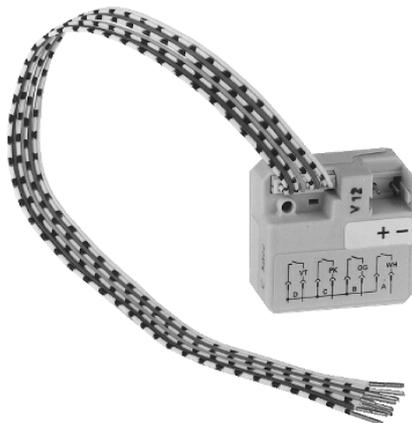


## Product and Applications Description



The push button interface UP 220/02 is a binary input device for use with box mounts (∅ 60 mm, depth: 60 mm). 4 inputs are available for volt free switching/keying contacts. The required scanning voltage is provided by the push button interface (requires no additional power supply).

The push button interface UP 220/02 may also be used for connecting conventional switches and push buttons. I.e. up to 4 switches/push buttons with one volt free contact each or up to 2 push buttons 2-fold with two volt free contacts each may be connected to a push button interface UP 220/02.

The connection to the push button interface UP 220/02 is accomplished via a plug-in 8-core set of lines (included). The length of the cables that connect the switches/push buttons to the push button interface UP 220/02 must not exceed 5 m!

Appropriate application programs are available for the different tasks the push button interface UP 220/02 can handle. Via the connected switches/ push buttons commands can be given to actuators, e.g., for defined on/off switching, for the dimming of fluorescent lamps, or for raising/ lowering venetian blinds and adjusting the louveres.

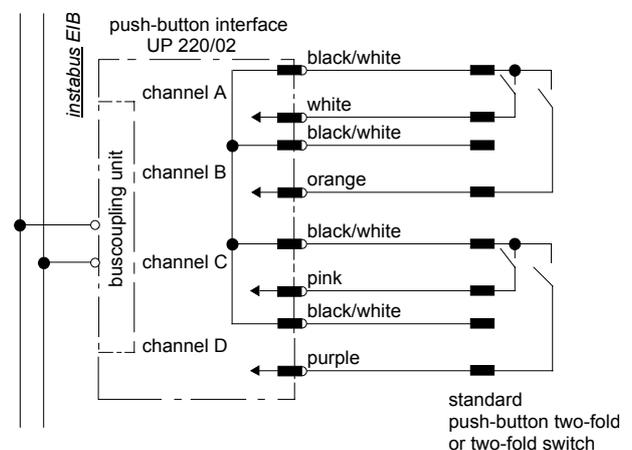
With the ETS (*EIB Tool Software*) the application program is selected, its parameters and addresses are assigned appropriately, and downloaded to the push button interface UP 220/02.

## Application programs

### 20 S4 On-off-toggle/Dim/Shu/Val/Cycl 900901

- 4-way binary input
- can be configured for dimmer/shutter control, on/off or value signal
- switching on leading or trailing or on leading and trailing edge
- switching on short/long push button action
- allows value signal on leading or on leading and trailing edge
- adjustable time for selecting long switch operation
- selectable contact type
- switching telegrams can be faded in for the leading or/and trailing edge
- allows cycling sending of the object value
- allows joining and switching off the initialisation report of each input

## 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 must not be connected to 230 V.
- The device may be mounted to switch and socket combination box mounts provided VDE-certified devices are used exclusively.
- Take care that there is a safe disconnection (SELV) of the connected signal lines (possible extension lines included) from the other current- and voltage carrying devices and lines.
- 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.

### Technical Specifications

#### Power supply

via bus cable

#### Inputs

- input signal voltage:  
provided by the push button interface, 20 V impulses, duration: 1 ms, period: 8 ms
- inputs signal current:  
at closed contact: 1 mA per channel (peak)
- input signal delay:
  - at leading edge of input signal: max. 35 ms
  - at trailing edge of input signal: max. 5 ms
- duration of input signal: min. 50 ms
- input characteristic:  
set in parameter list according to application program
- signal cable set:
  - length: 280 mm unshielded, may be extended to up to 5 m by twisted, unshielded cable
  - cross section: approx. 0,22 mm<sup>2</sup> (0,56 mm Ø)

#### Control elements

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

#### Display elements

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

#### Connections

- signal inputs: 8-pin plug-in connector
- bus line, screwless bus connection block  
Ø 0,6...0,8 mm single core

#### Physical specifications

- housing: plastic
- dimensions (L x W x H): 43 x 38 x 17,6 mm
- weight: approx. 50 g
- fire load: approx. 650 kJ ± 10 %
- installation: in box mounts, Ø 60 mm, depth: 60 mm

#### Electrical safety

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

#### Reliability

rate of failure: 408 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
- ambient temperature non-op.: - 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

## Push Button Interface UP 220/02

5WG1 220-2AB02

## Location and Function of the Display and Operator Elements

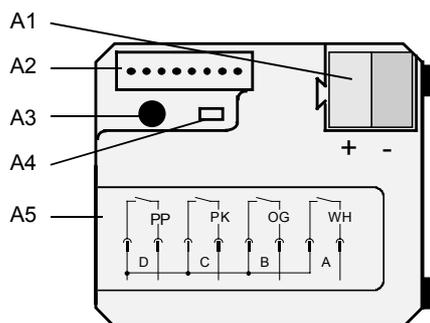


Figure 1: Push button-interface UP 220/02, front view

- A1 Bus connection block for single core wire, 0,6 ... 0,8mmØ
- A2 Pin connector for connecting an eight-core wire set
- A3 Learning button for switching between normal operating mode and addressing mode for receiving the physical address
- A4 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
- A5 Illustration of connection details  
colour markings (of the 8-core wire set):  
PP = purple PK = pink, OG = orange; WH = white

## Mounting and Wiring

General description

The push button interface UP 220/02 is built into box mounts, Ø 60 mm, depth 60 mm. In addition to the push button interface a standard device rack can be attached to the box mount. For mounting more than one standard device racks several box mounts must be employed connected via cable ducts (only the box mount that actually holds the push button interface requires a depth of 60 mm). The enclosed 8-core wire set is connected to the other devices via the cable ducts.

**Note**

Device combinations of a push button connected to the push button interface and 230 V devices (wall socket) are not allowed.

Wire set

The wire set consists of eight cores marked by specific colours with a plug fixed to one end. To allow for easy connection to the screw or plug-in terminals of the switches and push buttons core terminators are fixed to the free ends.

**Note**

The wires used for connecting the switches and push buttons must not be longer than 5 m (per channel). Otherwise the electromagnetic compatibility requirements (interference protection) cannot be met. The free ends that are not used must be insulated. The use of twisted cables is suggested.

Slipping off a bus connection block (figure 2)

- The bus connection block (B2) consists of two components (B2.1, B2.2) with four terminal contacts each. Take care not to damage the two test sockets (B2.3) 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 (B2.2) and pull the bus connection block (B2) from the push button-interface UP 220/02 (B1).

**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 the bus connection block

- slip the bus connection block onto the guide slot of the push button-interface UP 220/02 and press the bus connection block down to the stop.

Connecting the bus cable (figure 2)

- The bus connection block (B2) can be used with single core cables, 0,6 ... 0,8 mmØ.
- Remove the insulation from the wire (B2.4) and connect it to the terminal (B2) (red = +, grey = -).

Disconnecting the bus cable (figure 2)

- Unplug the bus connection block (B2) and remove the bus cable wire (B2.4) while simultaneously wiggling it.

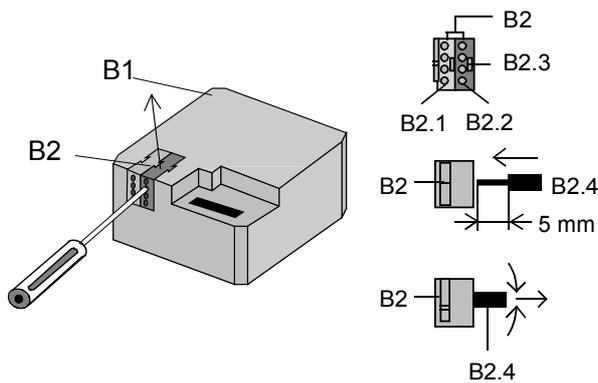


Figure 2: Connecting/disconnecting bus cables

Plugging in the wire set (figure 3)

- Slip the plug (C2) with the guide slot (C2.1) into the plug connector (C2.2) of the push button interface UP 220/02 and
- press the plug (C2) down to the stop.

Unplugging the wire set (figure 3)

- Pick up all eight cores and carefully remove them together with the plug (C2) from the plug connector (C2.2).

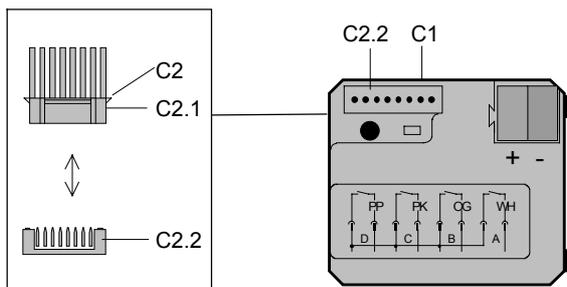


Figure 3: Connecting/disconnecting wire set  
**Dimensions Diagram**

Dimensions in mm

