Shutter Switch UP 520/11 without physical external interface **5WG1 520-2AB11**
1 x 230 V AC / 6 A

Product and Applications Description

The shutter switch UP 520/11 is a switching actuator with additional physical external interface for mounting flush-mounting boxes (60 mm Ø, 60mm depth). The box mount has to be covered with a universal-cover (ordering separately). The shutter switch can raise or lower a blind drive and turn the slats open or closed gradually by its volt free contacts. The connection of the load circuit is carried out via screwless connection blocks and the EIB bus line is connected via screwless plug-in connection blocks.

One channel is available for the connection of one shutter actuator. The shutter switch UP 520/11 consists of the device (hardware) and its application programs (software) for shutter control.

With the ETS (*EIB* Tool Software) the application program is selected, its parameters and addresses are assigned appropriately, and downloaded to the shutter switch UP 520/11.

Application Programs

20 A1 Actuator-BCU Shutter 902002

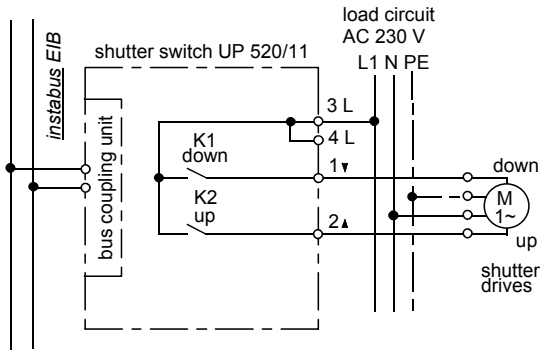
- single shutter with safety function
- shutter or roller blind mode available
- reverse delay mode available
- characteristic in case of bus voltage failure can be set in parameter list

⚠ WARNING

If the shutter switch UP 520/11 is used for shutter drives take care of the following: (otherwise the contacts may be welded)

- The factor and base values of the parameter "Reverse delay" must be combined to establish a time period as given by the blinds manufacturer (usually > 500 ms).
- The parameter "on bus voltage failure" should be set to "maintain actual state " or "stop".

Example of Operation



Installation Instructions

- The device may be used for permanent interior installations in dry locations within distribution boards.

⚠ WARNING

- The device must be mounted and commissioned by an authorised electrician.
- A safety disconnection of the device must be possible.
- The device may be mounted to switch and socket combination box mounts provided 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.

Shutter Switch UP 520/11 without physical external interface **5WG1 520-2AB11**
1 x 230 V AC / 6 A

Technical Specifications

Power supply
via bus line

Outputs
- number: 1 output channel (volt-free contacts)
- rated voltage: AC 230 V, 47 ... 63 Hz
- rated current: 6 A resistive load
- switching current at AC 230 V:
  - 0,01 ... 6 A resistive load
  - tubular motors with auxiliary phase condenser ≤ 14 µF, max. power 500 VA at 20000 load switching cycles (UP-DOWN-STOP) respectively max. 750 VA at 12000 load switching cycles
  - total maximum load at cosφ = 0,4; 750 VA
- switching current at DC 24 V:
  - 6 A resistive load,
  - 4 A inductive load (L/R = 7 ms)
- switching characteristic:
  set in parameter list according to application program
- switching repetition interval: min 150 ms

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
- load circuit, physical:
  strip insulation for 9 ... 10 mm
  permissible conductor types/cross sections:
  - 0,5 ... 2,5 mm² single core or flexible conductor, 8 mm ultrasonically compacted
  - 0,5 ... 2,5 mm² flexible conductor with terminal pin, crimped on gas tight
  - 0,5 ... 1,5 mm² flexible conductor with connector sleeve
  - 1,0 and 1,5 mm² plain flexible conductor
- load circuit, electrical:
  - plain flexible conductor, min. 1 mm²: current carrying capacity max. 6 A
  - all other conductors, min. 1,5 mm²: current carrying capacity max. 10 A

⚠ WARNING

When looping through the L-conductor (connection blocks 3 and 4), take care that the maximum connection current of 16 A (as governed by the maximum permissible printed conductor load) is not exceeded!

- bus line: bus connection block screwless
  0,6...0,8 mm Ø single core
  insulation strip length 5mm

Physical specifications
- housing: plastic
- dimensions:
  - spacing dimensions (W x H): 44 x 51 mm
  - mounting depth: 40 mm
- weight: approx. 60 g
- fire load: approx. 971 kJ ± 10 %
- installation: in box mounts (a.o. Ø 60 mm, 60 mm deep)

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
- relay with µ-contact
- the device complies with
  EN 50090-2-2 and EN 60669-2-1

Reliability
- 20000 switching cycles per contact

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

Shutter Switch UP 520/11 without physical external interface **5WG1 520-2AB11**
1 x 230 V AC / 6 A

Location and Function of the Display and Operator Elements

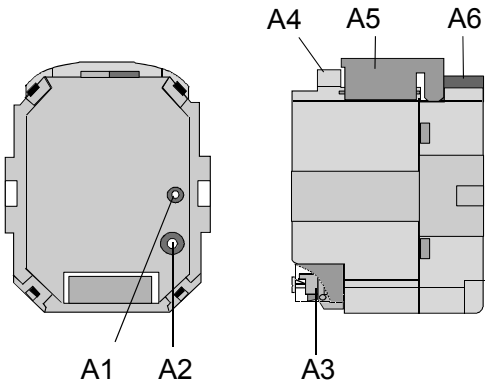


Figure 1: Location of the display and operator elements

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 Screwless plug-in connection blocks with measuring tap to connect the load circuits
A4 Clamping slots for anchoring the bus lines
A5 Snap-on cover for bus line and single bus wires
A6 Bus connection block for single core conductors with Ø0,6...0,8 mm

Mounting and Wiring

General description
The shutter switch UP 520/11 is built into box mounts (∅ 60 mm, depth 60 mm).
The box mount has to be covered with a universal-cover (ordering separately), which is screwed upon the box mount. The shutter switch is connected to the bus line via the bus terminal block 193 (plug-in connection blocks without screws for single core conductors).

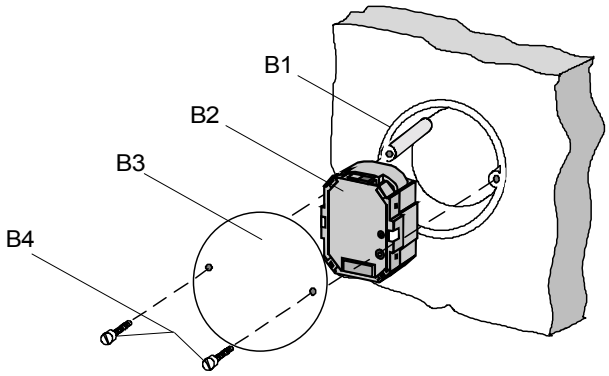


Figure 2: Mounting the shutter switch UP 520

B1 box mount
B2 shutter switch UP 520/11
B3 universal-cover
B4 mounting screws

Slipping off / on bus connection blocks (figure 3)
- The bus connection block (C2) is situated at the top of the shutter switch UP 520/11 (C3).
  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)
- Introduce the screw-driver between the cover (C1) and the shutter switch (C3) and lever out the cover.
- 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 shutter switch (C1).

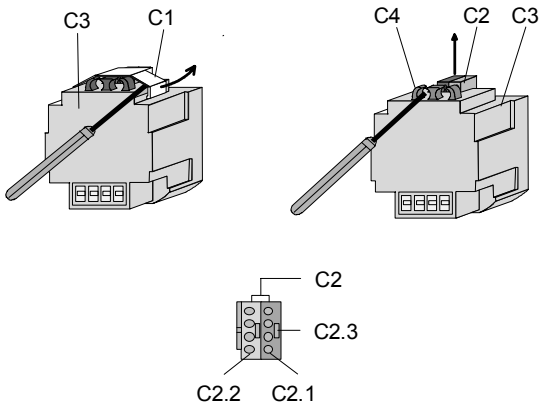


Figure 3: slipping off/on bus block

Shutter Switch UP 520/11 without physical external interface **5WG1 520-2AB11**
1 x 230 V AC / 6 A

Note

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

Connecting bus cables (figure 4)
- The bus connection block (D2) can be used with single core conductors 0,6 ... 0,8 mm Ø.
- Remove approx. 25 -35 mm of the insulation
- Remove the end of the insulation of the conductor (D2.4) and plug the last one into the connection block (D2) (red = +, grey = -).

Slipping on bus connection blocks (figure 3)
- Slip the bus connection block (C2) onto the guide slot of the shutter switch and
- press the bus connection block (C2) down to the stop.
- Press the sheathing of the cut-off insulation bus line (figure 4) projecting >3mm into the open clamping slot (C4). If a further bus line shall be connected break out the closed clamping slot with a screw-driver and press it into the clamping slot as described above. Press the single bus wires into the recess below the bus terminal block and snap on the cover (C1).

Disconnecting bus cables (figure 4)
- Unplug the bus connection block (D2) and remove the bus cable conductor (D3) while simultaneously wiggling it.

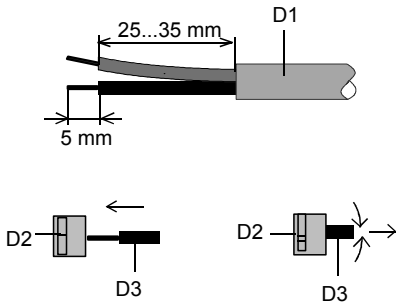


Figure 4: Connecting/disconnecting bus cables

Connecting load circuits (Figure 5)
- The load circuit is connected to screwless plug-in terminals (E1).
- Remove approx. 9 to 10 mm of insulation from the wire (E2) and plug it into the terminal (E1).

Conductor cross sections:
permissible conductor types/cross sections:
- 0,5 ... 2,5 mm² single core or flexible conductor, 8 mm ultrasonically compacted
- 0,5 ... 2,5 mm² flexible conductor with terminal pin, crimped on gas tight
- 0,5 ... 1,5 mm² flexible conductor with connector sleeve
- 1,0 and 1,5 mm² plain flexible conductor

Disconnecting load circuits (Figure 5)
- Press the screw-driver onto the locking bar (F2) of the connection block (F1) and
- Slip the conductor (F3) out of the terminal block (F1)

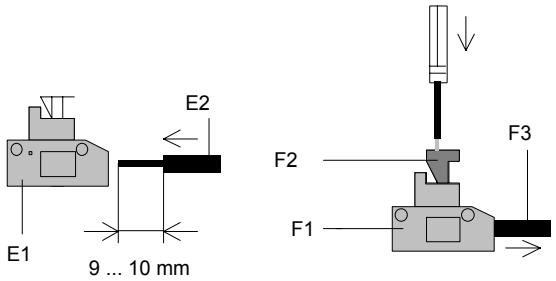
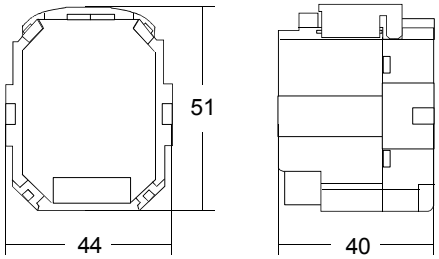


Figure 5: Connecting/disconnecting cables

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
❒ http://www.siemens.com/automation/support-request