



Homematic IP HmIP-SMO-A Motion Detector with Brightness Sensor Instruction Manual

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homematic

Mounting instruction and operating manual
Motion Detector with Brightness Sensor – outdoor, anthracite



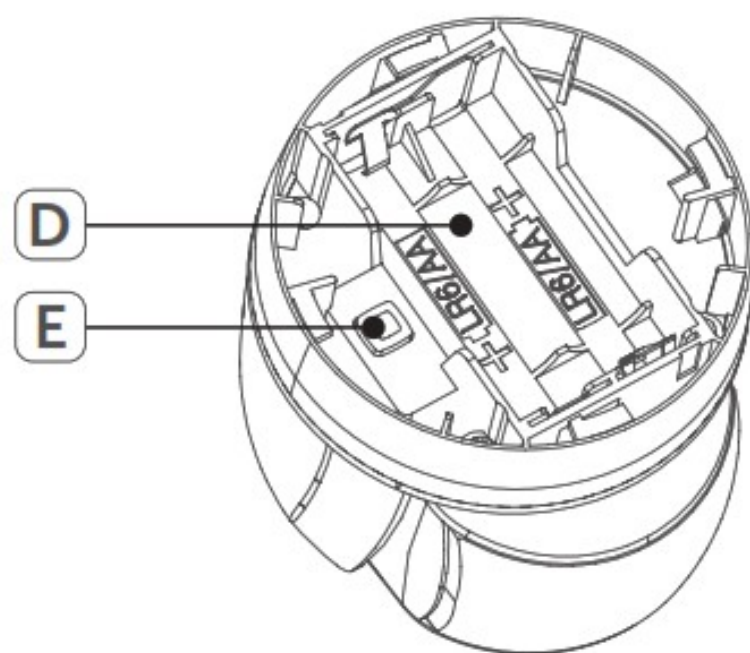
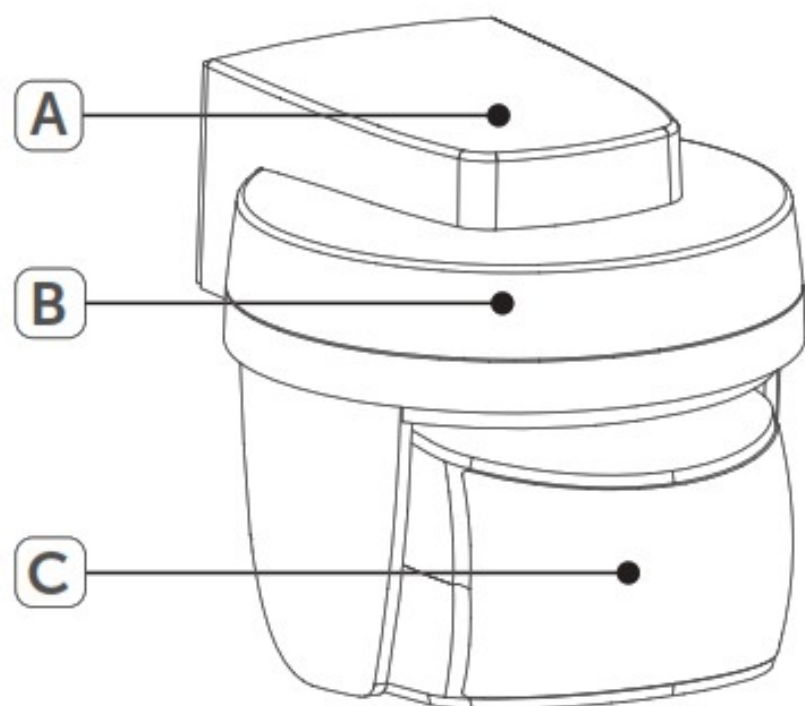
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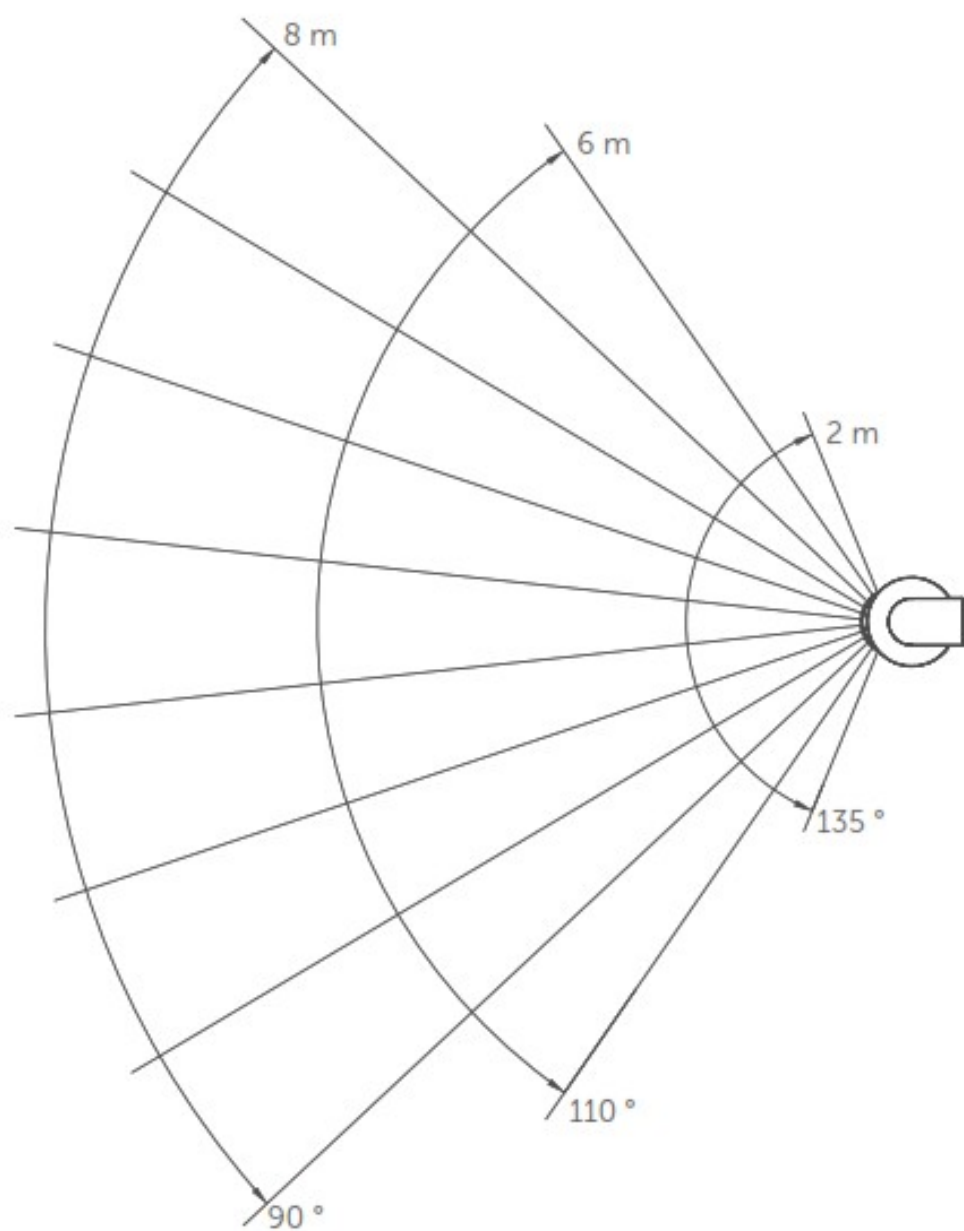
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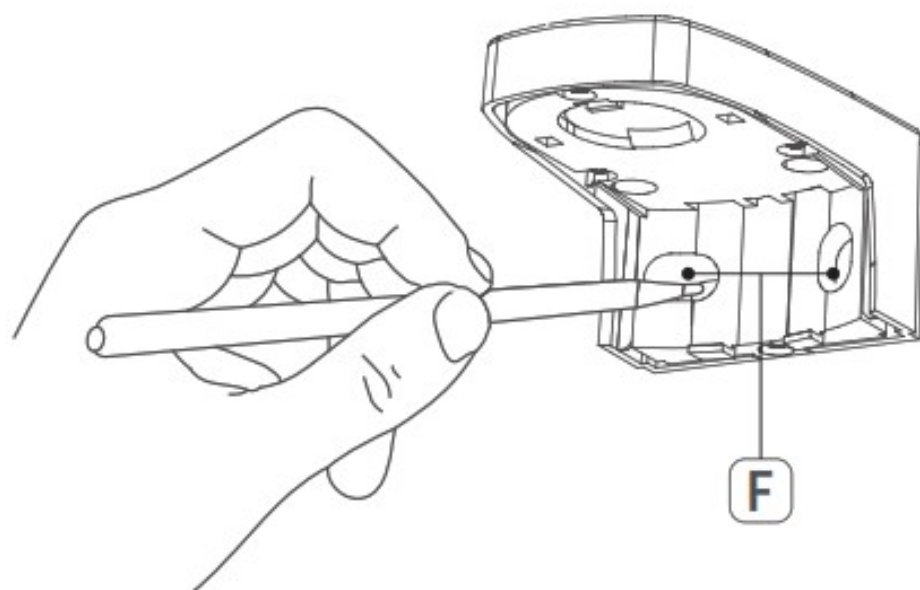
HmIP-SMO-A Motion Detector with Brightness Sensor

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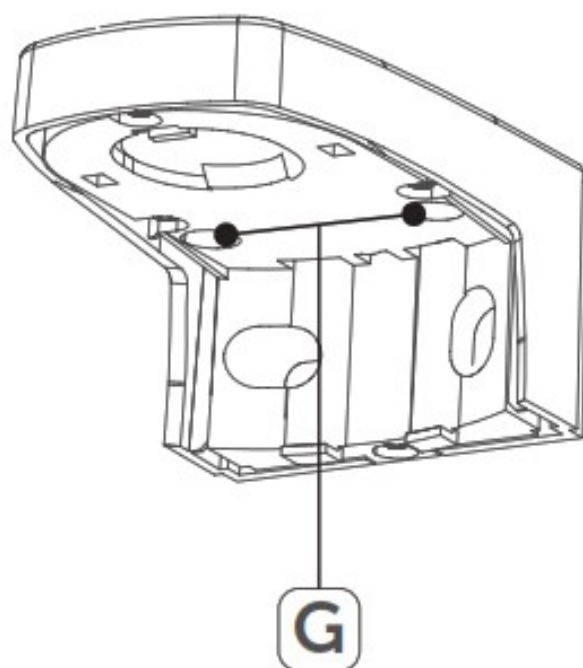


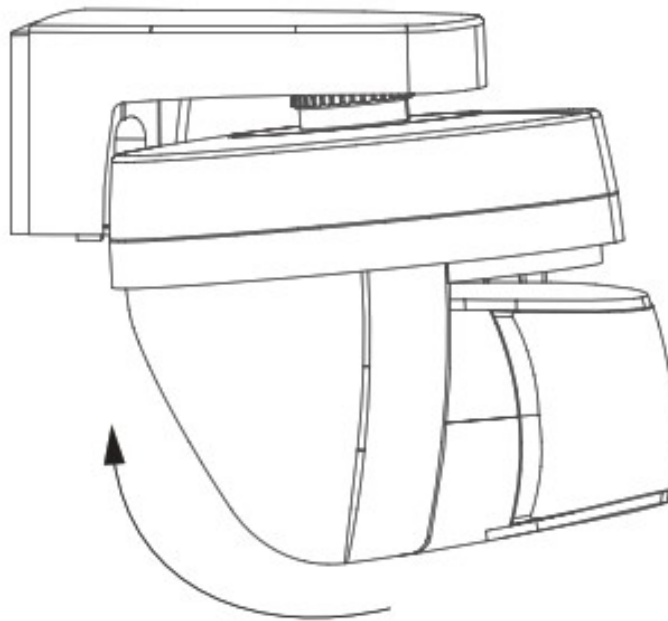


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Package contents

Quantity	Description
1	Hematic IP Motion Detector with Brightness Sensor – outdoor, anthracite
1	Wall mounting bracket
2	Screws
2	Plugs
2	1.5 V LR6/mignon/AA batteries
1	Operating manual

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Information about this manual

Please read this manual carefully before beginning operation with your Hematic IP component. 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



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 have the device checked by an expert.



not permitted.

For safety and licensing reasons (CE), unauthorized change and/or modification of the device is



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 hazard information. In such cases, any claim under warranty is extinguished! For consequential damages, we assume no liability!



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.



The device may only be operated within residential buildings.

Function and device overview

The Hematic IP Motion Detector with Brightness Sensor is designed especially for application in outdoor areas of the house. The device detects movements within its detection range (e.g. a person or animal) as well as light intensity with an integrated brightness sensor.

The high performance motion detector can be used for light control or security applications, for example. In connection with other Homematic IP devices lights can be switched on or an alarm can be triggered if motions are detected. Brief changes in the level of brightness are filtered out. Thus, unintended response of the motion detector can be avoided. Advanced features as for example for controlling light sources or setting the brightness level for triggering are available in connection with the Homematic Central Control Unit CCU3.

With a detection distance of up to 8 meters and a detection angle of 90° (approx.) as well as a 360° angle that can be rotated continuously, the detection range can be optimized to the particular surroundings. The motion detector can be flexibly mounted to walls using the supplied wall mounting bracket.

Device overview (see figure 1):

- (A) wall mounting bracket
- (B) battery compartment cover
- (C) PIR lens
- (D) battery compartment
- (E) system button and device LED

General system information

This device is part of the Homematic IP smart home system and works with the Him radio protocol. All Homematic IP devices 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.

Mounting

General notes on installation

The Homematic IP Motion Detector is equipped with a wall mounting bracket for wall mounting. The lens of the device can be rotated through 360° and also tilted in the wall mount. This means that the detection range can be set to virtually any angle to the wall and the floor and even adjusted after installation. Find a suitable mounting location for the motion detector in the area to be monitored. Follow the instructions in the rest of this document when mounting the device. We recommend a mounting height of approx. 2 m for optimum operation.



The detection lens of the motion detector operates on multiple detection levels, each of which has 12 segments. This means that, with an aperture angle of 90°, a range of up to 8 m can be achieved. The possible detection range is shown in figure 2.



To avoid the detector being triggered inadvertently by pets, for example, keep them away from the detection range if at all possible. If you cannot do this, try to align the detection area accordingly by adjusting the height of the detection lens.



The effectiveness of the detection procedure depends on the temperature difference between the moving object and the relevant background. It is not possible to detect temperature differences through glass.



The detector responds best to movement across the detection range, i.e. past the motion detector. The device is least sensitive to direct movement towards or away from it.



When mounting the motion detector, please ensure that it is not installed directly on or in the vicinity of large metal objects (heaters, aluminium clad walls, etc.), as this would reduce the wireless range.



To reduce the risk of a false alarm being triggered, the motion detector must not be exposed to direct sunlight, car headlights, etc., nor must it be mounted in the vicinity of a heat source (above a heating appliance, for example). The detection ranges must be aligned against a wall or the floor, but not directly on a window, heater or other heat source.

Mounting



When selecting a mounting location and drilling in the vicinity of switches or socket outlets, check for electrical wires and power supply cables.



The mounting location should be protected from the effects of the weather and not exposed to direct sunlight or other sources of heat radiation.

To install the motion detector, proceed as follows:

- Select an appropriate mounting location at a height of between 2.0 and 2.5 m.
- Position the wall mounting bracket (A) with the plane surface upwards at a suitable point on a wall or ceiling.
- Mark through the screw holes (F) where you will make the corresponding bore holes in the wall mounting bracket (A) (see figure 3).
- Drill holes 5 mm wide and 35 mm deep. Insert the plugs (included in the scope of supply).
- For ceiling mounting, drill through the preformed holes in the wall mounting bracket (G) with a 3.2 mm drill (see figure 4).
- Place the wall mounting bracket (A) over the holes. Use the screws supplied to attach it to the wall.
- Then push the motion detector back into the wall mounting bracket (A) until it locks. Insert the device into the designated opening from the front first and then lock it in place at the back (see figure 5).

Start-up



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



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.



You can connect the device either to the Access Point or to the Homematic Central Control Unit CCU3. 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 motion detector 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.

To add the motion detector, please proceed as follows:

- Open the Homematic IP app on your smartphone.
- Select the menu item “Add device”.
- To activate the device, remove the insulation strip from the battery compartment (D) of the motion detector and insert the two supplied LR6/mignon/ AA batteries into the battery compartment (D), using the polarity markings to ensure the polarity is correct.
- The battery compartment (D) is located on the base unit. To open it, you must remove the base unit from the wall mounting bracket (A) (see figure 5).
- Turn the battery compartment cover (B) of the motion detector anti-clockwise and lift it off.



Once the batteries have been inserted, initialization is performed. The device LED (E) lights up orange and then green (or orange and then red if an error occurred).

- Push the cover down onto the battery compartment (D) and turn it clockwise until it locks into place

Pair mode remains activated for 3 minutes.



You can manually start the pair mode for another

3 minutes by pressing the system button (E) briefly (see figure 5).

- 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 device LED (E) lights up green. The device is now ready for use.
- Select the desired solution for your device.
- Allocate the device to a room and give the device a name.



If the device LED (E) lights up red, please try again.



Once the batteries have been inserted, it will take around 30 seconds before the device will be ready for operation. No motion will be detected during this time.



After add has been completed, the motion detector starts its function test (see „7 Function test” on page 39).

Function test



The function test is only activated if the motion detector has already been taught-in. Up to 10 minutes after pairing or inserting the batteries the PIR lens (C) indicates detected movements. Meanwhile, the PIR lens flashes red every second. In this way, the detection range and sensitivity can be checked directly on the device.



In order to start the function test again, remove the batteries and insert them again.

Replacing batteries

If the battery symbol is displayed via the app or an empty battery is indicated on the device (see sec. „9.2 Error codes and flashing sequences” on page 43), replace the used batteries by two new LR6/mignon/AA batteries. You must observe the correct battery polarity.

- The battery compartment (D) is located on the base unit. To open it, you must remove the base unit from the wall mounting bracket (A) (see figure 5).
- Turn the battery compartment cover (B) of the motion detector anti-clockwise and lift it off.
- Insert two new 1.5 V LR6/mignon/AA batteries into the battery compartment (D), observing the correct polarity as marked.
- Push the cover down onto the battery compartment (D) and turn it clockwise until it locks into place.

Once the battery has been inserted, the motion detector will perform a self-test (approx. 2 seconds). Afterwards, initialization is carried out. The LED test display will indicate that initialization is complete by lighting up orange and green (see sec. „9.2 Error codes and flashing sequences” on page 43).



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.

Troubleshooting

Weak batteries

Provided that the voltage value permits it, the motion detector 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 battery voltage is too weak, this will be displayed in the Homematic IP app and directly on the device via the device LED (E) (see „9.2 Error codes and flashing sequences” on page 43). In this case, replace the empty batteries by two new batteries (see „8 Replacing batteries” on page 40).

Error codes and flashing sequences

Flashing code	Meaning	Solution
Fast orange flashing	Configuration data is transmitted	Wait until the transmission is completed.
1x long green lighting	Operation confirmed (pair or restoring factory settings)	You can continue operation.
1x long red lighting	Operation failed (pair or restoring factory settings) or duty cycle limit is reached	Please try again (or see sec. „9.3 Duty cycle - on page 45).
Short orange lighting	Batteries empty	Replace the batteries of the device (see „8 Replacing batteries” on page 40).
Short orange flashing (every 10 s)	Pair mode active (for 3 minutes)	Please enter the last four numbers of the device serial number to confirm (see „6 Start-up” on page 37).
Red flashing every second	Functional test	Please wait until the function test has finished after 10 minutes (see sec. „7 Function test” on page 39).
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.
Long and short orange flashing (alternating)	Device software update (OTAU)	Wait until the update is completed.

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 one long red lighting of the device LED (E), and may manifest itself in the device temporarily working incorrectly. The device starts working correctly again after a short period (max. 1 hour).

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 motion detector, please proceed as follows:

- Open the battery compartment (D). The battery compartment is located on the base unit. To open it, you must remove the base unit from the wall mounting bracket (A) (see figure 5).
- Turn the battery compartment cover (B) of the motion detector anti-clockwise and lift it off.
- Remove the batteries.

- Insert the batteries ensuring that the polarity is correct (see figure 6) while pressing and holding down the system button (E) for 4 seconds at the same time, until the LED quickly starts flashing orange (see figure 5).
- Release the system button again.
- Press and hold down the system button again for 4 seconds (see figure 5), until the device LED lights up green.
- Release the system button to finish the procedure.

The device will perform a restart.

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.

Hereby, eQ-3 AG, Maiburger Str. 29, 26789 Leer/Germany declares that the radio equipment type Homematic IP HmIP-SMO-A is in compliance with 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-SMO-A
Supply voltage:	2x 1.5 V LR6/mignon/AA
Current consumption:	40 mA max.
Battery life:	3 years (typ.)
Degree of protection:	IP44
Ambient temperature:	-20 to +55 °C
Dimensions (W x H x D):	76 x 74 x 90 mm
Weight:	170 g
Radio frequency band:	(including batteries) 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:	230 m
Duty cycle:	< 1 % per h/< 10 % per h
Detection range:	8 m
Detection angle horizontal:	90°

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.



For technical support, please contact your retailer.

Free download of the Homematic IP app!

 	 
https://itunes.apple.com/de/app/homematic-ip/id1012842369?mt=8	https://play.google.com/store/apps/details?id=de.eq3.pscc.android&hl=de

Manufacturer's authorized representative:


eQ-3

eQ-3 AG

Miniburger StraÙe 29 26789 Leer / GERMANY

www.eQ-3.de

Documents / Resources

	<p>Homematic IP HmIP-SMO-A Motion Detector with Brightness Sensor [pdf] Instruction Manual</p> <p>HmIP-SMO-A, HmIP-SMO-A Motion Detector with Brightness Sensor, Motion Detector with Brightness Sensor, Brightness Sensor</p>
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References

- [eStart - eQ-3](#)
- [eStartseite - eQ-3](#)