KNX

GIRA

Operating instructions

RF/TP media coupler/repeater
Order no. 5110 00

32591122 / 10867569 / 14.11.2022

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1 Safety instructions

Electrical devices may only be mounted and connected by electrically skilled persons.

Serious injuries, fire or property damage possible. Please read and follow manual fully.

The radio communication takes place via a non-exclusively available transmission path, and is therefore not suitable for safety-related applications, such as emergency stop and emergency call.

This manual is an integral part of the product, and must remain with the end customer.

2 Device components

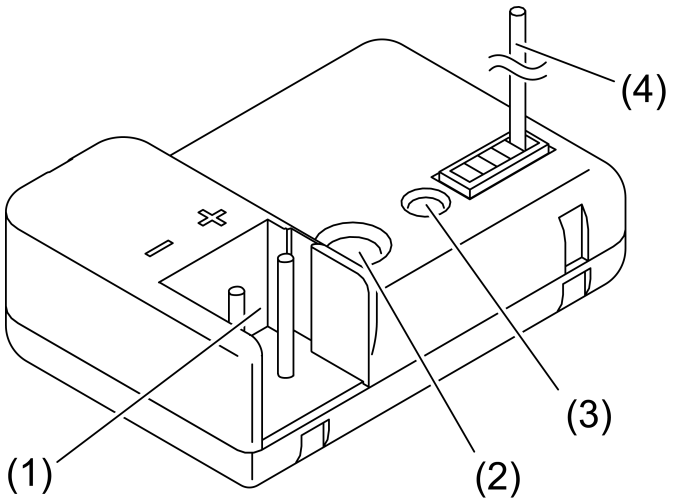

Image 1: Device components

(1) KNX connection (TP)

(2) Programming button

(3) Status LED

Red lit up: Prog. mode

Red flashing quickly: Filter function deactivated

Red flashing slowly: Safe-state mode active

Yellow flashing: telegram traffic

Yellow lit up: Repeater prog. mode (for devices with marking "I04" or higher)

(4) Antenna (RF)

3 Function

System information

This device is a product of the KNX system and complies with the KNX directives. Detailed technical knowledge obtained in KNX training courses is a prerequisite to proper understanding.

The range of a radio system depends on various external circumstances. The range can be optimised by the choice of installation location. The product documentation for this device contains application basics for the KNX radio system.

Planning, installation and commissioning are carried out using ETS version 5 or higher. You can find the up-to-date product database, technical descriptions and Declaration of Conformity on our Internet site.

Overview of device versions

Devices with marking "I00": no KNX Data Secure compatibility. Secure commissioning of other devices via media coupler is not possible with this device version.

Devices with marking "I01" or higher: KNX Data Secure compatibility from ETS5.7.3. Secure commissioning of other devices via media coupler is possible without restrictions from this device version. KNX Data Secure offers protection against manipulation in building automation and can be configured in the ETS project. Detailed specialist knowledge is required.

Devices with marking "I04" or higher: use as segment coupler possible for commissioning with ETS version 6.0.5 or higher.

The devices are update-capable. Firmware updates (e.g. I01 -> I04) can be carried out conveniently using a special ETS application program. See the technical documentation for details.

Simplified Declaration of Conformity

Hereby Gira Giersiepen GmbH & Co. KG declares that the radio system type
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corresponds to the directive 2014/53/EU. You can find the full article number on the device. The complete text of the EU Declaration of Conformity is available under the Internet address: www.gira.de/konformitaet

Intended use

- Connection of KNX radio networks with grid-bound KNX lines
- Increasing radio range in KNX radio networks (repeater operation)
- Mounting in appliance box with dimensions according to DIN 49073

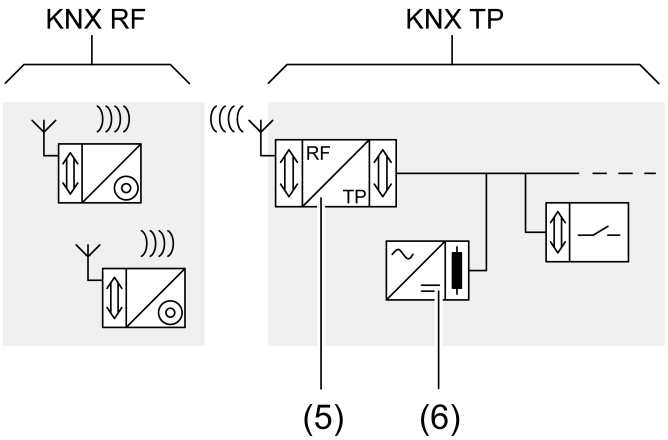

Image 2: Media coupler and RF participant

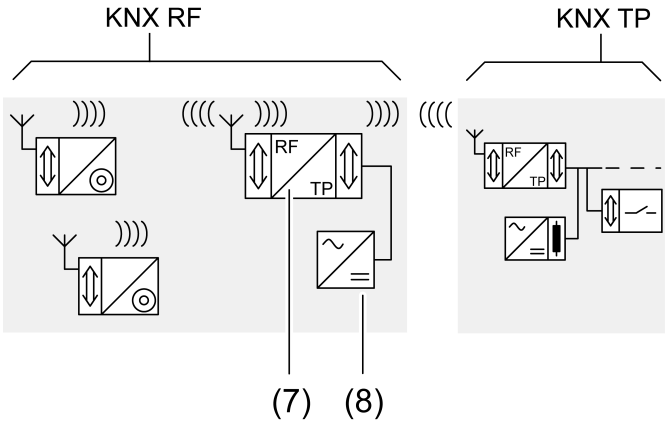

Image 3: Media coupler and RF participant, supplemented by repeater

(5) Media coupler or segment coupler
(6) KNX power supply with choke
(7) Repeater
(8) Power supply

4 Operation as media coupler or segment coupler

Media coupler: The physical address is the address of a line or a backbone coupler **x.y.0** and must match the logical topology of the KNX system.
Segment coupler: The physical address is the address of a normal KNX participant **x.y.z** (z≠0) and must match the logical topology of the KNX system.
Observe the instructions in the technical documentation regarding the address.

Power is supplied via the KNX bus cable.

With operation as a media coupler or segment coupler, the repeater function can also be activated.

5 Operation as RF repeater without routing function

The physical address of the radio repeater is the address of a normal KNX participant **x.y.z** (z≠0) within the address range of the KNX radio system. Observe the instructions in the technical documentation regarding the address.

Power is supplied via a separate power supply (accessory) or via the connection to a KNX line.

Do not use the unchoked 30 V output of a KNX power supply. The media coupler may heat up to an impermissible temperature.

Repeater mode is active after the physical address is assigned. Once this happens, programming via bus line is blocked. Then the device can only be reached by radio. To address the device via the bus line, reset the device to default settings.

6 Information for electrically skilled persons

DANGER!

Mortal danger of electric shock.

Cover up live parts in the installation environment.

6.1 Mounting and electrical connection

Mounting and connecting the device

Mount in flush-mounted or surface appliance boxes.

In outdoor installations: Use appliance box IP55.

- For operation as media coupler/segment coupler: Connect the device to the KNX bus cable via a bus terminal.
- For operation as repeater: Connect the device to a separate power supply or a KNX bus cable via a bus terminal.
- Place the device in the appliance box.
- When laying the antenna, extend the antenna extended as much as possible. If this is not possible, position the antenna behind the device in a circular arrangement.

In the case of blank covers, do not place the antenna behind the metal supporting frame.

Selecting installation location

– To ensure good transmission quality, keep a sufficient distance from any possible sources of interference, e.g. metallic surfaces, microwave ovens, hi-fi and TV systems, ballasts or transformers.

- Do not mount the media coupler near the earth or ground.
- Do not place KNX RF devices in metallic small distribution boards or boxes.
- If several adjacent media couplers are used, place them so their radio ranges either do not overlap at all, or so they can receive each other. Check within a system to see if a media coupler can be configured as a repeater.

Media couplers must be accessible even after mounting.

6.2 Commissioning

Commissioning of media coupler/segment coupler

Device connected, power switched on.

- Press the programming button.
  The status LED lights up red.
- Download the physical address and domain address.
  The status LED goes out.
- Download the filter table and parameters.

Activating the safe-state mode

- Disconnect the device connection terminal.
- Hold down the programming button.
- Reconnect the device connection terminal.
  The device restarts. The status LED briefly lights up red and then yellow.
- Release the programming button as soon as the status LED starts flashing red slowly.

  Safe-state mode is active.

Activating RF repeater mode

Safe-state mode is activated.

- Press programming button again and hold about 2 seconds until status LED lights up yellow.
  The device is in "Repeater prog. mode".
- Release the programming button.
- Commission the device with a physical address **x.y.z** (z≠0).

  The device is in RF repeater mode.

Resetting the device to the factory setting

Safe-state mode is activated.

- Press programming button again and hold about 5 seconds until status LED goes out.
- Release the programming button.

  The status LED lights red briefly and then yellow.

  The device is reset to default setting.

7 Technical data

KNX RF

KNX medium	RF1.R
Commissioning mode	S-mode
Radio frequency	868.0 ... 868.6 MHz
Transmission capacity	max. 20 mW
Transmitting range in free field	typ. 100 m
Receiver category (Data according to EN 300220)	2

KNX TP (media coupler/segment coupler operation)

KNX medium	TP256
Commissioning mode	S-mode
Rated voltage KNX	DC 21 ... 32 V SELV
Current consumption KNX	3.9 ... 5.1 mA

Repeater operation

Rated voltage	DC 24 V SELV

Degree of protection	IP20
Protection class	III
Ambient temperature	-20 ... +45 °C
Storage temperature	-25 ... +55 °C
Transport temperature	-25 ... +70 °C
Relative humidity	10 ... 100 % (no moisture condensation)
Dimensions L×W×H	44x29x16 mm

8 Accessories

Power supply 24 V DC 300 mA	Order no. 1296 00

9 Warranty

The warranty is provided in accordance with statutory requirements via the specialist trade. Please submit or send faulty devices postage paid together with an error description to your responsible salesperson (specialist trade/installation company/electrical specialist trade). They will forward the devices to the Gira Service Center.

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