



## Homematic IP HmIP-FSI16 Switch Actuator with Push Button Input Instruction Manual

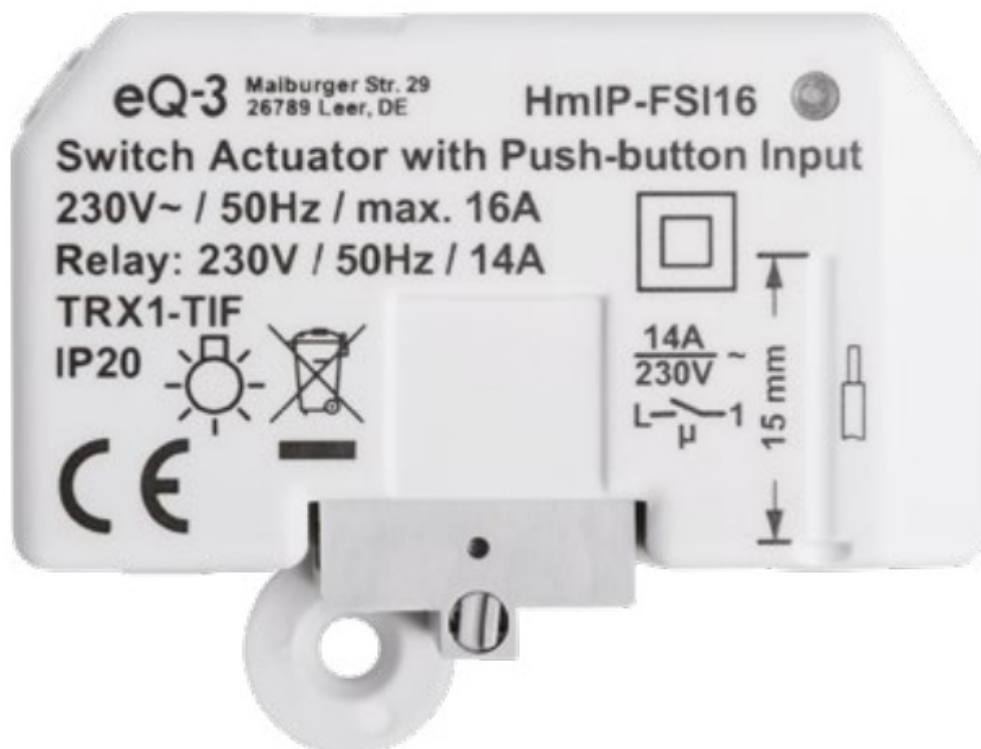
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# homematic

Installation instruction and operating manual

Switch Actuator with Push-button Input – flush-mount



HmIP-FSI16

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## Package contents

Quantity	Description
1	Homematic IP Switch Actuator with Push-button Input – flush-mount
1	User manual

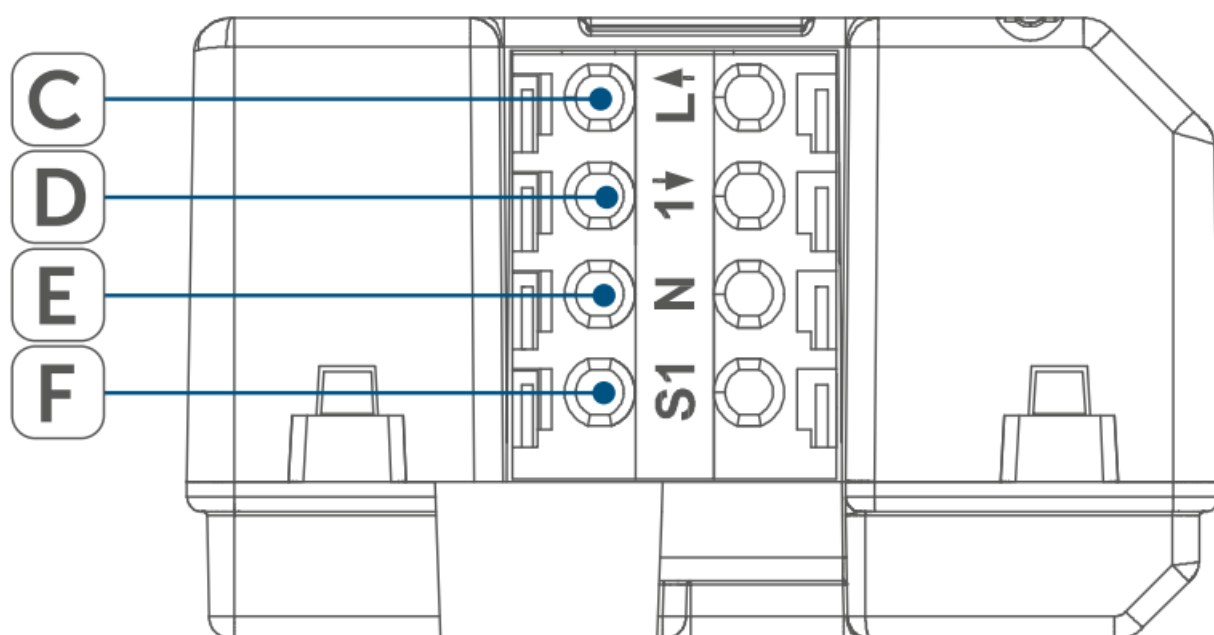
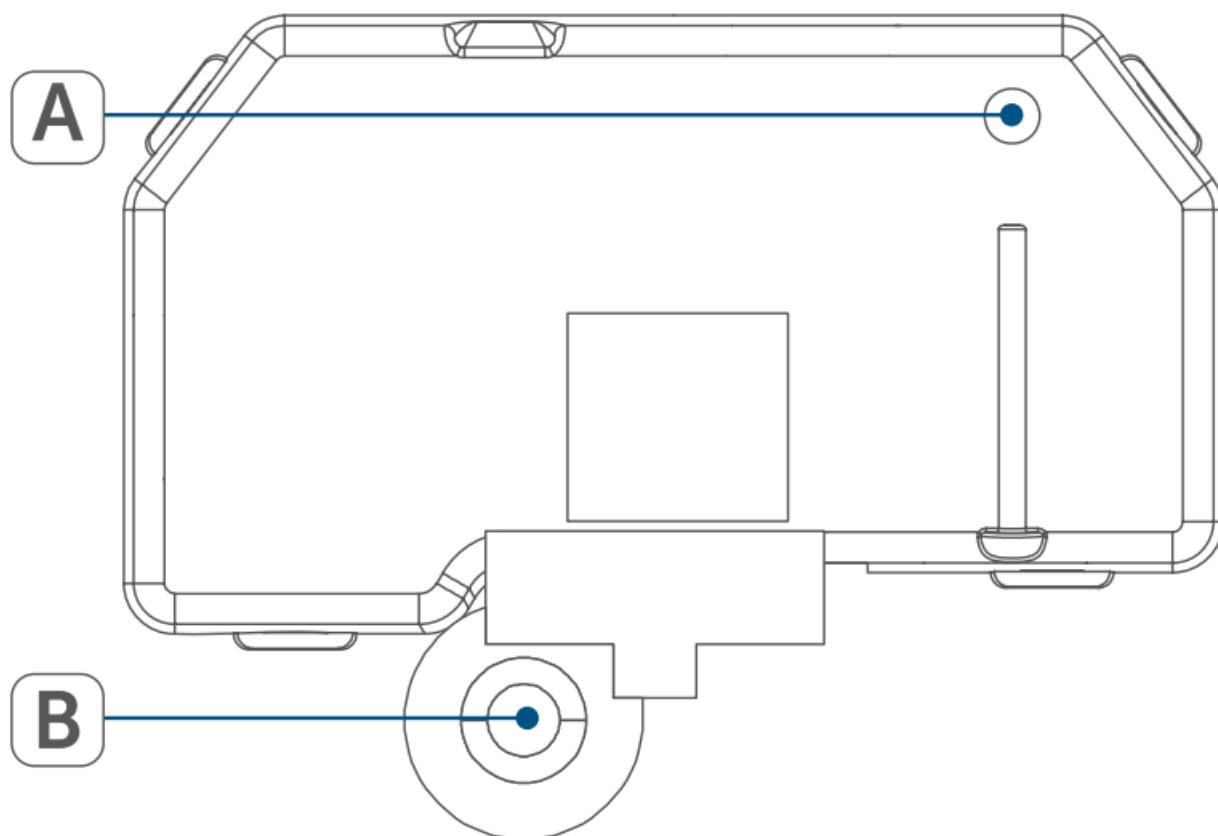
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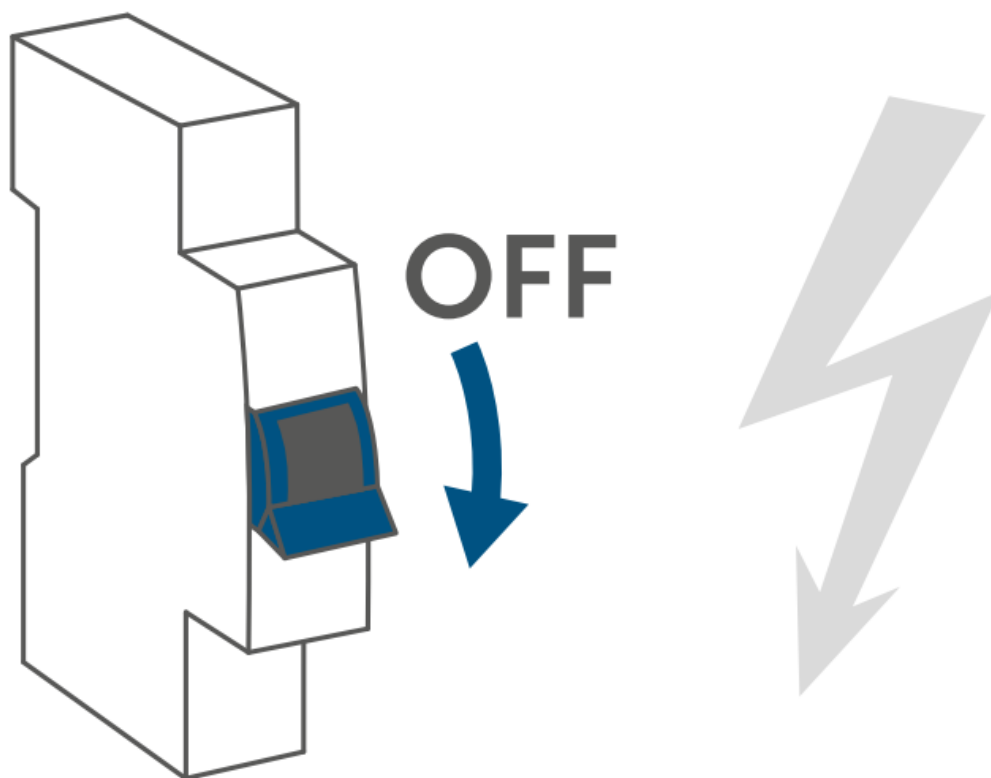
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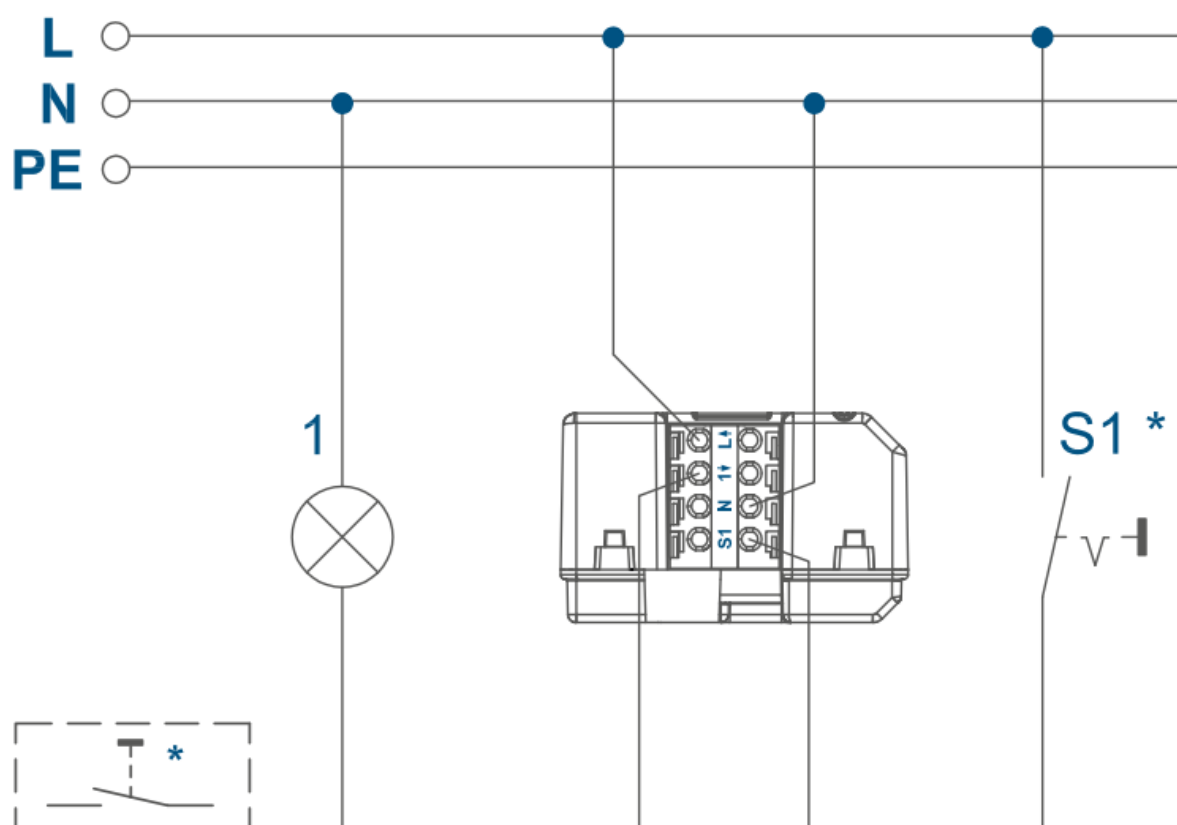
Version 1.1 (06/2022)



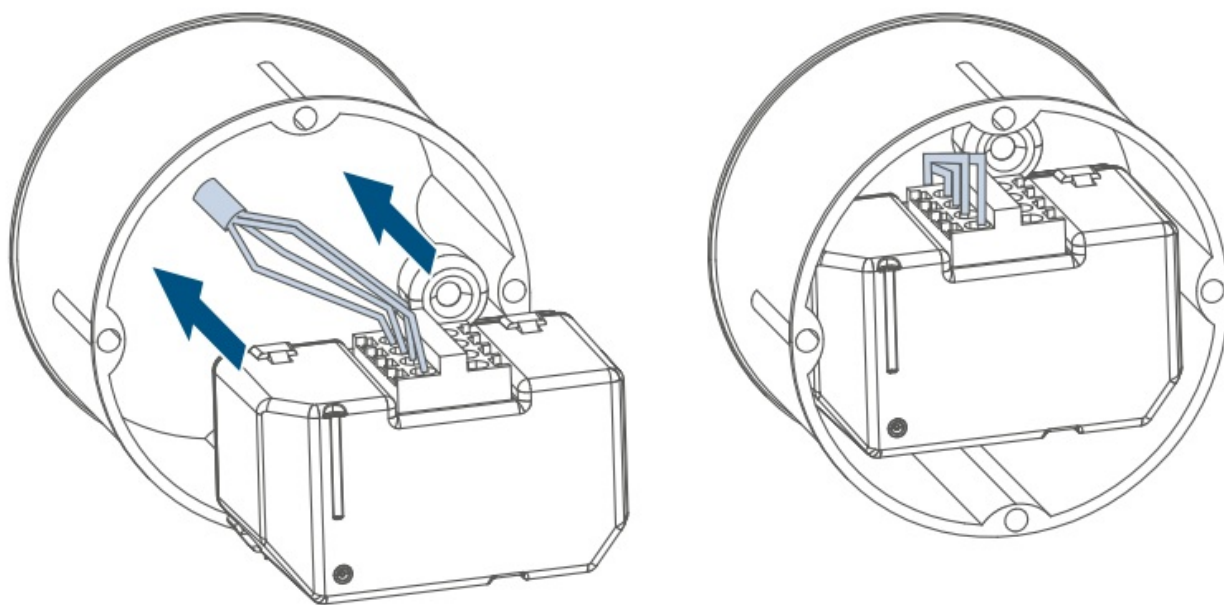
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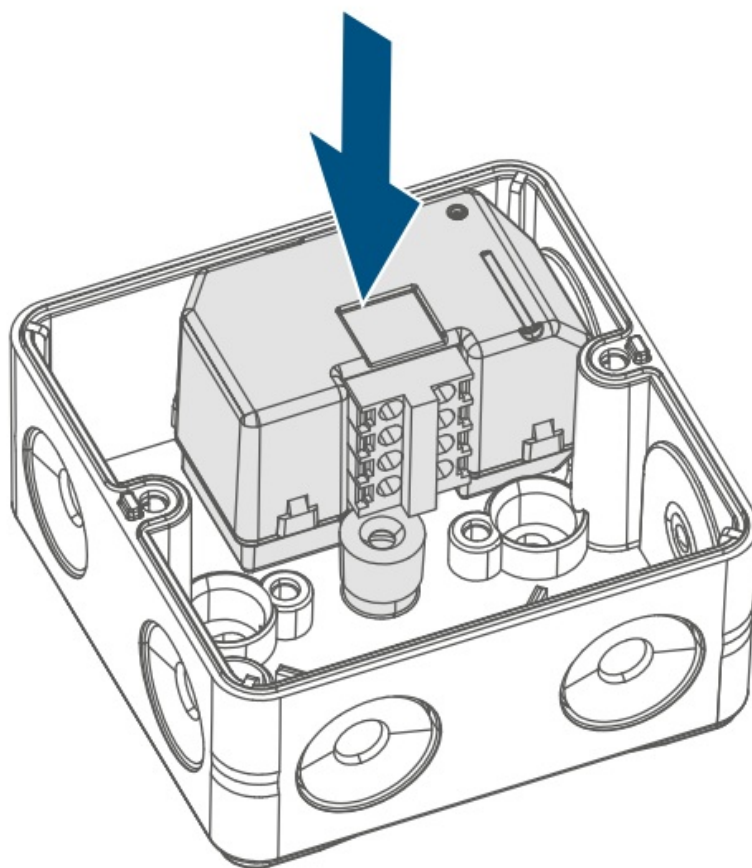
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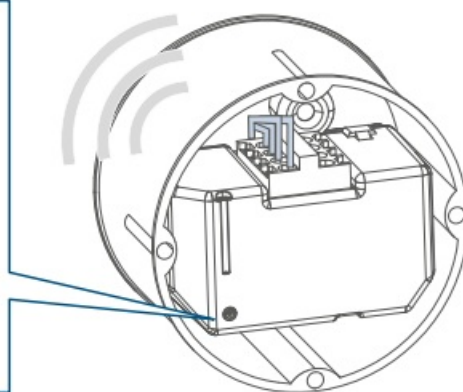
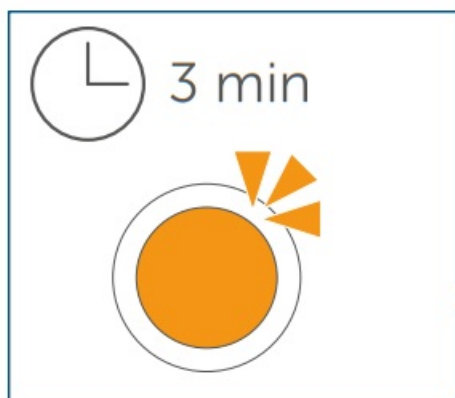
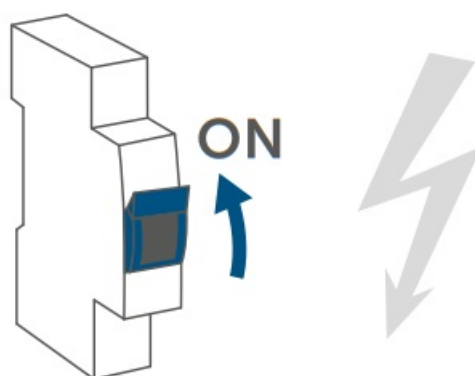
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### Information about this manual

Please read this manual carefully before beginning operation with your Homematic 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, hand over this manual as well.

### Symbols used:

	<b>Attention!</b> This indicates a hazard.
	<b>Please note:</b> This section contains information.

### Hazard information



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. 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.



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



The device may only be operated in a dry and dust-free environment and must be protected from the effects of moisture, vibrations, solar or other methods of heat radiation, and 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 hazard information. In such cases, any claim under warranty is extinguished! For consequential damages, we assume no liability!



The device may only be used for fixed installations. The device must be securely attached within a fixed installation.



The actuator is part of the building installation.



The relevant national standards and directives must be taken into consideration during planning and setup. The device has been designed solely for operation on a 230 V/50 Hz AC supply. Only qualified electricians (to VDE 0100) are permitted to carry out work on the 230 V mains. Applicable accident prevention regulations must be complied with whilst such work is being carried out. To avoid electric shocks from the device, please disconnect the mains voltage (trip the miniature circuit-breaker). Non-compliance with the installation instructions

can cause fire or introduce other hazards.



SELV/PELV power circuits may not be connected to the switching output.



When connecting to the device terminals, take the permissible cables and cable cross-sections into account.



Connected loads require sufficient insulation.



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! All load data relates to ohmic loads. Do not exceed the capacity specified for the device.



Exceeding this capacity could lead to the destruction of the device, fires, or electric shocks.



The circuit to which the device and the load will be connected has to be secured by a cable protection switch in accordance with EN60898-1 (tripping characteristic B or C, max. 16 A rated current, min. 6 kA interrupting rating, energy limiting class 3). Installation regulations according to VDE 0100 and HD382 or 60364 have to be considered. Users must be able to easily access the cable protection switch. This must be marked as disconnecting device for the actuator.



Before the actuator is connected, remove the fuse from the fuse box.



The device has not been designed to support safety disconnection.



Devices with electronic power supply units (e.g. TV or high voltage LED light sources) are not 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.

In such cases, we recommend using switch-on current limiters at the switching outputs.



The device is only intended for use within the residential, business, and commercial areas as well as in small enterprises.



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.

## Function and device overview



The Homematic IP Switch Actuator offers installation in standard flush- and surface-mounting boxes thanks to its compact design. Once installed, the device switches connected loads (e.g. lamps) on and off. Thanks to the high switching capacity, even large loads up to 16 A (for 15 minutes max.) can be switched.

A push-button or switch can be connected via the integrated input to trigger a switching command for the connected load.

The switch actuator also enables convenient and individual control of the connected load via a remote control or the Homematic IP smartphone app.



## Device overview (see figure 1):

- (A) System button (reset button and LED)
- (B) Fixing lug
- (C) Connecting terminal for L  (phase conductor)
- (D) Connecting terminal for 1  (switched phase)
- (E) Connecting terminal for N (neutral conductor)
- (F) Connecting terminal for S1 (push-button or switch input)

## General system information

This device is part of the Homematic IP smart home system and works with the Homematic IP protocol. All devices of the system can be configured comfortably and individually with the user interface of the Central Control Unit CCU3 or flexibly via the Homematic IP smartphone app in connection with the Homematic IP cloud. All available functions provided by the system in combination with other components are described in the Homematic IP Wired Installation Guide. All current technical documents and updates are provided at [www.homematic-ip.com](http://www.homematic-ip.com).

## Start-up

### 5.1 Installation instructions



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



Before installation, please note the device number (SGTIN) labeled on the device as well as the exact installation location in order to make later allocation easier. You can also find the device number on the QR code sticker supplied.



**Please note! Only to be installed by persons with the relevant electro-technical knowledge and experience!\***

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 de-energized; Earth and short circuit; Cover or cordon off neighboring live parts; Select suitable tools, and 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 may only take place in normal commercial switch boxes (device boxes) in accordance with DIN 49073-1 or surface mounting boxes in accordance with DIN 60670-1 (e.g. Abox 025 or Abox 040).



The circuit to which the device and the load will be connected has to be secured by a cable protection switch in accordance with EN60898-1 (tripping characteristic B or C, max. 16 A rated current, min. 6 kA interrupting rating, energy limiting class 3). Installation regulations according to VDE 0100 and HD382 or 60364 have to be considered.



Please observe the hazard information in section “2 Hazard information” on page 31 during installation.

Permitted cable cross-sections for connecting to the switch actuator are:

rigid cable [mm <sup>2</sup> ]	Flexible cable without ferrule [mm <sup>2</sup> ]
1.5 – 2.50	1.5 – 2.50

## 5.2 Installation

You can install the switch actuator

- in a flush-mounting box or
- in a surface-mounting box.

### 5.2.1 Installation with flush-mounting box

To install the device in a flush-mounting box, please proceed as follows:

- Switch off the fuse of the power circuit (see figure2).
- Connect the actuator to L (C) and N (E) to obtain a power supply (see fig. 3).
- Route the switched phase (D) to the consumer (see fig. 3).
- Connect an external push-button or switch to connecting terminal S1 (B) (see figure 3).



In the delivery state, the input is configured as “push button”. The switching function can be configured via

the Homematic IP app.

- Fix the actuator to an appropriate flush-mounting box. If required, remove the fixing lug (B) (see figure 4).
- Close the flush-mounting box using an appropriate cover.
- Switch the fuse of the power circuit on again to activate the teach-in mode of the device (see figure 6) (see “5.3 Teaching-in” on page 41).

### 5.2.2 Installation with surface-mounting box

To install the device in a surface-mounting box, proceed as follows:

- Switch off the fuse of the power circuit (see figure 2).
- Connect the actuator to L (C) and N (E) to obtain a power supply (see fig. 3).
- Route the switched phase (D) to the consumer (see fig. 3).
- Connect an external push-button or switch to connecting terminal S1 (B) (see figure 3).



In the delivery state, the input is configured as a “push-button”. The switching function can be configured via the Homematic IP app.

- Fix the actuator to an appropriate surface-mounting box (e.g. Abox 025 or Abox 040) (see figure 3).
- Fix the actuator to the holding mandrel using the fixing lug (B) (see figure 5).
- Close the surface-mounting box using the corresponding cover.
- Switch the fuse of the power circuit on again to activate the teach-in mode of the device (see figure 6) (see “5.3 Teaching-in” on page 41).

## 5.3 Teaching-in



**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 the operation of other Homematic IP devices within your system. For further information, 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 CCU2/CCU3. For detailed information, refer to the Homematic IP User Guide, available for download in the download area of [www.homematic-ip.com](http://www.homematic-ip.com).

To integrate the device into your system and enable it to communicate with other Homematic IP devices, it has to be connected to your Homematic IP Access Point first.

To teach in the device, please proceed as follows:

- Open the Homematic IP app on your smartphone.
- Select the menu item “Teach-in device”.

- After installation, the teach-in mode remains activated for 3 minutes.



If the 3 minutes have expired, disconnect and reconnect the mains voltage to start the teach-in mode again (see figure 6).

- Your device will automatically appear in the Homematic IP app.
- To confirm, enter the last four digits of the device number (SGTIN) in your app or scan the QR code. Therefore, see the sticker supplied or attached to the device.
- Wait until the connection is completed.
- If connecting was successful, the LED (A) lights up green. The device is now ready for use.
- If the LED lights up red, try again.
- Select, in which application (e.g. light control) you would like to use the device.
- In the app, give the device a name and allocate it to a room.

## Troubleshooting

### 6.1 Command not confirmed

If at least one receiver does not confirm a command, the device LED (A) lights up red at the end of the failed transmission process. The failed transmission may be caused by radio interference (see “9 General information about radio operation” on page 47). The failed transmission may also be caused by the following:

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

### 6.2 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 the 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 (A), and may manifest itself in the device temporarily working incorrectly. The device starts working correctly again after a short period (max. 1 hour).

### 6.3 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 or duty cycle limit is reached	Please try again (see sec. <a href="#">“6.1 Command not confirmed” on page 43</a> or <a href="#">“6.2 Duty cycle” on page 43</a> ).
Short orange flashing (every 10 s)	Teach-in mode active	Enter the last four numbers of the device serial number to confirm (see “5.3 Teaching-in” on page 41).
6x long red flashing	Device defective	Have a look at your app for an error message or contact your retailer.

1x orange and 1 x green lighting	Test display	Once the test display has stopped, you can continue.
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## 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 switch actuator, please proceed as follows:

- Press and hold down the system button (A) for at least 4 seconds using a VDE screwdriver until the LED (A) quickly starts flashing orange.
- Release the system button again.
- Press and hold down the system button again for 4 seconds, until the LED lights up green.
- Release the system button to finish the procedure.

The device will perform a restart.

After the restart, you can again integrate your device into your Homematic IP system.

## Maintenance and cleaning



The product does not require any maintenance. Enlist the help of an expert to carry out any repairs.



The mains voltage must be disconnected before the device is removed (trip the miniature circuit breaker). Only qualified electricians (to VDE 0100) are permitted to carry out work on the 230 V mains.

Clean the device using a soft, lint-free cloth that is clean and dry. 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-FSI16 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](http://www.homematic-ip.com)

## **Technical specifications**

Device short name:	HmIP-FSI16
Supply voltage:	230 V/50 Hz
Current consumption:	16 A max.
Power consumption in standby:	0.25 W
Max. switching capacity:	3220 W permanent 3680 W for 15 minutes
Max. switching current:	14 A permanent 16 A for 15 minutes
Relay:	NO contact, 1-pole, $\mu$ contact
Cable type and cross-section:	rigid and flexible cable, 1.5-2.5 mm <sup>2</sup>
Installation:	only in switch boxes (device boxes) in accordance with DIN 49073-1 or junction boxes ( surface-mounting boxes) in accordance with DIN 60670-1
Degree of protection:	IP20
Ambient temperature:	-10 to +55 °C
Dimensions (W x H x D):	54 x 33 x 41 mm
Weight:	49 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:	180 m
Duty cycle:	< 1 % per h/< 10 % per h

Load type		Relay
ohmic load		14 A permanent 16 A for 15 minutes
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 operations maximum

**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, contact your specialist dealer.

Free download of the Homematic IP app!





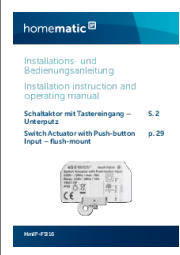
<https://itunes.apple.com/de/app/homematic-ip/id1012842369?mt=8>

Manufacturer's authorised representative:

eQ-3

eQ-3 AG  
Maiburger Straße 29  
26789 Leer / GERMANY  
[www.eQ-3.de](http://www.eQ-3.de)

## Documents / Resources

	<p><a href="#">Homematic IP HmIP-FSI16 Switch Actuator with Push Button Input</a> [pdf] Instruction Manual HmIP-FSI16, Switch Actuator with Push Button Input, HmIP-FSI16 Switch Actuator with Push Button Input</p>
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## References

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