

# steinel HF 360-2 Presence Detectors Instruction Manual

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steinel HF 360-2 Presence Detectors



#### **Product Information**

### **Specifications**

• Product Name: HF 360-2 COM1 / COM2 / BT IPD

• Power Output: < 1 W (HF 360-2 UP), 2.000 W (HF 360-2 AP), 1.500 W (HF 360-2)

• **Supported Lamp Types:** Leuchtstofflampen EVG, Leuchtstofflampen unkompensiert, Leuchtstofflampen reihenkompensiert, Leuchtstofflampen parallelkompensiert, Niedervolt Halogenlampen, LED

• Maximum Capacity: 176 F

• Operating Frequency: 5.8 GHz

Bluetooth Output Power: 5 dBm / 3 mW
 IP Rating: IP54 (only for Aufputzvariante)

## **Product Usage Instructions**

### **General Safety Instructions**

Before performing any work on the sensor, make sure to disconnect the power supply. The COM1 and COM2 variants control loads and process and output signals. The UP variant is for Unterputz installation, and the AP variant is for Aufputz installation.

#### **Electrical Connection**

For electrical connection, follow the color coding:

- L = Phase (usually black or brown)
- N = Neutral (usually blue)
- S = Switch

### Mounting

The product comes with the following components:

- HF 360-2 Sensor
- Erfassungsbereich HF 360-2

The mounting instructions are not provided in the text extract.

#### **Function and Settings**

The product can be connected to the HLK control system. The net power supply can be connected to COM1, COM2, or BT IPD. The detection range of HF 360-2 can be adjusted using the app.

#### **LED Function**

Initialization: LED blinks blueNormal Operation: LED off

• Bluetooth Connection Active: LED blinks slowly blue

• Test Mode, No Movement: LED stays red

#### **Maintenance and Care**

No specific instructions for maintenance and care are provided in the text extract.

#### **Disposal**

No specific instructions for disposal are provided in the text extract.

#### **FAQ**

• Q: Why is the light not turning off?

A: Please refer to the troubleshooting section in the complete user manual for assistance with this issue.

#### About this document

- Please read carefully and keep in a safe place.
- Under copyright.

Reproduction either in whole or in part only with our consent.

- Subject to change in the interest of technical progress.
- All product dimensions in mm.

#### **Symbols**

- Hazard warning!
- Reference to other information in the document.

### **General safety precautions**

Disconnect the power supply before attempting any work on the sensor.

- During installation, the electric power cable being connected must not be live. Therefore, switch off the power first and use a voltage tester to make sure the wiring is off-circuit.
- Installing the sensor involves work on the mains power supply. This work must therefore be carried out professionally by national wiring regulations and electrical operating conditions.
- Only use genuine replacement parts.
- Repairs may only be made by specialist workshops.
- Terminal B1 / B0 is a switching contact for low-energy circuits, no more than 1 A. This must be protected by a

fuse of the appropriate rating.

#### HF 360-2 COM1/COM2/BT IPD

### Proper use

• Motion sensor for ceiling mounting indoors.

The HF 360-2 also detects movements through thin walls. This makes it ideal for WC facilities with toilet cubicles, changing rooms, stairwells, multi-story car parks, and kitchens.

### Interface types

• COM1: relay 1

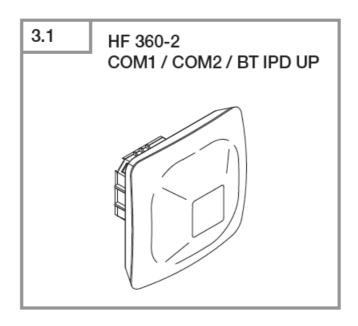
• COM2: relay 1 and relay 2 (for HVAC: heating/ventilation/air-conditioning)

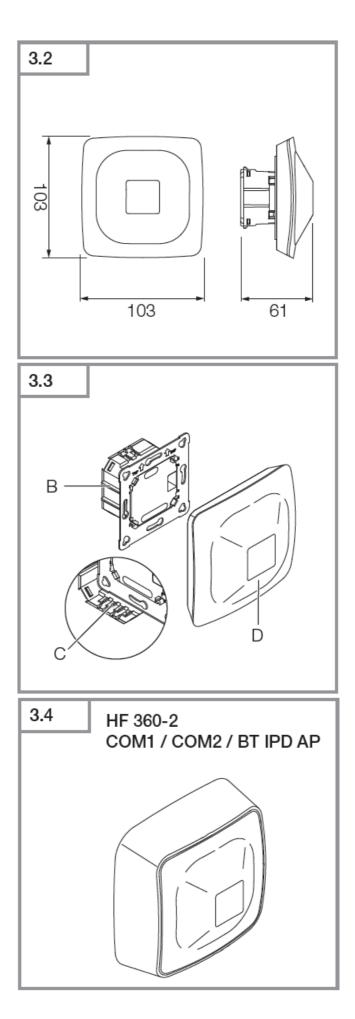
• BT IPD: no relay / no control

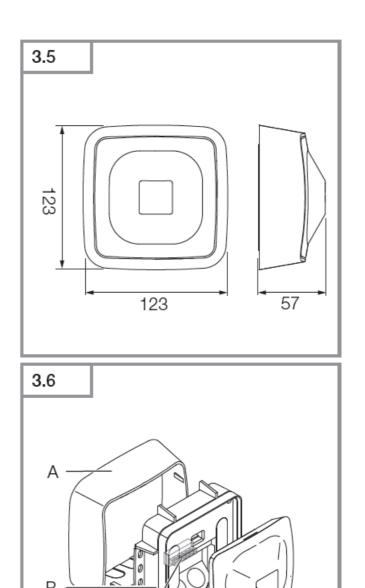
The COM1 and COM2 versions switch loads ON and OFF. Signals are processed and sent out.

The BT IPD version can be interconnected with other sensors via Bluetooth to extend the detection zone. It passes on the detected signals (presence and light level) via Bluetooth. This is controlled in the sensor interconnected with another interface.

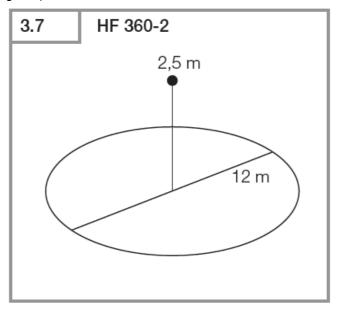
- UP: concealed version
- AP: surface-mounted version
- Package contents (Fig. 3.1, Fig. 3.4)
- Product dimensions (Fig. 3.2, Fig. 3.5)
- Product components (Fig. 3.3, Fig. 3.6)
  - A Surface-mounted surround
  - B Load module
  - C Connecting terminal
  - D Sensor module







• HF 360-2 detection zone (Fig. 3.7)



The mains supply lead is a multiple-core cable (max. conductor Ø 2.5 mm):

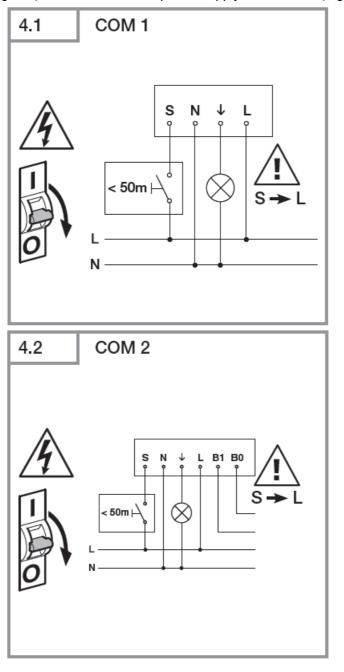
- **L** = Phase conductor (usually black or brown)
- **N** = Neutral conductor (usually blue)
- **PE** = Protective-earth conductor (usually green/yellow)
- ↓= Switched phase conductor (usually black, brown, or grey)
- S = Switch
- B0/B1 = Floating relay for controlling HVAC

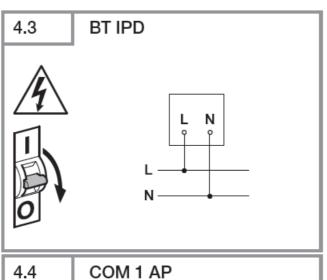
Cable length between sensor and button < 50 m.

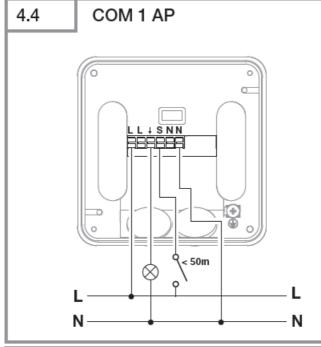
### Important:

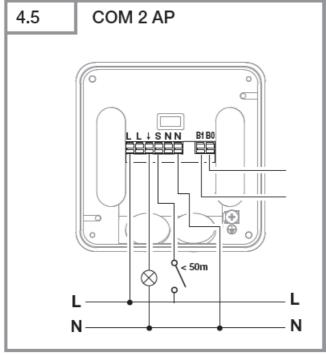
Incorrectly wired connections will produce a short circuit later on in the product or fuse box. In this case, you must identify the individual cables and re-connect them.

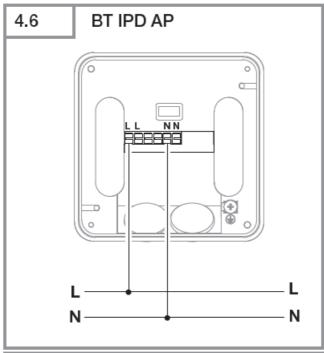
• Connect the mains power supply lead COM1 (Fig. 4.1, Fig. 4.4, Fig. 4.7) Connect the mains power supply lead COM2 (Fig. 4.2, Fig. 4.5, Fig. 4.8) Connect the mains power supply lead BT IPD (Fig. 4.3, Fig. 4.6, Fig. 4.9)

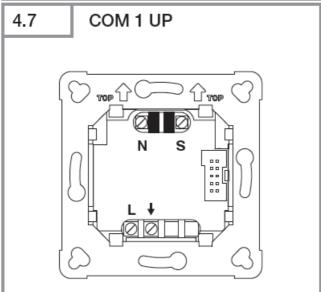


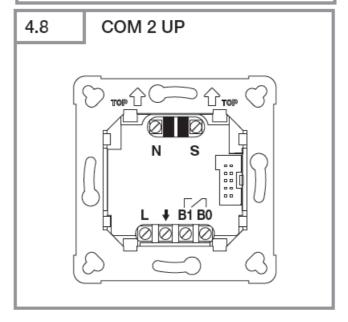


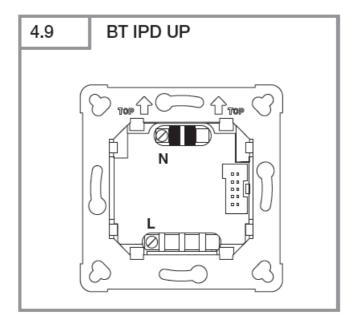










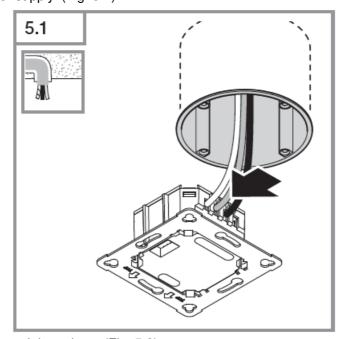


### Installation

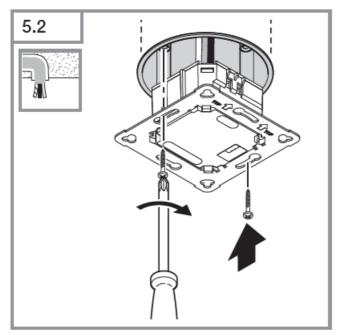
- Check all components for damage.
- Do not use the product if it is damaged.
- Select an appropriate mounting location, taking the reach and presence detection into consideration

# **Mounting procedure**

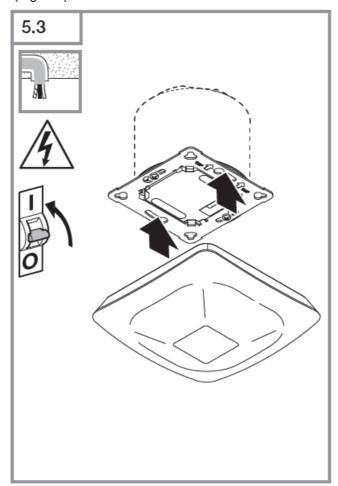
- Switch off the power supply. (Fig. 4.1, Fig. 4.2, Fig. 4.3)
- Concealed mounting
- Connect to the mains power supply. (Fig. 5.1)



• Fit the load module and screw it into place. (Fig. 5.2)



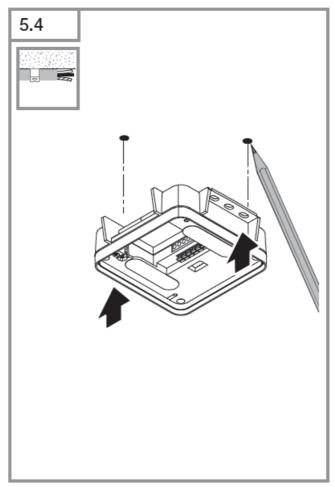
• Fit magnetic sensor module. (Fig. 5.3)



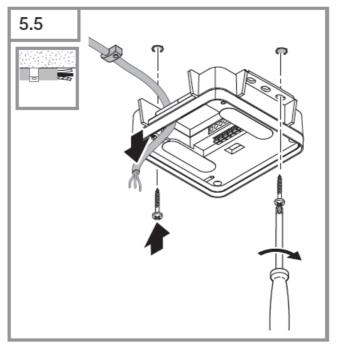
• Switch ON the power supply. (Fig. 5.3)

# Surface mounting

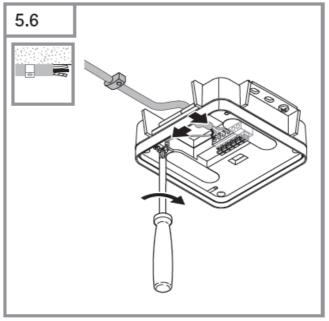
• Mark drill holes and drill. (Fig. 5.4)



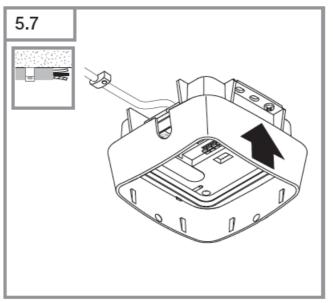
• Screw the load module into place. (Fig. 5.5)



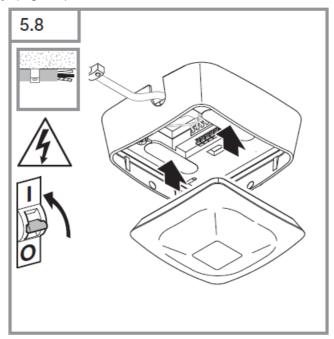
• Connect to the mains power supply. (Fig. 5.6)



• Fit surface-mounted surround. (Fig. 5.7)



- Fit magnetic sensor module. (Fig. 5.8)
- Switch ON the power supply. (Fig. 5.8)



• Make settings.

# **Function and settings**

#### **Factory settings**

The factory settings are activated when the presence detector is put into operation for the first time as well as after resetting by the app.

### The following factory settings are provided:

• Reach: 100 %

• Sensitivity: 100 %

### COM1/COM2 only:

• Twilight level: 500 lux

Time setting for COM1: 5 min
Time setting, HVAC: 15 min

• Fully/semi-automatic mode: fully automatic

• Switch-ON delays for HVAC: OFF

### **Network settings**

For installations with a large number of products we recommend the following commissioning steps:

- In case the products are working as single units, assign each product to a different network.
- In case the products need to communicate with each other, set up multiple networks with up to 100 products assigned to each network. (The products need to be grouped inside the network for proper communication).
- The App offers up to 50 networks. Each network can have up to 99 groups assigned to it.
- All network settings can be done over the Smart Remote App.

#### Setting HF 360-2 detection

Reach can be set via app.

#### **Bluetooth visibility**

Per default, the product visibility over Bluetooth is enabled. It is possible to have the visibility of the products disabled. The Bluetooth communication itself is still active but the product is not accessible.

#### The COM1 and COM2 versions additionally provide the following functions:

# · Twilight setting

The chosen response threshold can be set from approx. 2 to 2,000 lux.

# • Setting HF 360-2 detection

Reach can be set via the app.

## Daytime operation

When movement is detected, the sensor switches the load ON irrespective of ambient brightness.

Teach-IN

The Teach-IN function is to be selected at the level of light at which you want the sensor to respond to movement from now on. The level of ambient brightness measured in this way will be saved after 10 seconds. The load is deactivated during this period.

#### · Time setting

The chosen stay-ON time can be set from a minimum of 10 seconds to a maximum of 60 minutes. If no movement is detected, the sensor switches OFF after the stay-ON time expires.

#### · Bluetooth grouping

The sensors can be operated as individual sensors or as a group. The group is interconnected via wireless communication. In each group, a group master must be defined in the Smart Remote app. All sensors in a group operate in the same way as the group master is configured. Reach can be set individually for all lights in the lighting group.

# • Neighbouring-light function

The neighboring light function can be activated and deactivated via the Smart Remote app. This function assigns the neighbouring groups to the active sensor group. The active group responds to activation signals from the neighboring group assigned to it and switches to the main light as defined in the settings.

#### Operating mode

#### · Semi-automatic mode

The light now only switches OFF automatically. The light is switched ON manually. The light must be requested using the button and stays ON for the time set.

### · Fully automatic mode

- The light automatically switches ON and OFF to light level when someone is present. Light can be switched ON and OFF manually at any time.
- This temporarily interrupts the automatic switching function.

#### · Presentation mode

If input S is used in fully automatic mode with load activated, the sensor will activate presentation mode. The load remains switched OFF as long as movement is being detected. As soon as movement is no longer being detected and the stay-ON time has elapsed, the sensor returns to normal sensor mode.

#### Button input

Tells the sensor how to interpret incoming signals S. Assigning external buttons allows you to operate the detector as a semiautomatic unit and override it manually at any time. SOUND or SOUND/OFF describes the behavior after actuating the button. In the ON – OFF setting, the light can be switched ON and OFF manually at any time. In the SOUND setting, the light can no longer be switched OFF manually. The stay-ON time starts from the beginning again each time the switch is pressed.

### IQ mode

The stay-ON time is self-learning and adjusts dynamically to user behavior. The optimum time cycle is determined by employing a learning algorithm. The shortest time is 5 minutes, and the longest time is 20 minutes.

## Pulse mode

The pulse function activates the output for 2 seconds (e.g. for staircase lighting time switches). The sensor will then be in a dead time for 8 seconds.

#### Smart Remote app

To read off the sensor via smartphone or tablet, you must download the STEINEL Smart Remote app from your

# **Android**



### iOS



# **LED** function

• Initialization: LED flashes blue.

• Normal mode: LED OFF

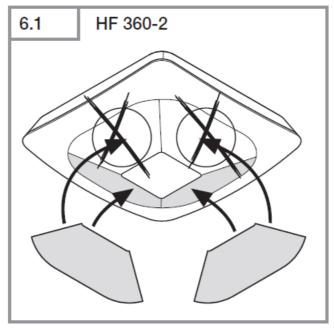
• Bluetooth connection active: LED is flashing slowly in blue.

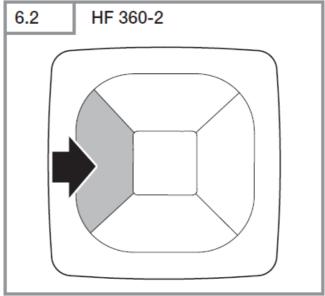
• Test mode, movement: LED permanently lights up green

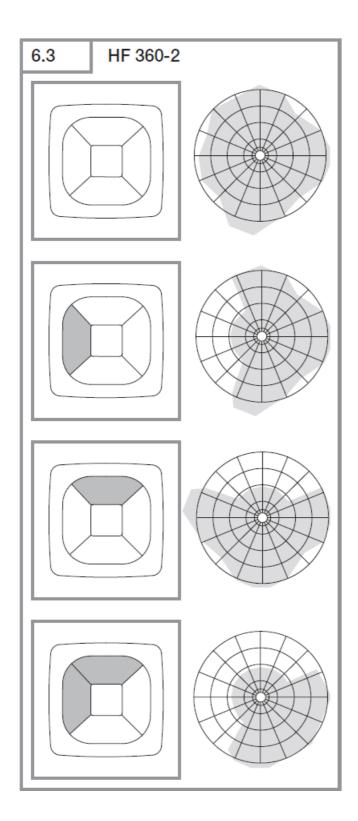
• Movement test mode no movement: LED permanently lights up red

#### HF 360-2

Set detection reach. (Fig. 6.1, Fig. 6.2, Fig. 6.3).







# Maintenance and care

The product requires no maintenance. The sensor can be cleaned with a damp cloth (without detergents) if dirty.

# **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.

### Conformity

STEINEL GmbH hereby declares that the HF 360-2 COM1/COM2/BT IPD radio equipment type conforms to Directive 2014/53/EU. The full wording of the EU Declaration of Conformity is available for downloading from the following Internet address: <a href="https://www.steinel.de">www.steinel.de</a>.

## Manufacturer's Warranty

Manufacturer's warranty of STEINEL GmbH, Diesel Strasse 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 that 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 selfemployed 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, and 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 the return shipment.
- Our warranty cover entrepreneurs The provisions below apply to entrepreneurs. An entrepreneur is a natural or legal person or partnership with a legal personality who, 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 issuing a credit note.
- In the case of sensors, floodlights, and 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 the 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 unauthorized additions, alterations, or other modifications to the product or any deficiencies attributable to the use of the accessory,
- supplementary or replacement parts that are not genuine STEINEL parts,
- any maintenance or care of products that is not carried out under the operating instructions,
- any attachment or installation that is not under 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 STEI-NEL (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	HF 360-2 UP:	103 × 103 × 61	
(L × D × H in mm)	HF 360-2 AP:	123 × 123 × 57	
Input voltage	220 – 240 V, 50/60 Hz		
Power consumption			
Stand-by	HF 360-2:	< 1 W	
Capacity, switching	Incandescent/halogen lamp load		2,000 W
output 1: (COM 1 / COM 2)	Fluorescent lamps, electronic ballast		1,500 W
	Fluorescent lamps, uncorrected		1,000 VA
	Fluorescent lamps, series-corrected		400 VA
	Fluorescent lamps, parallel-corrected		1,000 VA
	Low-voltage halogen lamps		2,000 VA
	LED < 2 W		100 W

	2 W < LED < 8 W	300 W
	LED > 8 W	600 W
	Capacitive load	176 µF
Capacity, switching	max. 230 W / 230 V	
output 2: (COM 2 only)	max. 1 A ( $\cos \phi = 1$ ) for HVAC (heating/ventilation/air -conditioning)	
Time setting	10 s to 60 min, IQ mode	
Twilight setting	2 – 2,000 lux	
Reach	Ø 12 m	
Angle of coverage	360°	
Mounting height	2 – 4 m	
IP rating	IP54 (surface-mounted version only)	
Temperature range	-20 °C to +50 °C	
UWB transmitter power	≤ -41 dBm / MHz	
Bluetooth frequency	2.4 – 2.48 GHz	
HF 360-2 Frequency	5.8 GHz	
Bluetooth transmitter power	5 dBm / 3 mW	
Transmitter power HF 360-2	< 1 mW	

# **Troubleshooting**

Malfunction	Cause	Remedy
Light does not switch ON	<ul><li>■ No supply voltage</li><li>■ Lux setting too low</li></ul>	<ul> <li>Check supply voltage</li> <li>Slowly increase lux setting until light switches ON</li> </ul>
	■ No movement detection	<ul><li>Ensure unobstructed sensor vision</li><li>Check detection zone</li></ul>
Light does not switch OFF	<ul><li>■ Lux setting too high</li><li>■ Stay-ON time running out</li></ul>	■ Reduce lux setting t ■ Wait until stay-ON time elapses; reduce stay-ON time if necessary
	Interfering heat sources: e.g. fan heater, open doors and windows, pets, light bulb / halogen floodlight, moving objects	■ Check detection zone
Sensor switches OFF despite persons being present	<ul><li>Stay-ON time too short</li><li>Light-level threshold too low</li></ul>	<ul><li>■ Increase stay-ON time</li><li>■ Change twilight setting</li></ul>
Sensor does not switch OFF quickly enough	■ Stay-ON time too long	■ Reduce stay-ON time
Sensor does not switch ON quickly enough when approached from the front	Reach is reduced when approached from the front	<ul><li>Install additional sensors</li><li>Reduce distance between two sensors</li></ul>
Sensor does not switch ON when persons are present despite it being dark	<ul> <li>Lux setting too low</li> <li>Semi-automatic mode activated</li> <li>4 hours OFF activated</li> </ul>	<ul> <li>Increase light-level threshold</li> <li>Activate fully automatic mode or switch light ON at button</li> <li>Deactivate 4 hours OFF</li> </ul>
Sensor not connecting with the app	■ Bluetooth of the smart- phone is disabled or Bluetooth visibilility in the Smart Remote App is disabled.	<ul> <li>Enable Bluetooth connection in your smart phone or check for visibilty in the Smart Remote App.</li> <li>In case Bluetooth visibilty is disabaled disconnect sensor from power for restart. Sensor will be visible for 60 min.</li> </ul>
Sensor randomly restarting	■ Interference between Wiff and Bluetooth of third party devices, e.g. Wifi routers	i ■ Change to a different network setting in the sensor configuration page.  → "6. Function and settings"

# **STEINEL GmbH**

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- www.steinel.de

# Contact

www.steinel.de/contact.



### **Documents / Resources**



steinel HF 360-2 Presence Detectors [pdf] Instruction Manual
HF 360-2 Presence Detectors, HF 360-2, Presence Detectors, Detectors

### References

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

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