

Push Button Interface UP 220/03
Push Button Interface UP 220/13

5WG1 220-2AB03
5WG1 220-2AB13

Product and Applications Description



The push button interfaces UP 220/03 and UP 220/13 are binary input devices for use with box mounts (∅ 60 mm, depth: 40 mm). Four/two inputs are available for potential-free switch/push button contacts. The required scanning voltage is provided by the push button interface (requires no additional power supply).

The push button interfaces UP 220/03 and UP 220/13 may also be used for connecting conventional switches and push buttons.

For example, up to 4 switches/push buttons with one potential-free contact each or up to two 2-fold push buttons with two potential-free contacts each may be connected to a push button interface UP 220/03. And up to 2 switches/push buttons with one potential-free contact each or one 2-fold push button with two potential-free contacts may be connected to a push button interface UP 220/13.

The connection is carried out via a cable set which is permanently connected to the push button interface. The connecting cables between switches/push buttons and the push button interface may be extended up to 10 m. It must be ensured that twisted cable pairs are used.

Appropriate application programs are available for the different applications. Commands can be given to actuators via the connected switches/push buttons, e.g. for defined switching on/off, for dimming fluorescent lamps or for raising/lowering venetian blinds and adjusting the louvres.

With the ETS (*E/B Tool Software*) the application program is selected, its parameters and addresses are assigned appropriately, and downloaded to the push button interface UP 220/03 and UP 220/13.

Application programs

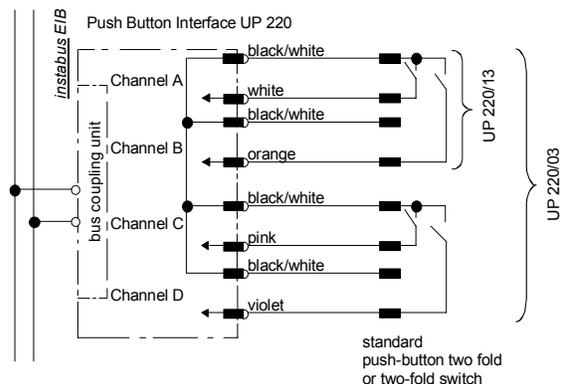
12 S2 On-off-toggle/Dim/Shu/Scene 220710

- 2-fold / 4-fold binary input
- can be configured for dimmer/shutter control, on/off or value sending
- switching on leading, trailing or leading and trailing edge
- switching after short/long push button action
- allows value sending on leading edge or on leading and trailing edge
- adjustable period for long switch operation can be selected
- selectable contact type

12 S4 BinCyc 240505

- 4-fold binary input
- switching on/off or toggling possible per input on leading or trailing edge
- cyclical sending possible
- sending possible on bus voltage recovery
- send condition can be set
- selectable contact type

Example of Operation



Installation Instructions

- The device may be used for permanent interior installations in dry locations within flush-type boxes.



WARNING

- The device must be mounted and commissioned by an authorised electrician.
- The device must not be mounted in a box together with 230 V devices and/or 230 V cables.
- The device must not be connected to 230 V.
- The device may be mounted in switch and socket combinations provided that VDE-certified devices are used exclusively.
- Ensure that there is a safety separation (SELV) of the connected signal cables (including possible extensions) from the other current- and voltage-carrying devices and cables.
- The prevailing safety and accident regulations must be heeded.
- The device must not be opened.
- When planning and installing electrical installations, the relevant guidelines, regulations and specifications of the respective country must be observed.

Technical Specifications

Power supply

via bus cable

Inputs

- input signal voltage:
provided by the push button interface
approx. 29 V DC (bus voltage) when the contact is opened
- input signal current:
when contact is closed: 0.5 mA DC per channel
at moment of closing: pulse 0.5 A_s for approx. 5 μs
- input signal delay:
50 ms including contact debounce
- duration of input signal: min. 50 ms
- input characteristic:
can be parameterised according to application program
- signal cable set:
 - length: 280 mm unshielded, may be extended up to 10 m with twisted, unshielded cable
 - cross-section: approx. 0.22 mm² (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 for displaying normal mode/addressing mode

Connections

- signal inputs: cables
- bus line: screwless bus terminal
Ø 0.6...0.8 mm single-core

Physical specifications

- housing: plastic
- dimensions (L x W x H): 42 x 42 x 8.5 mm
- weight: approx. 22.5 g
- fire load: approx. 450 kJ ± 10 %
- installation: in box mounts, Ø 60 mm, depth: 40 mm

Electrical safety

- degree of pollution (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

Electromagnetic compatibility

complies with
EN 50090-2-2 and IEC 61000-6-2

Environmental specifications

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

Certification

KNX/EIB

CE norm

complies with the EMC guideline (residential and functional buildings)

Push Button Interface UP 220/03
Push Button Interface UP 220/13

5WG1 220-2AB02
5WG1 220-2AB13

Location and Function of the Display and Operating Elements

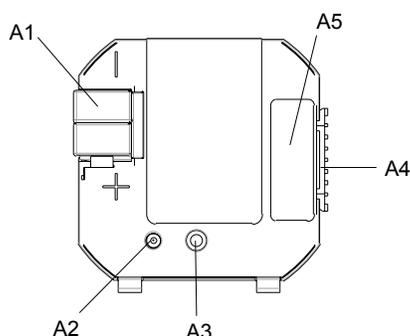


Figure 1: Push button interface UP 220/x3, front view

- A1 Bus terminal for solid conductors with 0.6 ... 0.8 mm \varnothing
- A2 LED for indicating normal operating mode (LED off) or addressing mode (LED on); it is extinguished automatically once the physical address has been transferred
- A3 Learning button for toggling between normal operating mode and addressing mode for transferring the physical address
- A4 Connection of the eight-/four-core cable set
- A5 Circuit diagram of the eight-/four-core cable set

Mounting and Wiring

General description

The push button interface UP 220/03 or UP 220/13 is built into box mounts, \varnothing 60 mm, depth 40 mm. In addition to the push button interface, a standard device insert can be attached to the box mount. For mounting several conventional device inserts, several box mounts must be combined via cable glands (only the box mount that actually holds the push button interface requires a depth of 40 mm). The cores of the eight-core cable set supplied with the device can be inserted in the series-connected box mounts via the cable glands.

Note

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

Cable set

The cable set consists of eight cores marked in 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, ferrules are fixed to the free ends.

Note

The cables used for connecting the switches and push buttons must not be longer than 10 m (per channel). Otherwise the electromagnetic compatibility requirements (interference immunity) cannot be met. Twisted cables must be used. The free ends that are not used must be insulated.

Removing a bus terminal (Figure 2)

- The bus terminal (B2) consists of two components (B2.1, B2.2) with four terminal contacts each.
- Carefully insert the screwdriver in the wire entry slot of the grey component of the bus terminal (B2.2) and remove the bus terminal (B2) from the push button interface UP 220/x3 (B1).

Note

Do not try to remove the bus terminal from underneath! There is a risk of shorting the device!

Clipping on the bus terminal

- Insert the bus terminal in the guide slot of the push button interface UP 220/x3 and press the bus terminal downwards until it reaches the stop.

Connecting the bus cable (Figure 2)

- The bus terminal (B2) can be used with solid conductors, 0.6 ... 0.8 mm Ø.
- Remove the insulation from the conductor (B2.4) and insert it in the terminal (B2) (red = +, grey = -).

Disconnecting the bus cable (Figure 2)

- Disconnect the bus terminal (B2) and remove the conductor (B2.4) of the bus cable while twisting it backwards and forwards.

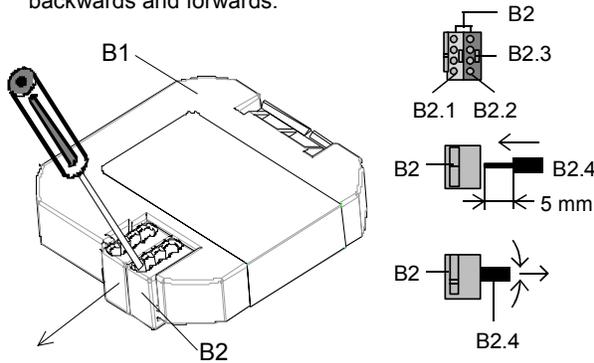
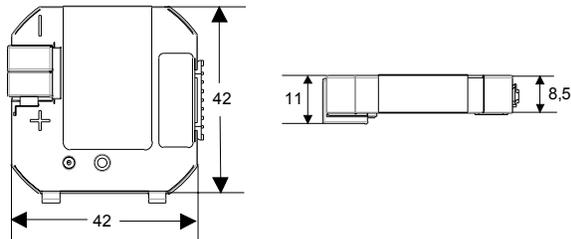


Figure 2: Connecting/disconnecting the bus cable

Dimension Diagram

Dimensions in mm



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 (0) 180 50 50-222
 - ☎ +49 (0) 180 50 50-223
 - ✉ adsupport@siemens.com