



homematic HmIP-PSM-2 Pluggable Switch and Meter Instruction Manual

[Home](#) » [homematic](#) » homematic HmIP-PSM-2 Pluggable Switch and Meter Instruction Manual 

homematic

Operating manual
Pluggable Switch and Meter

Contents

- 1 Package contents
- 2 Information about this manual
- 3 Hazard information
- 4 Function and device overview
- 5 General system information
- 6 Start-up
 - 6.1 Installation and teaching-in
- 7 Operation
- 8 Behaviour after power recovery
- 9 Troubleshooting
 - 9.1 Command not confirmed
 - 9.2 Duty cycle
 - 9.3 Automatic disconnection in case of overload
 - 9.4 Error codes and flashing sequences
- 10 Restore factory settings
- 11 Maintenance and cleaning
- 12 General information about radio operation
- 13 Technical specifications
- 14 Documents / Resources
 - 14.1 References
- 15 Related Posts



HmIP-PSM-2

Package contents

Quantity	Description
1	Homematic IP Pluggable Switch and Meter
1	Operating manual

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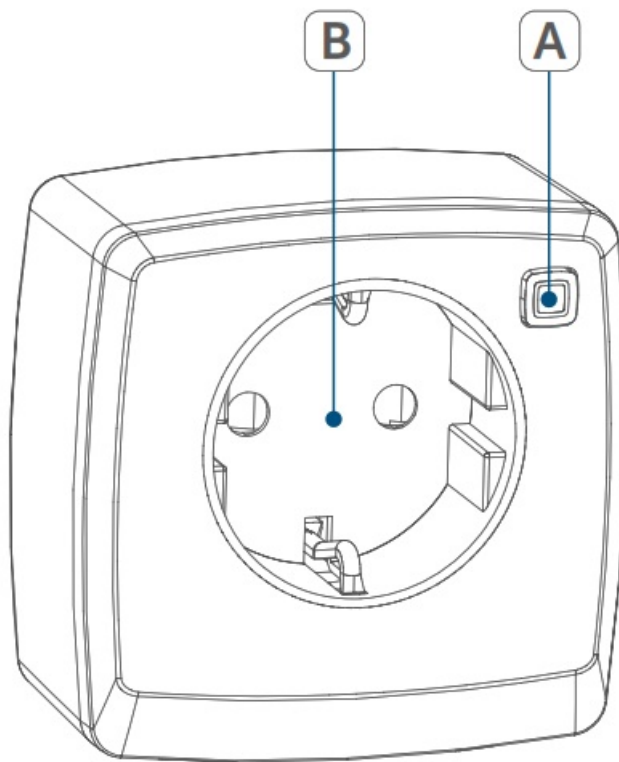
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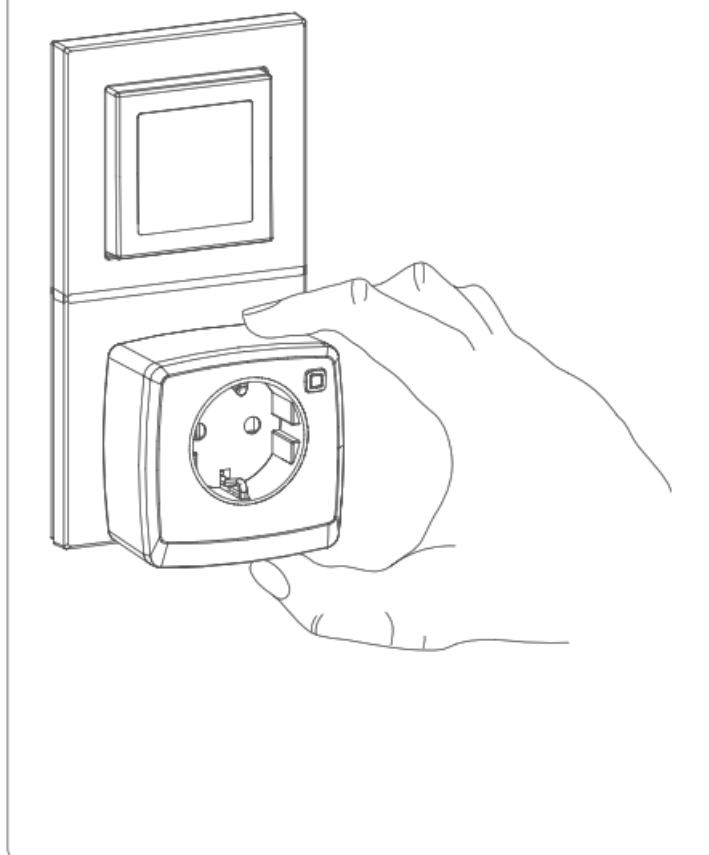
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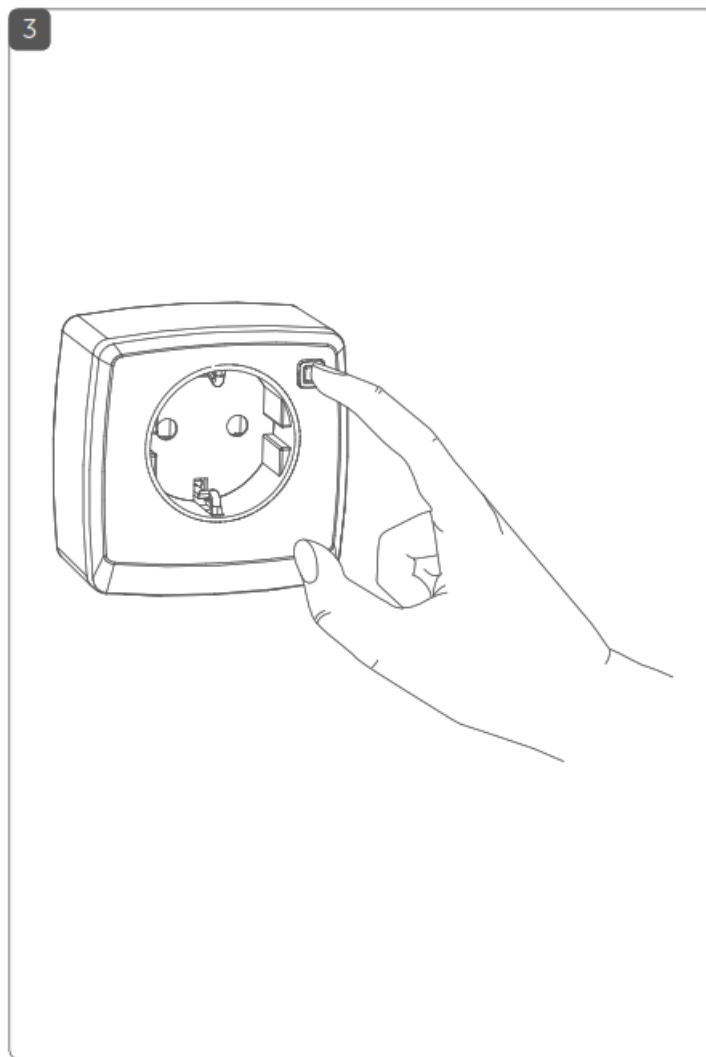
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Version 1.0 (10/2021)

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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.



Note

This section contains important additional information.

Hazard information



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!



Do not open the device. It does not contain any parts that can be maintained by the user. There is a risk of electric shock if the device is opened. In the event of an error, please have the device checked by an expert.



Do not use the device if there are signs of damage to the housing, control elements or connecting sockets, for example, or if it demonstrates a malfunction. If you have any doubts, have the device checked by an expert.



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



The device may only be operated indoors 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.



Please take the technical data (in particular the maximum permissible switching capacity of the relay and the type of load to be connected) into account before connecting a load! Do not exceed the capacity specified for the device. Exceeding this capacity could lead to the destruction of the device, to a fire or to an electrical accident.



The device may only be connected to an easily accessible power socket outlet. In case of danger, disconnect the device from the power socket outlet.



Only use the device with properly installed wall outlets with earth contacts and not with multiple socket outlets or extension cables.



Do not connect devices to the pluggable switch and meter which could cause fire or other types of damage in unattended operation (e.g. irons).



Remove the plug of the connected device from the pluggable switch and meter, whenever you make changes or modifications to the device.



Always lay cables in such a way that they do not become a risk to people and domestic animals.



The device has not been designed to support safety disconnection. The load is not isolated from the mains. Voltage-free only when the plug is pulled out!



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. This also applies to any conversion or modification work. The device is intended for private use only.



Do not connect multiple pluggable switches into one another.



If you use the device in a security application it has to be operated in connection with an UPS (uninterruptible power supply) in order to bridge possible power failure according to EN 50130-4.



Devices with electronic power supply units (e.g. TV or high voltage LED light sources) are no ohmic loads. They can generate inrush currents with more than 100 A. Switching such kind of loads may lead to premature wear of the actuator.



The device may only be operated within residential buildings.

Function and device overview

With the Homematic IP Pluggable Switch and Meter, you can comfortably switch on and off connected loads and meter the corresponding energy consumption as well as voltage, current, and power of the connected devices. The energy consumption of connected loads and their energy costs (€/kWh) are displayed via the Homematic IP app.

The pluggable switch and meter is connected quickly and without any tools. Simply plug in the device to a socket and it is immediately ready for use. Thanks to the compact design, the pluggable switch and meter does not block the surrounding sockets. The device can optionally be used as router to extend the wireless range.

Device overview (see figure 1):

(A) System button (teaching-in, switching connected loads on and off, LED)

(B) Pluggable switch

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 system can be configured comfortably and individually with the Homematic IP smartphone app. Alternatively, you can operate the Homematic IP devices via the Homematic Central Control Unit CCU2/CCU3 or in connection with various partner solutions. The available functions provided by the system in combination with other components are described in the Homematic IP User Guide. All current technical documents and updates are provided at www.homematic-ip.com.

Start-up

Installation and teaching-in



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



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.

To integrate the pluggable switch and meter into your system and enable it to communicate with other Homematic IP devices, you must teach-in the device to your Homematic IP Access Point first.

To teach-in the pluggable switch and meter, please proceed as follows:

- Open the Homematic IP app on your smartphone.
- Select the menu item “Teach-in device”.
- Plug in the pluggable switch and meter into the desired socket (see figure 2).
- Teach-in mode remains activated for 3 minutes.



You can manually start the teach-in mode for another 3 minutes by pressing the system button (A) shortly (see figure 3).

- 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 teach-in is completed.
- If teaching-in was successful, the LED lights up green. The device is now ready for use.

- If the LED lights up red, please try again.
- Select the desired solution for your device.
- In the app, give the device a name and allocate it to a room.

After teaching-in, connected loads can be easily switched on and off or the energy consumption can be measured.

Operation

After teaching-in and installing have been performed, simple operations are available directly on the device.

- Press the system button (A) shortly to switch on and off connected loads.



Improper usage or a defective installation (e.g. low-quality or defective plugs or sockets) can lead to overheating of the pluggable switch and meter. The integrated temperature control automatically switches off the load. The device is protected against overheating and secure operation is ensured. As soon as the temperature reaches a non-critical value, you can switch on the pluggable switch and meter again. Always observe the permitted ambient temperature of the device and, if necessary, have the installation checked for possible error sources by an expert.

Behaviour after power recovery

After the device has been inserted to a socket or after power recovery the pluggable switch and meter performs a self-test/restart (approx. 2 seconds). The device LED flashes orange and green briefly (LED test display). The LED will flash if an error is detected during this test (see „8.4 Error codes and flashing sequences“ on page 38). This is repeated continuously and the device does not perform its function. If the test is completed without errors, the pluggable switch and meter transmits a wireless telegram containing its status information.

Troubleshooting

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 „11 General information about radio operation“ on page 41). 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 teaching 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).

Automatic disconnection in case of overload



If the device is overloaded with load currents greater than 13 A or with loads with more than 3 kW power, after a short delay time, this leads to the device's automatic disconnection. The safety disconnection is reported with an error message via the app or WebUI.

To be able to use the device again, you must remove the overload and unplug the device once from the socket then plug it back in again. Alternatively, you can wait 30 minutes after removing the overload ("restart lock"). The device can then be switched on again. The device is not automatically switched on after the restart lock has expired.

Error codes and flashing sequences

Flashing code	Meaning	Solution
Short orange flashing	Radio transmission/at- tempting to transmit	Please wait, until transmission has been confirmed.
1x long green lighting	Transmission confirmed	You can continue operation.
1x long red lighting	Transmission failed	Please try again (s..8.1 Command not confirmed" on page 36).
Slow orange flashing (every 10 seconds)	Teach-in mode active	Please enter the last four numbers of the device number to confirm (see .5.1 Installation and teaching-in" on page 33).
1x long red lighting	Duty cycle exceeded or transmission failed	Please try again (see „8.1 Command not confirmed“ on page 36 or „8.2 Duty cycle“ on page 37).
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 plugging into a socket)	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 pluggable switch and meter, please proceed as follows:

- Unplug the device from the socket (see figure 2).
- Plug in the device into the socket again while pressing and holding down the system button (A) 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 4s, until the status 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. Enlist the help of an expert to carry out any repairs.

Before cleaning the device, unplug it from the socket outlet. Use a dry linen cloth to clean the device. If the device is particularly dirty, you can slightly dampen the cloth to clean it. Do not use any detergents containing solvents, as they could corrode the plastic housing and label. Make sure that no moisture will ingress into the housing.

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/Ger- many declares that the radio equipment type Homematic IP HmIP-PSM-2 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.homematic-ip.com

Technical specifications

Device short description:	HmIP-PSM-2
Supply voltage:	230 V/50 Hz
Current consumption:	13 A max.
Standby power consumption:	< 0.3 W
Max. switching capacity:	3 kW
Kind of load:	ohmic load, $\cos\phi\geq 0.95$
Life expectancy relay/switching cycle:	40000 (13 A, ohmic load)
Relay:	NO contact, 1-pole, μ contact
Switch type:	independently mounted switch
Operating mode:	S1
Withstand voltage:	2500 V
Protection class:	I
Method of operation:	Type 1
Degree of protection:	IP20
Ambient temperature:	-10 to +35 °C
Degree of pollution:	2
Dimensions (W x H x D):	70 x 70 x 39 mm (not incl. mains plug)
Weight:	154 g
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:	400 m
Duty cycle:	< 1 % per h / < 10 % per h
Temperature of ball pressure test:	125 °C
Temperature of glow wire test:	850 °C

	Measuring range	Resolution	Accuracy
Power	0 to 3 kW	0.01 W	1 % \pm 0.03 W*
Current	0 to 13 A	1 mA	1 % \pm 1 mA*
Voltage	200 to 255 V	0.1 V	0.5 % \pm 0.1 V
Frequency	40 to 60 Hz	0.01 Hz	0.1 % \pm 0.01 Hz


*Frequency range: 2 Hz to 2 kHz

Load type		Relay
Ohmic load		10 A
Incandescent lamp load		1500 W
Self-ballasted lamps (LED/compact fluorescent lamp)		200 W
HV halogen lamps		1500 W
Electronic transformers for NV halogen lamps		1500 W
Iron core transformers for NV halogen lamps		1500 W
Fluorescent lamps (uncompensated)		1500 W
Fluorescent lamps (parallel compensated)		1500 W
Electric radiators and other electric heating systems (ohmic load)		8 A (200.000 switching cycles)
Motor load		2.2 A

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.

Kostenloser Download der Homematic IP App!
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.droid&hl=de>

Bevollmächtigter des Herstellers:
Manufacturer's authorised representative:


eQ-3

eQ-3 AG

Maiburger Straße 29 26789 Leer / GERMANY

www.eQ-3.de

Documents / Resources

	<p>homematic HmIP-PSM-2 Pluggable Switch and Meter [pdf] Instruction Manual HmIP-PSM-2, Pluggable Switch and Meter, Pluggable Switch, Switch and Meter, Switch, HmIP-PSM-2, Meter</p>
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References

- [e Startseite - eQ-3](#)
- [IP Home page | Homematic IP](#)