

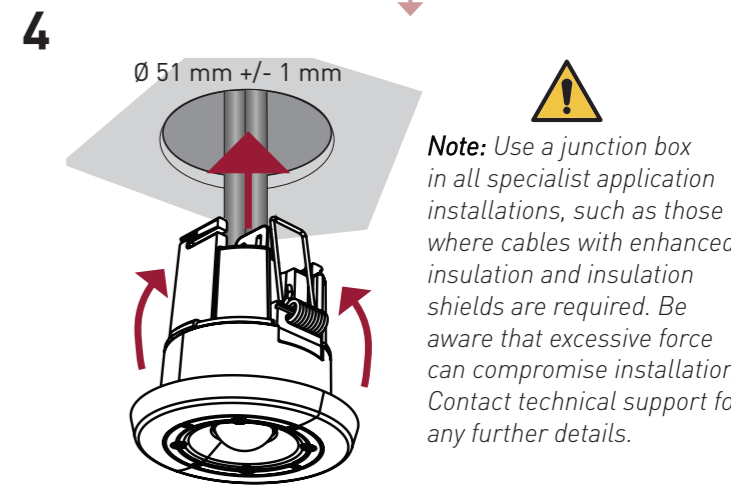
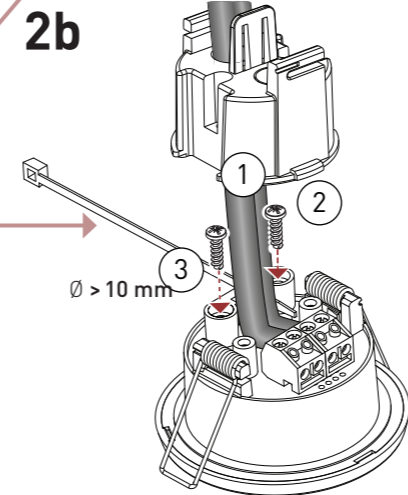
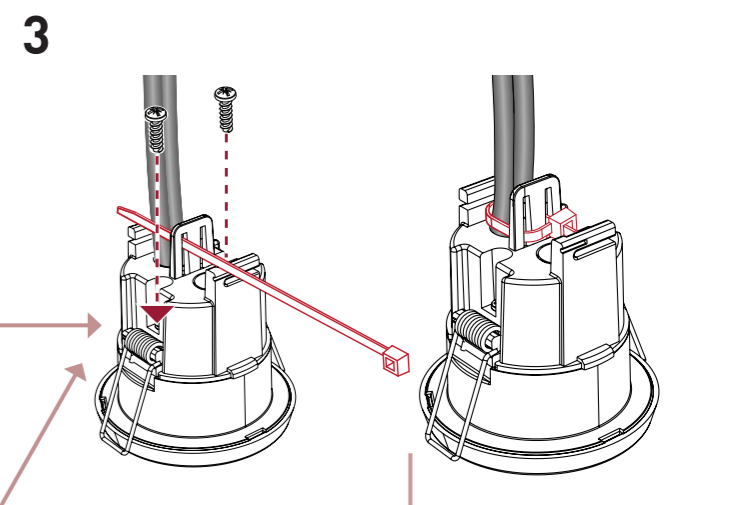
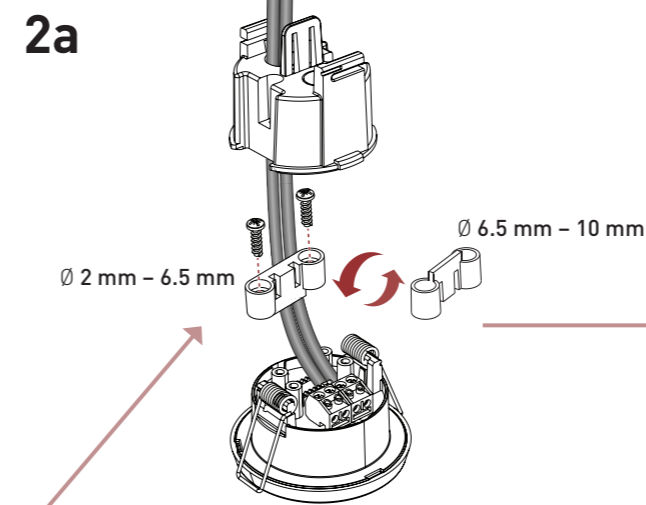
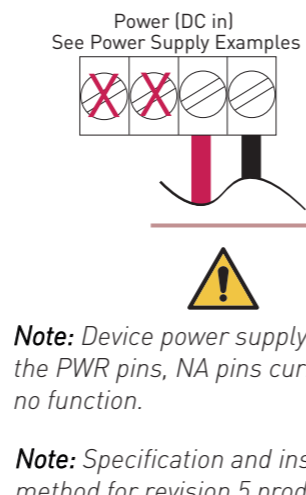
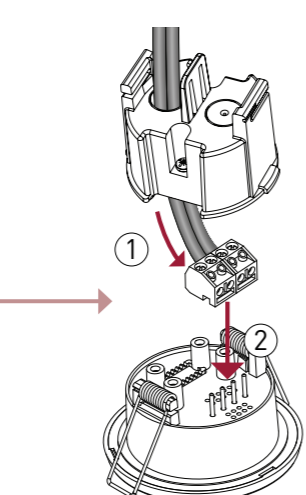
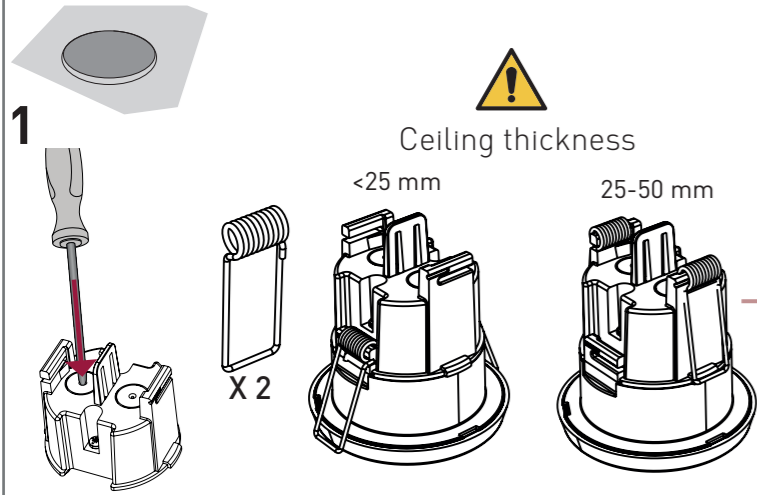
# 3901 ENVIRONMENTAL SENSOR

Installation notes:

- Do not install near an air conditioning unit, a heating unit or in a dusty environment.
- Nearest ActiveAhead device has to be within a 5 m range.
- A minimum of ten ActiveAhead nodes are required for a mesh network.
- Maximum radius of coverage to furthest luminaire is 30 m (via several luminaire hops)

For Insights - All nodes must be within a 20 m radius of the ActiveAhead Controller. The closest three nodes must be within 5 m.

## Installation Guide

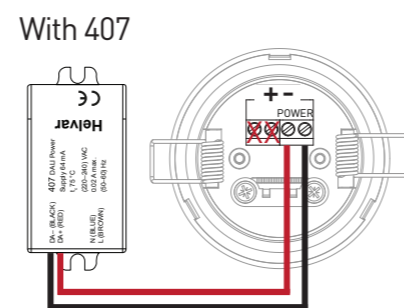
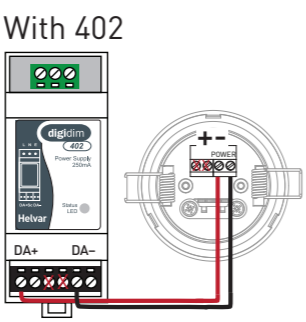
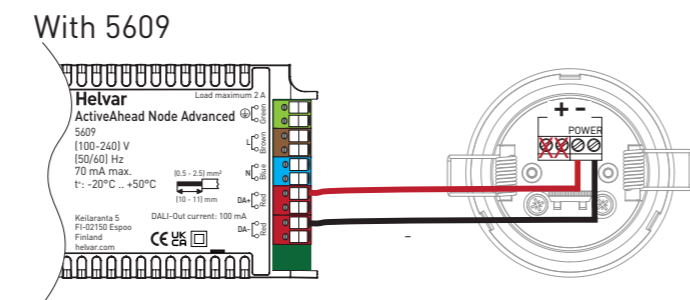


If the sensor is being fitted using an SBB-E Mounting Box, scan the QR code for installation details

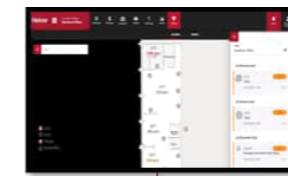


## Power Supply Examples

**Note:** Refer to power supply of the product in the Technical data of the installation guide or datasheet to determine max 3901 connectivity and connection options. 3901 consumes 60 mA max.



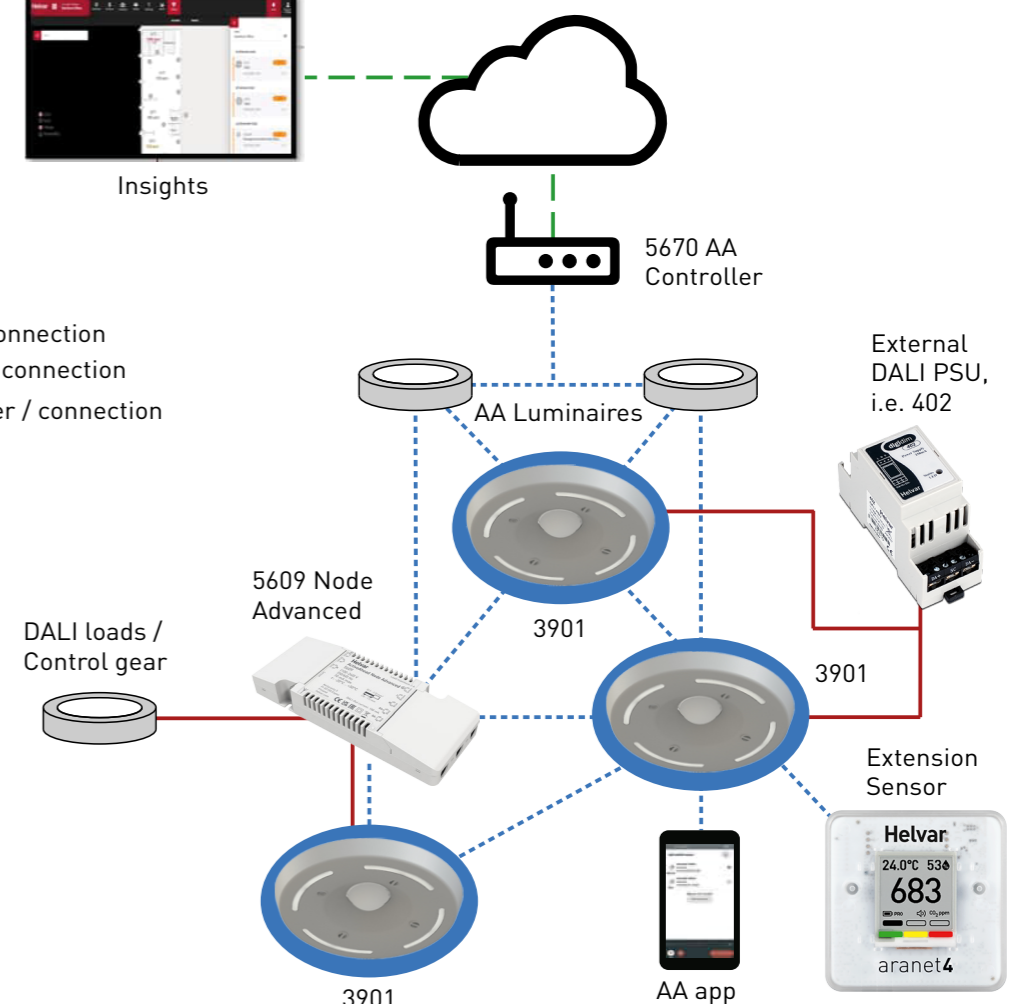
## Application Example



Insights

### Key

- AA - ActiveAhead
- - - Internet connection
- - - Bluetooth connection
- - - DALI power / connection



Helvar Oy Ab  
Keilaranta 5, 02150, Espoo, Finland  
www.helvar.com  
+358 9 5654 1

Helvar Ltd  
Hawley Mill, Hawley Road,  
Dartford, Kent, UK  
DA2 7SY  
www.helvar.com  
+44 (0) 1322 617200

# Technical Data

## Connections

**DALI:** Removable connector block, DALI communication not yet supported.

**Wire section:** 0.5 – 1.5 mm<sup>2</sup> solid or stranded.

**Cable rating:** All cables must be mains rated.

**Note:** Power and DALI pins are not internally connected together.

## Electrical data

**DC supply input:** 9-22.5 V (Pins marked PWR)

**Max current:** 60 mA. Only use DALI power supply.

 Do not connect a power supply other than a current limited max 250 mA DALI PSU

## Sensors

**Light:** Photocell, light level measurement

**Occupancy detection:** Passive infrared (PIR)

**Enhanced occupancy detection:** This feature extends occupancy timeout to a fixed period when PIR is not detecting any movement any more but speech is detected. PIR trigger is required to turn on lighting first.

**Note:** Recommended for using enclosed, quieter spaces e.g. meeting rooms, cell offices. Avoid using feature in open plan, or louder spaces as this may generate false noise occupancy triggers. Disable/enable feature via App, if required.


**Sound level (Ambient noise):** Microphone

**Note:** General Data Protection Regulation (GDPR) compliant.

**Climate:** Ambient temperature and Relative Humidity

**Air quality:** eCO<sub>2</sub> and TVOC

**Note:** Air quality measurements typically require two days to calibrate upon each power up. Up to seven days in environments with a lack of fresh air.

 eCO<sub>2</sub> and TVOC measurements are indicative estimations only and cannot be taken as exact values.

## Wireless connectivity

**Operating frequency range:** 2402-2480 MHz

**Transmission power:** Max. 0 dBm

**Technology:** Bluetooth® Mesh

**Antenna pattern:** Omnidirectional

## Operation

Start-up time <5 seconds

**Note:** Allow up to 5 minutes for the TVOC / eCO<sub>2</sub> sensor to start measurements.

## Operating and storage conditions

**Ambient temperature:** 0 °C to +40 °C

**Relative humidity:** Max. 90 %, non-condensing.

**Storage temperature:** 0 °C to +70 °C

**Note:** The temperature difference between the PIR detection target and the background must be at least 4 °C.

## Compatibility

ActiveAhead

## Mechanical data

**Max. recommended mounting height:** 4 m

**Presence detection coverage area:** 46 m<sup>2</sup> @ 2.5 m mounting height

**Mounting hole diameter:** 51 mm +/- 1 mm

**Ceiling thickness:** <25mm / 25-50 mm

**Bezel diameter:** 66 mm

**Recommended clearance depth:** 10 cm (with cable cover, incl. 5 cm for cabling)

**Material (casing):** Flame retardant PC/ABS (UL94-V0)

**Finish/Colour:** Semi-matt / White RAL 9003

**Weight:** 60 g

**IP rating:** IP20

## Conformity and standards

**Conformity:**  

**RED:** EN 301 489-1, EN 301 498-17, EN 300 328

**EMC emission:** EN 55015

**EMC immunity:** EN 61547

**Safety:** EN 61347-2-11

**Environment:** Complies with WEEE, RoHS and REACH directives.

Hereby, Helvar Oy Ab declares that the radio equipment type 3901 is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: <https://helvar.com/doc/3901>

### FI:

Helvar Oy Ab vakuuttaa, että radiolaitetyyppi 3901 on direktiivin 2014/53/EU mukainen.

EU-vaatimustenmukaisuusvakuutuksen täysimittainen teksti on saatavilla seuraavassa internetosoitteessa: <https://helvar.com/doc/3901>

### SV:

Härmed försäkrar Helvar Oy Ab att denna typ av radioutrustning 3901 överensstämmer med direktiv 2014/53/EU.

Den fullständiga texten till EU-försäkran om överensstämmelse finns på följande webbadress: <https://helvar.com/doc/3901>

### IT:

Helvar Oy Ab dichiara che la tipologia di apparecchiatura radio 3901 è conforme alla Direttiva 2014/53/UE.

Il testo completo della dichiarazione di conformità UE è disponibile al seguente indirizzo Internet: <https://helvar.com/doc/3901>

### FR:

Le soussigné, Helvar Oy Ab, déclare que l'équipement radioélectrique du type 3901 est conforme à la directive 2014/53/UE.

Le texte complet de la déclaration UE de conformité est disponible à l'adresse internet suivante: <https://helvar.com/doc/3901>

### DE:

Hiermit erklärt Helvar Oy Ab, dass der Funkanlagentyp 3901 der Richtlinie 2014/53/EU entspricht.

Der vollständige Text der EU-Konformitätserklärung ist unter der folgenden Internetadresse verfügbar: <https://helvar.com/doc/3901>

## Connecting to an Extension Sensor (to be carried out by a Helvar trained engineer)



Recommended distance <5 m. Max 10 m (open space)

Extension Sensor can be freestanding or wall mounted.

Download the Helvar ActiveAhead app.  
*Note: Pairing with Extension Sensors only supported via Android App.*

With the phone next to the Extension Sensor, open the app and select Connect > Select the Environmental Sensor to be paired > wait for connection confirmation > Devices Tab > + Add Sensors.