



homematic HMIP-STHD Temperature and Humidity Sensor User Guide

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Information about this manual

Please read this manual carefully before beginning operation with your Homematic IP components. Keep the manual so you can refer to it at a later date if you need to. If you hand over the device to other persons for use, please hand over this manual as well.

Symbols Used:

| | |
|---|--|
|  | Attention: This indicates a hazard. |
|  | Please note: This section contains important additional information. |

Hazard information

| | |
|---|--|
|  | <p>Do not open the device.</p> <p>It does not contain any parts that can be maintained by the user.</p> <p>In the event of an error, please have the device checked by an expert.</p> |
|  | <p>For safety and licensing reasons (CE), unauthorized change and/or modification of the device is not permitted.</p> |
|  | <p>The device may only be operated in dry and dust free environment and must be protected from the effects of moisture, vibrations, solar or other methods of heat radiation, cold and mechanical loads.</p> |
|  | <p>The device is not a toy; do not allow children to play with it.</p> <p>Do not leave packaging material lying around.</p> <p>Plastic films/bags, pieces of polystyrene, etc. can be dangerous in the hands of a child.</p> |
|  | <p>We do not assume any liability for damage to property or personal injury caused by improper use or the failure to observe the hazard information.</p> <p>In such cases, any claim under warranty is extinguished! For consequential damages, we assume no liability</p> |
|  | <p>The device may only be operated within residential buildings.</p> |
|  | <p>Using the device for any purpose other than that described in this operating manual does not fall within the scope of intended use and shall invalidate any warranty or liability.</p> |

Package contents

| Quantity | Description |
|----------|--|
| 1 | Homematic IP Temperature and Humidity Sensor with Display – indoor |
| 1 | Clip-on frame |
| 1 | Mounting plate |
| 2 | Double-sided adhesive strips |
| 2 | Screws 3.0 x 30 mm |
| 2 | Plugs 5 mm |
| 2 | 1.5 V LR03/micro/AAA batteries |
| 1 | Operating manual |

Function and device overview

The Homematic IP Temperature and Humidity Sensor with Display – indoor measures the temperature and humidity in the room.

The measured values are shown on the integrated LC display.

You can select between the temperature and humidity.

Both values can also be displayed alternately.

In addition, the measured values are transferred cyclically to the Homematic IP Access Point as well as to the app and help to regulate the room climate.

Take a look at the home screen of the app and you will be informed about the room temperature as well as the current humidity of the corresponding room.

Via the display and the app, the current measured values as well as open windows, empty batteries and radio communication errors are indicated.

Thanks to the radio communication and battery operation, the device is highly flexible where mounting and selecting a mounting location are concerned.

The device is mounted and removed very easily with the supplied clip-on frame using screws or adhesive strips.

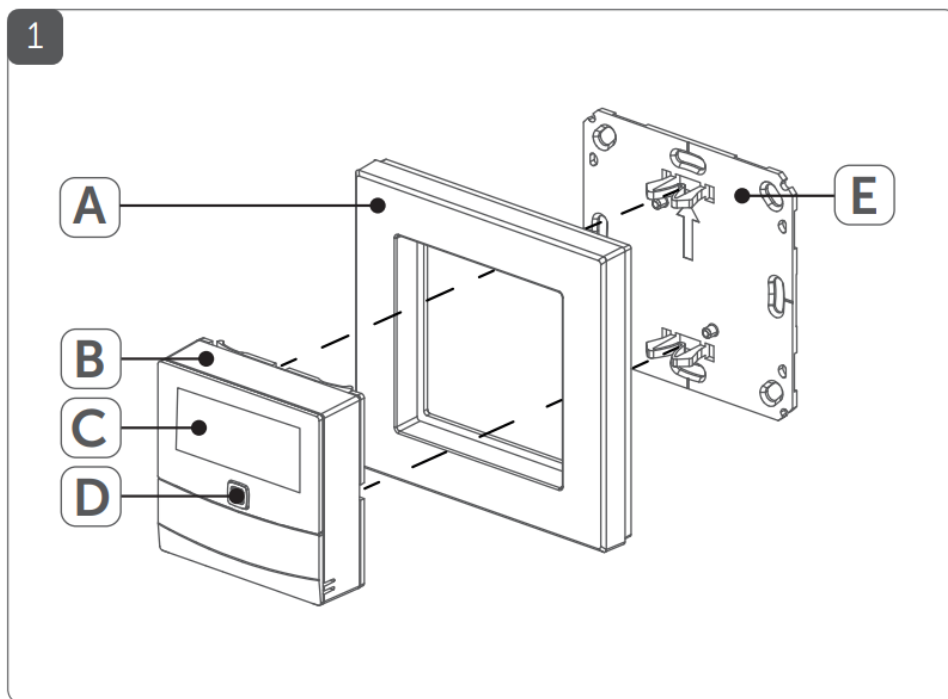
It is compatible with a number of different surfaces including furniture, brick walls, tiles or glass.

It is also possible to integrate the temperature and humidity sensor into existing switches of leading manufacturers.




Device overview (see figure 1):

- **(A)** Clip-on frame
- **(B)** Sensor (electronic unit)
- **(C)** Display

- (D) System button (pair button and LED)
- (E) Mounting plate



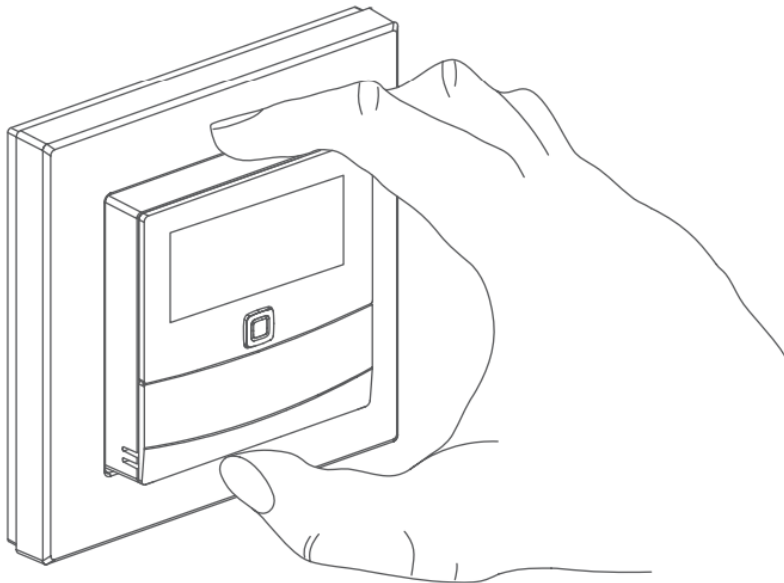
Display overview (see figure 2):

| | |
|---|--------------------|
| °C | Actual temperature |
| % | Humidity |
|  | Open window symbol |
|  | Battery symbol |
|  | Radio transmission |

2



2



General System Information




This device is part of the Homematic IP smart home system and works with the Homematic IP radio protocol. All devices of the Homematic IP system can be configured comfortably and individually with a smartphone via the Homematic IP app.

The available functions provided by the Homematic IP system in combination with other components are described in the Homematic IP User Guide.

All current technical documents and updates are provided at: www.eQ-3.de.

Start-up


Pairing

| | |
|---|---|
|  | <p>Please read this entire section before starting the pair procedure.</p> |
|  | <p>First set up your Homematic IP Access Point via the Homematic IP app to enable operation of other Homematic IP devices within your system. For further information, please refer to the operating manual of the Access Point.</p> |
|  | <p>You can connect the device to the Access Point. For detailed information, please refer to the Homematic IP User Guide, available for download in the download area of www.eQ-3.de. To integrate the temperature and humidity sensor into your system and enable it to communicate with other Homematic IP devices, you must add the device to your Homematic IP Access Point first.</p> |

To add the temperature and humidity sensor, please proceed as follows:

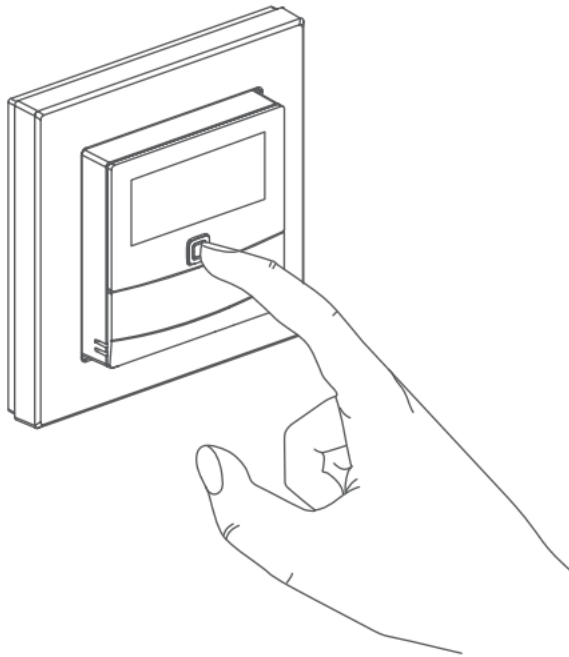
- Open the Homematic IP app on your smartphone.
- Select the menu item **“Add device”**.
- To remove the sensor **(B)** from the frame, take hold of the sides of the sensor and pull it out (see figure 2).
- Turn over the sensor.
- Remove the insulation strip from the battery compartment.

Pair mode remains activated for 3 minutes.

| | |
|---|--|
|  | <p>You can manually start the pair mode for another 3 minutes by pressing the system button (D) briefly (see figure 3).</p> |
|---|--|

- Your device will automatically appear in the Homematic IP app.
- To confirm, please enter the last four digits of the device number (SGTIN) in your app or scan the QR code.
Therefore, please see the sticker supplied or attached to the device.
- Please wait until add is completed.
- If pairing was successful, the LED lights up green.
The device is now ready for use.
- If the LED lights up red, please try again.
- Please select, in which application (e.g. climate control) you would like to use the device.
- Allocate the device to a room and give the device a name.

3



Mounting



Please read this entire section before starting to mount the device.

You can use the supplied clip-on frame **(A)** to mount the temperature and humidity sensor or easily integrate it into an existing switch systems (see „5.2.4 Installation in multiple combinations“ on page 43).

If you want to mount the temperature and humidity sensor with the supplied clip-on frame, you can use

- the supplied double-sided adhesive strips or
- the supplied screws to fix it to a wall.

You can also mount the temperature and humidity sensor on a flush-mounting box.

Adhesive strip mounting

For mounting the assembled device with adhesive strips, please proceed as follows:

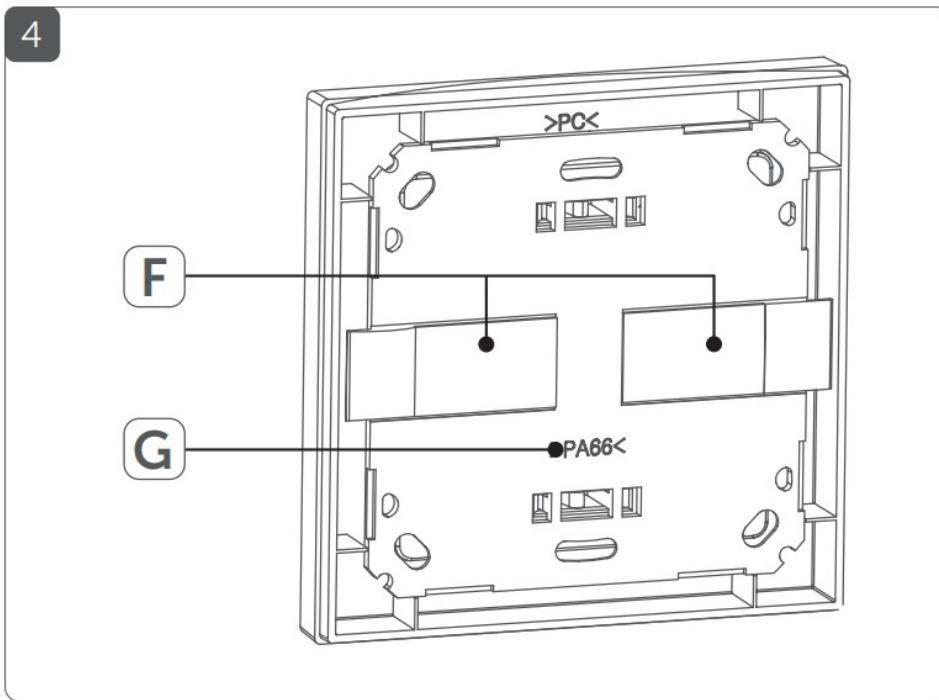
- Choose a site for installation.



Make sure that the mounting surface is smooth, solid, non-disturbed, free of dust, grease and solvents and not too cold to ensure long-time adherence.

- Fix the adhesive strips **(F)** on the back side of the mounting plate **(E)** in the provided area.
You should be able to read the letters on the back side **(G)** (see figure 4).
- Remove the protective film from the adhesive strips.

- Press the assembled temperature and humidity sensor with the back side to the wall in the position where it should subsequently be attached.



Screw mounting

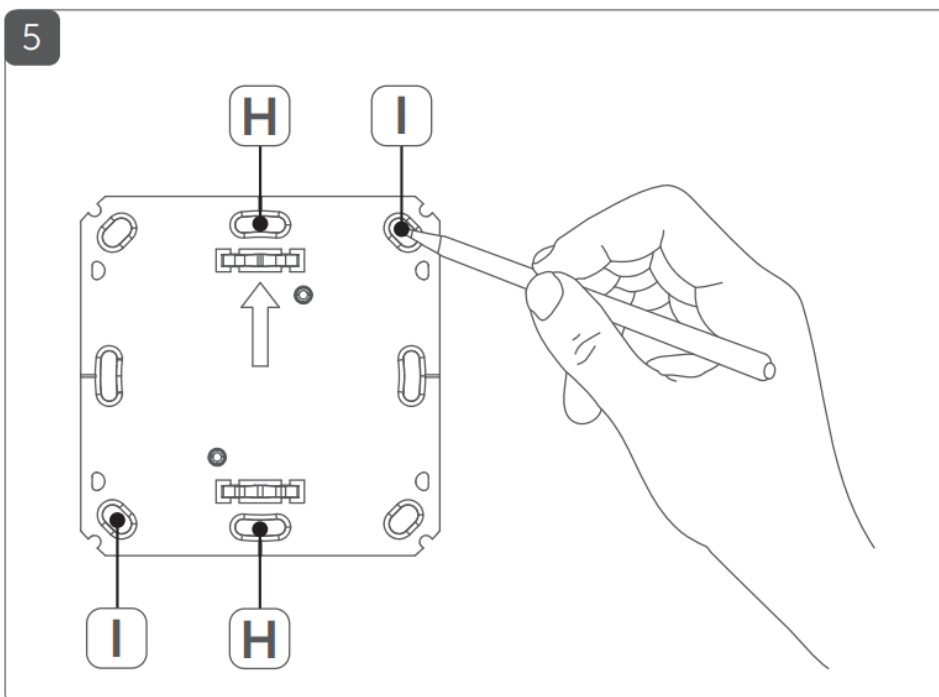
For mounting the temperature and humidity sensor with the supplied screws, please proceed as follows:

- Choose a site for installation.




Make sure that no electricity or similar lines run in the wall at this location!

- Position the mounting plate (**E**) on the desired site on the wall. Make sure that the arrow on the mounting plate is pointing upwards.
- Use a pen to mark the positions of bore holes (**I**) (diagonally opposite) in the mounting plate on the wall (**see figure 5**).

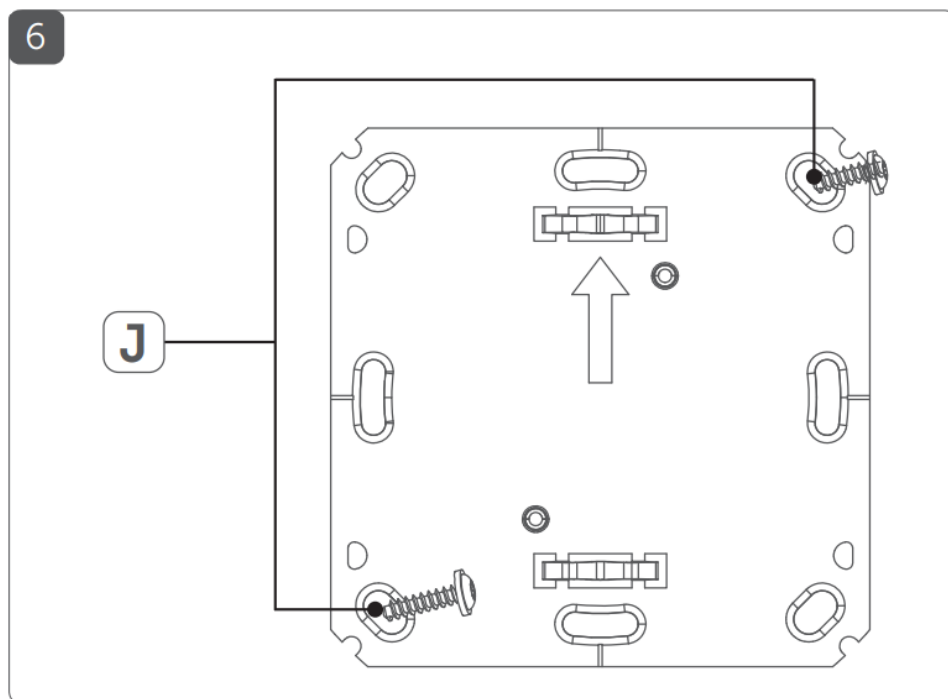


- Now drill the bore holes

| | |
|---|--|
|  | <p>If you are working with a stone wall, drill the marked two 5 mm holes and insert the plugs supplied.</p> <p>If you are working with a wooden wall, you can pre-drill 1.5 mm holes to make screws easier to insert</p> |
|---|--|




- Use the supplied screws and plugs (**J**) to fasten the mounting plate to the wall (**see figure 6**).
- Attach the clip-on frame (**A**) to the mounting plate.
- Place the sensor (**B**) back into the frame (**see figure 1**).

Make sure that the clips on the mounting plate latch into the openings on the sensor.



Mounting on flush-mounted boxes

You can mount the temperature and humidity sensor on flush-mounting/installation boxes using the holes (**H**) (**see figure 4**).

| | |
|---|--|
|  | <p>If the device is mounted to a flush-mounting box, there may be no open conductor ends.</p> |
|  | <p>If changes or works have to be made on the house installation (e.g. extension, bypass of switch- or socket inserts) or the low-voltage distribution for mounting or installing the device, the following safety instruction must be considered:</p> |
|  | <p>Please note: Only to be installed by persons with the relevant electro-technical knowledge and experience.</p> |

Incorrect installation can put

- your own life at risk;
- and the lives of other users of the electrical system.

Incorrect installation also means that you are running the risk of serious damage to property, e.g. because of a fire.

You may be personally liable in the event of injuries or damage to property.

Contact an electrical installer!

Specialist knowledge required for installation:

The following specialist knowledge is particularly important during installation:

- The “5 safety rules” to be used:
Disconnect from mains; Safeguard from switching on again;
Check that system is deenergized; Earth and short circuit;
Cover or cordon off neighboring live parts;
- Select suitable tool, measuring equipment and, if necessary, personal safety equipment;
- Evaluation of measuring results;
- Selection of electrical installation material for safeguarding shut-off conditions;
- IP protection types;
- Installation of electrical installation material;
- Type of supply network (TN system, IT system, TT system) and the resulting connecting conditions (classical zero balancing, protective earthing, required additional measures etc.).

Installation in multiple combinations

You can mount the temperature and humidity sensor with the attachment frame **(A)** provided or use it with 55mm frames of other manufacturers as well as integrate the electronic unit **(B)** into a multi-gang frame.

You can flexibly fix the mounting plate **(E)** to the wall using adhesive strips or screws.

For mounting with multiple combinations, make sure that the mounting plate of the temperature and humidity sensor is seamlessly aligned to the already fixed mounting plate/retaining ring.

The temperature and humidity sensor is designed to fit into 55mm frames supplied by the following manufacturers:

| Manufacturer | Frame |
|--------------|---|
| Berker | S.1, B.1, B.3, B.7 glass |
| ELSO | Joy |
| GIRA | System 55, Standard 55, E2, E22, Event, Esprit |
| merten | 1-M, Atelier-M, M-Smart, M-Arc, M- Star, M-Plan |
| JUNG | A 500, AS 500, A plus, A creation |

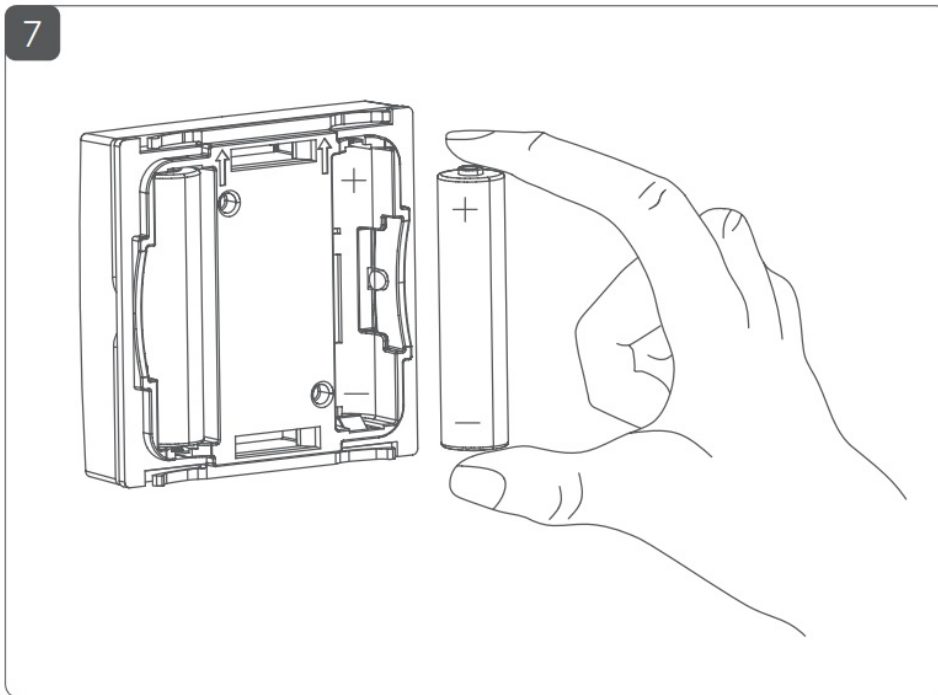
Replacing Batteries

If an empty battery is displayed via the app or the device (see „7.4 Error codes and flashing sequences“ on page 47), replace the used batteries by two new LR03/micro/AAA batteries.

You must observe the correct battery polarity.

To replace the batteries of the temperature and humidity sensor, please proceed as follows:

- Once mounted, the sensor can easily be pulled out of the frame **(A)** or removed from the mounting plate **(E)**.
To remove the sensor **(B)** from the frame, take hold of the sides of the sensor and pull it out **(see figure 2)**.
You do not need to open the device.
- Turn the sensor over to remove the batteries.
- Insert two new 1.5 V LR03/micro/batteries into the battery compartment, making sure that you insert them the right way round **(see figure 7)**.





- Put the sensor back into the frame.
Make sure that the clips on the mounting plate latch into the openings on the sensor.
- Please pay attention to the flashing signals of the device LED while inserting the batteries (see „7.4 Error codes and flashing sequences“ on page 47).

Once the batteries have been inserted, the temperature and humidity sensor will perform a self-test/restart (approx. 2 seconds).

Afterwards, initialization is carried out.

The test display will indicate that initialization is complete: orange and green lighting.

| | |
|---|--|
|  | <p>Caution:</p> <p>There is a risk of explosion if the battery is not replaced correctly. Replace only with the same or equivalent type. Never recharge standard batteries. Do not throw the batteries into a fire. Do not expose batteries to excessive heat. Do not short-circuit batteries. Doing so will present a risk of explosion.</p> |
|  | <p>Used batteries should not be disposed of with regular domestic waste! Instead, take them to your local battery disposal point.</p> |

Troubleshooting

Weak Battery

Provided that the voltage value permits it, the temperature and humidity sensor will remain ready for operation also if the battery voltage is low.

Depending on the particular load, it may be possible to send transmissions again repeatedly, once the batteries have been allowed a brief recovery period.

If the voltage drops too far during transmission, this will be displayed on the device or via the Homematic IP app (see „7.4 Error codes and flashing sequences“ on page 47).

In this case, replace the empty batteries by two new batteries (see „6 Replacing batteries“ on page 44).

Command not confirmed

If at least one receiver does not confirm a command, the device LED lights up red at the end of the failed transmission process.

The failed transmission may be caused by radio interference (see „10 General information about radio operation“ on page 50).

This may be caused by the following:

- Receiver cannot be reached.
- Receiver is unable to execute the command (load failure, mechanical blockade, etc.).
- Receiver is defective.

Duty cycle

The duty cycle is a legally regulated limit of the transmission time of devices in the 868 MHz range.

The aim of this regulation is to safeguard the operation of all devices working in the 868 MHz range.

In the 868 MHz frequency range we use, the maximum transmission time of any device is 1% of an hour (i.e. 36 seconds in an hour).

Devices must cease transmission when they reach the 1% limit until this time restriction comes to an end.

Homematic IP devices are designed and produced with 100% conformity to this regulation.

During normal operation, the duty cycle is not usually reached.

However, repeated and radio-intensive pair processes mean that it may be reached in isolated instances during start-up or initial installation of a system.

If the duty cycle is exceeded, this is indicated by three long flashes of the device LED, and may manifest itself in the device temporarily working incorrectly.

The device starts working correctly again after a short period (max. 1 hour).

Error codes and flashing sequences

| Flashing code | Meaning | Solution |
|-----------------------|--|---|
| Short orange flashing | Radio transmission/ attempting to transmit/data transmission | Wait until the transmission is completed. |

| | | |
|---|--|---|
| 1x long green lighting | Transmission confirmed | You can continue operation. |
| 1x long red lighting | Transmission failed | Please try again (see „7.2 Command not confirmed“ on page 46). |
| Short orange lighting (after green or red confirmation) | Batteries empty | Replace the batteries of the device (see „6 Replacing batteries“ on page 44). |
| Short orange flashing (every 10 s) | Pair mode active | Please enter the last four numbers of the device serial number to confirm (see „5.1 Pairing“ on page 37). |
| 1x long red lighting | Transmission failed or duty cycle limit is reached | Please try again (see sec. „7.2 Command not confirmed“ on page 46 or „7.3 Duty cycle“ on page 47). |
| 6x long red flashing | Device defective | Please see your app for error message or contact your retailer. |

| | | |
|--|--------------|--|
| 1x orange and 1 x green lighting (after inserting batteries) | Test display | Once the test display has stopped, you can continue. |
|--|--------------|--|

Restore factory settings



The factory settings of the device can be restored.
If you do this, you will lose all your settings.

To restore the factory settings of the temperature and humidity sensor please proceed as follows:

- To remove the sensor (**B**) from the frame, take hold of the sides of the sensor and pull it out (**see figure 2**).
- Remove a battery.
- Insert the battery ensuring that the polarity is correct (**see figure 7**) while pressing and holding down the system button (**D**) for 4s at the same time, until the LED will quickly start flashing orange (**see figure 3**).
- Release the system button again.
- Press and hold down the system button again for 4 seconds, until the status LED lights up green.
- Release the system button to finish the procedure

Maintenance and cleaning



The device does not require you to carry out any maintenance other than replacing the battery when necessary.
Enlist the help of an expert to carry out any maintenance or repairs.

Clean the device using a soft, lint-free cloth that is clean and dry.
You may dampen the cloth a little with lukewarm water in order to remove more stubborn marks.
Do not use any detergents containing solvents, as they could corrode the plastic housing and label.

General information about radio operation

Radio transmission is performed on a non-exclusive transmission path, which means that there is a possibility of interference occurring.
Interference can also be caused by switching operations, electrical motors or defective electrical devices.



The range of transmission within buildings can differ greatly from that available in the open air.
Besides the transmitting power and the reception characteristics of the receiver, environmental factors such as humidity in the vicinity have an important role to play, as do on-site structural/ screening conditions.

eQ-3 AG, Maiburger Str. 29, 26789 Leer/Germany hereby declares that the radio equipment type HmIP-STHD is in compliance with the Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: www.eQ-3.com


Technical specifications

- **Device short description:** HmIP-STHD
- **Supply voltage:** 2x 1.5 V LR03/micro/AAA
- **Current consumption:** 20 mA max.



- **Battery life:** 2 years (typ.)
- **Degree of protection:** IP20
- **Ambient temperature:** 5 to 35 °C
- **Dimensions (W x H x D):** b55 x 55 x 23.5 mm
- **Including frame:** 86 x 86 x 25 mm
- **Weight:** 65 g (including batteries)
- **Radio frequency band:** 868.0 – 868.6 MHz 869.4 – 869.65 MHz
- **Maximum radiated power:** 10 dBm
- **Receiver category:** SRD category 2
- **Typ. open area RF range:** 180 m
- **Duty cycle:** < 1 % per h/< 10 % per h
- **Method of operation:** Type 1
- **Degree of pollution:** 2

Subject to technical changes.

Instructions for disposal

| | |
|--|--|
|  | <p>Do not dispose of the device with regular domestic waste Electronic equipment must be disposed of at local collection points for waste electronic equipment in compliance with the Waste Electrical and Electronic Equipment Directive.</p> |
|--|--|

Information about conformity

| | |
|---|---|
|  | <p>The CE sign is a free trading sign addressed exclusively to the authorities and does not include any warranty of any properties.</p> |
|  | <p>For technical support, please contact your retailer.</p> |

Kostenloser Download der Homematic IP App!

Free download of the Homematic IP app!

For iOS



For Android



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Changes may be made without prior notice as a result of technical advances. 150215 (web)

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Documents / Resources

| | |
|---|--|
|  | <p>homematic HMIP-STHD Temperature and Humidity Sensor [pdf] User Guide HMIP-STHD Temperature and Humidity Sensor, HMIP-STHD, Temperature and Humidity Sensor, Humidity Sensor</p> |
|---|--|

References

- [e Start - eQ-3](#)
- [e Startseite - eQ-3](#)