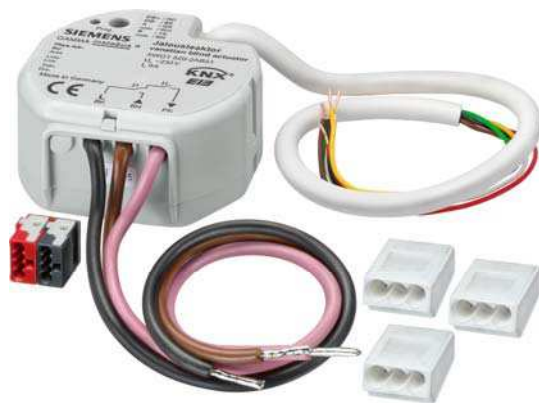


## Product and Function Description



Photo

The blind actuator receives telegrams from sensors via the Instabus and controls a shutter or blind motor with its output. Both travel directions are mechanically interlocked. With sun protection or positioning telegrams, the actuator offers moreover the possibility of moving shutters, blinds and slats into any desired position. On reception of a storm warning, the actuator is capable of moving shutters or blinds into a predefined safety position and to lock them up in this position.

In addition, the device has two extension inputs that depending on parameter settings, can act directly on the output (local operation, see "state of delivery") or alternatively also as binary inputs on the Instabus. The connected potential-free switch or push button contacts are read in via a common reference potential on the actuator. As binary input, telegrams can be transmitted for switching or dimming, for Venetian blind control, value setting or scene recall / save.

### State of delivery:

- When delivered, the switching state of the outputs is undefined.
- On application of the bus voltage, the relays will switch off.
- With the bus voltage applied, the extension inputs control the relays of the actuator as follows:

| input | Operation | behavior         |
|-------|-----------|------------------|
| A     | short     | stop / slat up   |
|       | long      | move up          |
| B     | short     | stop / slat down |
|       | long      | move down        |

Simultaneous actuation of A and B is not possible

## Application program

### 12 A1S2 Shutter, 2x Input 207301

- 2 binary inputs
  - ON / OFF / TOGGLE switching
  - Value setting
  - Dimming
  - Blind / Shutter – control
  - Scene control
  - Inputs blocking function
  - Behavior on bus power restoration
- 1 channel with additional functions
  - Sun protection function
  - Safety function
  - Adjustable response after bus voltage failure
  - Adjustable response to bus voltage return
  - Adjustable priority of sun protection function and manual operation

**Technical specifications**

**Power supply**

- Carried out via the bus line
- Power consumption: typically 150 mW

**Outputs**

- Number: 1 output, potential-free relay contact ( $\mu$ -contact)
- Rating voltage: AC 230V,
- Switching power: max. 1 motor 1000 VA
- Switching behavior: Can be parameter set, depending on function

**Contacts**

- Output: Contact the load on H07V-K 1,5 mm<sup>2</sup> with the attached clamps.
- Inputs and bus line: Line YY 6x0.6 mm  
Approx. 33cm pre-assembled, can be laid to max. 5m

**Mechanical specifications**

- Casing: plastic
- Dimensions: d =53mm, height = 28 mm
- Weight: approx. 88g
- Mounting: in box mounts,  $\varnothing$  60mm, depth: 40mm

**Electrical safety**

- Degree of pollution (to IEC 60664-1): 2
- Protection class (to EN 60529): IP 20
- Protection class (to IEC 61140): III
- Overvoltage category class (to IEC 60664-1): III
- Bus: safety extra low voltage SELV DC 24V
- Device complies with EN 50090-2-2 and IEC 60664-1

**Reliability**

Failure rate: 170 fit at 40°C

**EMC criteria**

- Complies with EN 61000-6-2, EN 61000-6-3 and EN 50090-2-2

**Environmental specifications**

- Climatic conditions: EN 50090-2-2
- Ambient temperature in operation: - 5 ... + 45 °C
- Storage temperature: - 25 ... + 70 °C  
(Storage above + 45°C reduces the service life)
- Relative humidity (non-condensing): 5% to 93%

**Markings**

- KNX *EIB*

**CE mark**

- to EMC directive (residential and functional building)

**Location and functioning of the display and operating elements**

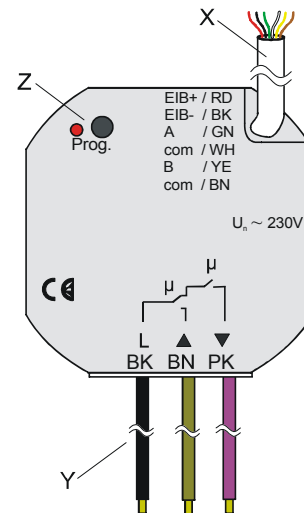


Figure 1: Location of the indicating and operating elements

- X Connector cables low voltages  
Red: Bus (+)  
Black: Bus (-)  
Green: input A  
White: Reference potential (com)  
Yellow: Input B  
Brown: Reference potential (com)
- Y Connector cables load  
black: L // brown: Up // pink: Down
- Z Program button / -LED (red)

## Blind actuator UP 520/31

5WG1 520-2AB31

## Mounting and wiring

## → General:

It is recommended that the actuator is installed in two flush sockets connected to one another (cf. fig. 2). One socket (A) can accommodate, e.g., a series switch (C) as well as the bus and extension connection. The other socket (B) accommodates the actuator and the 230 V terminals. The 6-pole connection lead (D) is guided through the socket connection.

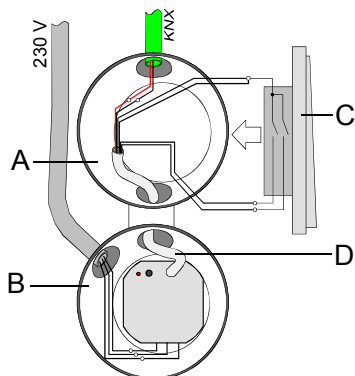


Figure 2

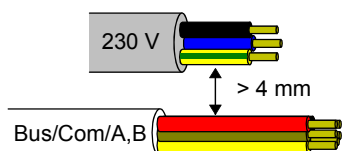


Figure 3

**Danger**

- The device must be mounted and commissioned by an authorized electrician.
- When connecting the device, it should be ensured that the device can be isolated.
- 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.
- During installation, ensure adequate insulation between mains voltage and bus or extensions! A minimum spacing should be maintained between bus / extension cable cores and mains voltage cable cores of at least 4 mm. (cf. figure 3)

## → Inputs:

Two extension inputs can be used for the connection of potential-free contacts for local control or as binary inputs. (cf. figure 4)

Line YY 6x 0.6 mm

Approx. 33cm pre-assembled, can be laid to max. 5m

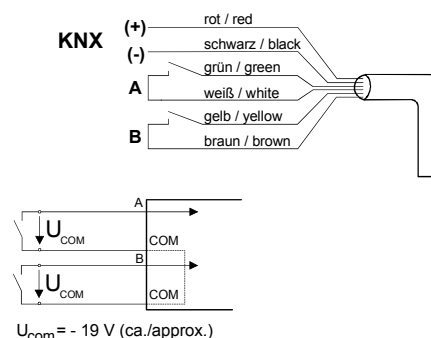


Figure 4

**Caution**

- To avoid disruptive EMI irradiation, the lines of the inputs should not be laid parallel to lines conducting mains voltage.
- Input A (green), input B (yellow) and reference potential (com) (white and brown) must not connect to inputs or reference potential (com) of other devices.

**Danger**

- On no account should you connect mains voltage (230 V) or other external voltages to the extension inputs! Connection to an external voltage would endanger the electrical safety of the entire KNX/EIB system (SELV / no galvanic isolation)!
- People can be at risk, equipment and devices can be destroyed!
- Unused cable cores of the 6-pole connection lead are to be insulated from one another and from external voltages.

**→ Outputs:**

A blind actuator is switching an electrical drive, which is configured for two rotating directions (Up/Down). (cf. figure 5)

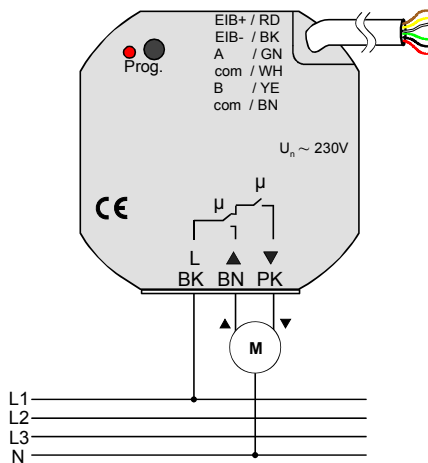


Figure 5

**Note**

- The outputs of the blind actuator are electrical interlocked



**Danger**

- The soldered end of lines have to connect by using the attached clamps.
- Do not connect three-phase AC motors to blind actuators
- Observe the instructions of the motor manufacturers if motors are to be connected in parallel. Otherwise risk of irreparable damage to the motors.
- Use only blinds or shutters with limit switches (mechanical or electronic). The limit switches of the connected motors must be checked for correct adjustment.

**Dimensioned picture**

Dimensions in mm

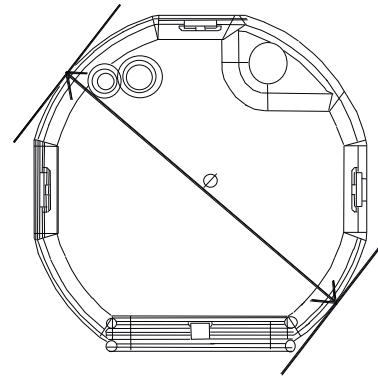




Figure 6

Ø = 53 mm  
Height = 28 mm

**General notes**

- Any faulty device is to be returned to the local Siemens office.
- If you have further questions concerning the product, please contact our Technical Support:  
 +49 (0) 180 50 50-222 (0,14 €/min. from the German landline network, deviating mobile communications prices are possible)  
 +49 (0) 180 50 50-223  
 E-Mail: [support.automation@siemens.com](mailto:support.automation@siemens.com)  
 Internet: [www.siemens.com/automation/service&support](http://www.siemens.com/automation/service&support)