



**Installation and
Operating Manual (p. 32)**

**Funk-Tür-/Fensterkontakt, optisch
Wireless Door/Window Sensor,
optical**

HM-Sec-SCo

Scope of delivery

Quantity	Item
1 x	HomeMatic Wireless Door/Window Sensor, optical
2 x	Caps (brown/white)
1 x	Double-sided adhesive stripes
2 x	Countersunk head screws 2.2 x 13 mm
1 x	Reflecting sticker (for dark surfaces)
1 x	1.5 V LR03/micro/AAA battery
1 x	Operating manual

1st English edition 06/2014

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Changes may be made without prior notice as a result of technical advances.

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1 Information about this manual

Read this manual carefully before beginning operation with your HomeMatic 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 the operating manual as well.

Symbols used:



Attention!

This indicates a hazard.



Note. This section contains important additional information.



Note. This section contains additional important information about using the device in connection with the HomeMatic Central Control Unit.

2 Hazard information



Do not open the device. It does not contain any parts that can be maintained by the user. In the event of an error, please return the device to our service department.



For safety and licensing reasons (CE), unauthorized change and/or modification of the product is not permitted.



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.



The device is not a toy; do not allow children to play with it. Do not leave packaging material lying around. Plastic films/bags, pieces of polystyrene, etc. can be dangerous in the hands of a child.



We do not assume any liability for damage to property or personal injury caused by improper use or the failure to observe the safety instructions. In such cases any claim under guarantee is extinguished! For consequential damages, we assume no liability!



This device operates using non-visible infra-red light. Please keep a minimum distance of 20 cm between the device and your eyes!

3 General information about the HomeMatic system

This device is part of the HomeMatic home control system and works with the bidirectional BidCoS® wireless protocol. All devices are delivered in a standard configuration. The functionality of the device can also be configured with a programming device and software. The additional functions that can be made available in this way and the supplementary functions provided by the HomeMatic system when it is combined with other components are described in the HomeMatic WebUI Manual. All current technical documents and updates are provided at www.homematic.com.

4 Function and device overview

The HomeMatic Wireless Door/Window Sensor, optical detects open and closed windows and doors with an infra-red sensor (reflection coupler) and transmits the current status via radio signal to other HomeMatic devices or the HomeMatic Central Control Unit. Even while being out and about you can keep a close eye to your windows and doors.

The device offers different application options and can be used e.g. with a HomeMatic Wireless Radiator Thermostat for regulation of the room temperature during ventilation.

Thanks to the two different caps, the colour of the device adapts to the door/window frames. Furthermore, the door/window sensor can be easily mounted thanks to the supplied adhesive stripes or screws.

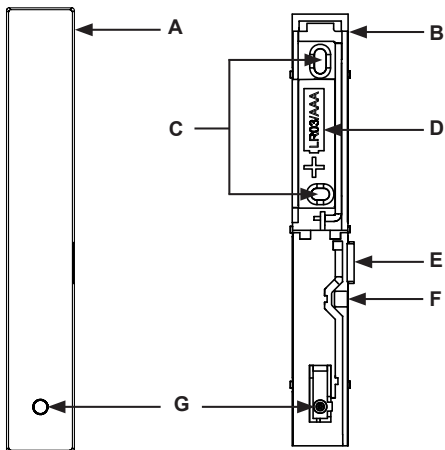
The integrated temper contact sends an alarms e.g. to the WebUI in case the cap is being removed.



Strong extraneous light and contamination of the sensor can lead to functional disorders.



The Wireless Door/Window Sensor (HM-Sec-SCo) is not compatible with the HomeMatic Wireless Alarm Central Unit (HM-Sec-Cen).



- (A) Cap
- (B) Electronic unit
- (C) Screw holes
- (D) Battery compartment
- (E) Infra-red sensor (reflection coupler)
- (F) Tamper contact
- (G) Device LED and teach-in button

5 Start-up

5.1 Mounting



Please read this entire section before starting to carry out the mounting procedure.
Do not yet place the cap!

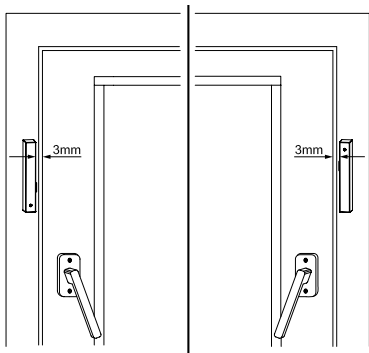
5.1.1 Selecting a suitable mounting location

- Select a door or window for mounting the door/window sensor.
- Fasten the door/window sensor on the side of the door/window where the handle is located, in the upper third of the door/window frame (see „A„5.1.2 *Adhesive stripe or screw mounting*“ on page 40).
- The infra-red sensor (**E**) must point into the direction of the door/window casement (see following figure).



The ideal spacing between the housing edge of the door/window sensor and door/window casement should be 3 mm (see following figure).

- If the door/window handle is located on the right side you will have to turn around the door/window sensor so that the infra-red sensor points into the direction of the door/window casement also on this side (see following figure).



If the door/window casement is too small the device can not be mounted.



For poorly reflecting surfaces (e.g. dark door/window frames) the supplied reflecting sticker has to be fixed to the door/window casement on the opposite of the infra-red sensor.

5.1.2 Adhesive stripe or screw mounting

You can fix the door/window sensor by the supplied

- double-sided adhesive stripe or
- countersunk head screws.

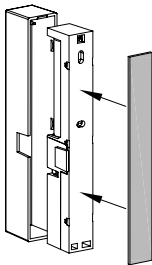
Adhesive stripe mounting

For mounting the door/window sensor by the **adhesive stripe**, please proceed as follows:

- Attach the double-sided adhesive stripe to the back of the electronic unit (**B**) and press the electronic unit onto the desired position of the window frame.



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.



Screw mounting



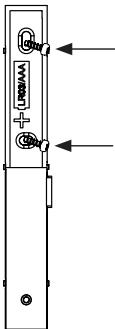
Using screws will damage the door and/or window. For those living in rented accommodation, this could lead to a landlord making a claim for compensation or holding back a tenant's deposit.

For mounting the door/window sensor by **screws**, please proceed as follows:

- Use a pen to mark the bore holes (**C**) on the door/window frame.
- If you are working with hard surfaces you should pre-drill the holes marked using a 1.5 mm drill (not necessary for soft surfaces).

Use the countersunk head screws supplied to fasten the door/window sensor.

- Place the electronic unit (**B**) to the desired mounting location and turn both countersunk head screws into the bore holes (**C**).



5.2 Inserting and replacing battery



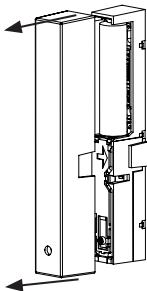
Please read this entire section before inserting or replacing the battery.



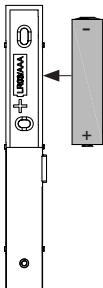
Please pay attention to the flashing signals of the device LED while inserting the battery (see „6.4 Error messages and information indicated by the device LED“ on page 53).

5.3 Inserting battery

- Pull the cap (**A**) off the electronic unit (**B**). Therefore, gently squeeze the cap from above and below with your index finger and thumb. You will find the battery compartment (**D**) in the electronic unit.



- Place the supplied 1.5 V LR03/micro/AAA battery into the battery compartment (**D**), using the polarity markings to ensure the polarity is correct.



- Please pay attention to the flashing signals of the device LED while inserting the battery (see „5.3.2 *Response once the battery has been inserted*“ on page 45).
- Put the cap (**A**) back to the electronic unit.

5.3.1 Changing battery



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.



Used batteries should not be disposed of with regular domestic waste! Instead, take them to your local battery disposal point.

If the device being controlled does not respond when a signal is sent or if the flashing code indicating an empty battery appears (5x red flashes), follow the instructions of the previous section to replace the old battery with one new of type LR03/micro/AAA. You must observe the correct battery polarity.

5.3.2 Response once the battery has been inserted

Once the battery has been inserted, the sensor will first perform a self-test, which will take about two seconds. Initialisation is carried out. The LED test display will indicate that initialisation is complete: red, green and orange for half a second each.



If an error occurs, this is indicated by the LED flashing red (see „5.3.2 Response once the battery has been inserted“ on page 45).

The transmitter then sends a status message to the CCU, which is indicated by the device LED lighting up orange. If the sensors have been taught-in, the LED will then flash green or red to indicate whether or not the message has been received.

5.4 Teaching-in



Please read this entire section before starting the teach-in procedure!

To integrate the door/window sensor into your HomeMatic system and enable it to communicate with other HomeMatic devices (e.h. HomeMatic Radiator Thermostat), you must teach it in first. You can teach-in the door/window sensor directly to other HomeMatic devices or to the HomeMatic Central Control Unit

5.4.1 Teaching-in directly in to HomeMatic devices

If you would like to teach-in the door/window sensor to one or more HomeMatic devices, you must put the devices to be linked into teach-in mode and select the required teach-in channel. To do this, proceed as follows:



During teach-in, please make sure you maintain a distance of at least 50 cm between the devices.

Activate the teach-in mode of your door/window sensor.

- To activate the teach-in mode of your door/window sensor, briefly press the teach-in button (**G**) of your door/window sensor with a pointed object. The device LED flashes orange.



To exit teach-in mode, press the teach-in button (**G**) again. The device LED lights up red.



- Now put the device in to which you wish to teach-in the door/window sensor into teach-in mode. Please follow the relevant operating manual instructions of the corresponding device.

The device LED lights up green to indicate that teaching-in has been successful.



If no teach-in operations are carried out, teach-in mode is exited automatically after 20 seconds. If other devices are also in teach-in mode, they will be taught-in.



If the sensor has already been taught-in to a central control unit, it is blocked for direct teach-in to other devices and the device LED lights up red for 2 seconds.

5.4.2 Teaching-in to a HomeMatic Central Control Unit

Your device can be conveniently

- controlled and configured,
- connected directly to other devices or
- used in central control unit programs

by using the HomeMatic software "WebUI". Therefore, your door/window sensor has to be taught-in to the HomeMatic Central Control Unit first. New devices are taught-in to the central control unit via the HomeMatic „WebUI“.



A soon as a component has been taught-in to a central control unit, it can only be connected to other components via this unit.



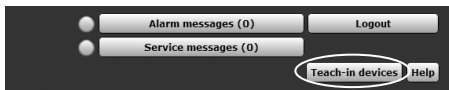
Each component can only be taught-in to one CCU.



During teach-in, please make sure you maintain a distance of at least 50 cm between the HomeMatic devices and the central control unit.

To teach-in your device to the central control unit, proceed as follows:

- Open the "WebUI" user interface in your browser.
- Click the "Teach-in devices" button on the right-hand side of the screen.



Time: 14:02
 Date: 16.09.2013
 Sunrise: 06:49
 Sunset: 19:12
 Current firmware version: 2.5.2
 Update: Firmware 2.5.4 is available
 Login: No password set

- To activate teach-in mode, click "Start teach-in mode".

Teach-in devices		
BidCoS-RF (Radio)	BidCoS-RF - Variant 1: Direct teaching-in Teach-in mode not active Start teach-in mode To activate teach-in mode, click "Start teach-in mode". Teach-in mode remains activated for 60 seconds. Meanwhile, please activate the teach-in mode of the HomeMatic device you want to teach-in as well. The remaining time for teaching-in will be displayed. You will find further information in the operating manual of the corresponding devices.	BidCoS-RF - Variant 2: Teaching-in with serial number Serial number: <input type="text"/> Teach-in device Please enter the serial number and click on the button "Teach-in device". Please note: Not every BidCoS-RF device does support teaching-in via serial number.
	BidCoS-Wired BidCoS-Wired - Variant 1: Automatic teaching-in Please start the teach-in mode directly on the device. The device will then be taught-in to the CCU automatically. Further information on the teach-in mode is provided in the respective operating instructions.	BidCoS-Wired - Variant 2: Search devices Search devices Please click on the button "Search devices" The CCU will then automatically teach-in all new HomeMatic Wired devices.

- Teach-in mode remains activated for 60 seconds. An information box shows how much teach-in time remains.
- Meanwhile, activate the teach-in mode of the door/window sensor to teach-in as well. Press the teach-in button (**G**) briefly using a pointed object. The device LED flashes orange.



After a short time, the newly taught-in device will appear in the inbox of your software interface. The button „Inbox (x new devices)“ indicates how many new devices have been taught-in successfully.

- If required, you can teach-in additional devices by repeating the steps described above for each device.
- Now configure the newly taught-in devices in the inbox as described in section „Neu angelegte Geräte konfigurieren“ .

5.5 Configuring newly taught-in devices

Once you have taught-in your door/window sensor to the HomeMatic Central Control Unit, it will be moved to the inbox. Here, you must configure the device and its associated channels in order to make them available

for operating and configuration tasks. Give the device a name and assign it to a room. You can also make individual parameter settings.

Now you can use the „WebUI“ user interface to control your device, configure it, connect it directly to other devices, or use it in central control unit programs. Please refer to the HomeMatic WebUI Manual for more details (you can find this in the „Downloads“ area of the website www.homematic.com).

6 Errors and information indicated by the device LED

6.1 Weak battery

Provided that the voltage value permits it, the door/window 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 battery has been allowed a brief recovery period.

If the voltage drops too far during transmission, the corresponding error code will be displayed once more (see „5.3.2 *Response once the battery has been inserted*“ on page 45).

If the battery is so weak that a reset is triggered several times in succession without any signals being success-

fully transmitted in between, nothing more will be transmitted during subsequent window detections. The LED will only flash red for 0.5 seconds.

6.2 Command not confirmed

If a receiver (at least one in cases where multiple devices have been taught-in) does not confirm a command, the device LED lights up red at the end of the failed transmission process. The error must be solved by the receiver and may be caused by the following:

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

6.3 Duty cycle exceeded

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

During normal operation, the duty cycle is not usually reached. However, repeated and wireless-intensive teach-in 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 one long and one short red flash 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).

6.4 Error messages and information indicated by the device LED

This information applies to operation with and without a central control unit.

Wireless transmission

Flashing code	Meaning
Lighting up orange	Currently transmitting radio signal
Lighting up green	all actuators have confirmed the (most recent) bidirectional command.
Lighting up red	at least one actuator has not confirmed the (most recent) bidirectional command.

Teach-in

Flashing code	Meaning
Slow orange flashing	Sensor in teach-in mode (waiting for teach-in partner or parameterisation)
Fast orange flashing	Teaching-in active
Long green lighting	Teach-in successful
Long red lighting	Teach-in failed

Error messages

Flashing code	Meaning
Five times short red flashes	Battery voltage too low
One long flash, two short flashes, pause (continuous)	Device defective
One long and one short red flash	Duty cycle exceeded (see „6.3 Duty cycle exceeded“ on page 52)

Restore factory settings

Flashing code	Meaning
Slow red flashing	Stage before resetting to factory settings (device is waiting for teach-in button to be pressed and held in order to carry out a reset, or for a short button press to cancel the process)
Fast red flashing	Sensor is being reset to the initial state

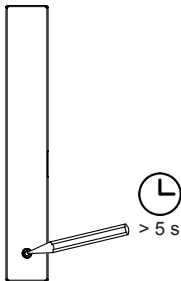
7 Restore factory settings



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 door/window sensor, please proceed as follows:

- Press the teach-in button (**G**) for at least 5 seconds using a pointed object. The LED will start to flash red slowly.



If you want to cancel the reset procedure at this point, you can either press the teach-in button again briefly or wait for 15 seconds. In both cases, the slow red flashing will stop.

- To restore the factory settings of the device, press and hold the teach-in button (**G**) for at least another five seconds. With the button pressed, the LED starts to flash red faster.
- Release the button to complete the reset process.

To confirm that resetting has been carried out, the LED will light up red for approx. 3 seconds.

Possible error messages:

This error can only occur if you have taught-in the sensor to a central control unit.

If the LED does not start to flash when the button has been held down for five seconds, but lights up continuously instead, the sensor cannot be reset. In this case, the system security key differs from the one supplied with the product. Restore the factory settings of the sensor via the WebUI user interface. Please refer to the WebUI Manual for further information (you can find this in the Downloads area of the website www.homematic.com).

8 Maintenance and cleaning

This product 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 product 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.

9 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 Entwicklung GmbH hereby declares that this device complies with the essential requirements and other relevant regulations of Directive 1999/5/EC.

You can find the full declaration of conformity at www.homematic.com.

10 Technical specifications

Device short name:	HM-Sec-SCo
Supply voltage:	1x 1.5 V LR03/micro/AAA
Current consumption:	100 mA (max.)
Battery life:	2 years (typ.)
Degree of protection:	IP20
Ambient temperature:	-20 to +55 °C
Radio frequency:	868.3 MHz
Receiver category:	SRD category 2
Typ. open area RF range:	> 100 m
Duty cycle:	< 1 % per h
Dimensions (W x H x D):	15 x 100 x 18 mm
Weight:	30 g (incl. battery)

Subject to technical changes.

Instructions for disposal:



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.

Information about conformity:



The CE sign is a free trading sign addressed exclusively to the authorities and does not include any warranty of any properties.



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