

Dimmer UP 525/11
 without physical external interface

5WG1 525-2AB11

Product and Applications Description



The dimmer UP 525/11 is a dimming actuator for mounting in box mounts (a.o. 60 mm Ø, 60 mm depth). The box mount has to be covered with a universal-cover (ordering separately). 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.

The dimmer UP 525/11 can switch and dim incandescent lamps, high voltage halogen lamps or low voltage halogen lamps with intermediate conventional or electronic transformers.

Note

The dimmer UP 525/11 is a phase interval operating device.

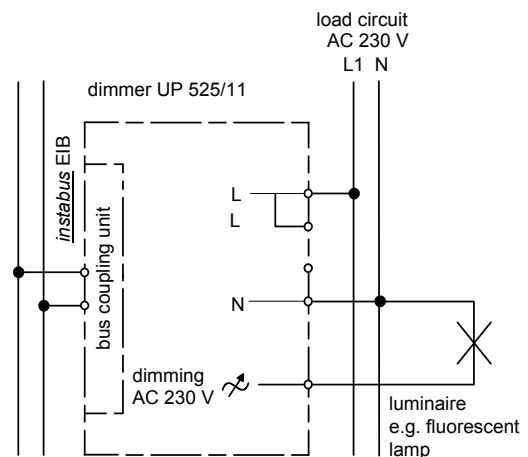
The dimmer UP 525/11 consists of the device (hardware) and its application programs (software). Several modes are available e.g. switching on and off low-voltage halogen lamps, increasing and decreasing their light intensity or setting them to a specified light intensity value. With the ETS (EIB Tool Software) the application program is selected, its parameters and addresses are assigned appropriately, and downloaded to the dimmer UP 525/11.

Application Programs

20 A1 Actuator-BCU Dimmer 903002

- single dimming device for on/off, dim, set value
- allows switching on bus voltage recurrence
- dimming range adjustable
- dimmed value when switching on adjustable
- allows state to be read via bus
- allows dimming and set-value operations while switched off without having to switch on
- establishes light intensity specified in the set-value mode optionally directly or via dimming

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.
- A safety disconnection of the device must be possible.
- On load side there must not be carried out any switching operations.
- 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.

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Technical Specifications

Power supply

via bus cable and 230 V mains

230 V-Supply connection

- rated voltage: AC 230 V, 50 Hz
- rated current: 1,1 A
- no-load current: approx. 5,5 mA
- no-load power input: approx. 1,3 VA
- no-load power loss: approx. 0,5 W

Short-circuit protection

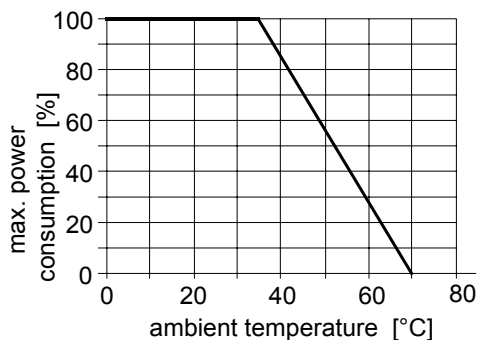
Electronic protection that switches the device down when it detects a short-circuit. It switches it on every 1 minute and examines whether the short-circuit has been eliminated.

Overload protection

Electronic protection switching the dimming device down for at least 1 minute on exceeding the maximum operating temperature due to overload. It automatically switches the device on after cooling down setting the actual set-point.

Load output

- number: 1 output
- rated voltage: 230 V AC, 50 Hz
- rated current: 1,1 A
- maximum power consumption of devices connected at 35°C ambient temperature:
 - incandescent lamp: 20...250 W
 - high voltage halogen lamps with intermediate electric transformers: 20...250 W
 - low voltage halogen lamps with intermediate electric transformers: 20...250 W
- maximum power consumption of devices connected in relation to the ambient temperature:



Performance in case of mains voltage failure

dimmer retrieves the actual switching condition and brightness value saved in the bus coupling system after mains voltage restoration.

Performance in case of bus voltage failure

switch-off (cannot be set in the parameter list)

Performance in case of bus voltage recurrence

set in parameter list according to application program

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
 - flexible conductor with terminal pin, crimped on gas tight, min. 1,5 mm²: current carrying capacity max. 10 A
 - all other conductors, min. 1,5 mm²: current carrying capacity max. 10 A



WARNING

When looping through the L- conductor (L- connection blocks), take care that the maximum connection current of 10 A (as governed by the maximum permissible printed conductor load) is not exceeded!

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

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Physical specifications

- housing: plastic
- dimensions:
 - spacer dimensions (W x H): 44 x 51 mm
 - mounting depth: 40 mm
- weight: approx. 60 g
- fire load: approx. 1000 kJ ± 10 %
- installation: mounting in box mounts (a.o. 60 mm Ø, 60 mm depth)

Electrical safety

- fouling class (according to IEC 664-1): 2
- protection (according to EN 60529): IP 20
- protection class (according to EN 60536): 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 and EN 60669-2-1

Reliability

- rate of failure: 565 fit at 40°C

Electromagnetic compatibility

complies with EN 50081-1, EN 50082-1, EN 60669-2-1 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

Location and Function of the Display and Operator Elements

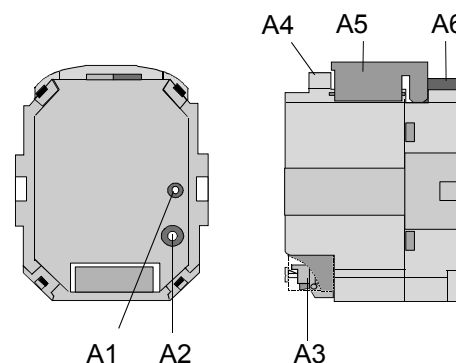


Figure 1: Location of the display and operator elements

- 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 plug-in terminals with trial tap for connecting load circuits
- A4 clamping slots for anchoring the bus lines
- A5 snap-on cover for bus lines and bus single cores
- A6 bus connection block for single core conductors with 0,6...0,8 mm Ø

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Mounting and Wiring

The dimmer UP 525/11 is mounted in box mounts (a.o. 60 mm Ø, 60 mm depth). The box mount has to be covered with universal-cover (ordering separately), which is screwed upon the box mount. The dimmer is connected with the bus line via the bus connection block 193 (screwless connection blocks for single core conductors).

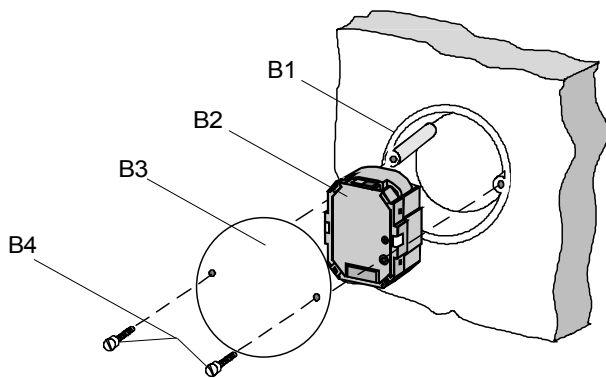


Figure 2: Mounting the dimmer UP 525/11

- B1 box mount
- B2 dimmer UP 525/11
- B3 a universal-cover
- B4 mounting screws

Slipping off/on bus connection blocks (Figure 3)

- The bus connection block (C2) is situated on the top of the device (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)

- Insert the screw-driver between the cover (C1) and the dimmer (C3) and push off 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 dimmer (C3).

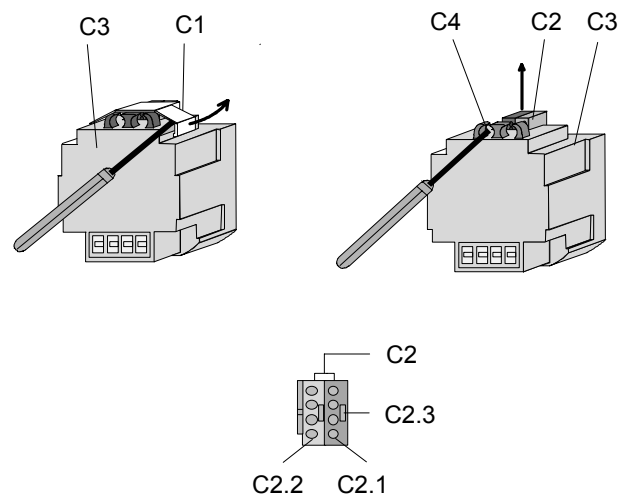


Figure 3: Slipping off/on bus connection blocks

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 Ø 0,6 ... 0,8 mm.
- Remove approx. 25 - 35 mm of insulation from the conductor (D1).
- Strip the conductor (D3) and plug it into the connection block (D2) (red = +, grey = -).

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Slipping on bus connection blocks (figure 3)

- Slip the bus connection block (C2) onto the guide slot of the binary output and
- press the bus connection block (C2) down to the stop.
- press the sheathing of the cut-off insulation bus line 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.

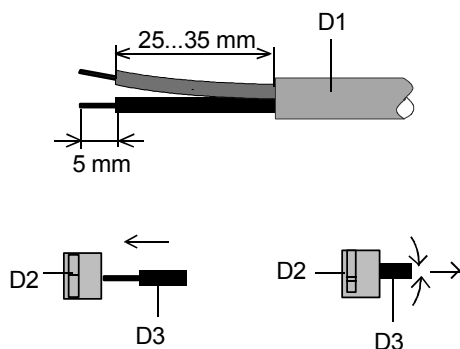


Figure 4: Connecting/disconnecting bus cables

Connecting load circuits (Figure 5)

- The load circuits are connected via 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

Disconnect load circuits (Figure 5)

- Press the terminal lock (F2) with a screw-driver and
- remove the wire (F3) from the terminal (F1).

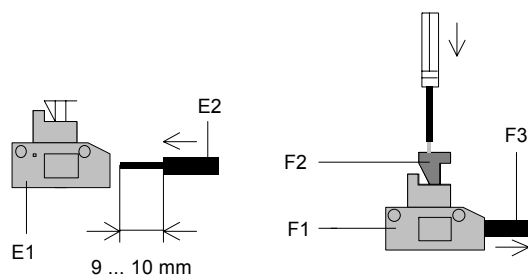
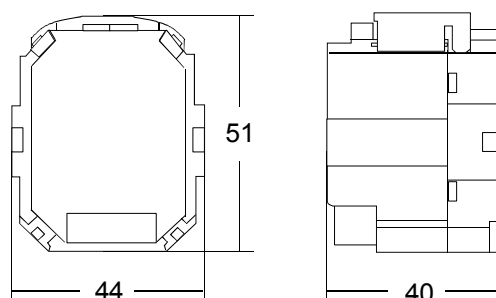


Figure 5: Connecting/disconnecting cables

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>