

Issued: September 2007

## Product and Applications Description

The bus coupling unit (BCU) UP 110/03 enables connecting application units to the bus line via the physical external interface (PEI). The telegrams received via the bus line are processed by the BCU and passed on to the application unit. In the opposite direction, signals coming from the application unit are converted into telegrams and transmitted.

The bus coupling unit UP 110/03 is directly connected to the bus line. It constantly monitors the bus and thus continuously is aware of whether the line is clear for sending or busy with other telegrams. Events like a switch signal are sent immediately provided the bus is not busy. Otherwise the sending request will be postponed until the line is disengaged.

The BCU is designed for mounting on NEMA wall boxes. The connection to the bus line is established via screwless plug-in terminals (bus connection block 193).

The application units (e.g. push button UP 211) are slid onto the bus coupling unit UP 110/03 with guide and mounting clamps.

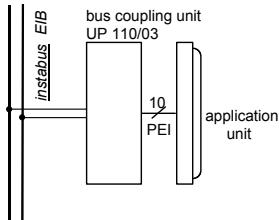
When connected to the bus with reversed polarity the bus coupling unit UP 110/03 is switched off (reverse voltage protection). If the voltage of the bus line decreases to below the minimum voltage of approx. DC 21 V, the required data is saved by writing it to the BCU's EEPROM. The application unit is set to corresponding mode as specified in the parameter list for this case (depending on application program).

The BCU mounting frame is designed to accept a DELTA contour design cover, which must be ordered separately.

## Additional Information

<http://www.siemens.de/gamma>

## Example of Operation



## Technical Specifications

### Power supply (via bus)

- rated voltage: DC 24 V
- operating voltage: min. DC 21 V, max. DC 30 V

### Power input

max. 150 mW

### Physical external interface - application unit

- supply voltage: DC 5 V and/or DC 24 V
- power intake: max. 50 mW

### Connections

- 10-pin socket (PEI): for connecting an application unit
- bus line:
  - screwless bus connection block 0,6...0,8 mm Ø single core
  - remove approx. 5mm of isolation

### Physical specifications

- dimensions:
  - height x width: 115 mm x 69 mm
  - mounting depth: 26 mm
- weight: approx. 68 g (incl. mounting hanger)
- installation: mounting in NEMA type wall boxes, minimum interior wall box size (W x H): 50 mm x 89 mm, 40 mm deep

### Electrical safety

- protection (according to EN 60529): IP 20

### Environmental specifications

- ambient temperature operating: -5 ... +45 °C
- storage temperature: -25 ... +70 °C
- relative humidity (non-condensing): 5 % to 93 %

## Location and Function of the Display and Operator Elements

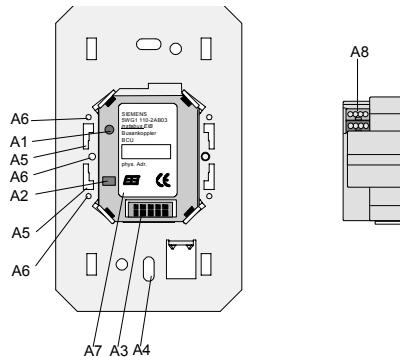


Figure 1: Location of the display and operator elements

- A1 LED for indicating normal operating mode (LED off) and addressing mode (LED on); upon receiving the physical address the device automatically returns to normal operating mode
- A2 Learning button for switching between normal operating mode and addressing mode for receiving the physical address
- A3 Physical external interface (PEI) for connecting an application unit
- A4 Slots for attaching the bus coupling unit to box mounts
- A5 Slots for mounting application unit with guide and mounting clamps
- A6 Thread for mounting screws (for additional support, e.g. for securing the application unit against theft)
- A7 Type label
- A8 Bus connection block for single core conductors: Ø 0,6 ... 0,8 mm

## Installation Instructions

- The device may be used for permanent interior installations in dry locations within box mounts.

### WARNING

- The device must be mounted and commissioned by an authorised electrician.
- The device must not be mounted in wall boxes together with mains voltage (120 V / 230 V) devices and/or mains voltage (120 V / 230 V) cables.
- The device may be mounted to switch and socket combination wall boxes if VDE-certified devices are used exclusively.
- The prevailing safety rules must be heeded.
- 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.

## Mounting and Wiring

### General description

The connection to the bus line is established via bus connection block 193 (screwless plug-in terminals for single core conductors). The application unit, e.g. a push button UP 210 is slipped onto the bus coupling unit via guide and mounting clamps and, depending on the device type, fastened with screws.

**Note:** The bus coupling unit UP 110/03 must be mounted with the physical external interface (PEI) situated at the bottom (see Figure 2). Thus, the application unit will be oriented properly when slid onto the PEI. For achieving a permanent stable contact at the PEI, the exclusive use of bus devices provided with mounting screws is recommended.

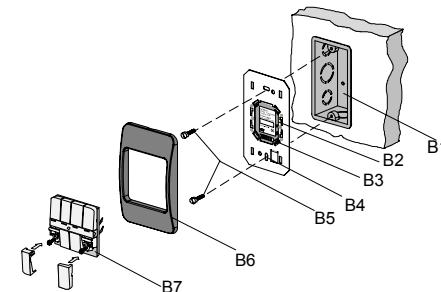


Figure 2: Mounting the bus coupling unit UP 110/03

- B1 NEMA wall box
- B2 bus coupling unit UP 110/03
- B3 physical external interface (PEI)
- B4 mounting screw holes
- B5 mounting screws
- B6 DELTA contour design frame
- B7 *instabus* wall switch, secure-in-place screws

## Slipping off/on bus connection blocks (figure 3)

The bus connection block (C2) is situated on the back of the bus coupling unit (C1). It consists of two components (C2.1 and C2.2) with four terminal contacts each. Take care not to damage the two test sockets (C2.3) by accidentally connecting them to the bus cable or with the screw driver (e.g. when attempting to unplug the bus connection block).

## Slipping off bus connection blocks (figure 3)

- Carefully put the screw driver to the wire inserting slot of the bus connection block's grey component (C2.2) and pull the bus connection block (C2) from the bus coupling unit UP 110/03 (C1).

**Note:** Don't try to remove the bus connection block from the bottom side. There is a risk of shorting-out the device!

## Slipping on bus connection blocks (figure 3)

- Slip the bus connection block (C2) onto the guide slot of the bus coupling unit UP 110/03 (C1) and
- press the bus connection block (C2) down to the stop.

## Connecting bus cables (figure 3)

- The bus connection block (C2) can be used with single core conductors Ø 0,6 ... 0,8 mm.
- Remove approx. 5 mm of insulation from the conductor (C2.4) and plug it into the bus connection block (C2) (red = +, grey = -).

## Disconnecting bus cables (figure 3)

- Unplug the bus connection block (C2) and remove the bus cable conductor (C2.4) while simultaneously wiggling it.

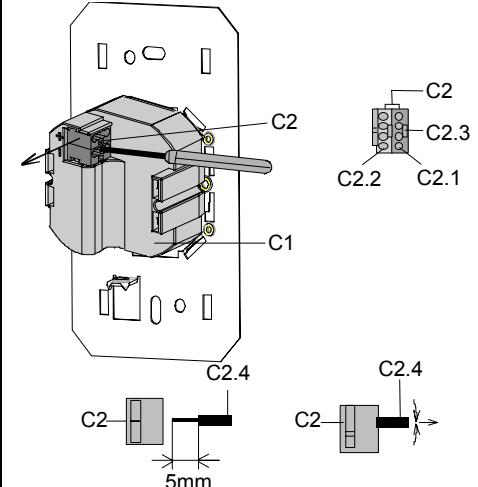


Figure 3: Connecting/disconnecting a bus cable

## General Notes

- Any faulty devices should be returned to the local Siemens office.
- If you have further questions about the product, please contact our Technical Support:
  - ✉ +49 (180) 5050-222
  - ✉ +49 (180) 5050-223
  - ✉ [adsupport@siemens.com](mailto:adsupport@siemens.com)