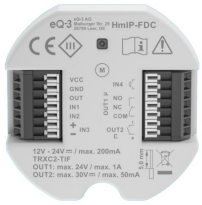
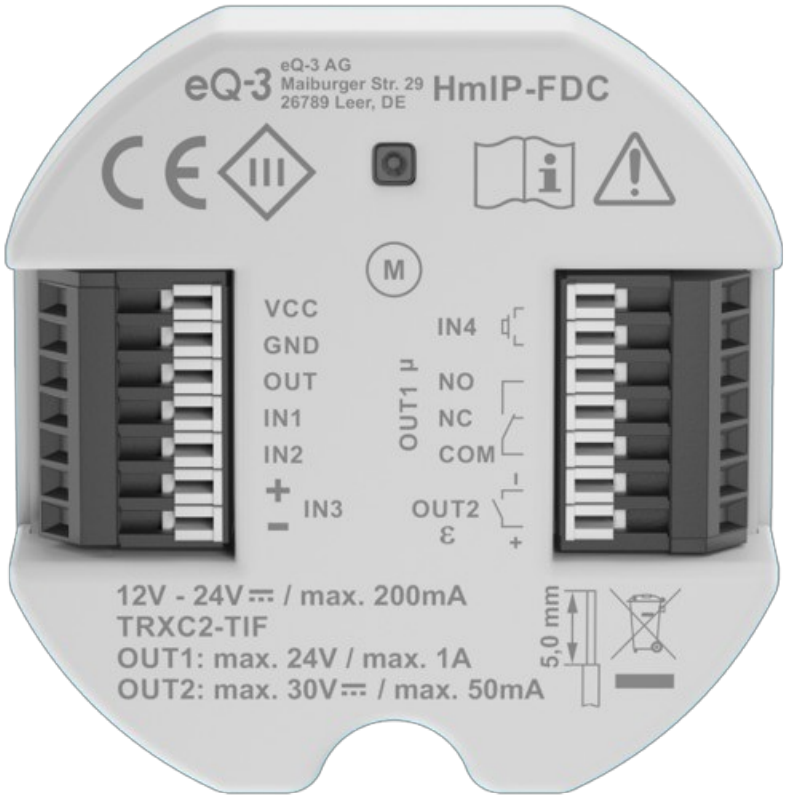


homematic IP HmIP-FDC IP Universal Door Opener Controller Instruction Manual

homematic IP HmIP-FDC IP Universal Door Opener Controller



Contents

Package contents

- 1x Universal Door Opener Controller
- 1x Operating manual

Information about this manual

Please read this manual carefully before operating your 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:

 **Important!** This indicates a hazard.

 **Note.** This section contains important additional information!

Hazard information

 Do not open the device. It does not contain any parts that need to be maintained by the user. In the event of an error, please have the device checked by an expert.

 For safety and licensing reasons (CE), unauthorised changes and/ or modifications of the device are 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.

Function and device overview

The Homematic IP Universal Door Opener Controller is a device for controlling an existing electric door opener and is designed for integration into installations with permanently installed electric door openers in (house) entrance doors. When using the HmIPFDC, the electric door opener can be switched directly. The power supply required for the door opener must be provided by the customer.
The HmIP-FDC is controlled via four inputs that can be used for different purposes. The door status (open/ closed or locked/unlocked) can be detected and switched between day/ night mode using a button. It is also possible to output an opening pulse at the touch of a button. There are two switching outputs for controlling the electric door opener. The changeover contact is used to switch between day/ night mode. The open collector output sends the switching pulse to the door opener.

Device overview:

(**A**) System button (pairing button/LED)
(**B**) Power supply 12 – 24 VDC
(**C**) Output terminals 12 – 24 VDC
(**D**) Input terminals of contact interface 12 – 24 VDC
(**E**) Input terminals of door opener 6 – 24 VAC/DC
(**F**) Input terminals of day/night switch
(**G**) Output terminals of changeover contact
(**H**) Output terminals of open collector

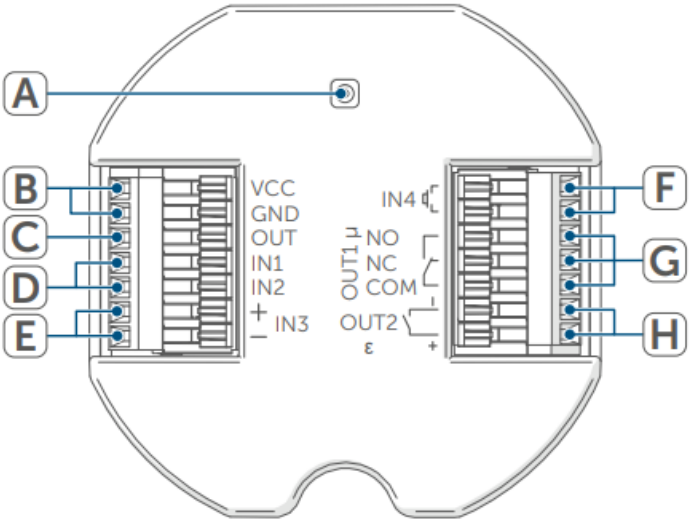


Figure 1

General system information

This device is part of the Homematic IP Smart Home system and communicates via the Homematic IP wireless protocol. All devices in the Homematic IP system can be configured easily and individually with a smartphone using the Homematic IP app. The functions provided by the system in combination with other components are described in the Homematic IP User Guide. All current technical documents and updates can be found at www.homematic-ip.com.

Start-up

Selecting the supply voltage

The power supply for the universal door opener controller is provided by a separate power supply unit (not included in the delivery package). The basic requirements for this power supply unit are:

- Safety extra-low voltage (SELV)
- **Voltage:** 12 – 24 VDC, SELV (max. 40 mA)

Installation instructions

Please read this entire section before starting the pairing procedure.

Before installation, please note the device number (SGTIN) labelled on the device as well as the exact installation location to make subsequent 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 endanger

- your own life,
- 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. from fire. You risk personal liability for personal injury and property damage.

Consult an electrician!

*Specialist knowledge required for installation:

The following specialist knowledge is particularly important during installation:

- The “5 safety rules” to be used: Disconnect from the mains; Safeguard against switching on again; Check that system is deenergised; Earth and short circuit; Cover or cordon off neighbouring live parts;
- Selection of suitable tools, measuring equipment and, if necessary, personal protective 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 connection conditions (classic 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.

Please observe the hazard information in section (see „3 Hazard information“ on page 15) during installation.

⚠ To ensure electrical safety, all terminals are to be connected only with safety extra-low voltage (SELV).

⚠ It is absolutely essential to ensure that all connecting cables are laid so that they are physically separate from cables carrying mains voltage (e.g. in separate cable ducts or wiring conduits).

Permitted cable cross sections for connecting to the device are:

Rigid cable and flexible cable [mm2]
0.08 – 0.5 mm2

Installation

Proceed as follows to install the device in a flush-mounted box:

- Switch off the power supply unit.
- Connect the device according to the connecting diagram.
- Fix the controller to an appropriate flush-mounted box.

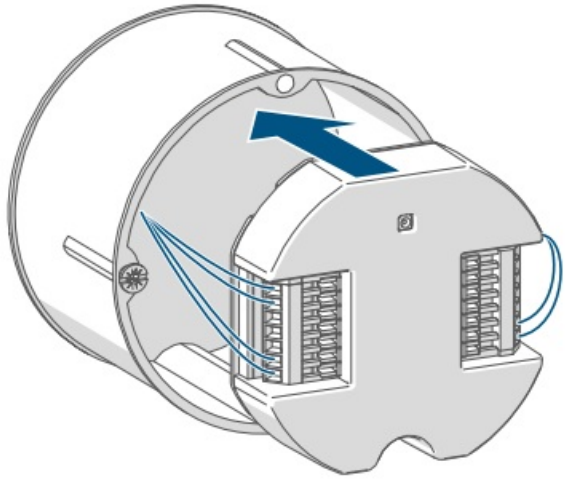


Figure 2

- Supply the device with voltage via the power supply unit provided to activate the device’s pairing mode.

Possible application examples are shown below.

⚠ Please refer to the operating instructions for your electric door opener for wiring instructions.

Door opening via button

A Floating button
B Button with external voltage

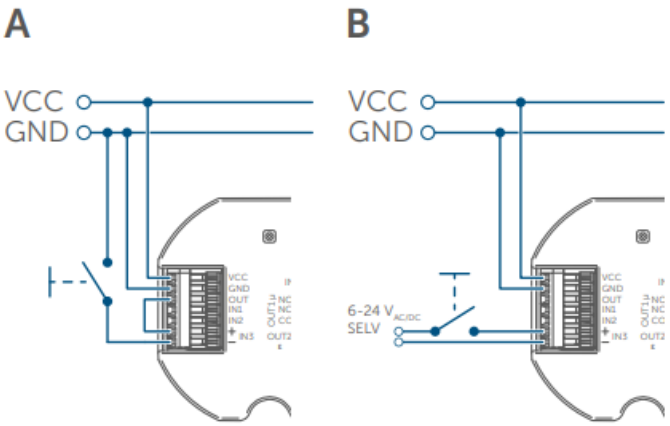


Figure 3

Input IN3 is normally used for the door opening function. Alternatively, other access control systems with pulse outputs can also be used (code lock, RFID reader, wireless receiver).

Day/night switching via button/ switch

Day/night mode switching can also be triggered by a button or switch. The mode is changed automatically when a button is used (toggle function). A switch that specifies the mode by the corresponding position is normally used.

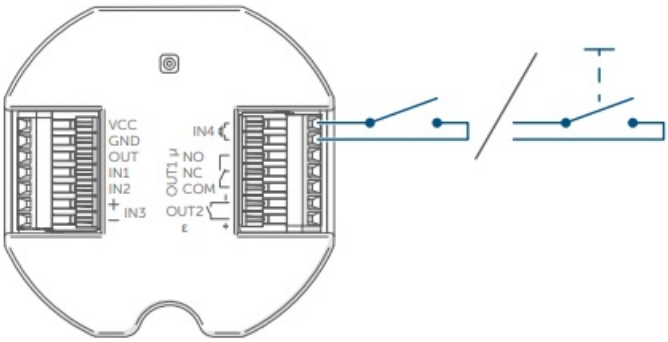


Figure 4

This differs from the standard configuration and must be set separately in the Homematic IP app.

If the day/night mode is changed by time control or remote control, the position of the connected switch may not match the current mode. However, actuating the switch always results in a change to or continuation in the respective mode.

Door status detection

The open/closed door status can be detected with the IN1 input. Input IN2 detects the locked/unlocked status, if installed. The corresponding signals for this can be provided by separate door/ window contacts and connected to the HmIP-FDC.

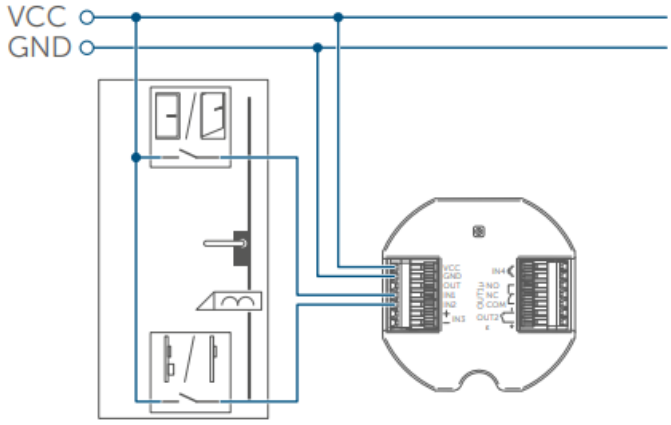


Figure 5

Simple door opener

A Classic electric door opener
B Electric door opener with closed-circuit current function

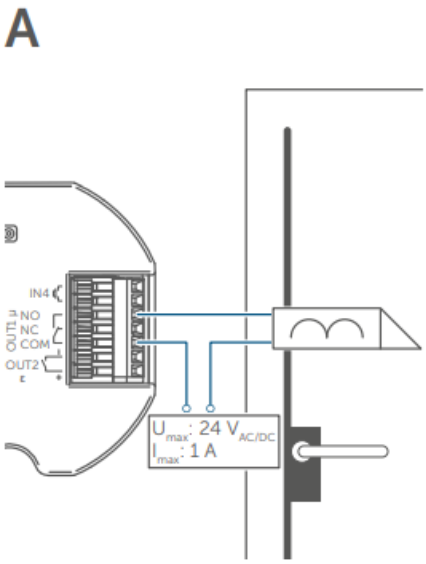


Figure 6

With a suitable voltage source and a corresponding electric door opener, output terminal C of the HmIP-FDC can be used for the supply voltage, if necessary.

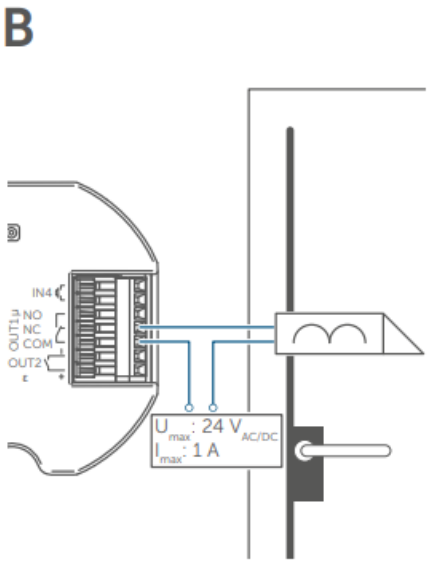


Figure 7

Pairing

Please read this entire section before starting the pairing procedure.

First of all, set up your
Homematic IP Home Control Unit or Homematic IP Access Point using the Homematic IP app to be able to use other Homematic IP devices in the system. Detailed information on this can be found in the operating instructions for the Home Control Unit or Access Point.

Proceed as follows to pair the device:

- Open the Homematic IP app on your smartphone.
- Select the menu item “Pair device”.
- After installation, the pairing mode remains activated for 3 minutes.

You can manually start the pairing mode for another 3 minutes by briefly pressing the system button (A).

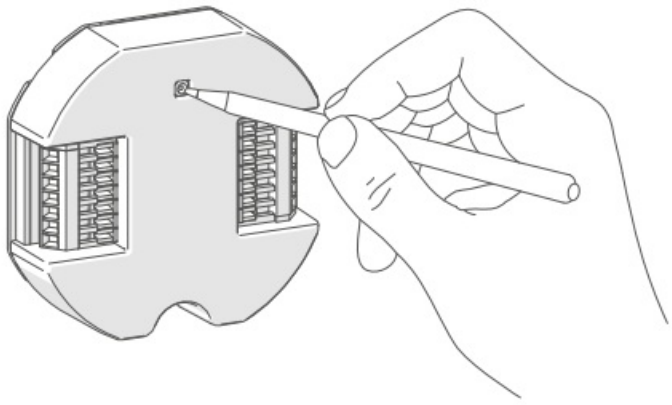


Figure 8

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. The device number can be found on the sticker supplied or attached to the device.
- Wait until pairing is completed.
- If pairing was successful, the LED (A) lights up green. The device is now ready for use.
- If the LED lights up red, please try again.
- In the app, give the device a name and allocate it to a room.
- After installation, close the flush-mounted box with a suitable cover or a masking frame for flush-mounted boxes.

Troubleshooting

Command not confirmed

If at least one receiver does not confirm a command, this may be caused by radio interference (see „11 General information about radio operation“ on page 22). The transmission error will be displayed in the app and may have the following causes:

- 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 ends.
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 pairing 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 slow red flashes 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).

Error codes and flashing sequences

Flashing code	Meaning	Solution
Short orange flashes	Radio transmission/attempting to transmit/data transmission	Wait until the transmission is completed.
1x long green light	Transmission confirmed	You can continue operation.
1x long red light	Transmission failed or duty cycle limit reached	Please try again (see „8.1 Command not confirmed“ on page 20) or (see „8.2 Duty cycle“ on page 20).
Short orange flashes (every 10 s)	Pairing mode active	Enter the last four digits of the device serial number to confirm.
6x long red flashes	Device defective	Please see the display on your app for error messages or contact your retailer.
1x orange and 1x green light (after connecting the power supply)	Test display	You can continue once the test display has stopped.

Restoring factory settings

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

Proceed as follows to restore the factory settings of the device:

- Press and hold down the system button (A) using a pen for 4 seconds until the LED (A) quickly starts flashing orange.
- Release the system button (A) briefly and then hold the system button (A) down again until the orange flashes are replaced by a green light.
- Release the system button (A) again to complete restoring the factory settings.

The device will perform a restart.

Maintenance and cleaning

The device does not require you to carry out any maintenance.
Leave any maintenance or repair to a specialist.

Clean the device using a soft, clean, dry and lint-free cloth. The cloth can be slightly dampened with lukewarm water 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 transmission range within buildings can differ significantly from that available in open space. Besides the transmitting power and the reception characteristics of the receiver, environmental factors such as humidity in the vicinity play an important role, as do on-site structural/screening conditions.

eQ-3 AG, Maiburger Straße 29, 26789 Leer, Germany hereby declares that the radio equipment type Homematic IP HmIP-FDC is compliant with Directive 2014/53/EU. The full text of the EU declaration of conformity can be found at: **www.homematic-ip.com**

Disposal

Instructions for disposal

This symbol means that the device must not be disposed of as house – hold waste, general waste, or in a yellow bin or a yellow bag.
For the protection of health and the environment, you must take the prod – uct and all electronic parts included in the scope of delivery to a municipal collection point for waste electrical and electronic equipment to ensure their correct disposal. Distributors of electrical and electronic equipment must also take back waste equipment free of charge.

By disposing of it separately, you are making a valuable contribution to the reuse, recycling and other methods ofrecovery of old devices.
Please also remember that you, the end user, are responsible for deleting personal data on any waste electrical and electronic equipment before dis – posing of it.

Information about conformity

CE The CE mark is a free trademark that is intended exclusively for the authorities and does not imply any assurance of properties.

For technical support, please contact your retailer.

Technical specifications

Device short description:	HmIP-FDC
Supply voltage:	12 – 24 VDC
Current consumption:	6.5 mA max.
Power consumption in standby:	60 mW
Cable type and cross section, rigid and flexible cable:	0.08 – 0.5 mm2
Installation:	Only in normal commercial switch boxes (device boxes) in accordance with DIN 49073-1
1x input channel for floating button/switch (F):	Day/night
1x input channel for NO contact (E): Open/close Input voltage:	6 – 24 VAC/DC, SELV
2x input channels for contact interfaces (D):	External door/window contacts or glass breakage detectors
Input voltage:	12 – 24 VDC, SELV
Floating open collector contact (H):	Door opener open/closed
Max. switching voltage:	30 VDC, SELV
Max. switching current:	0.05 A*
Floating changeover contact (G):	Door opener day/night
Max. switching voltage:	24 VAC/DC, SELV
Max. switching current:	1 A*
Protection rating:	IP20
Protection class:	III
Pollution degree:	2
Ambient temperature:	-5 to +40°C
Dimensions (W x H x D):	52 x 52 x 15 mm
Weight:	28 g
Radio frequency band:	868.0 – 868.6 MHz 869.4 – 869.65 MHz
Max. radio transmission power:	10 dBm
Receiver category:	SRD category 2
Typical range in open space:	200 m
Duty cycle:	< 1% per h/< 10% per h

*To ensure electrical safety, the power supply unit feeding the switching outputs (door opener/bell transformer) must be a safety extra-low voltage with a maximum load current limited to 5 A.

Subject to technical modifications.

Download on the App Store	GET IT ON Google Play

CUSTOMER SUPPORT

Manufacturer’s authorised representative:
eQ-3 AG
Maiburger Straße 29
26789 Leer / GERMANY
www.eQ-3.de

Documents / Resources

	homematic IP HmIP-FDC IP Universal Door Opener Controller [pdf] Instruction Manual HmIP-FDC IP Universal Door Opener Controller, HmIP-FDC, IP Universal Door Opener Controller, Door Opener Controller, Opener Controller, Controller

References

- Home page | Homematic IP
- User Manual