GIRA

USB data interface
USB data interface insert
Order no. 2014 00
Order no. 2024 00

GIRA

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1 Information on the product

1.1 Product catalogue

Product name:	USB data interface / USB data interface insert
Use:	Interface
Design:	RMD, FM
Order no.	2014 00 / 2024 00

1.2 Function

The device serves as an interface to KNX installations. This allows communication between KNX devices and PC tools.

The communication between PC and KNX system is established via KNX bus line. The connection to the computer (USB 2.0 type A) takes place via a USB port. With the help of the USB data interface, the addressing, programming and diagnostics of the KNX devices can be performed by the commissioning software from version ETS4 or higher. The USB data interface supports KNX long frames from version ETS5 or higher.

The device electronics are supplied fully via the USB interface of the connected PC. For this reason, the USB data interface is not ready for operation unless it is connected to a PC.

The physical address of the USB data interface is solely programmed (ETS) locally via the connected PC. Thus, the USB data interface has neither a programming button nor a programming LED.

Only standard Windows HID drivers that are installed or activated automatically when connecting the device to the PC are required for the device to function. The device can first be accessed by the ETS after successful installation.

1.3 Device components

The USB data interface is available in the RMD and FM designs. The USB data interface has a type B USB socket. There are no controls or indicators on the device.
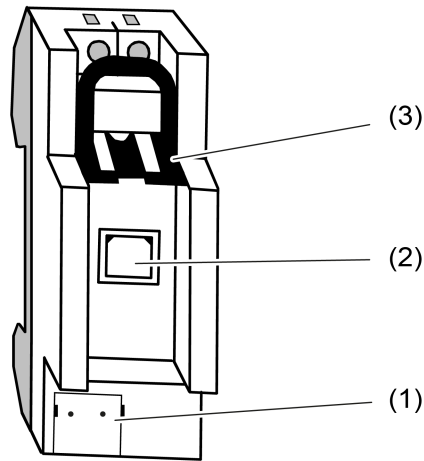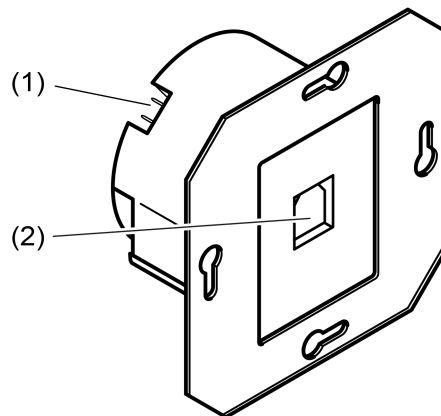
Image 1: Device components (RMD)

Image 2: Device components (FM)

(1)   KNX connection

(2)   USB socket (type B)

(3)   Slide for locking the USB connecting cable and contact protection (only in the RMD design)

1.4   Technical data

KNX

Rated voltage KNX	DC 21 ... 32 V SELV
KNX medium	TP256
Protection class	II
Ambient temperature	-5 ... +45 °C
Storage/transport temperature	-25 ... +70 °C

Fitting width

Order no. 2014 00	36 mm / 2 module
Order no. 2024 00	—

USB

USB socket	Type B
USB-Version	2.0
Cable length	max. 5 m

2 Safety instructions

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

Danger of electric shock. During installation and cable routing, comply with the regulations and standards which apply for SELV circuits.

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

These instructions are an integral part of the product, and must remain with the end customer.

3   Fitting and electrical connection

⚠️ **DANGER!**

Mortal danger of electric shock.

Cover up live parts in the installation environment.

Fitting the RMD device

- ◾ Snap onto DIN rail to DIN EN 60715. Observe the installation position (see figure 3).

Connecting the RMD device

A   B
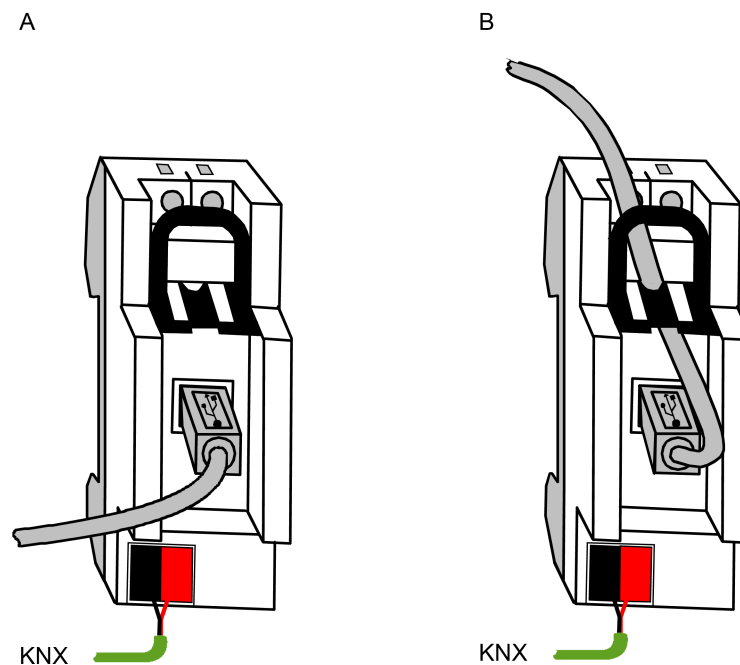

KNX   KNX

Image 3: Device connection (RMD design)

- ◾ Make the KNX connection (standard device connection terminal).

Variant A:
Lay the USB connecting cable in front of the field cover of the distribution board.

- ◾ Insert the USB plug (type B) into the USB socket of the USB data interface.
- ◾ Lead the USB connecting cable forwards out of the distribution board.

Variant B:
Lay the USB connecting cable behind the field cover of the distribution board.

- ◾ Unlock the slide (1) by pulling the bow and pulling it out.
- ◾ Insert the USB plug (type B) into the USB socket of the USB data interface.
- ◾ Lead the USB connecting cable upwards through the housing opening.
- ◾ Insert slide (1).

Inserting the slide locks the USB connecting cable in place. This ensures that the maximum installation height in the distribution box is maintained.

[i] The USB connection should be made with a certified USB connecting cable with a maximum cable length of 5 m.

Fitting the FM-device

- Install the device in the appliance box.
- Fit the cover frame onto the appliance box.
- Mount the cover for TAE and USB.
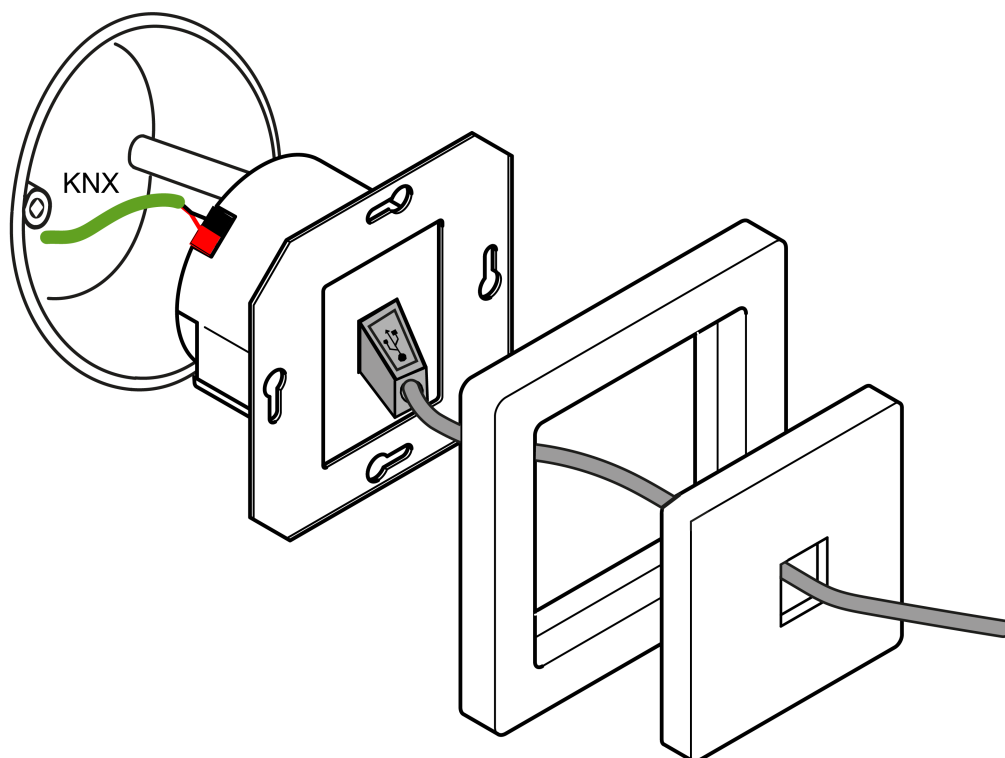
Connecting the FM device

Image 4: Device connection (FM design)

- Make the KNX connection (standard device connection terminal).
- Insert the USB plug (type B) into the USB socket of the USB data interface.

[i] The USB connection should be made with a certified USB connecting cable with a maximum cable length of 5 m.

4 Commissioning

Establishing a connection between the USB data interface and a PC

The USB data interface must be connected to a PC before commissioning the device by the ETS.

Operable PC with USB port.

- Connect the USB data interface to a switched-on PC using a USB connecting cable.

  The operating system installs the required USB driver automatically. After successful installation, the USB data interface is ready for operation.

  [i] If the USB data interface is inserted into a PC for the first time, it will first be initialised by the operating system. It may take several minutes to search for a suitable driver.

The USB data interface establishes the connection between a PC and the KNX installation. The USB data interface works in accordance with the KNX standard, which means that the addressing, programming and diagnostics of the KNX devices can take place by the KNX certified software from version ETS4 or higher.
The device only requires HID drivers to function (HID = Human Interface Device). One advantage of this device class is the fact that the required drivers are available in the operating system. When attaching the USB data interface to the PC, the drivers are installed or activated automatically (partially user-controlled depending on the operating system). The user might be requested to insert or specify the installation source of the operating system. USB support is possible in current Windows operating systems. The device can first be accessed by the ETS after successful installation or activation of the drivers.

Programming the physical address

The physical address of the USB data interface is solely programmed locally by the commissioning software from version ETS4 or higher.

The ETS is installed on the PC.

The USB data interface is connected and ready for operation.

- Click on the "Connections" function under the "Bus" tab in the ETS.
- Select the "Interfaces" subarea.

  The USB data interface is displayed under "Interfaces found".

- Click on the interface so that the entry in the list is selected.

  [i] Press the "Test" button to check whether the USB data interface is connected and ready for operation. If the test fails, check whether the USB data interface is inserted correctly and was detected by the PC. Furthermore, the driver installation must be completed correctly.

- Press the "Select" button to define the selected interface as the currently used interface.

The USB data interface is displayed under "Current interface".

After the required USB data interface has been activated in the ETS, one address is to be assigned to this interface.

- ■ Click on the USB data interface so that the entry in the "Current interface" list is selected.
- ■ Enter the physical address.

[i] Care must be taken to ensure that the physical address entered here is not used by another device in the system and corresponds to the topology of the KNX system.

- ■ Press the "Adress free?" button to make sure that the entered physical address is not used by another KNX device.

By leaving the field, the physical address is programmed to the USB data interface. The newly programmed physical address is displayed under "Current interface".

ETS search paths:	Communication / USB / USB data interface
	Communication / USB / USB data interface insert
Configuration:	S-mode standard
Name	---
Version:	---
from mask version	---
Summarized description	No application program is required for this device! The physical address is assigned solely in the general interface settings of the commissioning software from version ETS4 or higher.

5 Scope of functions

– Connecting a PC to the KNX.

– Addressing, programming and diagnostics of KNX-RF devices by the KNX certified commissioning tool from version ETS4 or higher.

– Support of long frames for the ETS5, e.g. for KNX Data Secure.

– The device electronics are supplied fully via the USB interface of the PC.

– The firmware of the device can be updated. Thus, the device can be adapted to future standards.

– Only standard Windows HID drivers that are installed or activated automatically when attaching the device to the PC are required for the device to function.

6   Notes on software

6.1   ETS project design and commissioning

For project design and commissioning of the device, the commissioning software from version ETS4 or higher is required.
The physical address is assigned solely in the general interface settings of the ETS. This device has no parameters and objects. Thus, it is not necessary to program an application program. The product database available to the product can be imported to the ETS. No settings are possible, however. The device can be added to an ETS project with the aid of the product database. This means that the KNX installation e.g. for documentation of the system, can be fully mapped in the ETS.

6.2   Firmware upgrade

The firmware of the device can be updated independently of the device generation when the device is programmed locally with an application. The automatic upgrade can eliminate errors contained in the firmware, without the customer having to pay any additional costs. As soon as new firmware for the device is available, it is written to the USB data interface selected in the ETS during a download of the application program. The current firmware version is shown in the name of the product database.

The firmware update may take some time. During this period, the device does not send any valid values to the KNX.

| i | Application programs with an older firmware can also be programmed in devices in which the current firmware is already embedded. In this case, the scope of functions of the device is reduced by the extensions of the more current version of the application program. This downgrade of the firmware also takes some time.

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