

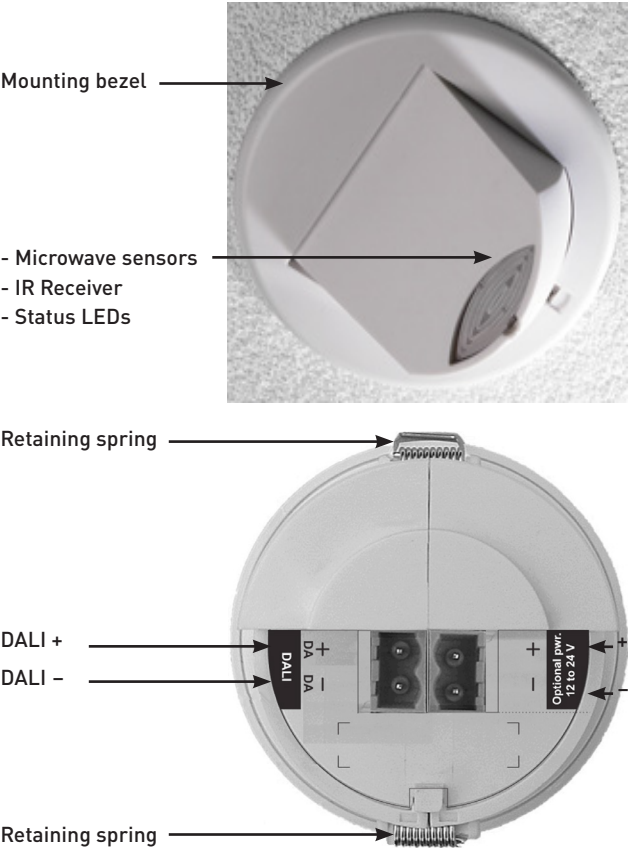
Installation Guide

The 314 Tilting Microwave Detector provides occupancy detection for the automatic control of DALI lighting loads. The unit can also be controlled using the Helvar 303 IR (infrared) remote control handset.

The 314 detects movement using its highly sensitive microwave detector. It works by emitting low-power microwave signals and measuring the reflections as the signals bounce off moving objects.

The 314 has an adjustable sensor head that allows the area of detection to be optimised for each particular purpose. When an area is no longer occupied, the load will switch off after a certain time. This time-out period is configured using Helvar's lighting system design and control software; Designer, or DIGIDIM Toolbox.

Features and Connections



Microwave 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:

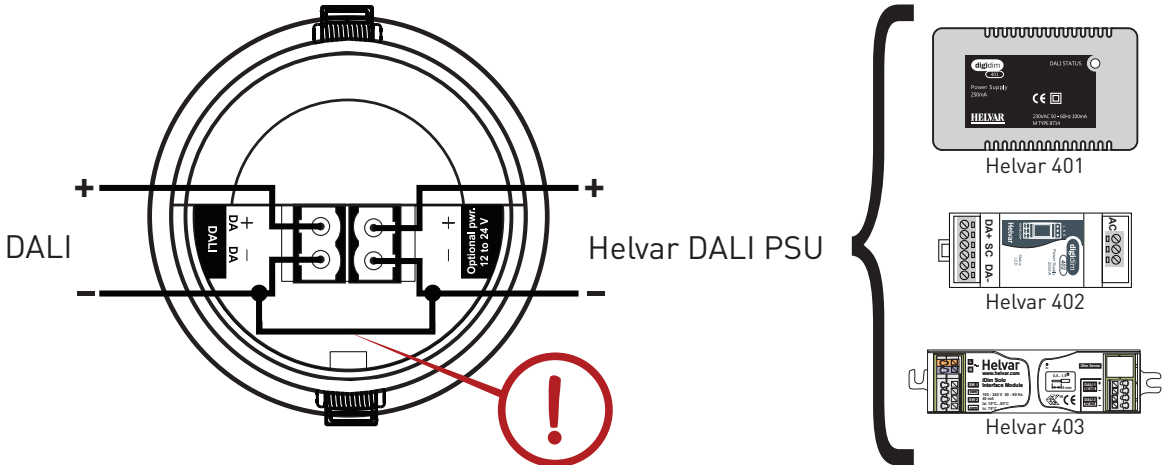
Valid setting received	
Identify Active	

= Red LED

External power connection (optional)
DALI connection
 The DALI connection is made via DA+ and DA- terminals. The device is not polarity-sensitive.

External power supply (optional)

Current-limited external power supply unit
 If an external power supply is required, use a Helvar 401, 402 or 403 power supply unit. Contact your Helvar representative if any further information is required.



Installation

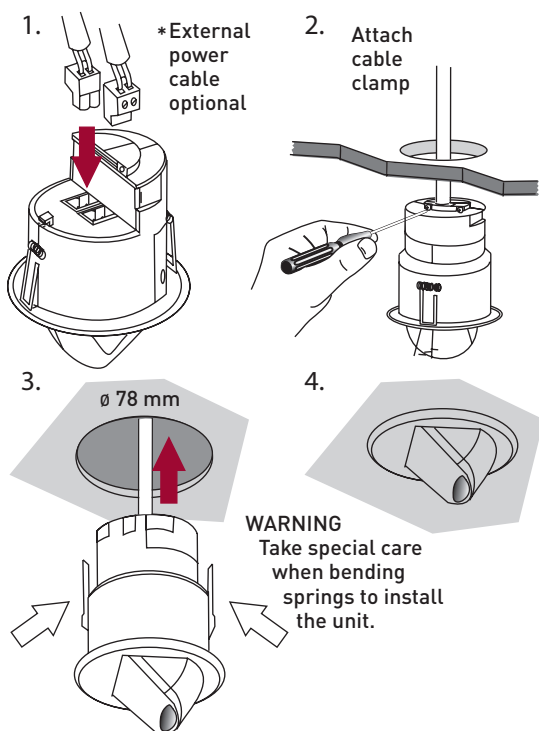
1. Install the unit: refer to the Connection and Fixing diagram below.
- 2a. Connect the DALI connectors to the socket at the rear of the sensor.
- 2b. If required, connect the optional power supply (see 'External power supply (optional)').
3. Power the unit up.
4. If the load comes on, by default it will take 20 minutes (of no movement detected) for the load to switch off.

Installation notes

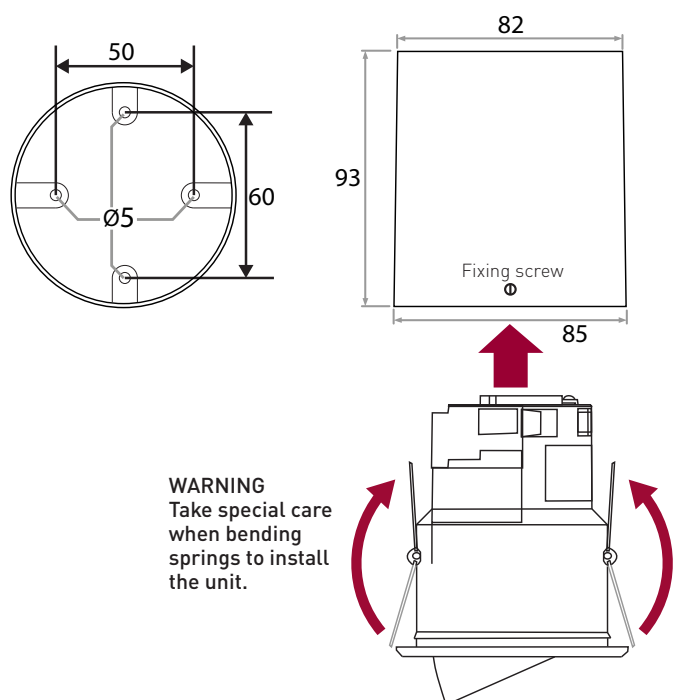
- Position the sensor so that the occupants of the room are normally inside the detection zone.
- Do not install the sensor within 1 m of any lighting, forced air heating, or ventilation equipment.
- Do not fix the sensor to an unstable or vibrating surface.
- Install the unit as far away as possible 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

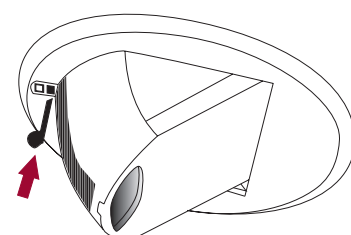


Surface back box SBB-B



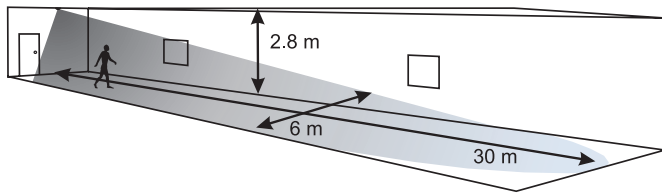
Head Locking

1. Remove metal locking clip from rear of unit
2.
 - Adjust head to required position
 - Push clip into position shown below to lock head
 - To remove clip, lever out with a small screwdriver



Detection pattern

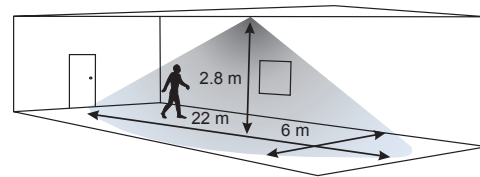
Ideal for large office or classroom, and for corridors and aisles



Sensitivity set to maximum.
Detector head position: 80°

Area of higher sensitivity  Area of lower sensitivity 

Ideal for open plan areas and offices



Sensitivity set to maximum.
Detector head position: 0°

Area of higher sensitivity  Area of lower sensitivity 

Remote Control

You can use the Helvar 303 IR Remote Control to send signals to the 314 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 connector block
Wire size: 0.5 mm² – 1.5 mm²
Solid or stranded

Cable rating: All cables must be mains rated

Power

DALI supply input: 13 V to 22.5 V

DALI consumption: 40 mA
NOTE: DALI consumption is less than 2 mA when external power is supplied to the unit. If an external power supply is used, it should be a Helvar 401, 402 or 403 power supply unit.

(Optional) External Power: 12 V to 24 V; 0.5 W

Sensors

Presence detector: PIR: Passive infrared presence detector

Infrared receiver: For remote control commands

Remote control functions

Remote control handset: Helvar 303 remote control handset:

Use Helvar 303 remote control to:

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

NOTE: Adjust sensitivity using Designer, or DIGIDIM Toolbox (and not by remote control unit)

Microwave operating frequency

Model	Frequency
314	10.687 GHz UK, China, Hong Kong, India, Malaysia, Middle East, Singapore
314/R2	10.525 GHz Australia, and Europe, except for: UK, France, Portugal, Germany, Switzerland, Austria, Slovak Republic, Republic of Ireland
314/R3	9.900 GHz France, Portugal, Switzerland
314/R4	9.350 GHz Austria, Germany, Slovak Republic
314/R5	10.41 GHz Republic of Ireland

Mechanical data

Mounting hole diameter: 78 mm

Bezel diameter: 85 mm

Recommended clearance depth (incl. 50 mm for cabling): 80 mm (without protective cover);
100 mm (with protective cover)

Material (casing): Flame retardant ABS and PC/ABS

Finish / Colour: Matt / White

Weight: 124 g

IP code: IP30

Operating conditions

Ambient temperature: +10 °C to +35 °C

Relative humidity: Max. 90 %, non-condensing

Storage temperature: –10 °C to +70 °C

Conformity and standards

EMC immunity: EN 61000–6–1

EMC emission: EN 61000–6–3

Safety: EN 60730–1

Environment: Complies with WEEE and RoHS directives

Version information

Software version: 6

Hardware version: Rev. 2

Dimensions

