

## Product and Applications Description



The USB interface N 148/12 is an N-system DIN-rail mounted device. The device can be connected to the bus line parallel via the pressure contact system as well as the bus terminal.

The USB interface N 148/12 enables with its built-in USB socket a personal computer to be attached for addressing, parameterising, visualising, logging and diagnosis of bus devices.

With the USB interface it is possible to operate all bus devices in the whole bus system.

The USB interface N 148/12, supporting long frames up to 64 bytes, is compatible to USB 2.0 and USB 3.0. The transmission rate between the PC and the interface is 12 Mbit/s maximum.

Inside the device the USB socket is isolated from the KNX-bus.

The connection between the USB interface and the PC is arranged between the USB socket of the USB interface and any USB socket of the PC or a connected USB hub.

The required USB cable (normal USB cable for PC peripherals with one USB plug type A and one USB plug type B) is not a part of the shipment but has to be bought separately, for example, at authorized computer stores.

The power supply of the USB interface N 148/12 is carried out via the USB cable by the PC. When the interface is not connected to the PC or the PC is not switched on the interface N 148/12 is not active and cannot be accessed from the bus.

### Note:

The USB interface is supported by ETS3 and newer versions.

## Application programs

### 300 CO USB-Interface 700201

- When using ETS3 or ETS4, the application program has to be imported.
- When using ETS5, no application program is required.

## Installation Instructions

- The device may be used for permanent interior installations in dry locations, within distribution boards or small casings with DIN rail (according to EN 60715-TH35-7).



## WARNING

- The device must be mounted and commissioned by an authorized electrician.
- When connecting the device, it should be ensured that the device can be isolated.
- The device must not be opened.
- For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.

## Technical Specifications

### Power supply

Via USB by the connected PC / laptop

### Transmission rate

9600 bit/s between N 148/12 and KNX bus  
 USB 2.0 full speed between PC and N 148/12 (Max. 12 MBit/s)

### Control elements

- 1 programming button to switch between the normal operating mode and the addressing mode

### Display elements

- 1 red LED to control the bus voltage and to display the normal mode / addressing mode
- 1 green LED to control the USB connection (supply voltage) and to display the data traffic

**Connections**

- KNX bus line:
  - Changeover contacts on data rail
  - Screwless bus connection block  
0.6...0.8 mm Ø single core  
Length of insulation strip: 5 mm
- USB socket type B  
Length of data cable: Max. 5 m

**Connection cable**

Available at authorized computer stores  
(normal USB cable for PC peripherals with AB plug)

**Physical specifications**

- Housing: plastic
- Dimensions: N-system DIN-rail mounted device
- Width: 1 SU (1 SU = 18 mm)
- Weight: approx. 60g
- Installation: rapid mounting on EN 60715-TH35-7,5 rail

**Electrical safety**

- Degree of pollution (according to IEC 60664-1): 2
- Protection (according to EN 60529): IP 20
- Protection class (according to IEC 61140): III
- Overvoltage class (according to IEC 60664-1): 2
- KNX-bus: safety extra low voltage (SELV)
- According to EN 50491-3

**EMC Requirements**

- According to EN 50491-5-1, EN 50491-5-2,  
EN 50491-5-3, EN 61000-6-2, EN 61000-6-3

**Environmental conditions**

- Climatical reliability: EN 50491-2 (3K5)
- Ambient temperature (operating): -5...+55 °C
- Ambient temperature (non-op.): -25...+70 °C
- Relative humidity (non-condensing): 5...93 %

**Certification**

KNX

**CE Mark**

- According to EMC requirements (residential and non-residential buildings)
- Low voltage directive

**RCM Mark**

- According to RCM requirements

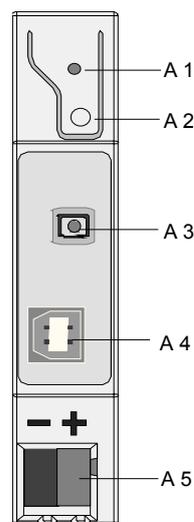
**Location and Function of the Display and Operator Elements**

Figure 1: Location of the display and operator elements

- A1 LED red: for indicating the normal operating mode (LED off) and the addressing mode (LED on); upon receiving the physical address the device automatically returns to the normal operating mode  
*Note:* After connection of the bus terminal it may take up to 10s before the bus connection is indicated.
- A2 Programming button for switching between the normal operating mode and the addressing mode for receiving the physical address
- A3 LED green: for monitoring the USB connection (power supply, LED on) and indicating data traffic (LED flashes)
- A4 USB socket type B
- A5 Bus connection block

## Mounting and Wiring

### General description

The N-system DIN-rail device can be installed to N-system distribution boards, surface or flush mounted, or to any DIN-rail available that has a data rail installed. The connection to the bus line is established by clicking the device onto the DIN-rail (with a data rail installed). Take care that the type plates of all devices on a DIN-rail can be read in the same direction, guaranteeing the devices are polarized correctly. If the Interface N 148/12 is installed the conventional adapter is not necessary (also for other DIN-rail devices connected to the same data rail). The bus voltage is carried from the bus connection block to the data rail.

### Mounting DIN-rail devices (Figure 2)

- Slide the device (B1) onto the DIN-rail (B2).
- Swivel back the device (B1) until the slide clicks into place audibly.

### Dismounting DIN-rail devices (Figure 2)

- Remove the cover.
- Remove the clamps for connection cables.
- Unplug the USB connector.
- Press down the slide (C3) with a screw-driver, and click it into place by a slight pressure.
- Swivel the device (C1) from the DIN-rail (C2).

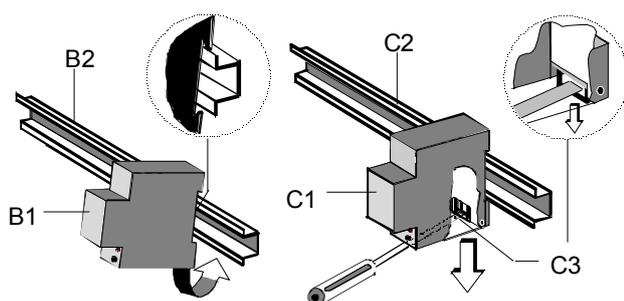


Figure 2: Mounting and dismounting a DIN-rail device

### Connection to the bus without data rail

If the connection is established via bus connection block (data rail not installed), the data rail connection system has to be covered with the enclosed insulation hood after removing the guiding ring, for example, with a screw-driver to guarantee a sufficient insulation from the DIN rail.

### Removing the guiding top (Figure 3)

- The guiding top (D3) encloses the contact system (D2) on the rear of the interface N 148/12 (D1).
- Insert the screw-driver between the DIN rail mounted device (D1) and the guiding ring (D3) and remove the guiding ring.

### Clipping on the insulating hood (Figure 3)

- Place the insulating hood (D4) on the contact system and press so that it snaps in place.

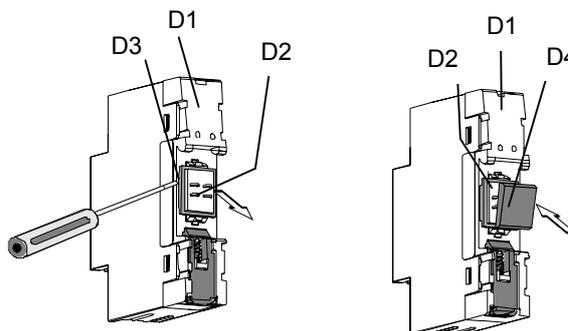
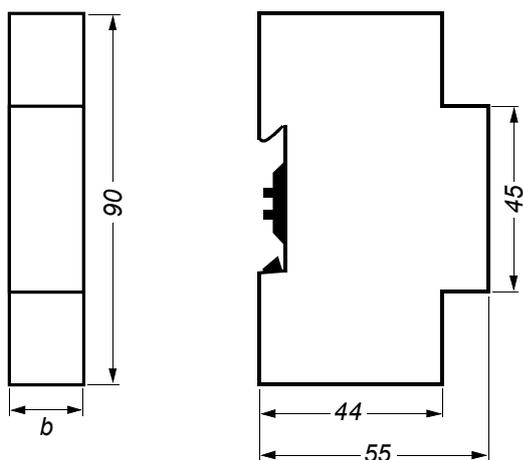


Figure 3: Covering the contact system

## Dimension Diagram

Dimensions in mm



b = 1 SU

1 SU (Spacer Unit) = 18 mm

## General Notes

- The operating instructions must be handed over to the client.
- Any faulty device has to be sent together with a return delivery note to the local Siemens office.
- If you have further questions concerning the product, please contact our technical support:



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