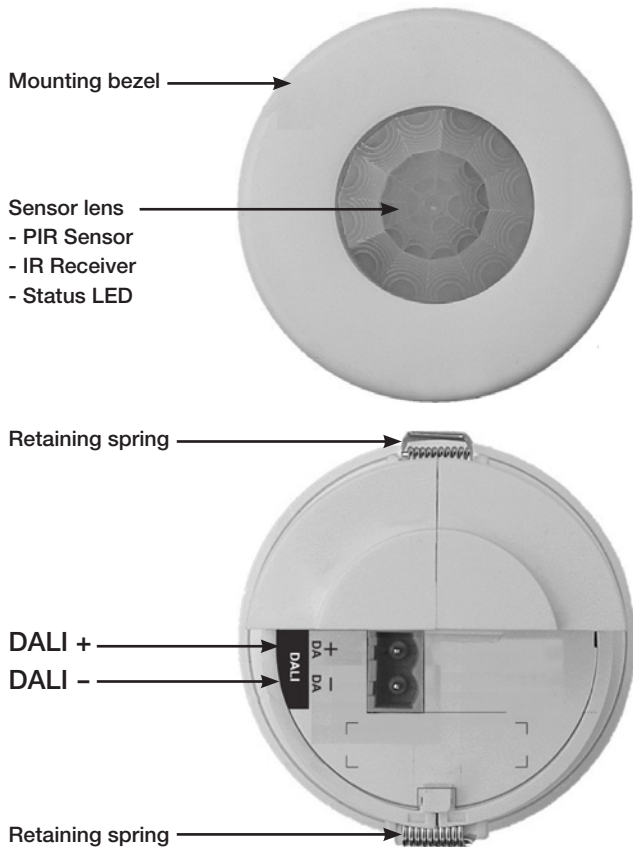## Installation Guide

The 311 Ceiling PIR Detector is a compact flush-mounted ceiling unit containing sensors to provide energy-saving functions when used in a DALI system. The unit can also be controlled using the Helvar 303 IR (infra-red) remote control handset.

Functioning as a presence detector, the unit can turn lights on when a room is occupied, and off when empty.

The unit is fully compatible with Helvar's lighting system design and control software; Designer, and DIGIDIM Toolbox.

Features and Connections

Mounting bezel

Sensor lens
- PIR Sensor
- IR Receiver
- Status LED

Retaining spring

DALI +
DALI −

Retaining spring

PIR sensor
Detects movement within the detection range allowing load control in response to changes in room occupancy.

IR Receiver
Receives control and programming commands from a 303 IR (infrared) handset (available separately).

Status LED
The red LED flashes to indicate the following:

Valid setting received	
Identify Active	

 = Red LED

DALI connection
The DALI connection is made via DA+ and DA- terminals. The device is not polarity-sensitive.
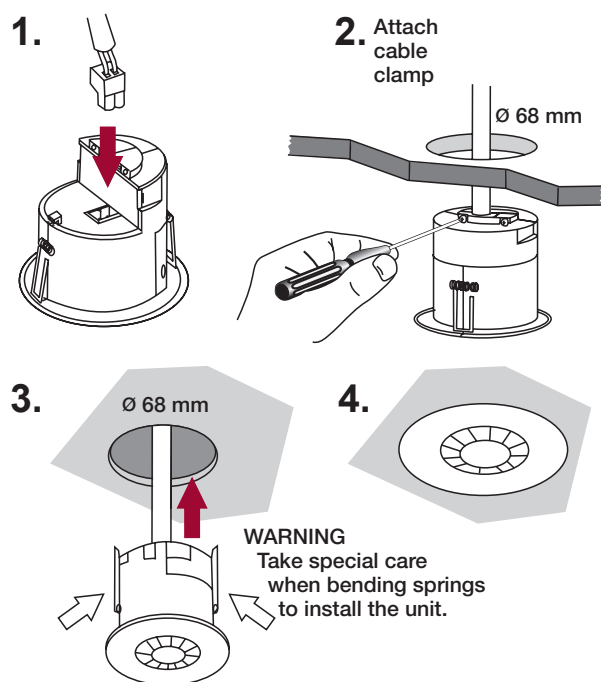
Installation

1. Install the unit: refer to the Connection and Fixing diagram below.

2. Connect the DALI connectors to the socket at the rear of the sensor.

3. Power the unit up.

4. If the load comes on, by default it will take 20 minutes (of no movement detected) for the load to switch off.

Installation notes

Position the sensor so that the occupants of the room are normally inside the detection zone.

Do not install the sensor within 1 m of any lighting, forced air heating, or ventilation equipment.

Do not fix the sensor to an unstable or vibrating surface.

Install the unit as far away as possible from the surface of metal objects.

The detection pattern illustrated is based on a mounting height of 2.8 m.

A lower mounting height will decrease the overall size of the detection zone.
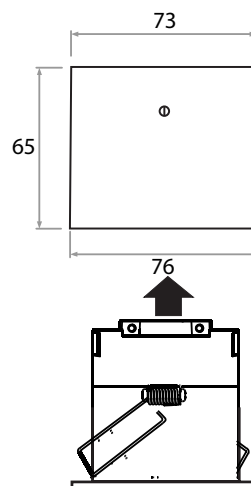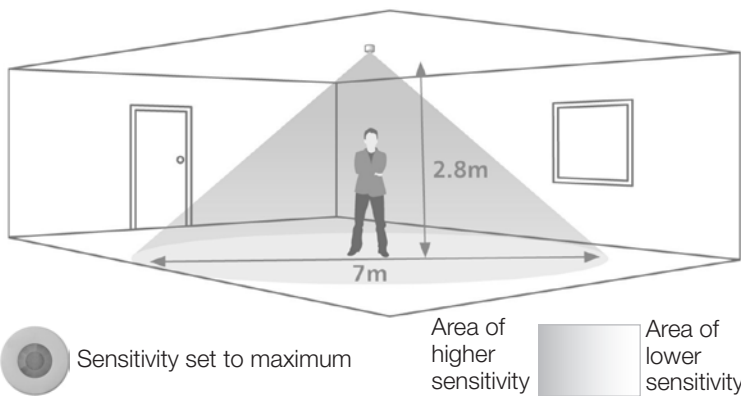
Connection and Fixing

Mounting hole

1.

2. Attach cable clamp

Ø 68 mm

3. Ø 68 mm

4.

WARNING
Take special care when bending springs to install the unit.

Surface back box SBB-A

Note: order the SBB-A surface mount box separately.

50

Ø5

60

73

65

76

Detection pattern

Sensitivity set to maximum

Area of higher sensitivity

Area of lower sensitivity

Remote Control

You can use the Helvar 303 IR Remote Control to send signals to the 311 detector to:

- recall lighting scenes 1 - 4
- adjust light levels
- store current level
- install preset levels for scenes 1 - 4

Helvar 303 IR Remote Control
See the 303 Remote User Manual (Helvar Document D004744) for full details.

Other Functions

Sensitivity

Adjust the sensitivity using *Designer*, or *DIGIDIM Toolbox* (Helvar's lighting system design and control software).
Note: *On maximum sensitivity, the detector unit is **extremely sensitive** to movement and may detect through glass, thin walls or partitions. If this causes a problem reduce its sensitivity.*

Adjusting On, Exit and Transition timeouts

The default timeouts for On, Exit and Transition can be altered using Designer, or DIGIDIM Toolbox (Helvar's lighting system design and control software).

Check connection to DALI network

To check the sensor is correctly connected the DALI network use the *Identify* function in Helvar's lighting system design and control software, Designer, or DIGIDIM Toolbox.

Using Designer and Toolbox software
When using Designer software, connect the PC to the lighting network via a Helvar Router.
When using Toolbox software, connect the PC to the lighting network via a Helvar serial or USB interface.
For further information on using Designer and Toolbox, see the System Software section of www.helvar.com.

Technical Data

Connections

External power / DALI: Removable 2-pole connectors
Wire size: 0.5 mm^2 - 2.5 mm^2
Solid or stranded

Power cable rating: All cables must be mains rated

Power

DALI Supply Input: 13 V to 22.5 V

DALI Consumption: 15 mA

Mechanical Data

Dimensions: See diagram

Material (casing): Non-flammable ABS

Finish / Colour: Matt / White

Weight: 58 g

IP rating: IP 30

Mounting hole diameter: 68 mm

Operating Conditions

Ambient Temperature: 0ºC to +35ºC

Storage Temperature: -10°C to +70°C

Relative Humidity: Max 95%, non-condensing
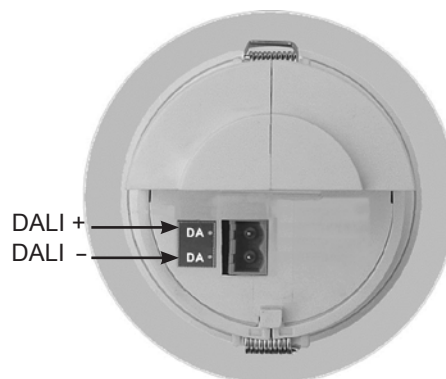
Conformity and Standards

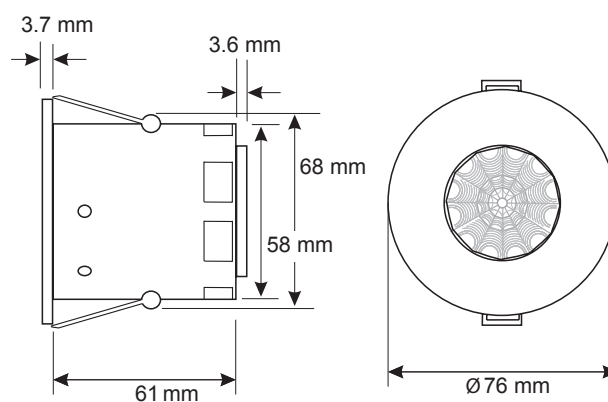**EMC: Immunity:** EN 61000-6-1

Emissions: EN 61000-6-3

Safety: EN 60730-1

Environment: Complies with WEEE and RoHS directives

Connections

DALI +
DALI −

Dimensions

3.7 mm

3.6 mm

68 mm

58 mm

61 mm

Ø 76 mm

Hole diameter: Ø68 mm

www.helvar.com