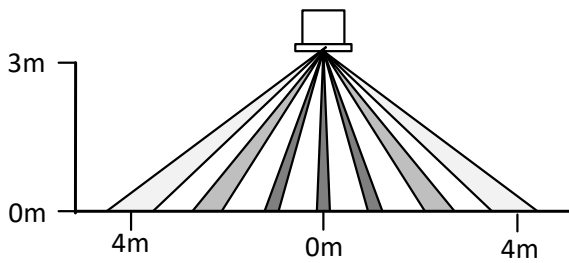
This sensor operates by detecting moving heat sources such as people, vehicles, etc. Mounting and operation in areas with full direct sunlight exposure is possible, though not preferred as sunlight heating of the sensor may cause it to become less sensitive.
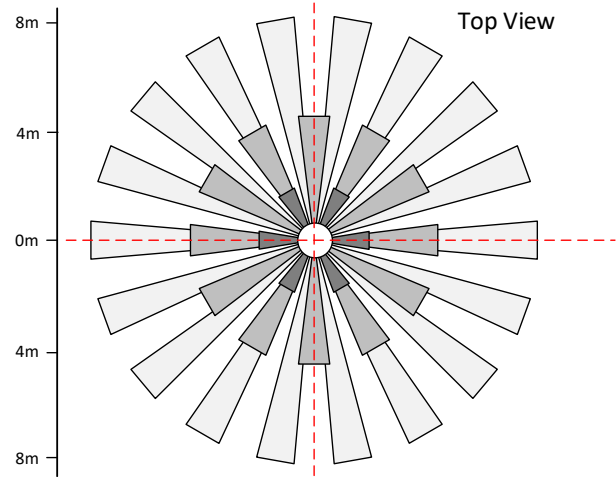
Sealing and IP Rating

This product relies on all entry to the enclosure being properly sealed. This includes any screw holes, cable glands and conduit entries. Silicon sealer or similar must be used to seal all entry points.
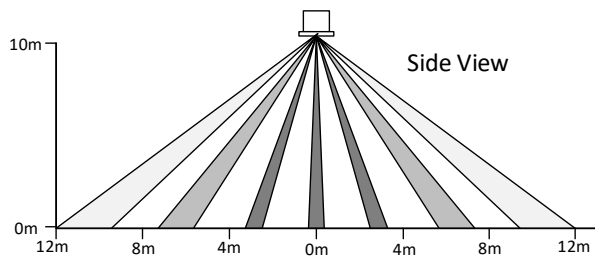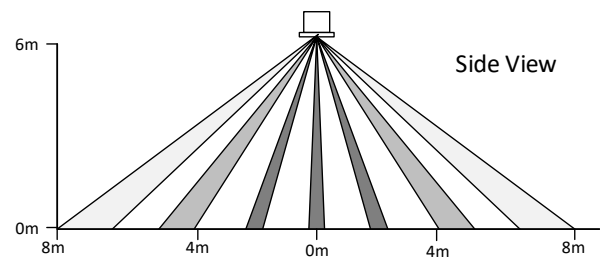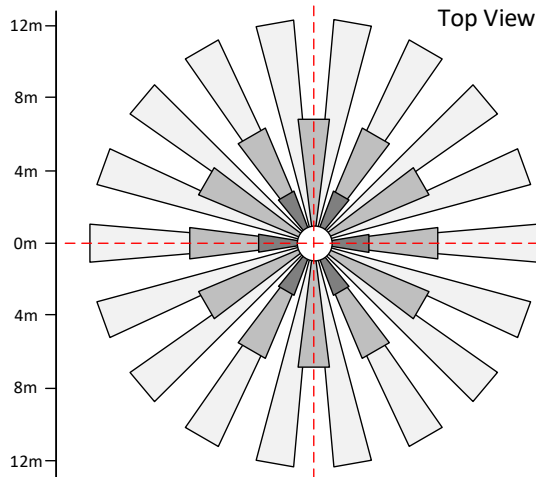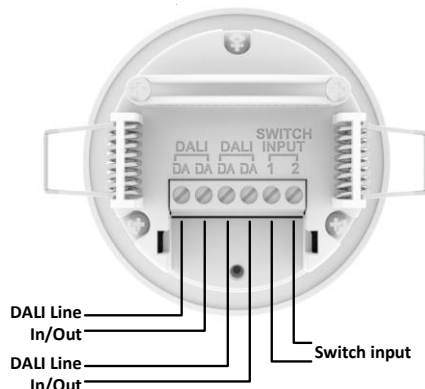
Typical Detection Range

3 m mounting height

6 m mounting height

Top View

Side View

10 m mounting height

Top View

Side View

Connections

Specifications: RAPIX DALI-2 IP65 Long Range Occupancy and Light Level Sensor

Parameter	Specification
Detection range (diameter)	Up to 24 metres, dependant on ceiling height. See diagrams for typical cases.
Recommended mounting height	6 to 12 metres
Maximum mounting height	16 metres
Light Level Measurement range	0 – 1023 lux (default) DALI Operating Mode allows optional high range: 0 – 65000 lux
Power source	DALI Line
Compatibility	DALI and DALI-2
DALI Line operating voltage	16 V dc (nominal), operation from 9.5 V – 22.5 V
DALI Line current draw	2 mA
Start up time	< 1.2 seconds
Mains tolerance	DALI input and auxiliary input are mains voltage tolerant
DALI connection	4 Tunnel Terminal block Each tunnel suitable for 1 x 2.5 mm^2 or 2 x 1.5 mm^2 wires
Auxiliary connection	2 Tunnel Terminal block Each tunnel suitable for 1 x 2.5 mm^2 or 2 x 1.5 mm^2 wires
Maximum auxiliary cable length	25 m when using twin core mains cable ≥ 0.75 mm^2 wires
Auxiliary Input Types	DALI-2 Type 1 (Push button switch), Type 2 (Absolute / toggle switch) or Type 3 (voltage free contacts of an occupancy sensor).
Indicators	Identification: Green, front through sensor lens
Ambient operating temperature	-30 to 50° C
Ambient storage temperature	-40 to 70° C
Humidity	0% to 95% RH non-condensing
Ingress protection	IP65
Materials	Enclosure – UV stabilised, halogen-free, shock-proof PS Lens - HDPE
Weight	210 g
DALI addresses used	One DALI-2 Control Device Short Address, no Control Gear Short Addresses
DALI Addressing types supported	Short Addresses, Group Addresses, Scenes, Broadcast
RAPIX Application Controller DALI addressing types supported	Control Gear Short Addresses, Group Addresses, Scenes, Broadcast
Additional addressing types	RAPIX Zones, RAPIX Flags, RAPIX Operating Properties

Parameter	Specification
Approvals	DALI 2 CE UK CA RoHS COMPLIANT

Standards & Compliance

EMC and Electrical Safety Frameworks and Standards

IEC/EN 55015, AS/NZS CISPR 15, AS CISPR 15
EN 55032, AS/NZS CISPR32
EN 55035
EN 61547
EN 61347-2-11, AS/NZS 61347.2.11
EN 61347-1, AS/NZS 61347.1
EN 62368-1

DALI Standards and Compliance

IEC 62386-101 Ed 2 (DALI-2)
IEC 62386-103 (DALI-2 Control Devices)
IEC 62386-301, -303, -304 (DALI-2 Instance Types Push Button, Occupancy Sensor, Light Level Sensor)
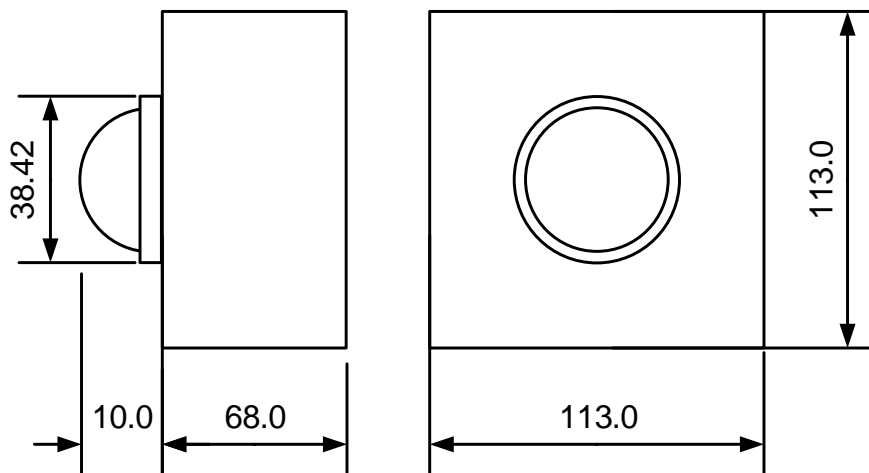IEC 62386-302 (DALI-2 Instance Absolute, tested, not certified)

EC Council Directives
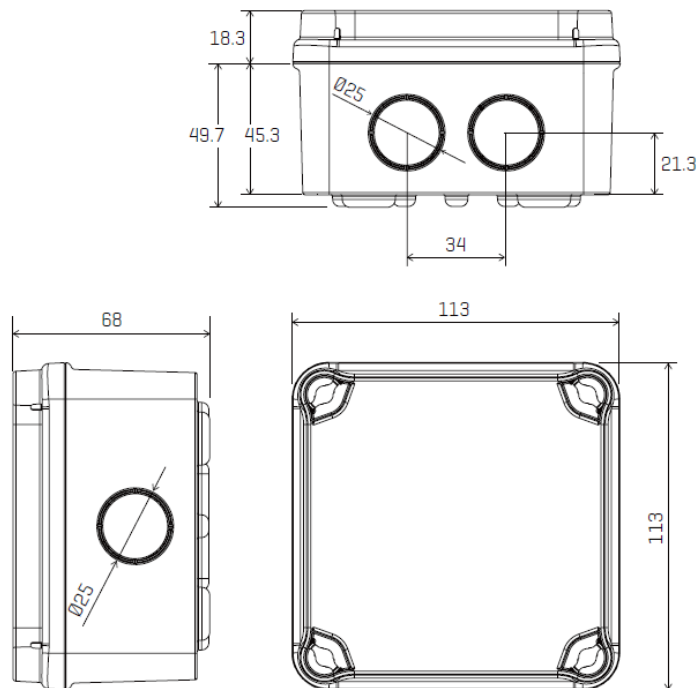
2014/35/EU	Low Voltage
2014/30/EU	Electromagnetic Compatibility (EMC)
2015/863	Restriction of Hazardous Substances (RoHS) in Electrical and Electronic Equipment

Dimensions

Dimensions (contd)

Contact Information

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This product includes a **TWO-YEAR WARRANTY** against manufacturing defects.

RAPIX is a trademark of Ozuno Holdings Pty Ltd.

DALI and **DALI-2** are trademarks of the Digital Illumination Interface Alliance.

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