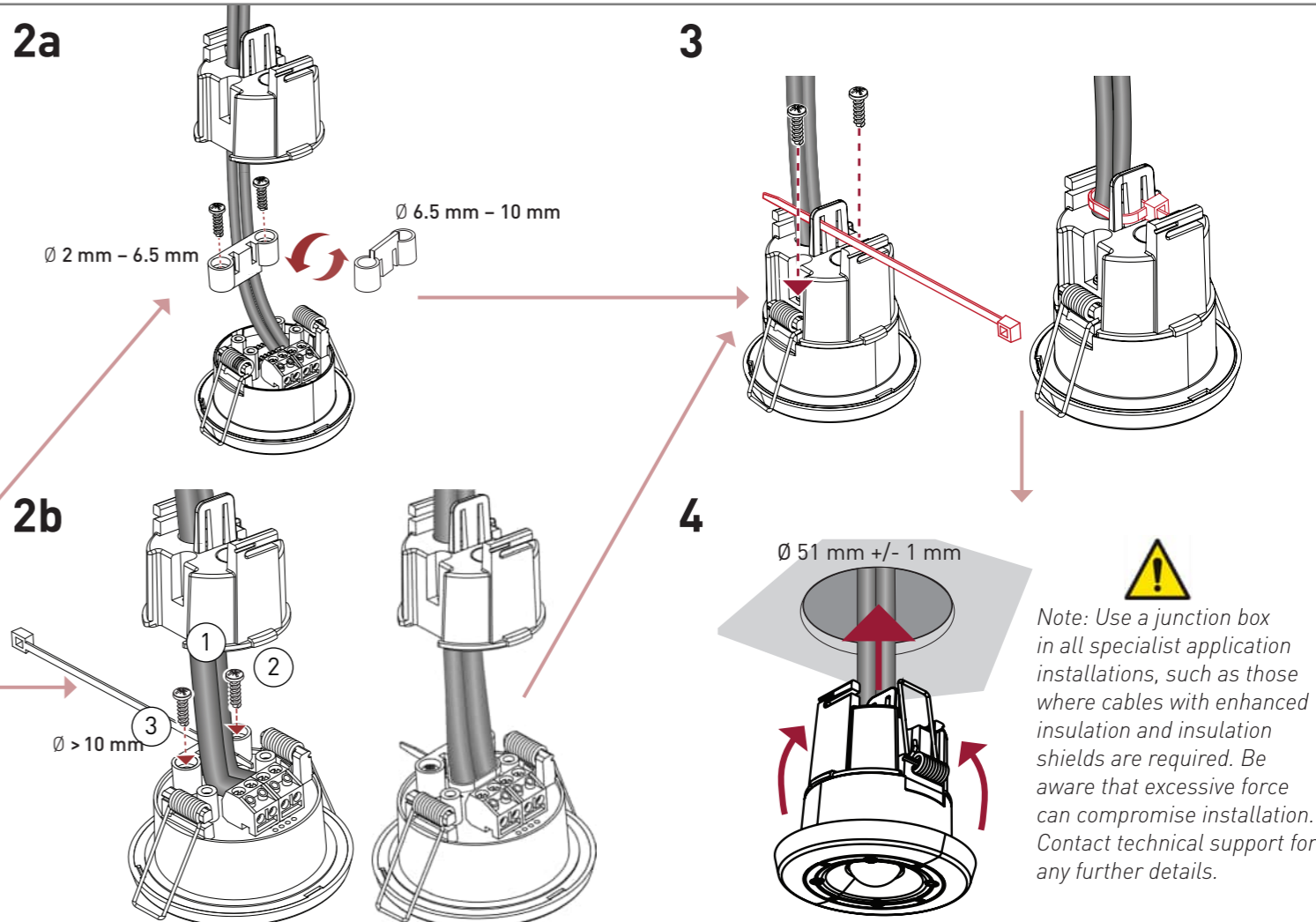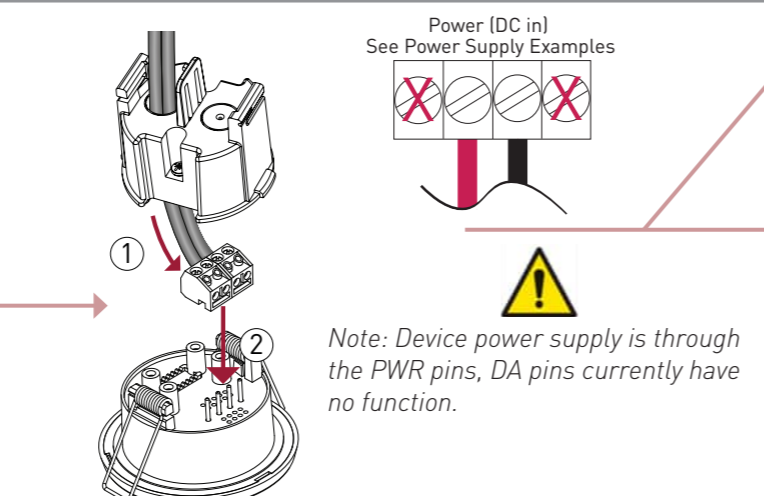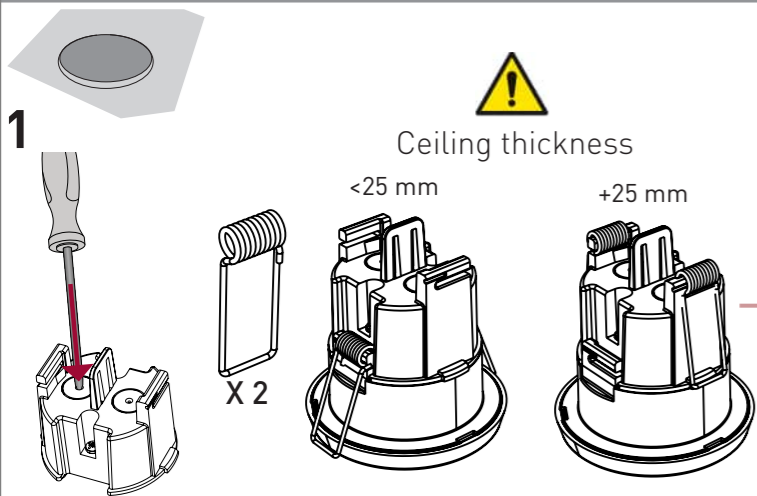**Helvar**

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.
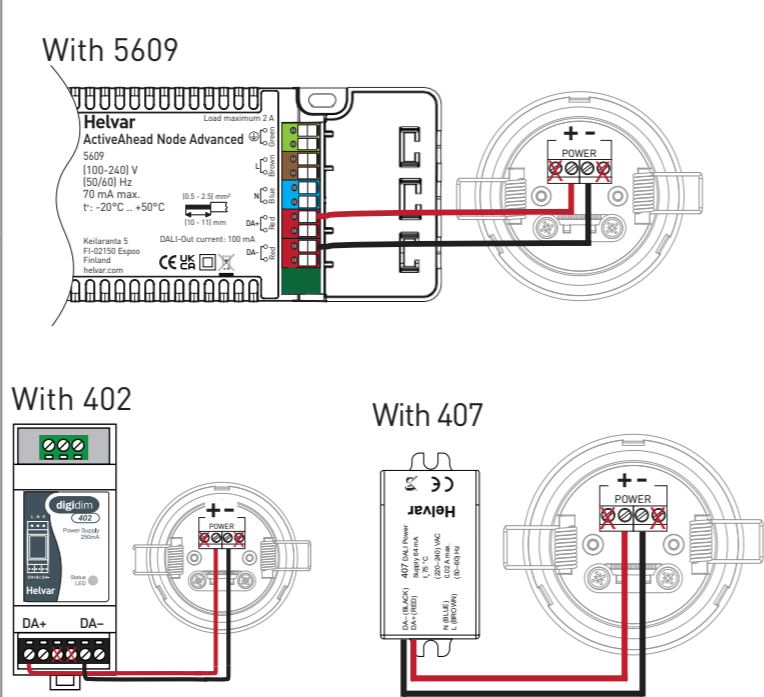
Installation Guide

1

Ceiling thickness

<25 mm   +25 mm

X 2

Power (DC in)
See Power Supply Examples

Note: Device power supply is through the PWR pins, DA pins currently have no function.

2a

∅ 2 mm – 6.5 mm   ∅ 6.5 mm – 10 mm

2b

∅ > 10 mm

3

4

∅ 51 mm +/- 1 mm

Note: Use a junction box in all specialist application installations, such as those where cables with enhanced insulation and insulation shields are required. Be aware that excessive force can compromise installation. Contact technical support for any further details.

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

Helvar Oy Ab
Keilaranta 5, 02150, Espoo, Finland
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Helvar Ltd
Hawley Mill, Hawley Road,
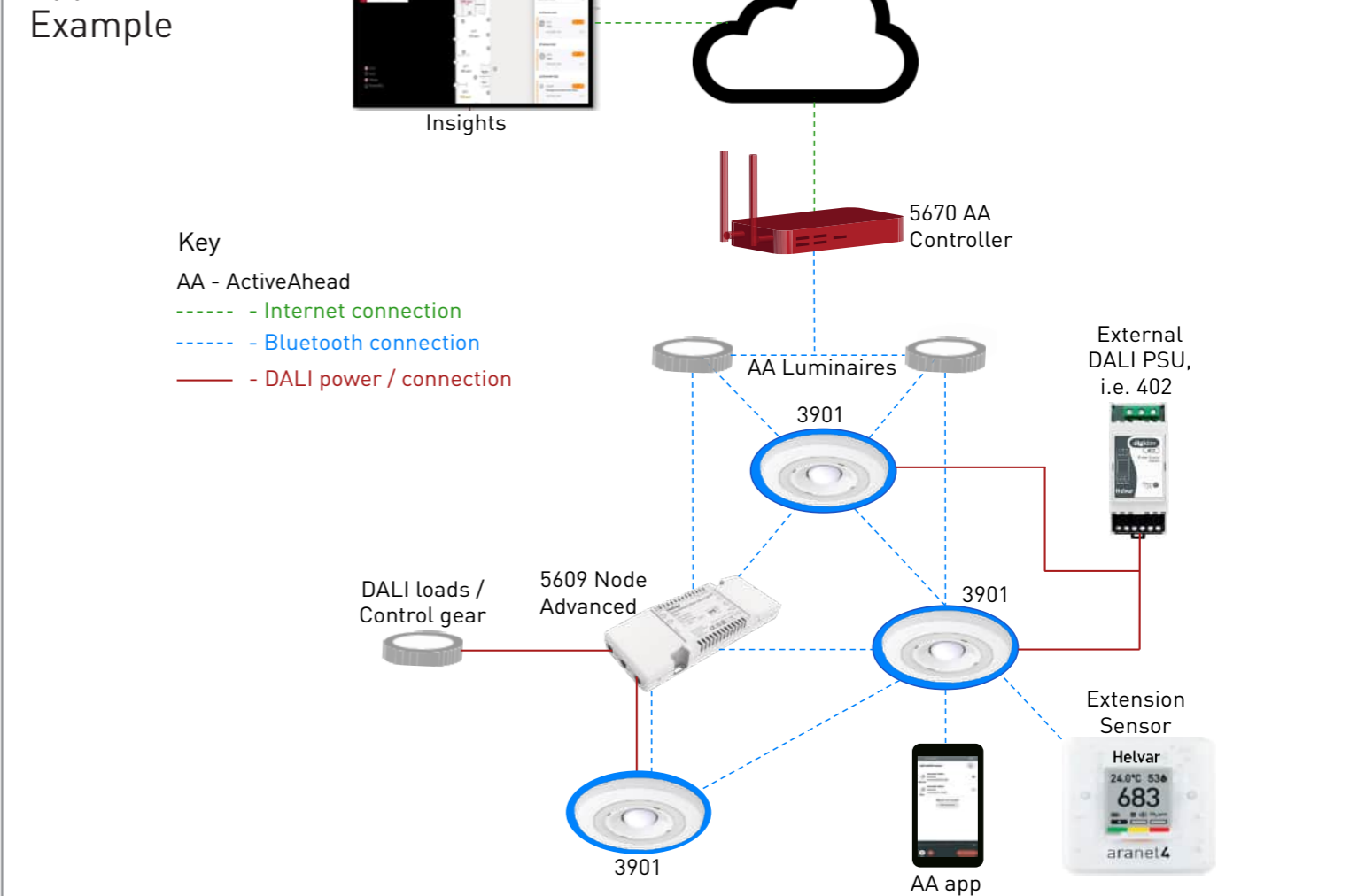Dartford, Kent, UK
DA2 7SY
www.helvar.com
+44 (0) 1322 617200

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.

With 5609

Helvar
ActiveAhead Node Advanced
5609
(100-240) V
[50/60) Hz
70 mA max.
t: –20°C ...+50°C
Keilaranta 5
FI-02150 Espoo
Finland
helvar.com
DALI-Out current: 100 mA

With 402

digidim
402

Helvar
DA+ DA–

With 407

Helvar
407
DA+ (BLACK)
DA– (RED)
N (BLUE)
L (BROWN)

Application Example

Insights

5670 AA Controller

Key

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

AA Luminaires

3901

External DALI PSU, i.e. 402

DALI loads / Control gear

5609 Node Advanced

3901

Extension Sensor

Helvar
24.0°C 53%
683
aranet4

3901

AA app

Technical Data

Connections

DALI:	Removable connector block, DALI communication not yet supported.
Wire section:	0.5 mm² – 1.5 mm² 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: Recommend using for enclosed, quieter spaces as 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:	eCO2 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.

⚠️ *eCO2 and TVOC measurements are indicative estimations only and cannot be taken as exact values.*

Wireless connectivity

BLE:	2.4 GHz
Max transmit power:	0 dBm
Antenna pattern	Omni-directional

Operation

Start-up time	<5 seconds

Note: Allow up to 5 minutes for the TVOC / eCO2 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 m² @ 2.5 m mounting height.
Mounting hole diameter:	51 mm +/- 1 mm
Ceiling thickness:	Maximum 25 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

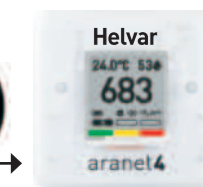|	
Conformity:	CE UKCA
RED:	EN 301 489-1, EN 301 498-17, EN 300 328
EMC emission:	EN 55015
EMC immunity:	EN 61547
Safety:	EN 61347-2-11
Environment:	Complies with WEEE and RoHS directives.

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.