

### Product and Applications Description

The bus coupling unit (BCU) UP 114/02 enables connecting application units to the bus line via the physical external interface (PEI). It contains a BCU 2.1 and is required for extensive application programs.

The telegrams received via the bus line are processed by the bus coupling unit (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 114/02 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 screw less plug-in terminals (bus connection block 193).

The application units (e.g. wall switch UP 243) are slid onto the BCU with guide and mounting clamps.

When connected to the bus with reversed polarity the bus coupling unit UP 114/02 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).

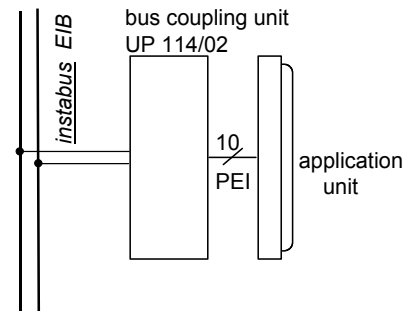
The BCU mounting frame is designed to accept a DELTA contour design frame, which must be ordered separately.

### Application Program

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 application unit description contains the description of its corresponding application program(s).

### 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. 220 mW

#### Physical external interface - application unit

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

#### Control elements

1 learning button for switching between normal operating mode and addressing mode

#### Display elements

- 1 red LED for controlling bus voltage and displaying mode, selected via the learning button

#### Connections

- 10-pin socket (PEI): for connection an application unit
- bus line: screwless extra low voltage terminal (red-black)  $\varnothing 0,6 \dots 0,8$  mm (AWG 18, solid Cu) remove approx. 5mm (3/16") of isolation

#### Physical specifications

- housing: plastic
- dimensions:
  - height x width: 115 mm x 69 mm (4"1/2 x 2"3/4)
  - mounting depth: 16 mm (5/8")
- weight: approx. 63 g (incl. mounting hanger)
- installation: mounting in NEMA type wall boxes minimum interior wall box size (H x W): 89 mm x 50 mm (3"1/2 x 1"15/16), 30 mm (1"3/16) deep

#### Electromagnetic compatibility

complies with Part 15 of the FCC rules pursuant to the limits for a Class A digital device

#### Environmental specifications

- ambient temperature operating: - 5 ... + 45° C (23...113°F)
- maximum ambient temperature range: - 25 ... + 70° C (-13...158°F)
- relative humidity (non-condensing): 5 % to 93 %

### Listings and Certifications

#### UL listed (E173 174)

UL 916, Energy Management Equipment Accessory

#### CSA certified

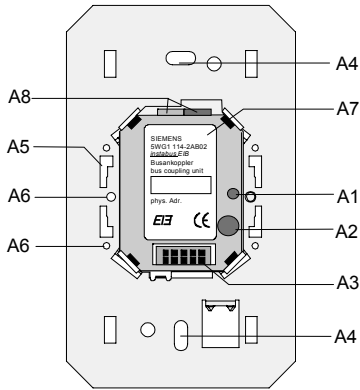
(pending)

#### CE mark

complies with EMC regulations (residential and non-residential buildings), and low voltage regulations

#### EIB certified

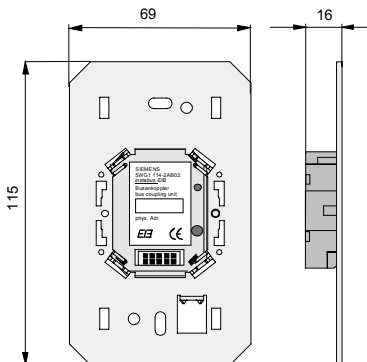
**Location and Function of the Display and Control Elements**



- 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
- 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

**Dimension Diagram**

Dimensions in mm



**⚠ WARNING**

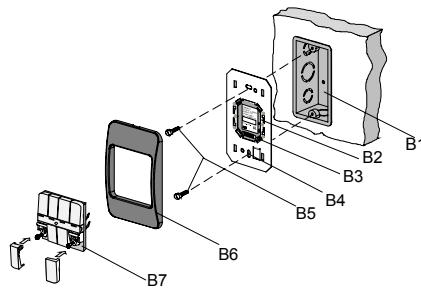
**Class 2 power wiring only.**

**The device must be mounted and commissioned by an authorized electrician.**

**The prevailing safety rules must be heeded.**

**The device must not be opened.**

**A device suspected faulty should be returned to the local Siemens sales office or distributor.**



- B1 NEMA wall box
- B2 bus coupling unit UP 114/02
- 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

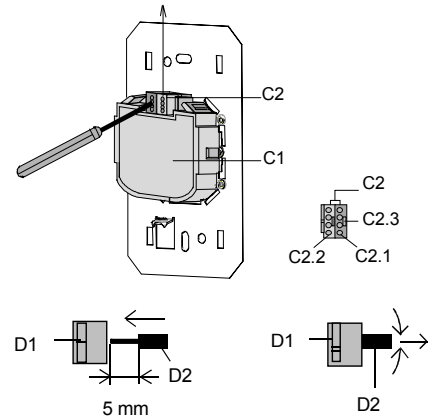
**Mounting**

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 243 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 114/02 must be mounted with the physical external interface (PEI) situated at the bottom. 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.



**Wiring**

**Slipping off/on bus connection blocks**

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

- 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 114/02 (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

- Slip the bus connection block (C2) onto the guide slot of the bus coupling unit UP 114/02 (C1) and
- press the bus connection block (C2) down to the stop.

**Connecting and Disconnecting bus cables**

Connecting bus cables

- 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

- Unplug the bus connection block (D1) and remove the bus cable conductor (D2) while simultaneously wiggling it.