

Venetian blind actuator N523C04 5WG1 523-1CB04

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Product and Applications Description

The Venetian blind actuator N 523/04 is a DIN rail mounted device in N-system dimensions with a width of 4 module units. Only one AC 120V drive (motor) with electromechanical limit switches or with integrated electronics for disconnection at the limit positions can be connected to one channel of the 4-fold Venetian blind actuator N 523/04. The parallel operation of several drives on one channel requires the intermediate switching of a special relay. Apart from the possibility to travel the sun-/ sight guard directly into one of its two final positions (via EIS 1 objects) it is also possible for both the shutter and the slats to be moved independently into intermediate positions, defined in percentages, by positioning commands (EIS 6 objects). And it can be distinguished between automatic / manual mode.

The power supply of the Venetian blind actuator electronics is carried out via an integrated power supply unit, which is fed via the mains connection L1 for channels A and B. The mains connection for channels C and D is carried out via the connection L2. This enables two channels to be connected to different L-conductors. If this is not required, one of the terminals L1 must be linked to one of the terminals L2 via a wiring jumper.

For direct operation (also in the event of communications failure or if KNX/EIB communication has not yet been put into operation), four pairs of push buttons are available on the top of the device. For direct operation, both AC 120 V and bus voltage must be applied at the actuator. Moreover, the actuator must be switched to direct operation via the appropriate push button with an LED. In direct operation mode, an output remains switched on while the associated push button is pressed. As the direct operation is completely independent of the bus communication, any active alarm or active block-

ing of the raising or lowering of the sun/anti-glare protection is not taken into account.

Note: After an "unload" of the application program with the ETS the device will be without any function. Even the direct operation is impossible.

Application Programs

25 A4 Venetian blind actuator 981201

Technical Specifications

Power supply

- Bus voltage: provided via the bus line
- Supply voltage for bus: 21V DC to 30V DC (Class 2)
- N 523/04 electronics: integrated power supply unit AC 120V, +5% / -25%, 50/60Hz

Operating elements

- 1 push button: for toggling between normal mode / addressing mode
- 1 push button: for toggling between bus / direct operation
- 4 x 2 push buttons: for direct operation of the Venetian blind drives, independent of the EIB

Display elements

- 1 red LED: for displaying normal mode / addressing mode (off / on)
- 1 yellow LED: for displaying bus / direct operation (off / on)

Inputs/outputs

- Mains connection:
 - 2 x 2-pole (N, L1) (L1 is also the power supply for outputs A and B)
 - 2-pole L2 (power supply for channels C and D)
- 4 load outputs for 4 Venetian blinds:
 - each 2-pole (up, down)
 - rated voltage: AC 230 V, 50Hz
 - rated current per relay contact: 6 A (resistive load)
 - Switching cycles: >20,000 at $\cos \phi = 1$

Connections

- Mains and load circuits plug-in terminals for mains connections and outputs Insulation strip length 9... 10 mm The following conductor cross-sections are permitted:
 - 0.5... 2.5 mm² single-core
 - 0.5... 2.5 mm² finely stranded with connector sleeve
 - 1.5 mm² finely stranded, untreated (max. ampacity 6A).
- Bus line: Pressure contacts on data rail and bus terminal

Mechanical data

- Housing: plastic
- Dimensions: DIN rail mounted device in N-system dimensions, width: 4 modules (1 module = 18 mm)
- Weight: approx. 290 g
- Fire load: approx. 3600 KJ ± 10%
- Installation: snap-on fixing onto DIN rail EN 60715-TH35-7.5

Electrical safety

- Degree of pollution (in accordance with IEC 60664-1): 2
- Protection type (in accordance with EN 60529): IP 20
- Bus: safety extra-low voltage SELV DC 24 V
- Device complies with EN 50090-2-2

EMC requirements

complies with EN 50090-2-2

Environmental conditions

- Ambient operating temperature: - 5 ... + 45 °C [+23 ... +113 °F]
- Storage temperature: - 25 ... + 70 °C [-13 ... +158 °F]

Listings and Certifications

UL listed (E464611)

UL 916, Open Energy Management Equipment

CSA certified

CE marked

In accordance with the EMC guideline (residential and functional buildings) and the low voltage guideline

KNX / EIB certified

Markings

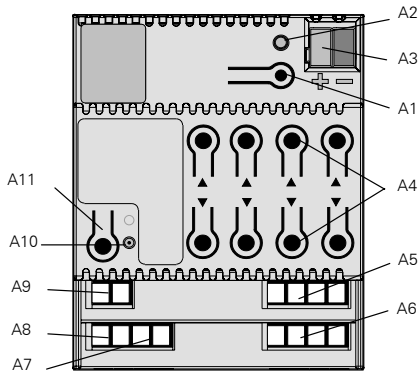
KNX, EIB, CE, UL

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Location and Function of the Display and Control Elements

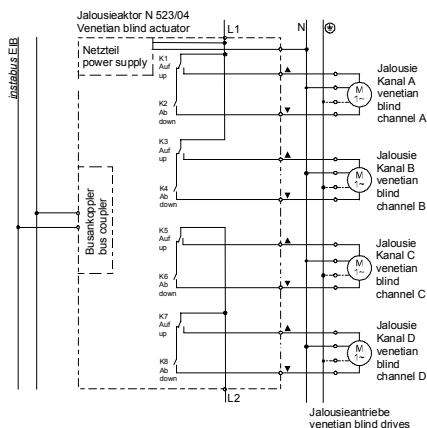


- A1 Commissioning button
- A2 Commissioning LED
- A3 Bus terminal (Class 2 voltage)
- A4 Buttons for direct operation UP/DOWN of a sun-blind
- A5 Terminals for sunblind UP/DOWN (Channel C + D)
- A6 Terminals for sunblind UP/DOWN (Channel A + B)
- A7 Terminals N
- A8 Terminals L1
- A9 Terminals L2
- A10 LED direct operation = ON
- A11 Button for toggling between bus / direct operation

Installation Instructions

The device may be used for permanent interior installations in dry locations within distribution boards or small casings with DIN rail EN 60715-TH35-7,5. This equipment is intended for field installation within the enclosure of another product.

Typical circuit



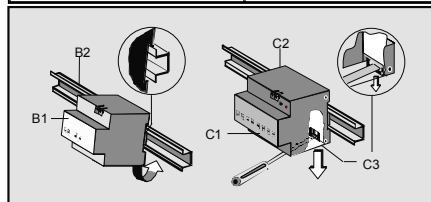
WARNING

Hazardous voltage. Can cause death, or serious injury or property damage. Disconnect and lock off power before installing or working on the device. CAUTION: Risk of Electric Shock – More than one disconnect switch may be required to de-energize the equipment before servicing.

The device must not be opened. A faulty device should be returned to the local Siemens sales office or distributor.

The device must be mounted and commissioned by a factory trained person. The prevailing safety rules must be observed! Mount in dry locations only.

When looping through the L and N conductors, it should be noted that the maximum terminal current of 10A, which is limited by the permitted printed conductor load, may not be exceeded.



Mounting

General description

The N-system DIN-rail device can be installed in the *instabus* KNX/EIB lighting control panel, surface or flush mounted, or to any DIN rail in distribution boards, surface or flush mounted, complying with EN 60715-TH35-7,5 that has a data rail installed.

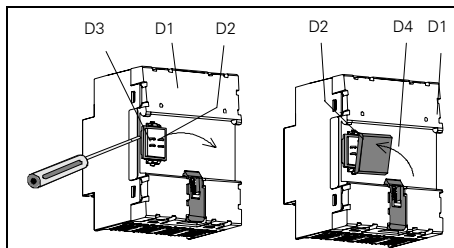
The connection to the bus line is established by clicking the device onto the DIN-rail (with a data rail installed). Take care that the type plates of all devices on a DIN-rail can be read in the same direction, guaranteeing the devices are polarised correctly.

Mounting the device to a DIN-rail

- Slide the DIN-rail device (B1) onto the DIN-rail (B2) and
- swivel back the DIN-rail device until the slide clicks into place audibly.

Dismounting DIN-rail devices

- Remove all connected wires,
- press down the slide (C3) with a screw-driver and
- swivel the DIN-rail device (C1) from the DIN-rail (C2).



Connection to the bus without data rail

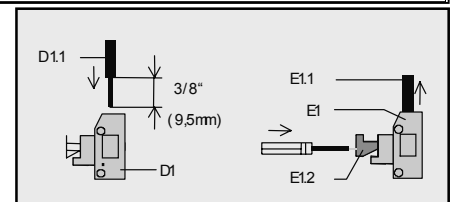
If the connection is established via bus connection block (data rail not installed) the data rail connection system has to be covered with the enclosed insulation hood after removing the guiding top e.g. with a screw driver to guarantee a sufficient insulation from the DIN rail.

Removing the guiding top

- The guiding top (D3) surrounds the contact system (D2) on the back side of the device (D1).
- Insert the screw driver between the DIN-rail device (D1) and the guiding top (D3) and remove the guiding top.

Inserting the insulation hood

- Put the insulation hood (D4) onto the contact system and click it into place by a slight pressure.



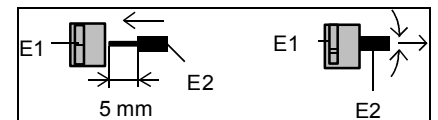
Wiring

Connecting mains

- Mains is connected via screwless plug-in terminals (D1).
- Remove approx. 3/8" (9,5mm) of insulation from the wire (D1.1) and plug it into the terminal (D1).

Disconnect mains

- Press the terminal lock (E1.2) with a screw-driver and
- remove the wire (E1.1) from the terminal (E1).



Slipping on of the safety extra low voltage block

- slip the connection block onto the guide slot and
- press the connection block down to the stop

Connecting the safety extra low voltage block

- The connection block (E1) can be used with single core conductors Ø 0.6 ... 0.8 mm.
- Remove approx. 5 mm of insulation from the conductor (E2) and plug it into the connection block (E1) (red = +, black = -).

Disconnecting the safety extra low voltage block

- Unplug the connection block (E1) and remove the bus cable conductor (E2) while simultaneously wiggling it.