Operating instructions

Switch actuator, 6-gang / blinds actuator, 3-gang
Art. no. 230061SR

Switch actuator, 16-gang / blinds actuator, 8-gang
Art. no. 230161SR

Switch actuator, 24-gang / blinds actuator, 12-gang
Art. no. 230241SR

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1 Safety instructions

Electrical devices may only be mounted and connected by electrically skilled persons.

Serious injuries, fire or property damage possible. Please read and follow manual fully.

Danger of electric shock on the SELV/PELV installation. Do not connect loads for mains voltage and SELV/PELV together to the device.

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.

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.

Do not connect any three-phase motors. Device can be damaged.

This manual is an integral part of the product, and must remain with the end customer.

2 Device components

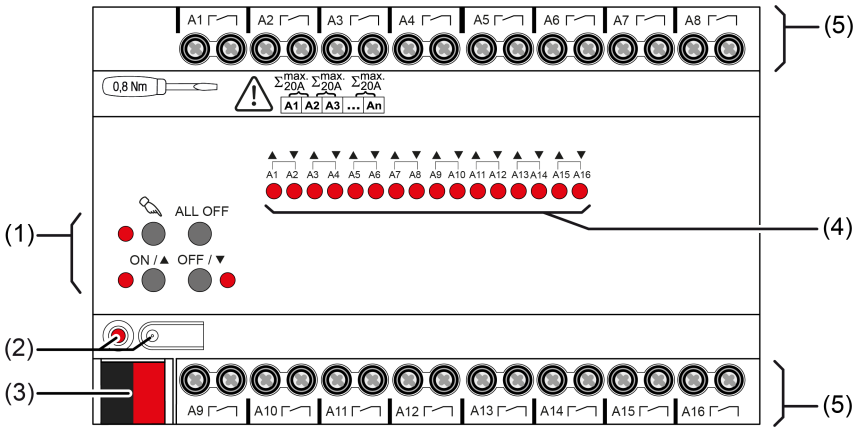

Image 1: Device components

(1) Button field for manual operation
(2) Programming button and LED
(3) KNX connection
(4) Status LEDs for outputs
(5) Load connections (relay 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.

The device can be updated. Firmware can be easily updated with the Jung ETS Service App (additional software).

The device is KNX Data Secure capable. KNX Data Secure offers protection against manipulation in building automation and can be configured in the ETS project. Detailed specialist knowledge is required. A device certificate, which is attached to the device, is required for safe commissioning. During mounting, the device certificate must be removed from the device and stored securely.

Planning, installation and commissioning of the device are carried out with the aid of the ETS, version 5.7.3 and above.

Intended use

- Switching of electrical loads with potential-free contacts
- Switching of electrically-driven Venetian blinds, roller shutters, awnings and similar hangings
- Installation in sub-distribution unit on DIN rail according to DIN EN 60715

Product characteristics

- Outputs can be operated manually, construction site mode
- Manual switching between Venetian blind operation and switching operation without commissioning
- Feedback in manual mode and in bus mode
- Disabling of individual outputs manually or by bus
- Status feedback (e. g. wind alarm)
- KNX Data Secure compatible
- Updatable with Jung ETS Service App

Characteristics switch operation

- Operation as NO or NC contacts
- Feedback function
- Logic and restraint function
- Central switching functions with collective feedback

- Time functions: switch-on delay, switch-off delay, staircase lighting timer with run-on time
- Scene function
- Operating hours counter

Characteristics blinds operation

- Suitable for AC motors 110...230 V
- Operating modes "Venetian blind with slats", "Roller shutter/awning", "Venting louvre/roof window"
- Blind/shutter position directly controllable
- Slat position directly controllable
- Feedback of movement status, blind/shutter position and slat position
- Forced position through higher-level controller
- Safety function: 3 independent wind alarms, rain alarm, frost alarm
- Sun protection function with heating/cooling operation
- Disabling function (lock-out protection)
- Scene function

Logic function characteristics

- Logic gate
- Transformer (conversion)
- Disabling element
- Comparator
- Limit value switch

4 Operation

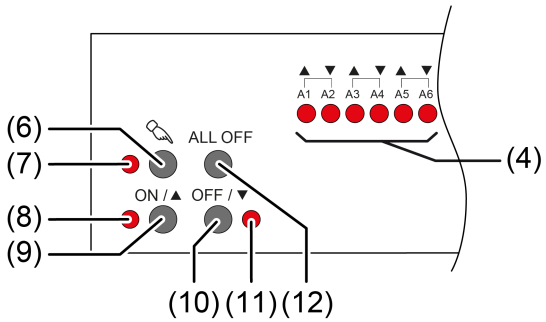

Image 2: Operating elements

(4) Status LEDs for outputs
ON: Relay output closed
OFF: Relay output opened
Flashes slowly: Output in manual mode selected
Flashes quickly: Output disabled via continuous manual mode

(6) Button
Manual operation

(7) LED
ON: Continuous manual mode active/Flashing: Temporary manual mode active

(8) LED **ON**/▲
ON: Relay outputs closed, manual mode active

(9) Button **ON**/▲
Short: Switch on, adjust slats or stop
Long: Move hanging upwards

(10) Button **OFF**/▼
Short: Switch off, adjust slats or stop
Long: Move hanging downwards

(11) LED **OFF**/▼
ON: Relay outputs opened, manual mode active

(12) Button **ALL OFF**
Open all relay outputs, stop drives

In operation with the button field the device distinguishes between a short and a long press.

– Short: Pressing for less than 1 s
– Long: Pressing for between 1 and 5 s

In switching operation, the device distinguishes between the "NO contact" and "NC contact" operating modes. The buttons (9 + 10) switch the switching state when actuated:
NO contact: Switch on = close relay, Switch off = open relay
NC contact: Switch on = open relay, Switch off = close relay
The LED (4 + 8 + 11) always indicate the relay state.

The LEDs (4) optionally indicate the states of the outputs only temporarily (parameter-dependent).

Operating modes

– Bus operation: operation via push-button sensors or other bus devices
– Temporary manual control: manual control locally with keypad, automatic return to bus control
– Continuous manual mode: Exclusively manual operation on the device

No bus operation is possible in manual mode.

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

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

Switching on temporary manual operation mode

Operation is not disabled.

- Press button (6) briefly.

  LED (7) flashes, LEDs **A1...** (4) of the first configured output or output pair flash.

  Short-time manual operation is switched on.

After 5 s without a button actuation, the actuator returns automatically to bus operation.

Switching off temporary manual operation mode

The device is in short-term manual mode.

- No button-press for 5 s.

  - or -

- Press (6) button briefly as many time as necessary until the actuator leaves the short-time manual mode.

  Status LEDs **A1...** (4) no longer flash, but rather indicate the relay status.

  Short-time manual operation is switched off.

  Switching outputs: depending on the programming, the output relays switch to the position that is active after the manual mode is switched off, e.g. logic function.

  Blind/shutter outputs: depending on the programming, the hangings move to the position that is active after the manual mode is switched off, e.g. to safety or sun protection position.

Switching on permanent manual operation mode

Operation is not disabled.

- Press the (6) button for at least 5 s.

  LED (7) lights up, LEDs **A1...** (4) of the first configured output or output pair flash.

  Continuous manual mode is switched on.

Switching off permanent manual operation mode

The device is in continuous manual mode.

- Press the (6) button for at least 5 s.

  LED (7) is off.

  Continuous manual mode is switched off. Bus operation is switched on.

  Switching outputs: depending on the programming, the output relays switch to the position that is active after the manual mode is switched off, e.g. logic function.

Blind/shutter outputs: depending on the programming, the hangings move to the position that is active after the manual mode is switched off, e.g. to safety or sun protection position.

Operating an output in manual mode

- Activate short-term or permanent manual operation.
- Press button ✎ (1) repeatedly until LED **A1...** (4) of the desired output or output pair flashes.
- Press button **ON**/▲ (9) or **OFF**/▼ (10).
  Short: Switch on/off, drive stop.
  Long: Move blind/shutter upwards/downwards.

  LED **ON**/▲ (3) ON: Relay output closed

  LED **OFF**/▼ (6) OFF: Relay output opened

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

Switching off all outputs / Stopping all hangings

The device is in permanent manual operation mode.

- Press the **ALL OFF** button (7).

  Switching outputs: All outputs switch off (NO operating mode: relay output opened/NC operating mode: relay output closed).

  Venetian blind outputs: All blinds/shutters stop.

Disabling outputs

The device is in continuous manual mode. The bus control can be disabled (ETS parameter).

- Press button ✎ (6) repeatedly until LED **A1...** (4) of the desired output or output pair flashes.
- Press the **ON**/▲ (9) and **OFF**/▼ (10) buttons simultaneously for approx. 5 s.

  Selected output is disabled.

  The status LED **A1...** (4) of the selected output or output pair flashes quickly.

ⓘ A disabled output can be operated in manual mode.

Re-enabling outputs

The device is in continuous manual mode. One or more outputs were disabled in manual mode.

- Press button ✎ (6) repeatedly until the output to be unlocked or the output pair is selected.
- Press the **ON**/▲ (9) and **OFF**/▼ (10) buttons simultaneously for approx. 5 s.

Disabling is deactivated.

The LED **A1...** (4) of the selected output or output pair flashes slowly.

Switching between Venetian blind and switching operation

Device is not in operation

- Activate permanent manual operation.
- Press button ✎ (1) repeatedly until LED **A1...** (8) of the desired output or output pair flashes.
- Press the ✎ (1) and **ON**/▲ (4) and **OFF**/▼ (5) buttons simultaneously for approx. 5 s.

  Switching operation: Both status LEDs **A1...** (8) of the output pair light up.

  Venetian blind operation: Both status LEDs **A1...** (8) of the output pair flash alternately.
- Press the **ON**/▲ (4) and **OFF**/▼ (5) buttons simultaneously.

  Outputs switch between switching operation and Venetian blind operation.

  Both status LEDs **A1...** (8) indicate the current operating mode.
- Press the ✎ (1) and **ON**/▲ (4) and **OFF**/▼ (5) buttons simultaneously for approx. 5 s.

  Operating mode switchover is terminated, permanent manual operation mode is activated.
- Press the ✎ button (1) for approx. 5 s.

  Operating mode switchover is terminated, permanent manual operation mode is deactivated.

5 Information for electrically skilled persons

DANGER!

Mortal danger of electric shock.

Disconnect the device. Cover up live parts.

5.1 Mounting and electrical connection

Mounting the device

In secure operation (preconditions):

– Secure commissioning is activated in the ETS.

– Device certificate entered/scanned or added to the ETS project. A high resolution camera should be used to scan the QR code.

– Document all passwords and keep them safe.

Observe ambient temperature. Ensure adequate cooling.

- Mount device on DIN rail.
- In secure operation: The device certificate must be removed from the device and stored securely.

Connecting the device

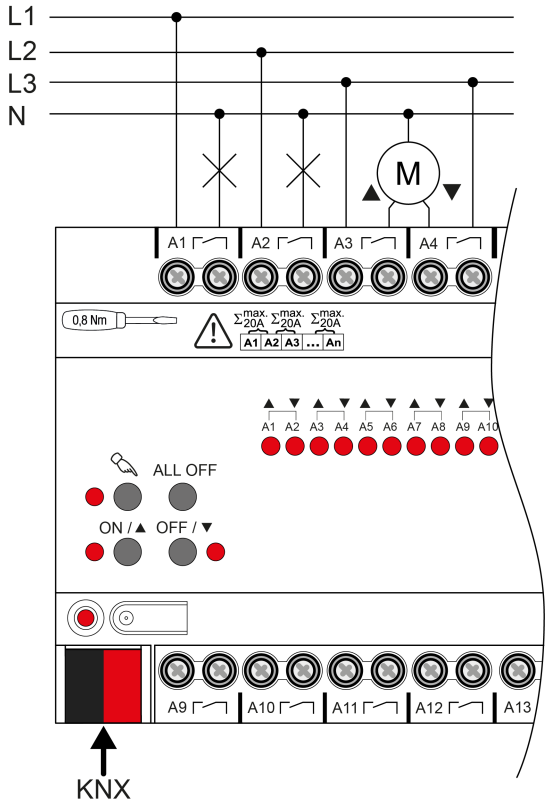

Image 3: Device connection (connection example)

- Connect bus line with KNX device connection terminal observing the correct polarity.
- Attach the cover cap to the KNX connection as protection against hazardous voltages.
- Connect load as shown in the connection example. Two adjacent relay outputs form a Venetian blind output.

The total current capacity of neighbouring outputs is a maximum of 20 A.

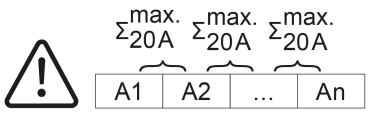

Image 4: Total current capacity of neighbouring outputs

5.2 Commissioning

Commissioning the device

NOTICE!

Incorrect load control due to undefined relay state at delivery.

Risk of destruction of connected drive motors.

During commissioning, before switching on the load, ensure that all relay contacts are open by applying the KNX bus voltage. Observe commissioning sequence!

- Switch on the KNX bus voltage.
- Wait about 10 s.
- Switch on load circuits.

Delivery state: The outputs can be operated with manual control. Outputs are set as Venetian blind outputs.

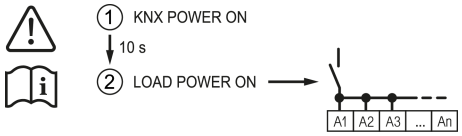

Image 5: Sequence during commissioning - Device label

Load physical address and application program

- For switched loads, configure the outputs as a switching output.
- For Venetian blind operation, configure the outputs as a Venetian blind output.
- In Venetian blind operation: measure blind/shutter and slat travel times and enter them in the parameter setting.
- Press the programming button.

  The programming LED lights up.

- Load physical address and application program using the ETS.

Safe-state mode

The safe-state mode stops the execution of the loaded application program.

Only the system software of the device is still functional. ETS diagnosis functions and programming of the device are possible. Manual operation is not possible.

Activating safe-state mode

- Switch off the bus voltage or remove the KNX device connection terminal.
- Wait about 15 s.
- Press and hold down the programming button.

- Switch on the bus voltage or attach the KNX device connection terminal. Release the programming button only after the programming LED starts flashing slowly.

  The safe-state mode is activated.

  By briefly pressing the programming button again, the programming mode can also be switched on and off in the safe-state mode as usual. If the programming mode is active, the programming LED stops flashing.

Deactivating safe-state mode

- Switch off bus voltage (wait approx. 15 s) or carry out ETS programming.

Master reset

The master reset restores the basic device settings (physical address 15.15.255, firmware remains in place). The device must then be recommissioned with the ETS. Manual operation is possible.

In secure operation: A master reset deactivates device security. The device can then be recommissioned with the device certificate.

Performing a master reset

Precondition: The safe-state mode is activated.

- Press and hold down the programming button for > 5 s.

  The programming LED flashes quickly.

  The device performs a master reset, restarts and is ready for operation again after approx. 5 s.

Restoring the device to factory settings

Devices can be reset to factory settings with the Jung ETS Service App. This function uses the firmware contained in the device that was active at the time of delivery (as-delivered state). Restoring the factory settings causes the devices to lose their physical address and configuration.

6 Technical data

Ambient conditions	
Ambient temperature	-5 ... +45 °C
Storage/transport temperature	-25 ... +70 °C
KNX	
KNX medium	TP256
Commissioning mode	S-mode
Rated voltage KNX	DC 21 ... 32 V SELV

Current consumption KNX	
Art. no. 230061SR, 230161SR	5 ... 18 mA
Art. no. 230241SR	5 ... 24 mA
Outputs	
Switching voltage	AC 250 V ~
Switching current AC1	16 A
Fluorescent lamps	16 AX
Current carrying capacity	
Neighbouring outputs	Σ 20 A
Loads per output	
Ohmic load	3000 W
Capacitive load	max. 16 A (140 µF)
Motors	1380 VA
Switch-on current 200 µs	max. 800 A
Switch-on current 20 ms	max. 165 A
Lamp loads	
Incandescent lamps	2300 W
HV halogen lamps	2300 W
HV-LED lamps	max. 400 W
LV halogen lamps with electronic transformers	1500 W
LV halogen lamps with inductive transformer	1200 VA
Compact fluorescent lamps	
uncompensated	1000 W
parallel compensated	1160 W (140 µF)
Installation width	
Art. no. 230061SR	72 mm / 4 HP
Art. no. 230161SR	144 mm / 8 HP
Art. no. 230241SR	216 mm / 12 HP
Weight	
Art. no. 230061SR	approx. 230 g
Art. no. 230161SR	approx. 500 g
Art. no. 230241SR	approx. 740 g
Clampable conductor cross-section	
Single stranded	0.5 ... 4 mm²
Finely stranded without conductor sleeve	0.5 ... 4 mm²
Finely stranded with conductor sleeve	0.5 ... 2.5 mm²

Connection torque, screw terminals	max. 0.8 Nm

7 Warranty

The warranty is provided in accordance with statutory requirements via the specialist trade.

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