

# 329 DALI External Light Sensor

The 329 DALI External Light Sensor, when used in conjunction with a Helvar Lighting Router based controls system, can provide energy savings by adjusting light levels based on the available daylight.

Mount the 329 outdoors to monitor the level of daylight. For instance, bright sunlight will raise the overall light level in the rooms of a building. The sensor will detect this, and the system will reduce the energy levels supplied to the lamps. If the day then becomes overcast, the system will respond to the lower levels of ambient light by increasing the energy provided to the lamps. By profiling the building (measuring the daylight contribution per room), the system can be used to maintain an approximate constant light level, and thereby reduce energy use.

The 329 is for mounting outdoors. The unit head assembly is waterproof when correctly installed and mounted vertically, and can tolerate a wide range of operating temperatures and conditions.



## Key Features

- Open loop light control.
- Light range of 1 lx – 100 000 lx.
- Simple mounting.
- Easy connection to Helvar router system.

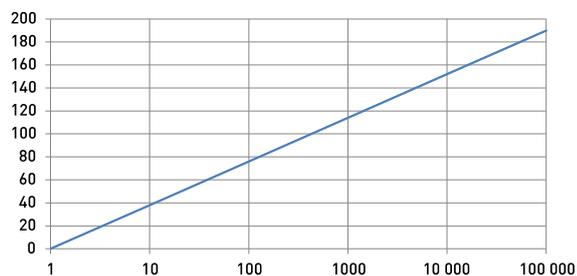
Incident Light (lx)	Light Level Output Value	Equivalent To
≤ 1	0	Darkness
2	11	-
5	26	-
10	38	Twilight
20	49	-
50	65	-
100	76	Dark day
200	87	-
500	102	-
1000	114	Overcast day
2000	125	-
5000	140	-
10 000	152	Full daylight
20 000	163	-
50 000	178	-
100 000	190	Bright sunlight

## Installation Notes

- The unit is intended for wall mounting.
- Isolate the mains supply before installation.
- Cabling must be 230 VAC mains rated.
- Do not mount sensor in direct line of artificial light sources, e.g. lamps, uplighters.
- The unit must be mounted vertically, i.e. with the clear Sensor Head Cover pointing upwards. Any convenient surface may be used as long as the sensor element has a reasonably unrestricted view of the sky.
- To avoid the possible risk of lightning strikes, never install the external light sensor at the highest point on a building.

## Light Level Output

The external light sensor is calibrated to provide a scaled light level output of 0 to 200 covering the full range of daylight. The sensitivity of the external light sensor is factory-set, and no adjustment is required.



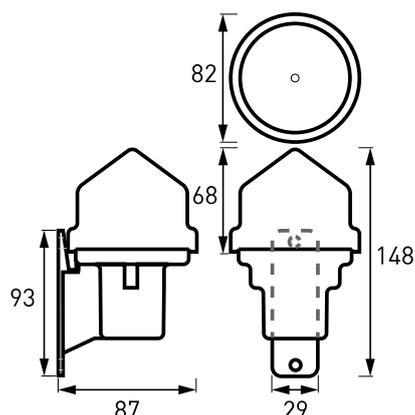
## Light Sensing Angle

Vertical plane: Unrestricted viewing angle of 170°.

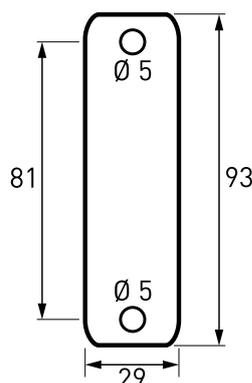
Horizontal plane: 360° viewing angle.



## Dimensions (mm)



## Fixing Centre Locations (mm)



## Technical Data

Connections	
DALI	Wire size: 1.0 mm <sup>2</sup> – 2.5 mm <sup>2</sup> 2-core solid, flexible or stranded Max. length: 300 m @ 2.5 mm <sup>2</sup> (part of DALI subnet)
Connector type:	Screw terminals:
	N: DALI+
	L0: DALI-
	L1: No connection
Cable rating:	All cables must be mains rated.

Electrical data	
DALI power supply:	13 V – 22 V
DALI consumption:	10 mA

Sensor	
Sensor element:	Photodiode matched to human eye response.
Light sensing angle:	When mounted vertically: <ul style="list-style-type: none"> <li>• 85° from vertical</li> <li>• Horizontal plane: 360°</li> </ul>
Working light range:	1 lx – 100 000 lx
Light level reading output:	0–200

Operating conditions	
Ambient temperature:	–35 °C to +70 °C
Relative humidity:	Max. 90%, noncondensing
Storage temperature:	–35 °C to +70 °C

Mounting	
Mounting angle:	Vertical (clear sensor head at top)
Mounting points:	2 × M4 (No. 8 woodscrew) For fixing centres, see diagram.

Mechanical data	
Dimensions:	148 mm × 82 mm × 87 mm

Materials	
Base & mounting bracket:	Black ABS
Socket and sensor accessory:	Black glass-filled nylon
Sensor cover:	Toughened acrylic (UV stable)
Weight:	250 g
IP code:	IP65

Conformity and standards	
Conformity:	
EMC emission:	EN 55015
EMC immunity:	EN 61547
Safety:	EN 61347-2-11
Environment:	Complies with WEEE and RoHS directives.