321D2, 321BD2, 321PD2, 321PBD2 Multisensor

The Multisensor is a compact unit and DALI-2 certified input device that combines a light sensor for constant light control and a passive infrared (PIR) presence detector to provide energy-saving functions in a DALI system.

The light sensor measures reflected light from the surface directly beneath it. The unit uses this information to maintain a constant light level by adjusting the lamp outputs.

The PIR sensor enables the Multisensor to switch the lights on when its coverage area is occupied, and off when it is unoccupied.

The sensor's settings are adjusted using Helvar's Designer software.

Due to its excellent detection performance, the Multisensor is especially suitable for applications where small or slow movements take place for extended periods of time, such as offices or classrooms. Since its detection sensitivity is less dependent on movement direction than that of most PIR sensors, fewer units are required to reliably cover a target area.

The unit can be mounted into a ceiling void or onto a solid surface using Helvar's SBB-C (white) or SBB-CB (black) mounting box (sold separately).
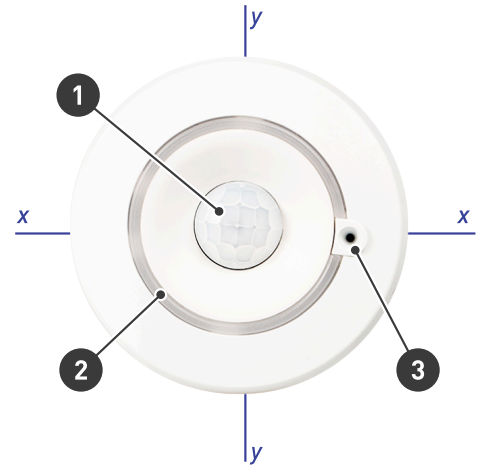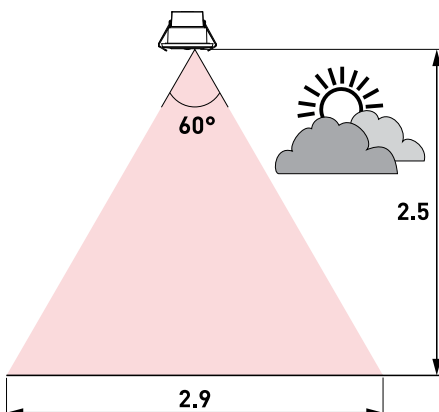

1. PIR sensor
2. Status LED
3. Light sensor

Key Features

- Excellent detection performance through high sensitivity and multidirectional coverage
- Programmable constant light control for energy efficiency
- 10 mA DALI current consumption
- Compact and functional design
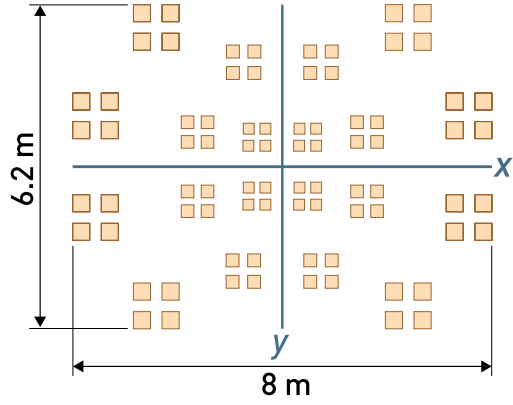- Programmable in Designer
- DALI-2 certified input device

Constant Light Coverage

60°
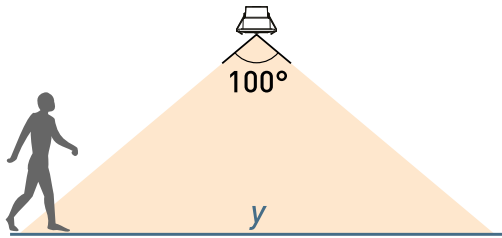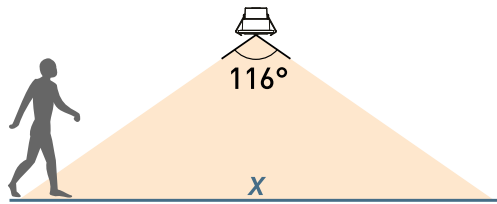
2.5

2.9

Detection

Detection pattern

6.2 m

8 m
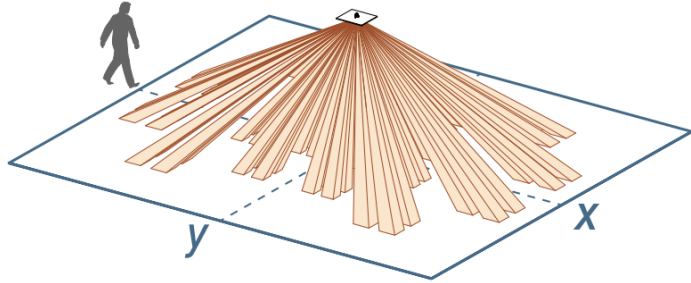
Detection Pattern at floor level for 2.5 m mounting height

Y-axis coverage

100°

y

X-axis coverage

116°

x

Connections

DA+ DA+ DA– DA–

DA+ DA–   DA+ DA–
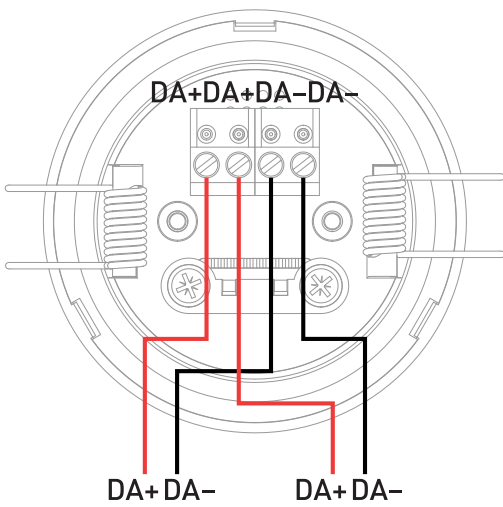
Dimensions (mm)

321D2, 321BD2
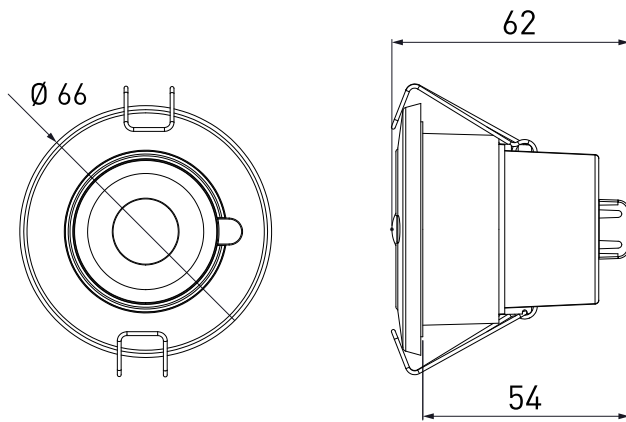
321PD2, 321BPD2
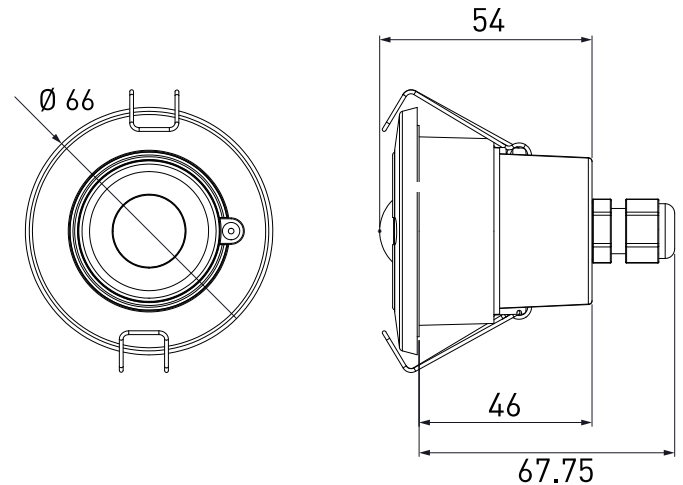
Technical Data

Connections

DALI:	Removable connector block
	Wire section: 0.5–1.5 mm², solid or stranded.
Cable rating:	All cables must be mains rated.

Electrical Data

DALI supply input:	12–22.5 V
DALI consumption:	10 mA Max

Sensors

Light sensor:	For constant-light functions
Presence detector:	Passive infrared (PIR)

Operation

Start-up time:	≤1 sec

Mechanical data

Recommended mounting height:	Max. 4 m
Presence detection coverage area:	46 m² @ 2.5 m mounting height
Mounting hole diameter:	51 mm +/- 1 mm

Note: If replacing an older sensor, 52–55 mm mounting hole is acceptable.

Ceiling thickness:	Maximum 25 mm
Bezel diameter:	66 mm
Recommended clearance depth:	10 cm (with cable cover, including 5 cm for cabling)
Dimensions:	321D2, 321BD2: 66 x 62 mm
	321PD2, 321PBD2: 66 x 67.75 mm
Material (casing):	Nonflammable PC/ABS (UL94–V0)
Finish/Colour:	321D2, 321PD2: Semi-matt / White RAL 9003
	321BD2 321PBD2: Semi-matt / Anthracite grey RAL 7016
Weight:	66.3 g
IP rating:	321D2, 321BD2: IP30, [IP20 cable cover]
	321PD2, 321PBD2: IP65

Operating and storage conditions

Ambient temperature:	0 °C to +50 °C
Relative humidity:	Max. 90 %, noncondensing
Storage temperature:	-10 °C to +70 °C

Compatibility

Router:	950
Designer:	5.8.2 or later

Conformity and standards

Conformity:	CE UKCA
EMC emission:	EN 55015
EMC immunity:	EN 61547
DALI:	IEC 62386, Parts 101, 103 and 301
Safety:	EN 61347-2-11
Environment:	Complies with WEEE and RoHS directives.