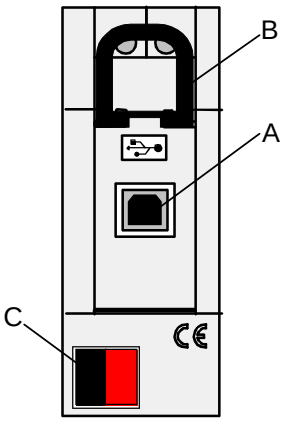
Product name:	USB data interface RMD
Design:	rail-mounting type (RMD)
ETS search path:	Communication / USB / USB data interface RMD

Functional description:

The USB data interface permits the connection of a PC to the instabus KNX / EIB.
The interface enables Instabus devices to be addressed, programmed and diagnosed by means of the ETS3 or the ETS3Starter.

The device electronics get their power supply completely from the USB interface of the connected PC. For this reason, the USB data interface cannot be accessed from the bus side unless the USB cable is plugged in and the the PC is on. The physical address of the interface can be programmed only locally (ETS) by means of the connected PC. For this reason, the data interface has neither a programming button nor a programming LED.
The firmware of the USB data interface can be updated with the local PC so that the device can easily be adapted to future standards.
For proper functioning, the device requires only the standard Windows HID drivers which are installed and activated automatically when the data interface is plugged into the PC. The device can be accessed by the ETS3 only after successful installation.

Illustration:



Dimensions:

Width: 36 mm; 2 modules
Height: 90 mm
Depth: 63 mm

Controls:

A: USB connection socket (type B)

B: Cable holder and protection against accidental contat

C: KNX / EIB bus terminal

Technical data

Degree of protection:	IP 20
Insulation voltage:	in acc. with VDE 0160
Mark of approval:	EIB / KNX
Ambient temperature:	-5 ℃ ... +45 ℃
Storage / transport temperature	-25 ℃ ... +75 ℃ (reduced lifetime when stored abo ve +45℃)
Mounting position:	any
Type of fixing:	snap-fastening on DIN rail (data rail not required)
instabus EIB supply	
voltage:	21 – 32 V DC
power consumption:	150 mW max.
connection:	instabus connecting and branching terminal

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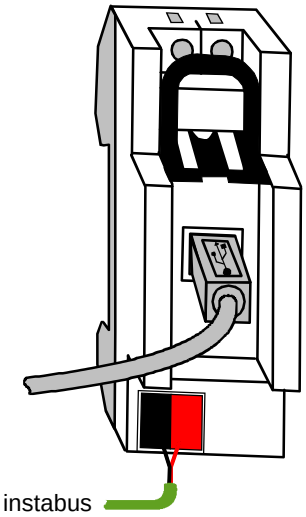
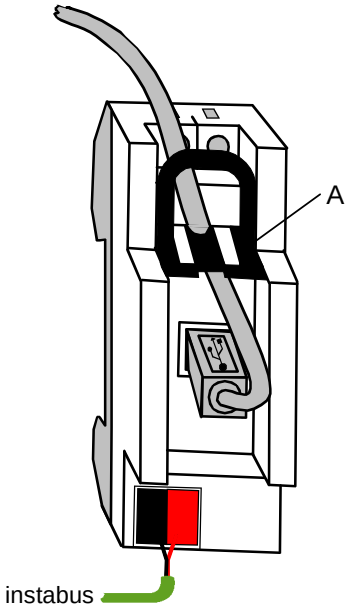
Response to voltage failure	
Bus voltage only:	communication interrupted
USB only:	communication interrupted; device no longer accessible from bus side
Mains voltage only:	---
Bus and mains voltage:	---
Response on reactivation	
Bus voltage only:	communication can continue
USB only:	communication can continue after initializing; device is accessible from bus side
Mains voltage only:	---
Bus and mains voltage:	---

USB	
Rate of transmission:	typically 9.6 kbaud
Transmission protocol:	compatible with USB standards 1.1 and 2.0
PC port:	USB connecting socket type B
Connecting cable:	max. 5 m use USB-certified connecting cable

Connection:



Variant A



Variant B

Variant A:
USB connecting cable laid in front of distribution panel cover.
The USB plug (type B) is plugged into the data interface socket and led out of the distribution in front of the device.

Variant B:
USB connecting cable laid behind distribution panel cover.
If the USB cable is to remain permanently connected inside the distribution, unlock the black holder by depressing strap (A) and pull out. Then, plug the USB connector (type B) into the socket of the data interface, run connecting cable through the device opening upwards and reinsert the black holder.
The insertion of the holder ensures fixing of the connecting cable and the observance of the max. installation height inside the distribution.

Hardware information:

- The USB connection should be made using a certified USB connecting cable of 5 m max. On the data interface side, a USB type B plug is required.

USB configuration

The USB data interface establishes the connection between a PC and the KNX/EIB installation. The data interface works in conformity with the KONNEX-USB-Standard so that addressing, programming and diagnosis of the instabus devices can be performed with the ETS3 or the ETS3 Starter.

For functioning, the device requires only the HID drivers (HID = Human Interface Device). It is an advantage of this class of devices that the required drivers are part of the operating system. When the data interface is plugged into the PC, the drivers are installed and activated automatically (depending on the operating system, partly user-controlled). In some cases, the user may be requested to insert the installation source of the operating system or to enter the path. USB is supported by the following operating systems: Windows® 98, Me, 2000 and XP.
Access to the device by the ETS3 is possible only after the drivers have been installed and/or activated successfully.

The ETS3 assumes the serial port COM1 to be the default port. In order to use the USB support, a USB link must first be created. For this purpose, the ETS3 must be started and the options dialog called up in the menu under "Extras - Options". In the "Communication" parameter card, the communication ports can be selected and activated.
By clicking on the "Configure interfaces" button, the "ETS Connection Manager" is called up. In this menu, new links can be created (button "New" cf. Fig.1).

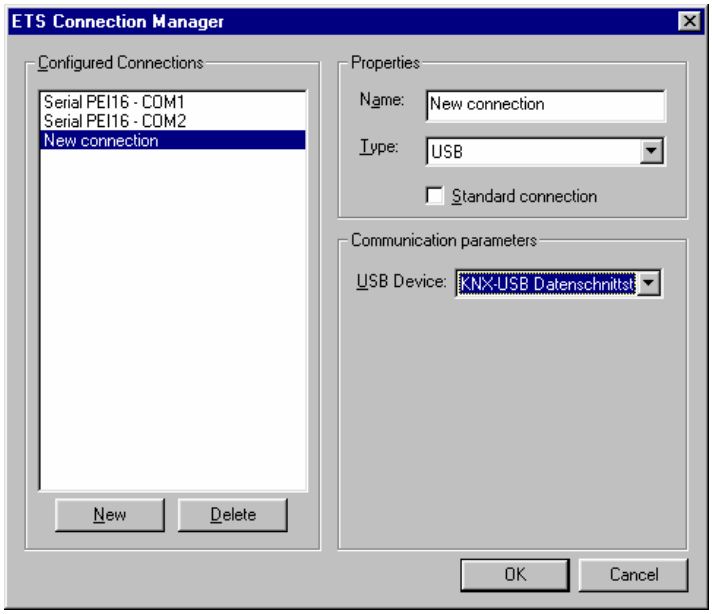


Fig. 1: Creating a new USB link

In the "Name" field, an unambiguous name for the link (e.g. USB) must be entered. Under "Type", "USB" must be selected. If a USB data interface is installed and plugged in, the USB device can be entered under "Communication parameters". The selection window displays all KNX-USB data interfaces that can be used with the PC. Each USB link can be assigned a separate USB data interface. If no USB data interface is available, the field is empty.

Important:

- In case of the ETS2, a USB connection with the USB data interface is not available due to the missing KONNEX-USB support !
- The USB data interface is a monoblock device, i.e. all components are housed in only one enclosure and are connected directly with the bus controller without being routed via the PEI. The time-critical communication protocol of the PEI is thus avoided and a fast and fail-safe local communication becomes possible.

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Physical address

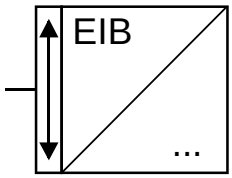
The physical address of the USB data interface is programmed only locally by means of the ETS3. For programming, the ETS3 is to be started and the options dialog called up in the menu under "Extras - Options". The physical address of the data interface can then be entered on the "Communication" parameter card by clicking on the "Settings" button. Make sure a USB link is specified as communication interface.

Software description

ETS search path:

Communication / USB / USB data interface RMD

ETS symbol:



PEI type

PC connected	00 Hex	0 Dez	No adaptor

Applications: No software application required for the functioning of the USB data interface.

No.	Short description:	Name:	Version:
1	---	---	---