

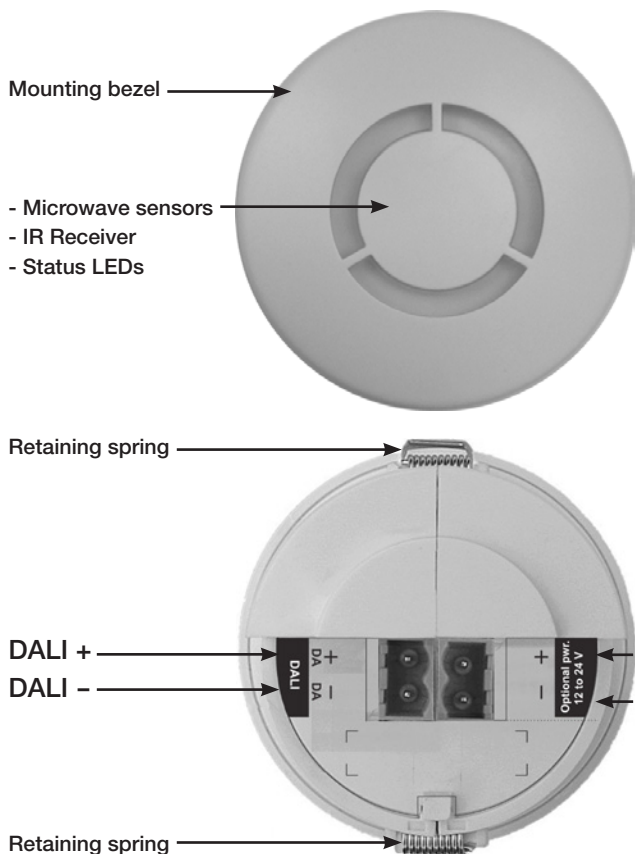
## Installation Guide

The 313 Low Profile Microwave Detector provides occupancy detection for the automatic control of DALI lighting loads. The unit can also be controlled using the 303 IR (infra-red) remote control handset.

The 313 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.

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

**Optional connection to external power**  
12 V to 24 V

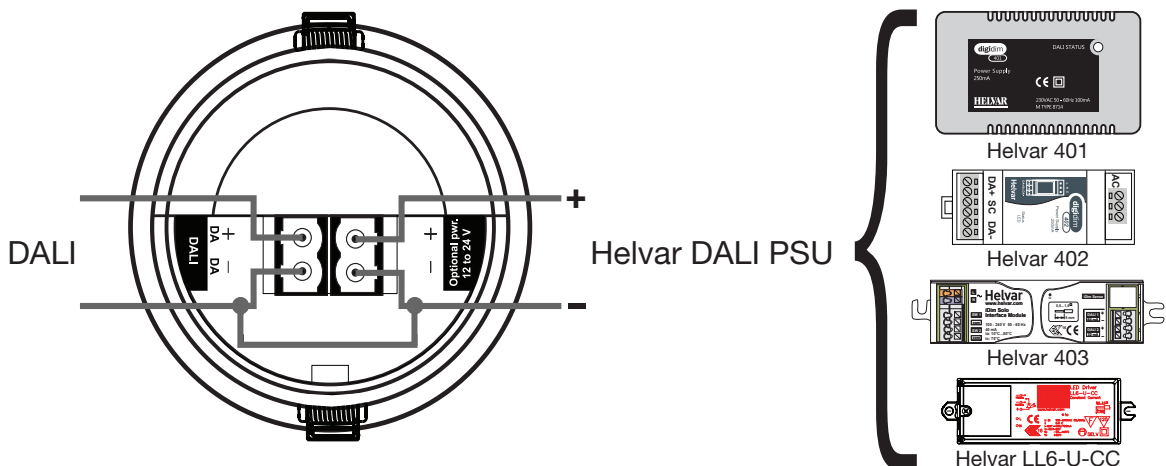
### DALI connection

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, or a Helvar LL6-U-CC LED driver. Contact your Helvar representative if any further information is required.



## Installation

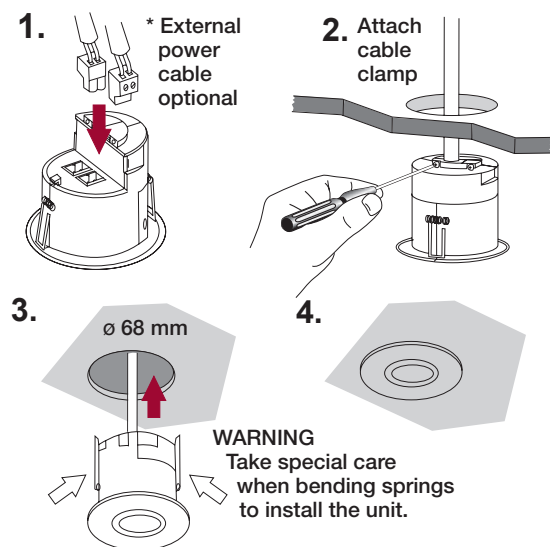
1. Install the unit: refer to the Connection and Fixing diagram below.
- 2a. Connect the DALI connectors to the socket at the rear of the sensor.
- 2b. If required, connect the optional power supply (see 'External power supply (optional)').
3. Power the unit up.
4. If the load comes on, by default it 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.

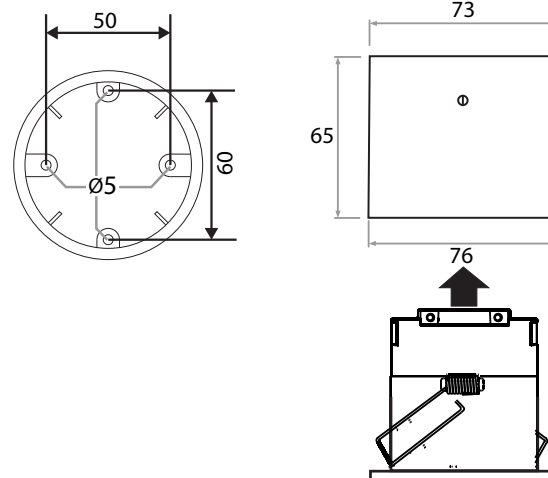
## Connection and Fixing

### Mounting hole

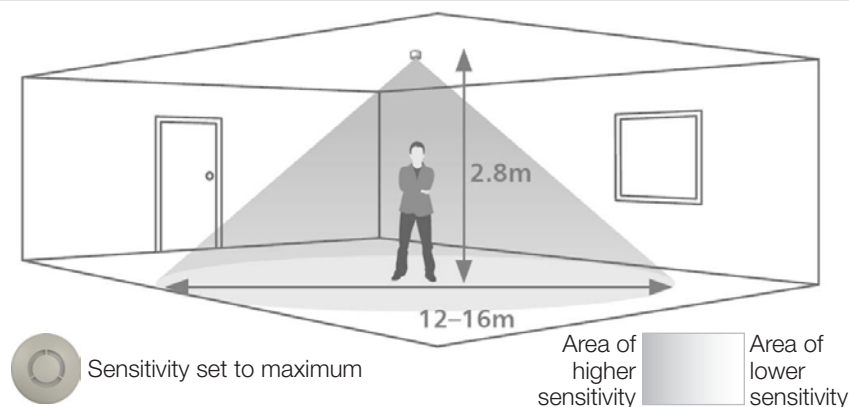


### Surface back box SBB-A

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



## Detection pattern



## Remote Control

You can use the Helvar 303 IR Remote Control to send signals to the 313 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](http://www.helvar.com).

## Technical Data

### Connections

**External power / DALI:** Removable 2-pole connectors  
Wire size: 0.5 mm<sup>2</sup> - 2.5 mm<sup>2</sup>  
Solid or stranded

**Power cable rating:** All cables must be mains rated

### Power

**DALI Supply Input:** 13 V to 22.5 V

**DALI Consumption\*:** 20 mA

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

\* 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 or Helvar **LL6-U-CC** LED driver.

### Microwave Operating Frequency

**Frequency:** 5.8 GHz

### Mechanical Data

**Material (casing):** Non-flammable ABS

**Finish / Colour:** Matt / White

**Weight:** 90 g

**IP rating:** IP 30

**Mounting hole:** 68 mm

### Operating Conditions

**Ambient Temperature:** 0°C to +35°C

**Storage Temperature:** -10°C to +70°C

**Relative Humidity:** Max 95%, non-condensing

### Conformity and Standards

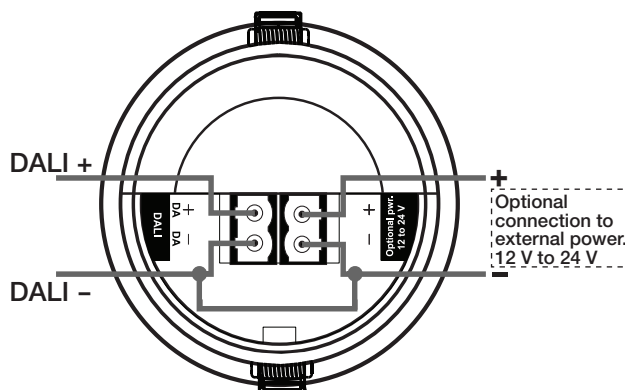
**EMC: Immunity:** EN 61000-6-1

**Emissions:** EN 61000-6-3

**Safety:** EN 60730-1

**Environment:** Complies with WEEE and RoHS directives

### Connections



### Dimensions

