steinel DALI-2 IPD Multisensor True Presence Instruction Manual

steinel DALI-2 IPD Multisensor True Presence

Contents

About This Document

- Under copyright. Reproduction either in whole or in part only with our consent.
- Subject to change in the interest of technical progress.

⚠ Hazard warning!

⚡ Warning of hazards from electricity!

☔ Warning of hazards from water!

General Safety Precautions

⚠ Failure to observe these operating instructions presents hazards!

These instructions contain important information on the safe use of this product. Particular attention is drawn to potential hazards. Failure to observe this information may lead to death or serious injuries.

- Read instructions carefully.
- Follow safety advice.
- Keep instructions within easy reach.
- Working with electrical current may produce hazardous situations. Touching live parts can result in electrical shock, burns or death.
- Work on mains voltage must only be performed by qualified, skilled personnel.
- National wiring regulations and electrical operating conditions must be observed (e.g. D: VDE 0100, A: ÖVE-ÖNORM E8001-1, CH: SEV 1000).
- Only use genuine replacement parts.
- Repairs must only be carried out by companies qualified to do so.

System Description

Proper use

- Multisensor.
- Ceiling mounting indoors.
- Bluetooth networking.
- Connection to a DALI bus.
- AP version for surface mounting.
- UP version for concealed mounting.

Multisensor variants

- Multisensor True Presence® DALI-2 IPD as a surface-mounted version (AP) or concealed version (UP).

Multisensor

The multisensor can detect the following sensor variables:

- Presence.
- Brightness.
- Room temperature.
- Humidity.
- Air pressure.
- Noise level.
- CO_2.
- VOC (volatile organic compounds).

How presence detection works

- The presence and absence of people is detected by sensing micro-movements.
- The detection range can be precisely limited via an app.

This makes it ideal for use in offices and schools.

For special applications, for example on cruise ships or in hotels, please contact STEINEL GmbH directly so that we can jointly realise optimum integration of the sensors.

Connect Bluetooth Mesh

- The sensors can be networked via Bluetooth.

Note

The CO2 sensor used in the multisensor comes with an auto-calibration function.
For this to work properly and ensure correct measurement by the CO2 sensor, the multisensor must be permanently connected to the power supply.
Furthermore, the first seven days after switching on the power supply may show major variations in the levels

measured. The sensor must also be exposed to fresh air for at least an hour a day.
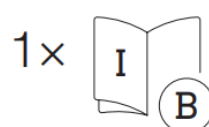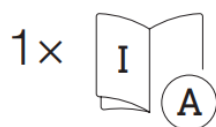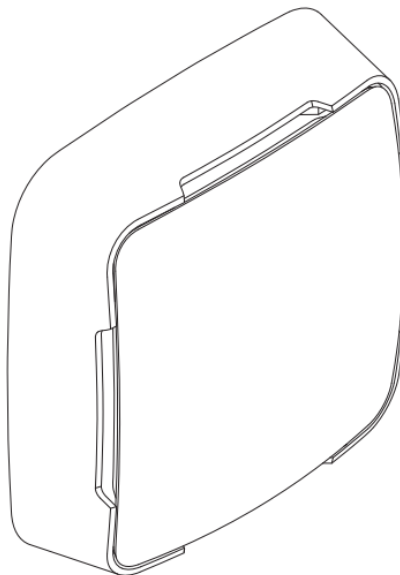
Scope of delivery – concealed version

- 1 Multisensor
- 1 Safety data sheet (A)
- 1 Quick Start Guide (B)
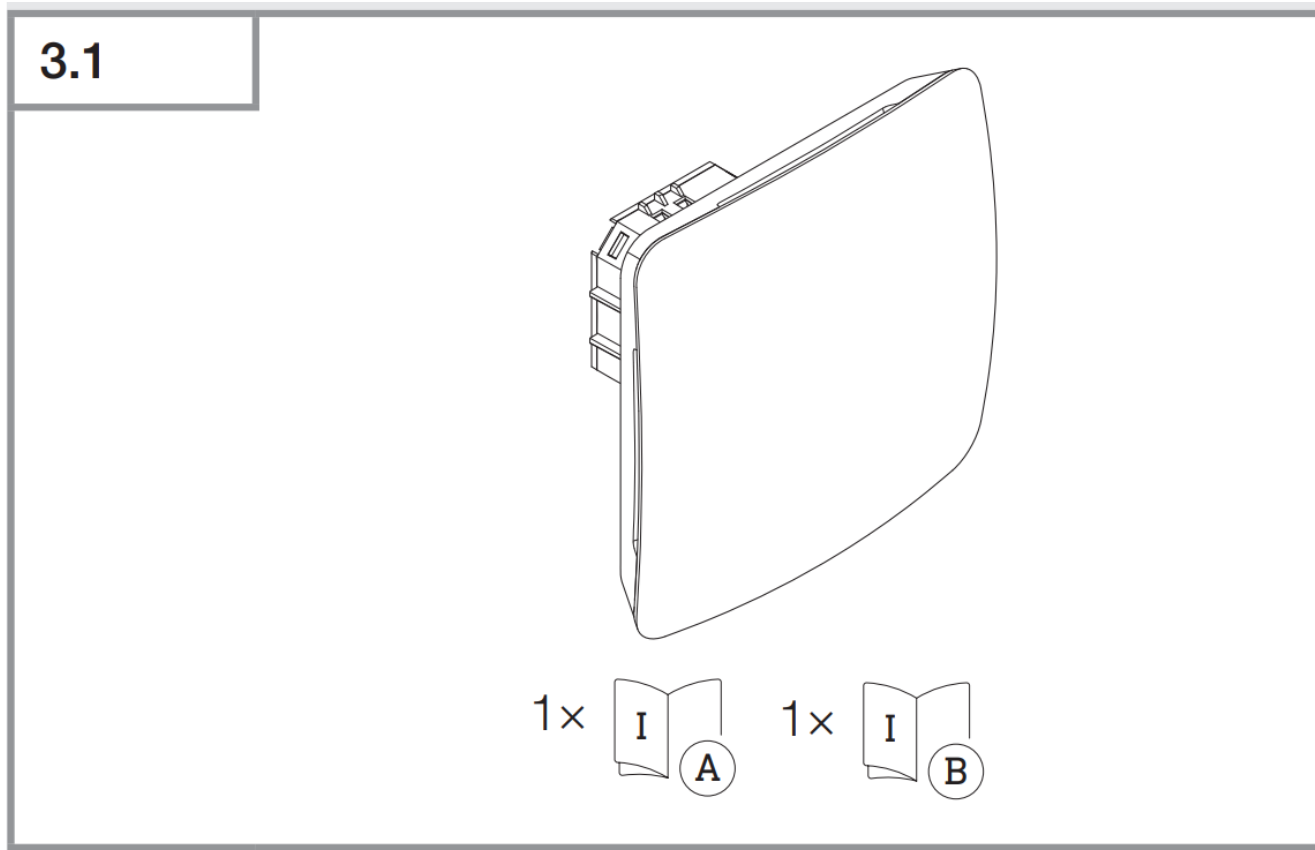
Scope of delivery – surface-mounted version

- 1 Multisensor
- 1 Safety data sheet (A)
- 1 Quick Start Guide (B)

3.2

1× I (A)   1× I (B)

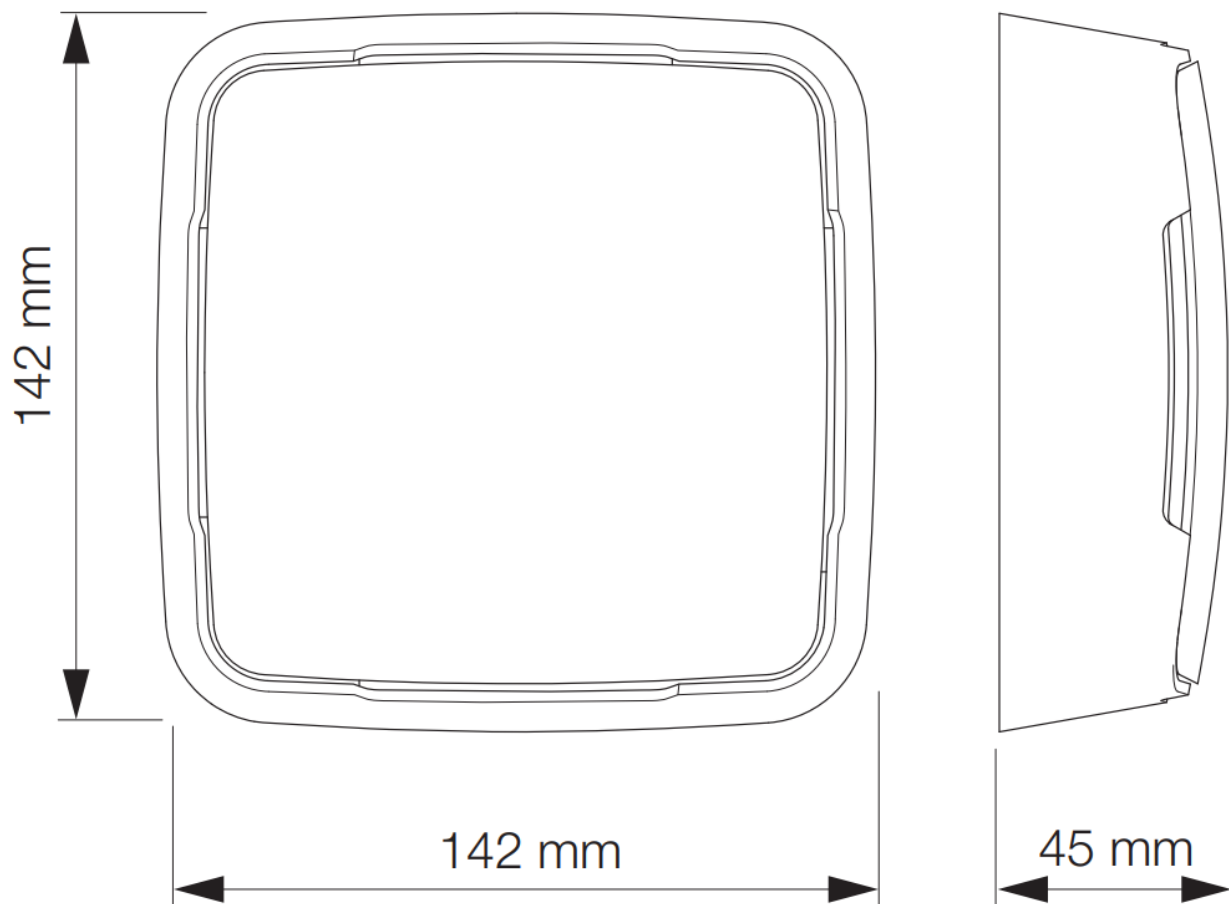**Product dimensions – concealed version**

3.3

123 mm

123 mm

51 mm
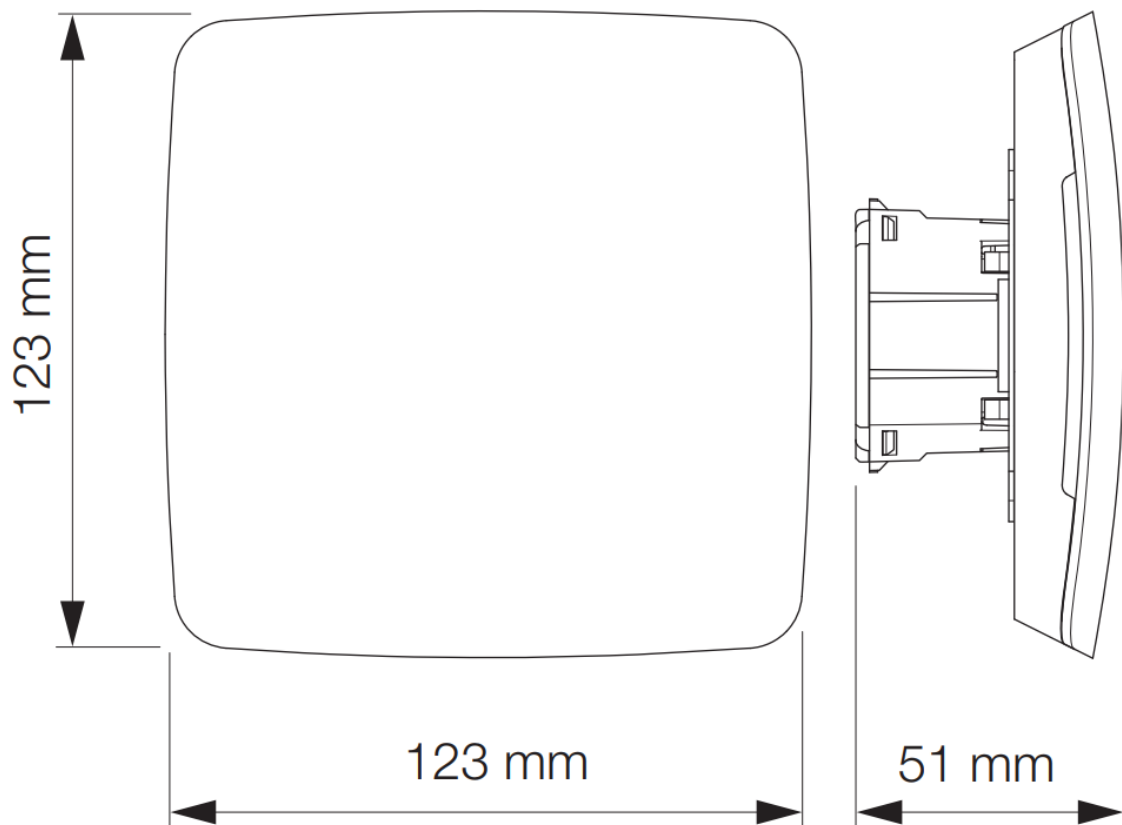
Product dimensions – surface-mounted version

3.4

142 mm

142 mm

45 mm

Device overview – concealed version

- A Load module
- B Terminal
- C Sensor module

3.5
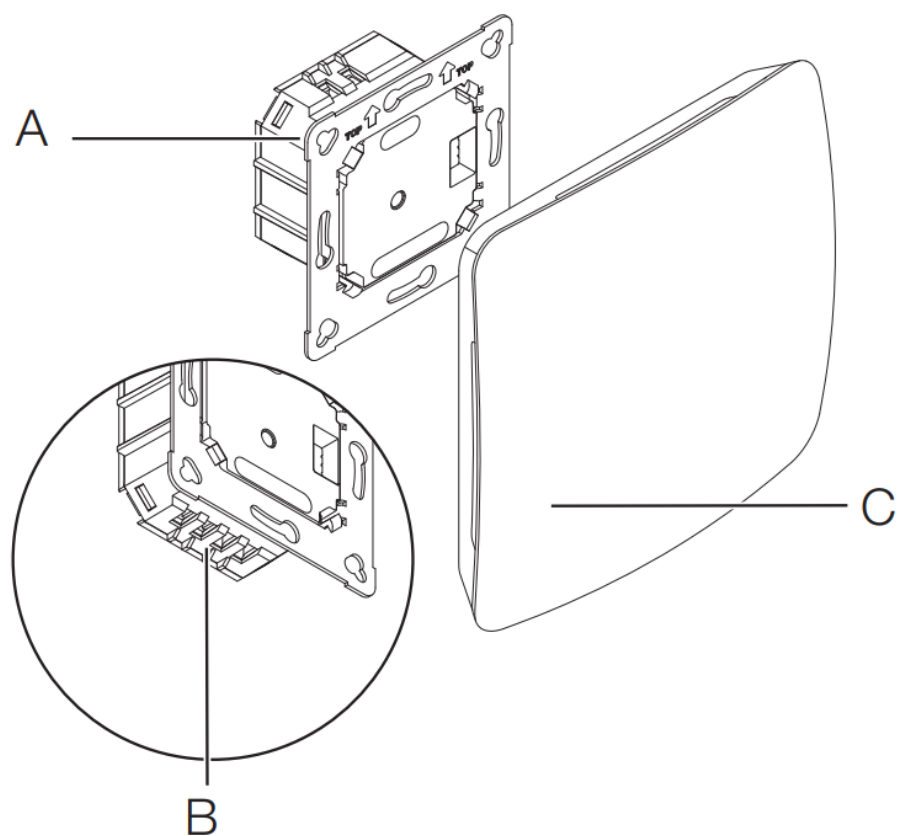
Device overview – surface-mounted version

- A Surface-mounting adapter
- B Load module
- C Terminal
- D Sensor module

Detection range

3.7

2.8 m

15 m

9 m
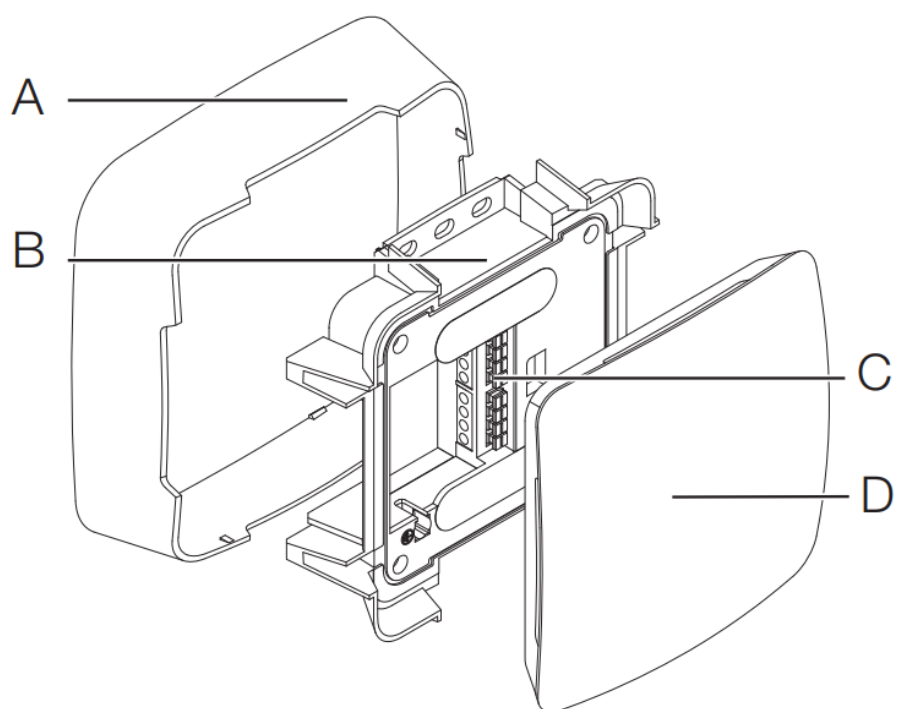
Electrical Connection

The power supply line consists of a 4- or 5-core cable:

L = Live (mostly black, brown or grey)
N = Neutral (mostly blue)
DA = Connection to the DALI bus (mostly blue)
PE = Protective earth (green/yellow)

4.1

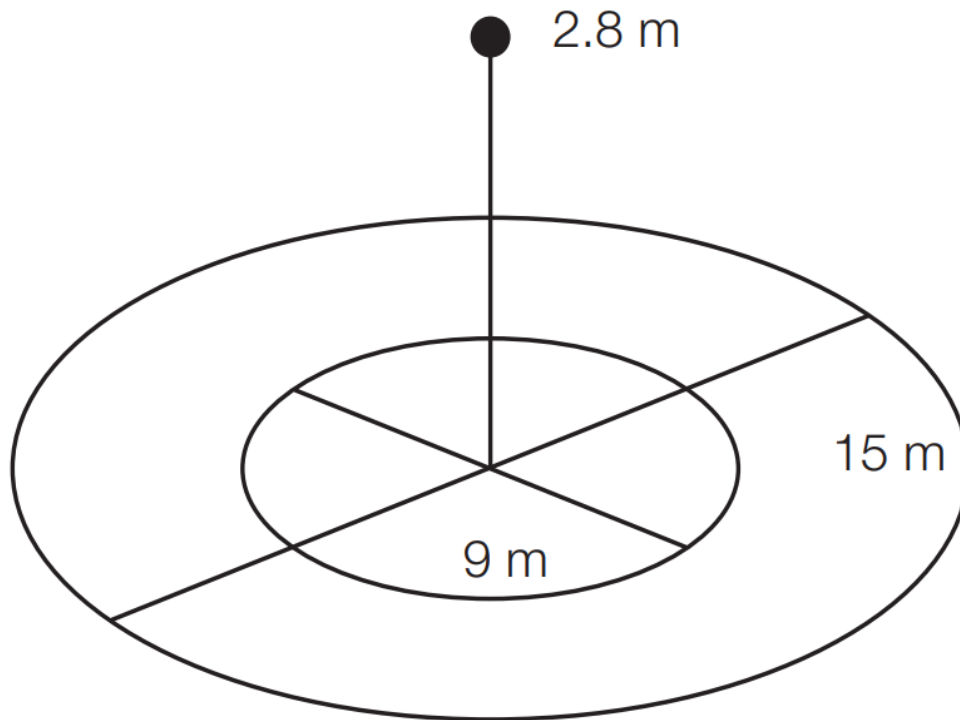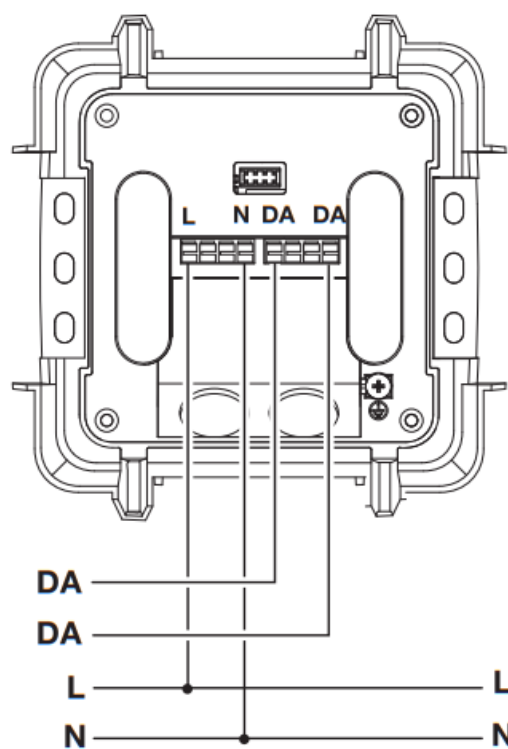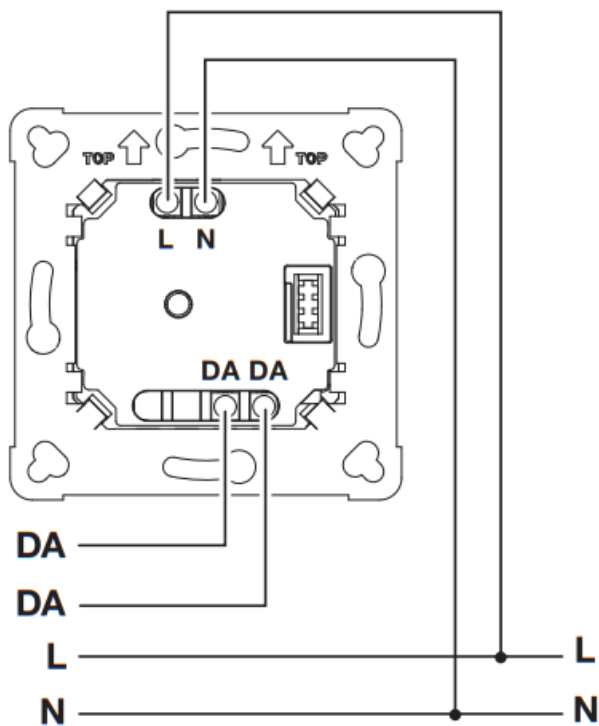The device can also be connected electrically after a mains switch, if it is ensured that the mains switch is permanently switched on.

Installation

⚠️ **Hazard from electrical power!**

Touching live parts can result in electrical shock, burns or death.

- Switch OFF power and interrupt power supply.
- Using a voltage tester, check to make sure that the power supply is disconnected.
- Make sure power supply remains interrupted.

Risk of damage to property!

Mixing up connection leads may produce a short circuit.

- Identify connection leads.
- Connect the leads correctly.

Preparing for installation

- Check all components for damage. Do not use the product if it is damaged.
- Select an appropriate site to install the product.
- Take reach into consideration.
- Take reach and motion detection into consideration.
- Vibration-free.
- No obstacles in detection zone.
- Not in explosive atmospheres.
- Not on normally flammable surfaces.

Installation steps – concealed version

- Check that power supply is switched off.
- Connect load module to the mains power supply.

5.1
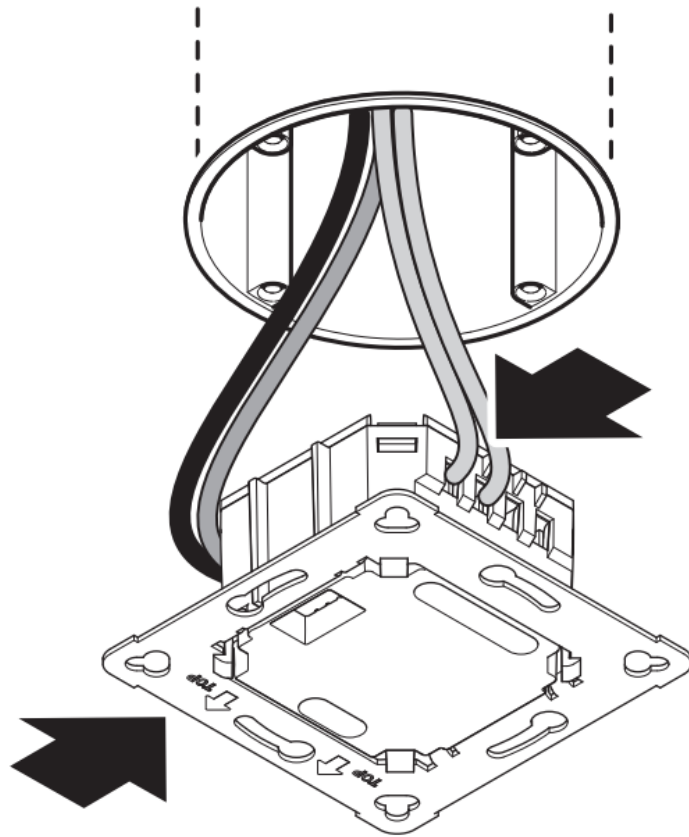
- Screw load module into place on mounting box.

5.2
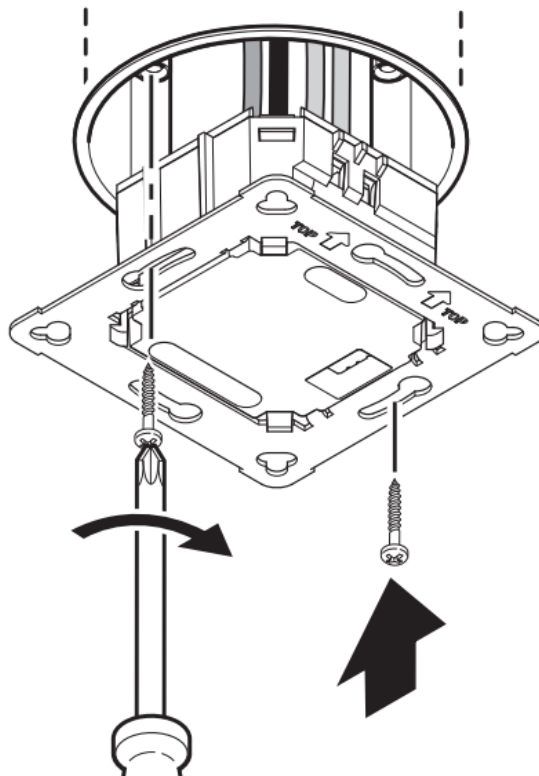
- Fit magnetic sensor module on load module.
- Switch on power supply.
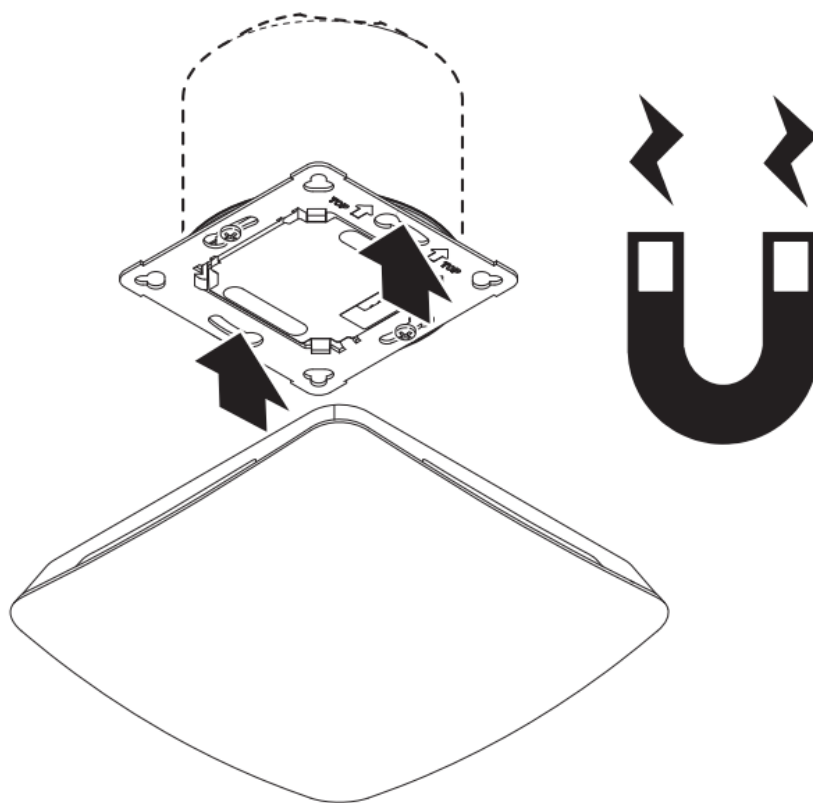
Installation steps – surface-mounted version

- Check that power supply is switched off.
- Mark drill holes.

5.4
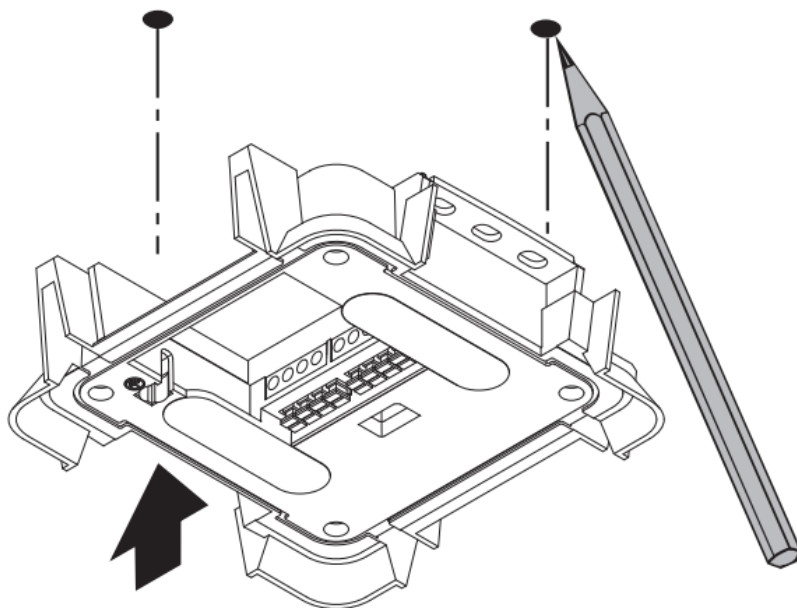
- Drill holes (Ø 6 mm) and insert dowels.

5.5

Ø 6 mm
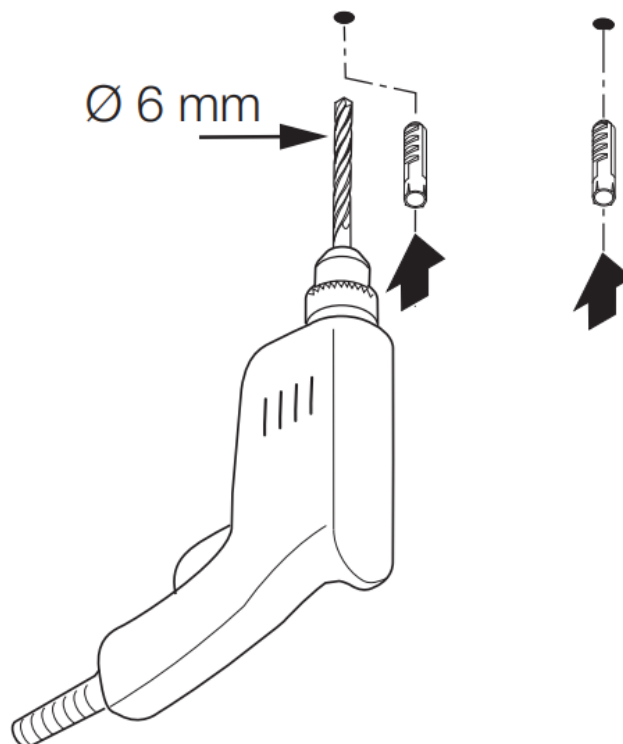
- Pull cable through.
- Screw on load module.

5.6
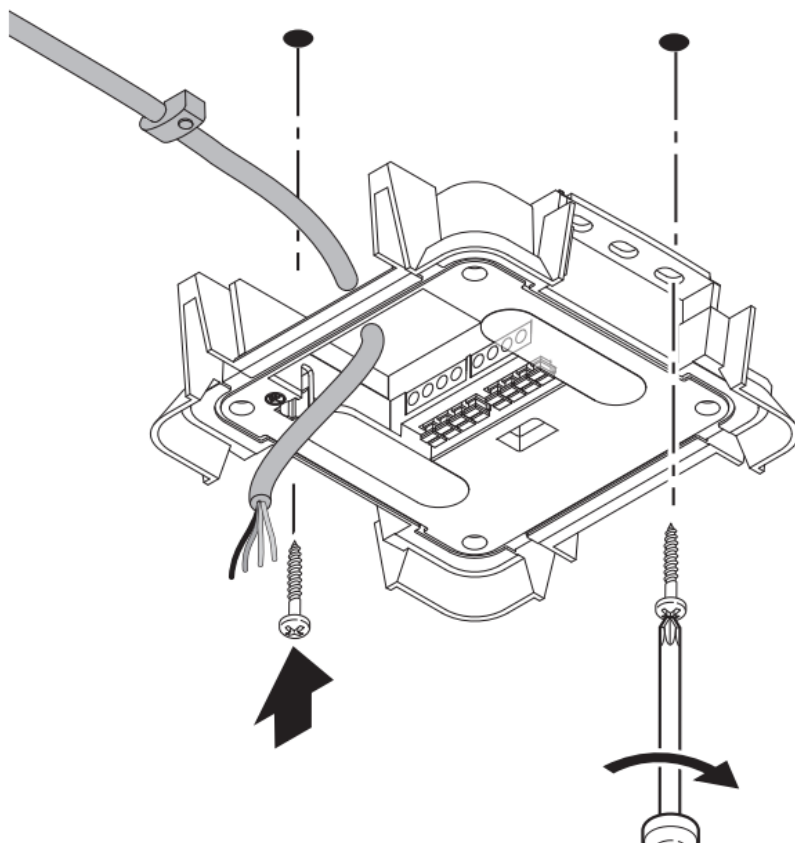
- Connect load module to the mains power supply.

5.7

L   N   DA   DA
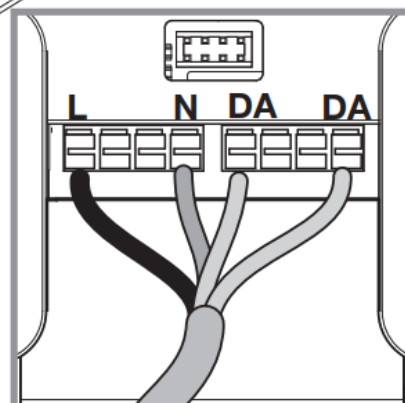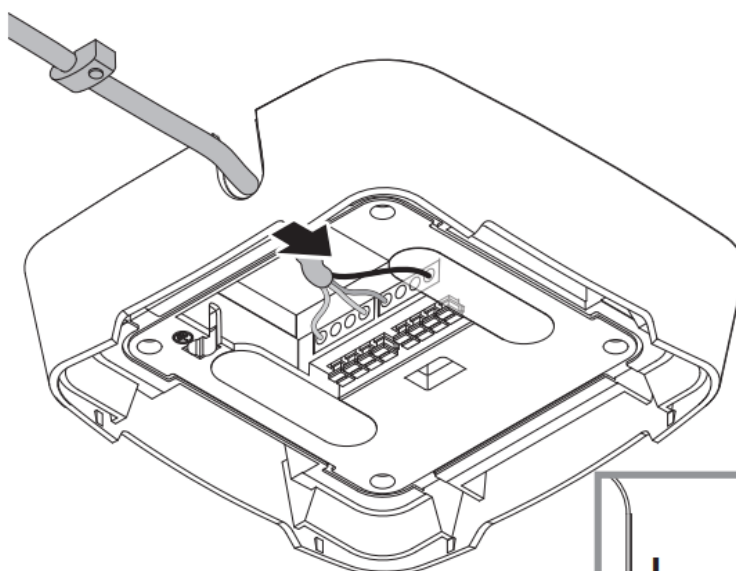
- Break out mounting tab.

- Fit surface-mounting adapter.
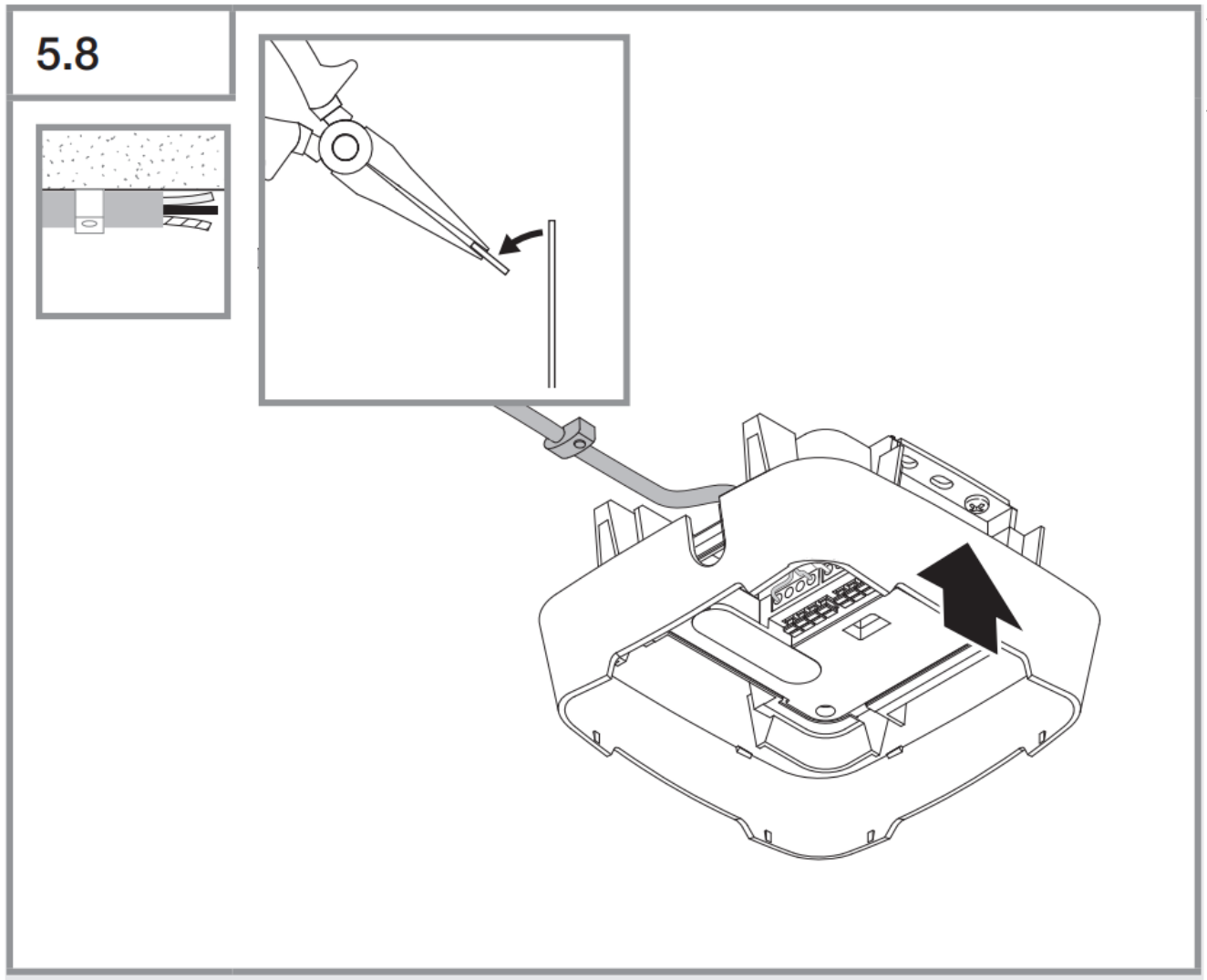
- Fit magnetic sensor module.
- Switch on power supply.
- Make settings.
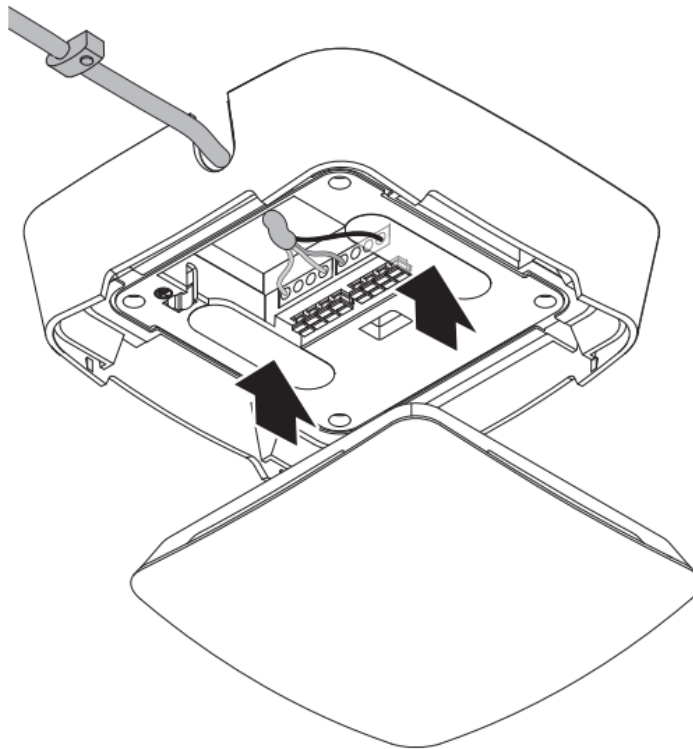
Function

Initial operation is carried out in accordance with the valid DALI-2 standard. All functions and commands of the DALI standard IEC 62386 Part 101, Part 103, Part 303 and Part 304 are available.

- All sensor values (motion, brightness, temperature, CO_2 , VOC, air pressure, noise level and humidity) can be queried by the DALI-2 Application Controller.
- For the motion and brightness values, there is also the option of automatic or time-based cyclical transmission.

Factory settings

The factory settings are activated when the multisensor is operated for the first time and when it is reset by the app.

The following factory settings are provided:

True Presence® detection setting:

True Presence® height 2.6 m
True Presence® radius 3.5 m

True Presence® scenario: Scenario 7

Note:

The parameter description can be found at: **www.steinel.de**

Steinel Connect app

To read out the sensor values with a smartphone or tablet, it is necessary to download the STEINEL Connect app from your AppStore. A Bluetooth-enabled smartphone or tablet is required.

- Android

- iOS

Functions in connection with the Steinel Connect app:

- Setting the detection range.
- Displaying the current sensor values.
- Networking the sensor.

Start-up: LED flashes blue rapidly for 30 seconds.
Initialisation: LED lights up blue continuously.
Normal operation: LED off.
Identification: LED flashes blue slowly.
Firmware update: LED flashes cyan rapidly.
Error: LED flashes red rapidly.

Connect Bluetooth Mesh

The sensor is configured via the Steinel Connect app.
The corresponding network keys are stored on the smartphone or tablet when the sensor and Steinel Connect app are connected for the first time. The keys prevent unauthorised access to the sensor.
The network key must be shared for access via another smartphone or tablet.

True Presence ® DALI-2 IPD detection setting

- Set the range via the Steinel Connect app.
- DALI interface.

Initial operation of the True Presence® DALI-2 IPD

During initial operation, the multisensor creates an image of the room.
During this process, the room must be free of movement for 2 to 2.5 minutes.

The process is complete when the blue LED goes out.

True Presence® DALI-2 IPD detection setting

The range can be set via the parameters installation height, radius and scenario.

Scenario 9:

Small office, quiet workplace

This scenario offers maximum sensitivity. To avoid undesired switching, this scenario should preferably be used for small areas.

Scenario 8:

Large office, quiet workplace

Like scenario 9, but with slightly reduced sensitivity.
Also suitable for large areas.

Scenario 7:

Large office, large entrance area
Like scenario 8, but with further reduced sensitivity.

Scenario 6:

Hotel room, room with sleeping people
This scenario also offers maximum sensitivity. In addition, signal processing is optimised to reliably detect the presence of persons sleeping.

Scenario 5:

Hotel room, room with sleeping people
Like scenario 6, but with further reduced sensitivity.

Scenario 4:

Noisy workplace, light industry, hall
Vibrations can retrigger the sensor. This can lead to longer stay-ON times in scenario 7-9. Scenario 4 works more robustly.

Scenario 3:

Noisy workplace, light industry, hall
Like scenario 4, but with further reduced sensitivity.

Scenario 2:

Very noisy environment, heavy industry

This scenario should be used if there are major vibrations or if there are sources of electrical interference. The True Presence® function is not available, the sensor functions as a conventional presence detector.

Scenario 1:

Very noisy environment, heavy industry
Like scenario 2, but with further reduced sensitivity.

Maintenance And Care

The device requires no maintenance.

⚠️ **Hazard from electrical power!**

Contact between water and live parts can result in electric shock, burns or death.

- Only clean device in a dry state.

Risk of damage to property!

Using the wrong cleaning product can damage the device.

- Clean device with a moist cloth without detergent.

Disposal

Electrical and electronic equipment, accessories and packaging must be recycled in an environmentally compatible manner.

🗑️ Do not dispose of electrical and electronic equipment as domestic waste.

EU countries only:

Under the current European Directive on Waste Electrical and Electronic Equipment and its implementation in national law, electrical and electronic equipment no longer suitable for use must be collected separately and recycled in an environmentally compatible manner.

Declaration of Conformity

STEINEL GmbH hereby declares that the radio equipment Multisensor True Presence® DALI-2 IPD complies with Directive 2014/53/EU.
The full wording of the EU Declaration of Conformity is available for downloading from the following Internet address: **www.steinel.de**

Manufacturer's Warranty

Manufacturer's warranty of STEINEL GmbH, Dieselstrasse 80-84, DE-33442 Herzebrock-Clarholz, Germany
All STEINEL products meet the highest quality standards.

For this reason, we, the manufacturer, are pleased to provide you, the customer, with a warranty under the following terms and conditions:

The warranty covers the absence of deficiencies which are proven to be the result of a material defect or fault in manufacturing and which are reported to us immediately after detection and within the warranty period. The warranty shall cover all STEINEL Professional products sold and used in Germany.

Our warranty cover for consumers

The provisions below apply to consumers. A consumer is any natural person who, on entering into the purchase transaction, neither acts in exercising their commercial nor their self-employed activity.

You can opt for warranty cover in the form of repair or replacement which will be provided free of charge (if applicable, in the form of a successor model of the same or higher quality) or in the form of a credit note.

In the case of sensors, floodlights, outdoor and indoor lights, the warranty period for the STEINEL Professional product you have purchased is 5 years in each case from the date on which the product was purchased.

We shall bear the shipping costs but not the transport risks involved in return shipment.

Our warranty cover for entrepreneurs

The provisions below apply to entrepreneurs. Entrepreneur is a natural or legal person or partnership with legal personality who or which, on entering into the purchase transaction, acts in exercising their or its commercial or self-employed activity.

We have the option of providing warranty cover by rectifying deficiencies free of charge, replacing a product free of charge (if applicable, in the form of a successor model of the same or higher quality) or by issuing a credit note.

In the case of sensors, floodlights, outdoor and indoor lights, the warranty period for the STEINEL Professional product you have purchased is 5 years in each case from the date on which the product was purchased.

Within the scope of warranty cover, we shall not bear your expenses accruing from subsequent fulfillment nor shall we bear your expenses for removing the defective product and installing a replacement product.

Statutory rights accruing from defects, gratuitousness

The warranty cover described here shall be applicable in addition to the statutory rights of warranty – including special consumer protection provisions – and shall not restrict or replace them. Exercising your statutory rights in the event of defects is gratuitous.

Exemptions from the warranty

All replaceable lamps are expressly excluded from this warranty.

- In addition to this, the warranty shall not cover:
- any wear resulting from use or any other natural wear of product parts or any deficiencies in the STEINEL Professional product that are attributable to wear caused by use or other natural wear,
- any improper or non-intended use of the product or any failure to observe the operating instructions,
- any unauthorised additions, alterations or other modifications to the product or any deficiencies attributable to the use of accessory,
- supplementary or replacement parts which are not genuine STEINEL parts,
- any maintenance or care of products that is not carried out in accordance with the operating instructions,
- any attachment or installation that is not in accordance with STEINEL's installation instructions,
- any damage or loss occurring in transit.

Application of German law

The warranty shall be governed by German law excluding the United Nations Convention concerning the International Sale of Goods (CISG).

Making claims

If you wish to make a warranty claim, please send your product complete and carriage paid with the original receipt of purchase, which must show the date of purchase and product designation, either to your retailer or directly to us at STEINEL (UK) Ltd. – 25 Manasty Road, Axis Park, Orton Southgate, GB- Peterborough Cambs PE2 6UP United Kingdom. For this reason, we recommend that you keep your receipt of purchase in a safe place until the warranty period expires.

Technical Specifications

- Dimensions (H × B × T):

  Surface-mounted: 123 × 123 × 51 mm

  Concealed: 142 × 142 × 45 mm
- Supply voltage: 220 – 240 V / 50/60 Hz
- Power consumption: 1 W
- Installation height: 2.8 – 12 m
- Detection angle: 360°
- Multisensor True Presence® DALI-2 IPD max.: Ø 9 m

  (up to max. installation height 4 m)

  Ø 15 m presence

  Ø 15 m movement

  (adjustable to within one centimetre)
- Temperature range: 0 °C to +50 °C
- Protection class: IP 20
- Bluetooth frequency: 2.4 – 2.48 GHz
- Transmission power, Bluetooth: 4 dBm / 2.5 mW
- Transmission power, UWB: ≤ -41 dBm / MHz
- Frequency, True Presence®: 7.2 GHz

  (responds to micro-movements of vital functions)
- Power consumption via DALI-2:

  (12 – 22.5 V DC, no SELV):

  max. 2 mA / 1 participant

Sensor values:

- Light measurement: 2 – 2,000 Lux
- Temperature: 0 – 40 °C
- Relative humidity: 0 – 100 %
- CO_2: 400 – 10,000 ppm
- VOC: 0 – 1,000 ppm
- Air pressure: 300 – 1,200 mbar
- Noise level: 0 – 120 dB

Troubleshooting

Sensor transmits an unwanted motion signal.

- Interference factor, e.g. fan, air conditioner or other moving parts in the detection range.
  - Reorganise or cover area, increase distance.
- Animals moving within the detection range.
  - Reorganise or cover area.
- People are detected through thin walls in the neighbouring room.
  - Reduce range of sensor.
- Wind moves paper or plants in the detection area.
  - Reorganise area.
- Sensor near WiFi or other radio source.
  - Install at least 2 m away from the radio source.

Sensor reacts late to motion.

- Excessive distance to the sensor.
  - Install more sensors.
  - Optimise sensor positioning.
- Range setting too low.
  - Adjust range.

Temperature value inaccurate.

- Adjustment required.
  - Enter correction value via sensor settings.

Sensor does not connect to the app.

- App or smartphone crashes.
  - Restart mobile device.

Customer Support

STEINEL GmbH
Dieselstraße 80-84
33442 Herzebrock-Clarholz
Tel: +49/5245/448-188
www.steinel.de

Contact
www.steinel.de/contact

Documents / Resources

steinel DALI-2 IPD Multisensor True Presence [pdf] Instruction Manual
DALI-2 IPD Multisensor True Presence, DALI-2 IPD, Multisensor True Presence, True Presence

References

- **Steinel Group | STEINEL**
- **International | STEINEL**
- **User Manual**