Roller shutter actuator 4gang RMD
Order-No. : 7531 40 13
Blind actuator 4gang RMD 24 V DC
Order-No. : 7531 40 11

Operation- and
Assembly Instructions

1 Safety instructions

Electrical equipment may only be installed and fitted by electrically skilled persons.

Failure to observe the instructions may cause damage to the device and result in fire and other hazards.

Danger of electric shock. Device is not suitable for disconnection from supply voltage.

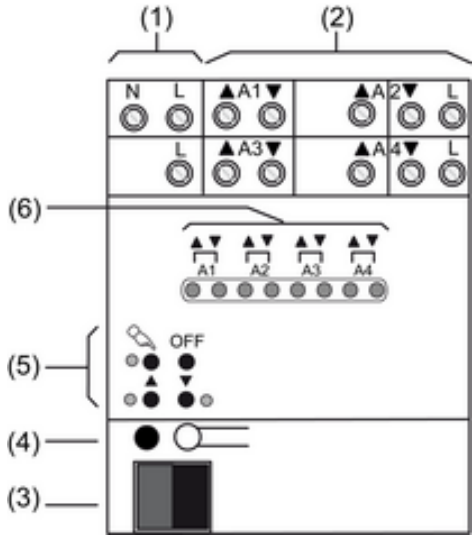
For parallel connection of several motors to an output it is essential to observe the corresponding instructions of the manufacturers, and to use a cut-off relay if necessary. The motors may be destroyed.

Risk of injury. Use the device only for controlling Venetian blind and roller shutter motors or awnings. Do not use it to switch other loads.

Use only venetian blind motors with mechanical or electronic limit switches. Check the limit switches for correct adjustment. Observe the specifications of the motor manufacturers. Device can be damaged.

These instructions are an integral part of the product, and must remain with the end customer.

2 Device components



picture 1

(1) Mains voltage connection
(2) Motor connections
(3) KNX connection
(4) Programming button and LEDs
(5) Button field for manual control
(6) Status LEDs for outputs

3 Function

System information

This device is a product of the KNX system and complies with the KNX directives. Detailed technical knowledge obtained in KNX training courses is a prerequisite to proper understanding.

The function of this device depends upon the software. Detailed information on loadable software and attainable functionality as well as the software itself can be obtained from the manufacturer´s product database.

Planning, installation and commissioning of the device are carried out with the aid of KNX-certified software. Full functionality with KNX commissioning software version ETS3.0d onwards.

An updated version of the product database, technical descriptions and conversion programs and other auxiliary programs are available on our Internet website.

Intended use

- Switching of electrically driven roller shutters for 230 V AC mains voltage or Venetian blinds for 24 V DC
- Mounting on DIN rail according to EN 60715 in distribution boxes

Product characteristics of roller shutter actuator

- 4 independent channels, each for a single motor
- 2 x 2-channel operation possible
- Travel direction change-over time can be set separately for each output
- Safety travel in case of storm can be set separately for each output
- Behaviour in case of bus voltage failure and return can be set
- Short-time and long-time operation can be set separately for each output
- Automatic travelling time extension to adjust for various travelling times to the upper end position

i For further product characteristics, please consult the associated KNX product documentation.

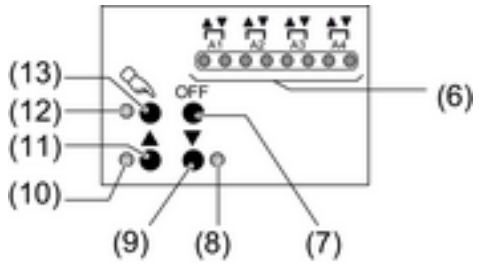
Product characteristics of 24 V Venetian blind actuator

- 4 independent channels, each for a single DC motor
- 2 x 2-channel operation possible
- Type of blind/shutter adjustable: Venetian blind with slat control or roller shutter
- Travel direction change-over time can be set separately for each output
- Central and positioning functions can be activated
- Safety travel in case of storm can be set separately for each output
- Behaviour in case of bus voltage failure and return can be set
- Short-time and long-time operation can be set separately for each output
- Travelling time extension can be set to adjust for various travelling times to the upper end position
- 2 sun protection functions can be configured for brightness-dependent travel of the blind/ shutter

i For further product characteristics, please consult the associated KNX product documentation.

4 Operation

Operating elements



picture 2

(6) Status LEDs for outputs
(7) Button **OFF**: Stop all hangings
(8) LED ▼ – on: hanging moves down, manual mode
(9) Button ▼: move hanging downwards/Stop
(10) LED ▲ – on: hanging moves up, manual mode
(11) Button ▲: move hanging up/Stop
(12) LED ✎ – on: continuous manual mode
(13) Button ✎: manual control

Status indication

The status LEDs A1...A4 (6) indicate the states of the outputs.
- Off: Output switched off
- On: Output switched on
- Flashes: Output in manual mode

Operating modes

- Bus operation: Operation via push-button sensors or other bus devices
- Temporary manual mode: exclusively manual operation on the device with button field; automatic return to bus operation.
- Continuous manual mode: exclusively manual operation on the device with button field

i When manual mode is activated, all safety travel in case of storm is aborted. If the safety travel in case of storm is still active after manual mode is exited, it will be completed then.

i No manual mode is possible in case of bus failure.

i After a bus failure and restoration the device switches to bus operation.

i After a power failure and restoration the device switches to bus operation.

i The manual mode can be disabled in ongoing operation via a bus telegram.

Priorities of Venetian blind actuator

- Highest priority: manual mode
- 2rd priority: safety function
- Lowest priority: bus mode: moving up/down, positioning function, central function

i The priority of the sun protection function can be configured using the software.

Priorities of roller shutter actuator

- Highest priority: manual mode
- 2rd priority: safety function
- Lowest priority: bus mode: moving up/down

Switching on the temporary manual control

Operation using the button field is programmed and not disabled.

- Press ✎ button (13) for shorter than 1 second.

Temporary manual mode is switched on.

Status LEDs **A1** (6) flash. LED ✎ (12) remains off.

i All channels are switched off during temporary manual mode.

i After 5 seconds without a button-press, the actuator automatically returns to bus operation.

i If a long press is made on the ✎ button (13) in temporary manual mode, the actuator switches to continuous manual mode.

Deactivating temporary manual control

The device is in short-term manual mode.

- No button-press for 5 seconds.

  - or -

- Press ✎ button (13) for shorter than 1 second until the actuator exits temporary manual mode.

  Bus operation is switched on.

  Status LEDs **A1...A4** (6) no longer flash, but rather indicate the status of the corresponding output.

Switching on permanent manual control

Operation using the button field is programmed and not disabled.

- Press the ✎ button (13) for longer than 5 seconds.

  Continuous manual mode is switched on.

  Status LEDs **A1** (6) flash. LED ✎ (12) lights up.

i All channels are switched off when manual mode is activated.

Deactivating permanent manual control

The device is in continuous manual mode.

- Press the ✎ button (13) for longer than 5 seconds.

  LED ✎ (12) is off. Bus operation is switched on.

Operating the outputs

The device is in continuous or short-term manual mode.

- Press ✎ button briefly, < 1 second, as many times as necessary until the desired output is selected.

  LEDs of the selected output **A1...A4** flash.

  The LEDs ▲ and ▼ indicate the status.

- Operate output with ▲ or ▼ button.
  Press for shorter than 1 second: stop blind/shutter.
  Press for longer than 1 second: move blind/shutter up/down.

  The selected hanging executes the corresponding commands.

  The LEDs ▲ and ▼ indicate the status.

i Short-term manual operation: After running through all of the outputs the device exits manual mode after another brief press.

Stop all hangings

The device is in continuous manual mode.

- Press the **OFF** button.

  All outputs are shut off. The blinds/shutters stop.

5 Information for electrically skilled persons

5.1 Fitting and electrical connection

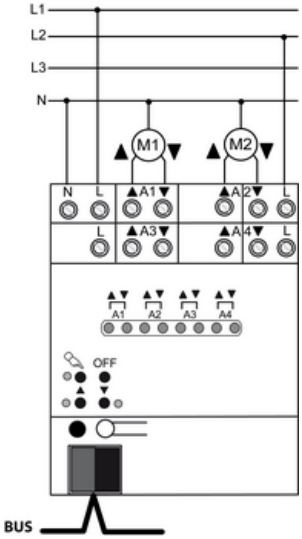
Fitting the device

DANGER!
Electrical shock when live parts are touched.
Electrical shocks can be fatal.
Before carrying out work on the device or load, disengage all the corresponding circuit breakers. Cover up live parts in the working environment.

Observe the temperature range. Ensure sufficient cooling.

- Mount device on DIN rail. Output terminals must be at the top.

Connecting a roller shutter actuator



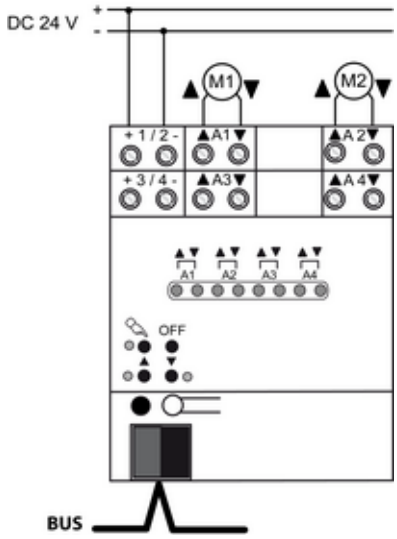
picture 3: Connection example with two motors

- Connect bus cable to the roller shutter actuator using the connecting terminal (picture 3).
- Connect mains voltage supply (picture 3).
- Connect motors to load terminals **A1 ... A4**(picture 3).

i Output **A1** and the device electronics of the actuator are supplied via a common lustre terminal. To supply power to outputs **A2 ... A4** it is also necessary to connect any desired external conductor to the lustre terminals in question.

i Delivery state: Outputs can be operated using button field, construction site mode.

Connecting a 24 V DC Venetian blind actuator



picture 4: Connection example with two motors

Only suitable for 24 V DC drives. Note permitted loads.

- Connect bus cable with connecting terminal (picture 4).

Terminals **1/2** supply power to the device electronics and outputs **A1** and **A2**. For operation of the actuator it is necessary to connect an external 24 V DC power supply to **1/2**.

Terminals **3/4** supply power to outputs **A3** and **A4**.

CAUTION!
The polarity of the external power supply units must be the same.
Actuator may be destroyed.
Note polarity of the external voltages.

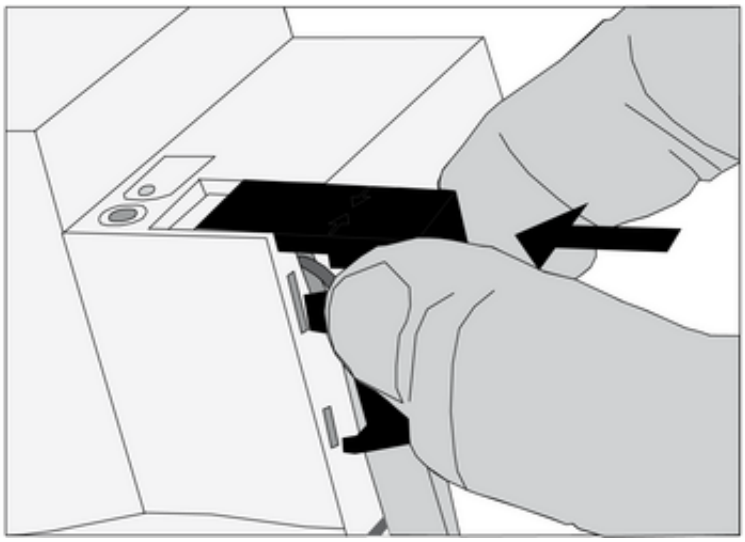
The supply voltages must be designed in such a way that a safe and reliable operating voltage is provided under all load conditions – especially when the motors are first switched on.

- Connect power supply to terminals **1/2** / **3/4**(picture 4).
- Connect motors to load terminals **A1 ... A4**(picture 4).

i Delivery state: Outputs can be operated using button field, construction site mode.

Installing the cover

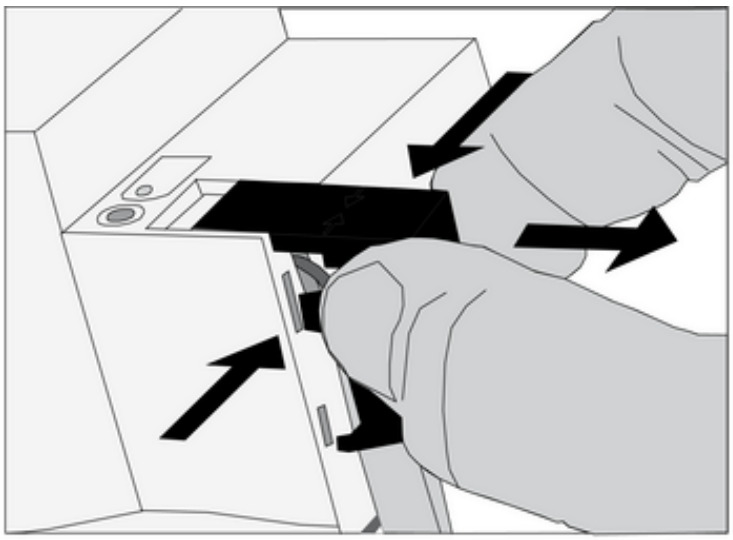
It is necessary to install a cover to protect the bus connection against hazardous voltages in the connection area.



picture 5: Installing the cover

- Route the bus cable towards the rear.
- Install cover on top of the bus terminal so that it snaps into place (picture 5).

Removing the cover



picture 6: Removing the cover

- Press the cover to the side and pull it off (picture 6).

5.2 Commissioning

Measuring blind/shutter travelling time and slat adjusting time

Blind/shutter travelling times and slat adjusting times are important for position runs.

- Measure up and down travelling times of the blind/shutter.
- Measure slat adjusting time between the "Open" and "Closed" positions.
- Enter measured values in seconds in the parameter settings.

Determining the travelling time extension

Because blinds/shutters are slower when they are moving up, the actuator extends the set time for long-time operation by the travelling time extension.

- Determine difference between up and down travelling times.
- Enter value for travelling time extension in percent in the parameter settings.

Load the address and the application software

- Switch on the bus voltage
- Assign physical address.
- Load the application software into the device.
- Note the physical address on the device label.

6 Appendix

6.1 Technical data

Roller shutter actuator 4gang RMD, Order-No. 7531 40 13

Supply	
Rated voltage	AC 230 / 240 V ~
Mains frequency	50 / 60 Hz
Power loss	max. 2 W
Ambient conditions	
Ambient temperature	-5 ... +45 °C
Storage/transport temperature	-25 ... +70 °C
Outputs	
Switching voltage	AC 250 V~
230 V AC switching current	6 A
Fitting width	72 mm / 4 modules
Connections supply and load	
Connection mode	Screw terminal
Single stranded	0.5 ... 4 mm²
finely stranded with conductor sleeve	0.5 ... 2.5 mm²
finely stranded without conductor sleeve	0.5 ... 4 mm²
KNX	
KNX medium	TP 1
Commissioning mode	S mode
Rated voltage KNX	DC 21 ... 32 V SELV
Power consumption KNX	typical 150 mW
Connection mode KNX	Connection terminal

Blind actuator 4gang RMD 24 V DC, Order-No. 7531 40 11

Supply	
Rated voltage	DC 24 V =
Power loss	max. 2 W
Ambient conditions	
Ambient temperature	-5 ... +45 °C
Storage/transport temperature	-25 ... +70 °C
Outputs	
Switching current	6 A
Switching voltage DC	DC 24 V =
Fitting width	72 mm / 4 modules
Connections supply and load	
Connection mode	Screw terminal
Single stranded	0.5 ... 4 mm²
finely stranded with conductor sleeve	0.5 ... 2.5 mm²
finely stranded without conductor sleeve	0.5 ... 4 mm²
KNX	

KNX medium	TP 1
Commissioning mode	S mode
Rated voltage KNX	DC 21 ... 32 V SELV
Power consumption KNX	typical 150 mW
Connection mode KNX	Connection terminal

6.2 Troubleshooting

Manual control with button field not possible

Cause 1: Manual control has not been programmed.

Program manual control.

Cause 2: Manual control via bus disabled.

Enable manual control.

Output cannot be operated.

Cause 1: Output is disabled.

Cancel disabling.

Cause 2: Safety function or sun protection function is active.

i As long as a higher-order function is active for an output, this output cannot be operated.

Cause 3: Continuous manual mode active.

Deactivate manual mode (switch off continuous manual mode).

Cause 4: Application software missing or faulty.

Check programming and correct.

Blind/shutter does not move to the end position, position run faulty

Cause: Hanging operation time has been set incorrectly.

Correct hanging operation time.

Position runs and scene runs are not executed

Cause 1: Sun protection, safety function or manual mode are activated.

i As long as a higher-order function is active for an output, no position runs are possible.

Cause 2: No blind/shutter operation time saved.

Measure and save blind/shutter travelling times.

6.3 Warranty

We reserve the right to make technical and formal changes to the product in the interest of technical progress.

Our products are under guarantee within the scope of the statutory provisions.

If you have a warranty claim, please contact the point of sale or ship the device postage free with a description of the fault to the appropriate regional representative.

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