

**Bus Coupling Unit UP 110/11**
**5WG1 110-2AB11**
**Product and Applications Description**


The bus coupling unit (BCU) UP 110/11 enables application units (AUs) to be connected 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 110/11 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. Upon appropriate events the BCU will send immediately provided the bus is not busy. Otherwise the sending request will be postponed until the line is disengaged.

The BCU is attached to box mounts, Ø 60 mm, with screw mounts or claw mounts. The connection to the bus line is established via screwless plug-in terminals (bus connection block 193).

The application units (e.g. temperature controller UP 252) are slid onto the bus coupling unit UP 110/11 with guide and mounting clamps.

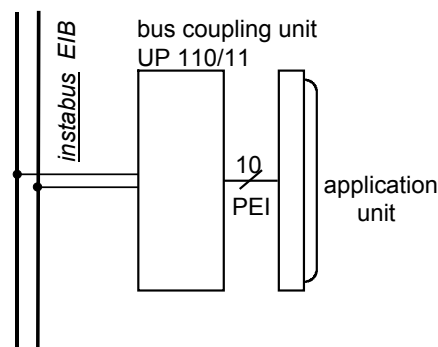
Application units with central mounting screws two mounting hangers are required. Order number 5WG1 294-8AB01 (included: 10 x 2 mounting hangers).

When connected to the bus with reversed polarity the bus coupling unit UP 110/11 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).

**Application Programs**

With the ETS (*EIB Tool Software*) the application program is selected, its parameters and addresses are assigned appropriately and downloaded to the bus coupling unit.

The description of the application programs is included in the appropriate application unit to which it belongs.

**Example of Operation**

**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 box mounts together with 230 V devices and/or 230 V cables.
- The device may be mounted to switch and socket combination box mounts if VDE-certified devices are used exclusively.
- The prevailing safety rules must be heeded.
- The device must not be opened. A device suspected faulty should be returned to the local Siemens office.

**Bus Coupling Unit UP 110/11****5WG1 110-2AB11****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

**Operator elements**

1 learning button (in combination with the display LED):  
for switching between normal operating mode and  
addressing mode

**Display elements**

1 red LED (in combination with the learning button):  
for monitoring bus voltage and displaying mode,  
selected with the learning button

**Connections**

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

**Physical specifications**

- housing: plastic
- dimensions:
  - W x H: 71 x 71 mm
  - mounting depth: 19 mm (claw-less)  
32 mm (claw-mounted)
- weight: approx. 55 g
- fire load: approx. 220 kJ ± 10 %
- installation: mounting in box mounts  
Ø 60 mm, 40 mm deep

**Electrical safety**

- fouling class (according to IEC 664-1): 2
- protection (according to EN 60529): IP 20
- protection class (according to IEC 1140): III
- overvoltage class (according to IEC 664-1): III
- bus: safety extra low voltage SELV DC 24 V
- device complies with  
EN 50090-2-2 und IEC 664-1: 1992

**Reliability**

rate of failure: 270 fit at 40 °C

**Electromagnetic compatibility**

complies with  
EN 50081-1, EN 50082-2 and EN 50090-2-2

**Environmental specifications**

- climatic conditions: EN 50090-2-2
- ambient temperature operating: - 5 ... + 45 °C
- storage temperature: - 25 ... + 70 °C
- relative humidity (non-condensing): 5 % to 93 %

**Certification**

EIB certificate

**CE norm**

complies with the EMC regulations (residential and  
functional buildings), and low voltage regulations

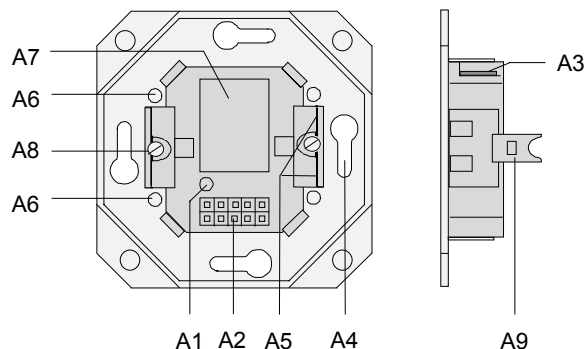
**Location and Function of the Display and Operator Elements**

Figure 1: Location of the display and operator elements

**A1 Operator element:**

- 1 learning button (in combination with the display LED): for switching between normal operating mode and addressing mode for receiving the physical address
- 1 red display LED (in combination with the learning button): for indicating operating mode, selected with the learning button

**A2 Physical external interface (PEI) for connecting an application unit****A3 Bus connection block for single core conductors: Ø 0,6 ... 0,8 mm****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 plate (for physical address)****A8 Screws for claw mounting****A9 Claw**

**Bus Coupling Unit UP 110/11****5WG1 110-2AB11****Mounting and Wiring**General description

The BCU is attached to box mounts, Ø 60 mm, with screw mounts or claw mounts. The connection to the bus line is established via screwless plug-in terminals (bus connection block 193).

**Note**

The bus coupling unit UP 110/11 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.

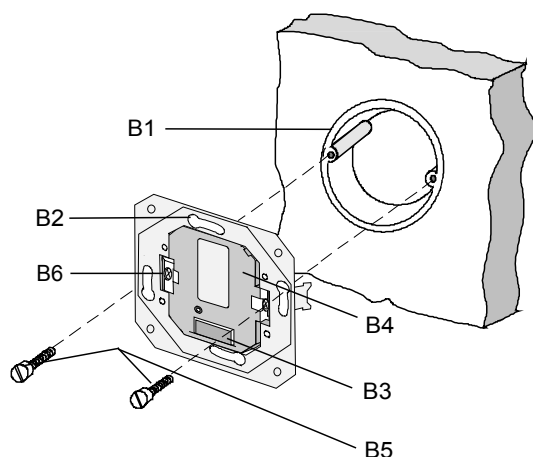


Figure 2: Mounting the bus coupling unit UP 110/11

- B1 box mount (60 mm Ø according to DIN 49073)
- B2 mounting slots
- B3 physical external interface (PEI)
- B4 bus coupling unit UP 110/11
- B5 mounting screws
- B6

Slipping off 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).

- Carefully put the screw driver to the wire inserting slit of the bus connection block's grey component (C2.2) and pull the bus connection block (C2) from the bus coupling unit UP 110/11 (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 110/11 (C1) and
- press the bus connection block (C2) down to the stop.

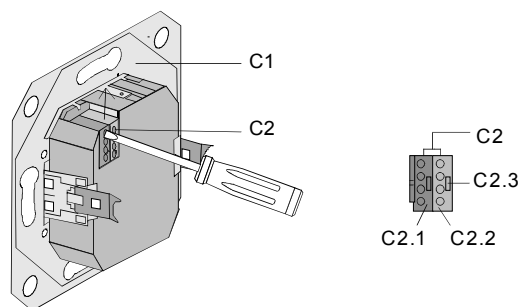


Figure 3: Slipping off/on bus connection blocks

Connecting bus cables (figure 4)

- The bus connection block (D1) can be used with single core conductors Ø 0,6 ... 0,8 mm.
- Remove approx. 5 mm of insulation from the conductor (D2) and plug it into the bus connection block (D1) (red = +, grey = -).

Disconnecting bus cables (figure 4)

- Unplug the bus connection block (D1) and remove the bus cable conductor (D3) while simultaneously wiggling it.

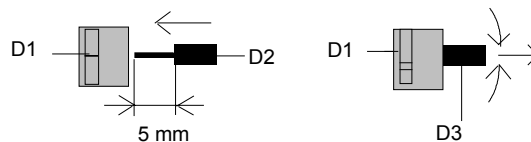


Figure 4: Connecting/disconnecting a bus cable

**Dimension Diagram**

Dimensions in mm

