

Operating instructions

Switching actuator / blind actuator 16 A Standard & Komfort
Order no. 5023 00, 5033 00, 5028 00, 5038 00, 5030 00, 5040 00

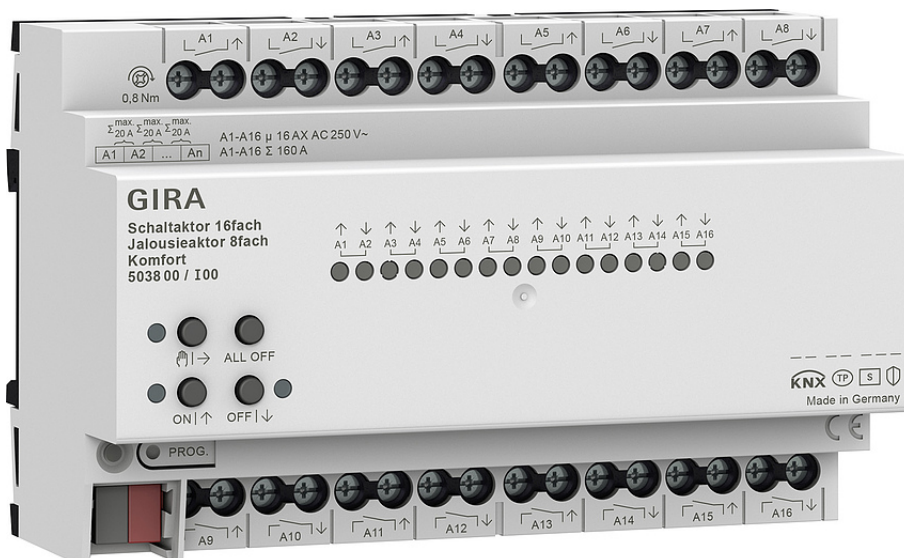


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1 Safety instructions



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

Serious injuries, fire or property damage are possible. Please read and follow the 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 mastering. Observe the specifications of the motor manufacturers. Device can be damaged.

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

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

2 Device components

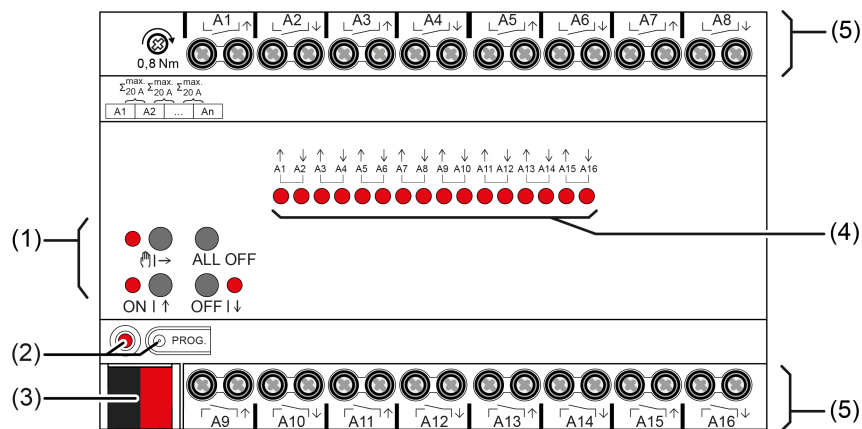


Figure 1: Device components

- (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 for proper understanding.

The function of the device depends on the software. Detailed information on software versions and the respective scope of functions 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 Gira ETS Service App (additional software).

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

The device is planned, installed and commissioned with version 5.7.3 or higher of the ETS.

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
- Operation in KNX System for Standard and Comfort devices.
- Operation in Gira One System for Standard devices only.

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 Gira 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 Venetian 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

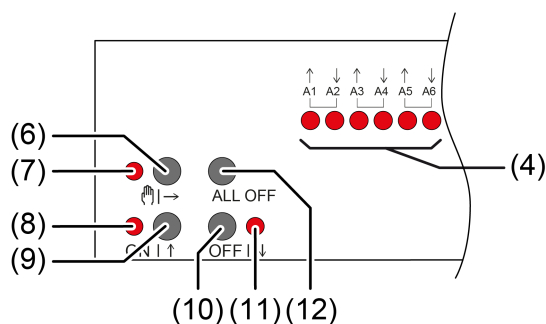




Figure 2: Operating elements

- (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

i 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.

i 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

i No bus operation is possible in manual mode.

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

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

Switching on temporary manual operation mode

Operation is not disabled.

- Press ↵ (6) button briefly.
LED ↵ (7) flashes, LEDs A1... (4) of the first configured output or output pair flash.

Short-time manual operation is switched on.

- i** 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.

Venetian blind outputs: depending on the programming, the blind moves 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 flashes.

Continuous manual mode is switched on.

Switching off permanent manual operation mode

The device is in permanent manual operation 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.

Venetian blind outputs: depending on the programming, the blind moves 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.
- Keep pressing the  button (6) until the LED A1... (4) of the desired output or output pair flashes.
- Press the **ON**|↑ (9) or **OFF**|↓ (10) button.
Short: Switch on/off, drive stop.
Long: Move blind/shutter upwards/downwards.
LED **ON**|↑ (8) ON: Relay output closed
LED **OFF**|↓ (7) 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 (12).
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 permanent manual operation mode. The bus control can be disabled (ETS parameter).




- Keep pressing the  button (6) until the 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 permanent manual operation 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.
- Keep pressing the  button (1) until the 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

Mount device

- Enter or scan the device certificate and add it to the project. A high resolution camera should be used to scan the QR code.
- The device certificate should be removed from the device during mounting.
- Document all passwords and keep them safe.

Observe the ambient temperature. Ensure sufficient cooling.

- Mount device on DIN rail.

Connect device

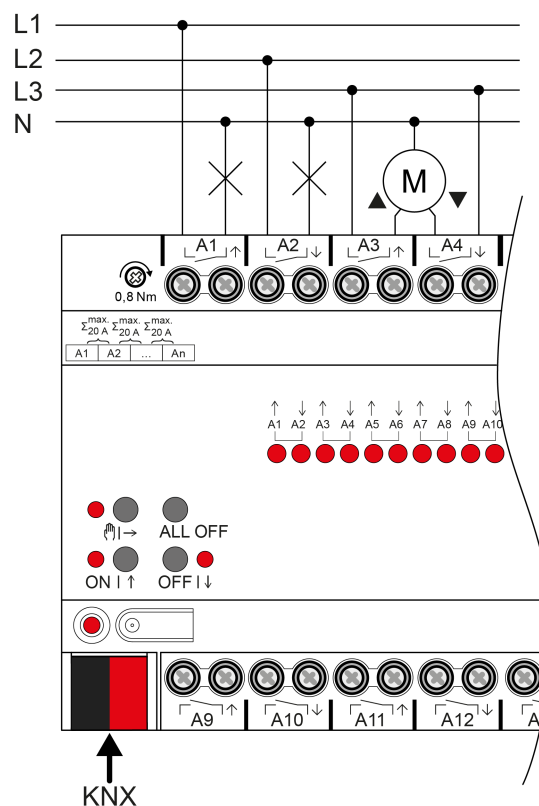


Figure 3: Device connection (connection example)

- 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.

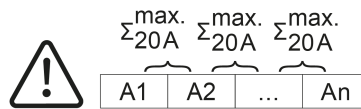


Figure 4: Total current capacity of neighbouring outputs

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 the commissioning sequence!

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

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

Safe-state mode

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

i 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 approx. 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.

Safe-state mode is activated.

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

Deactivating safe-state mode

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

Master reset

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

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

Performing a master reset

Prerequisite: 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 Gira ETS Service App. This function uses the firmware contained in the device that was active at the time of delivery (delivered state). Restoring the factory settings causes the devices to lose their physical address and configuration.

5.3 Optional: Installing the phase busbar (accessory)

- If necessary, cut the phase busbar at the notches using diagonal cutting pliers (see figure 5).
- Attach the end cap to the interface.

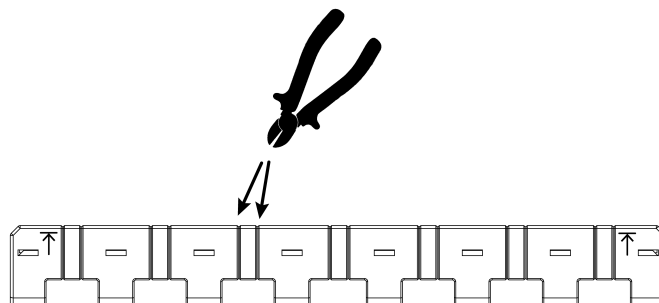


Figure 5: Shortening the phase busbar

- i** Ensure that the device connection terminals are open and the copper pins are inserted in the device connection terminals.
- Align the phase busbar using the printed arrows and plug it into the device connection terminals (see figure 6).

- Screw the phase busbar to the device connection terminals.

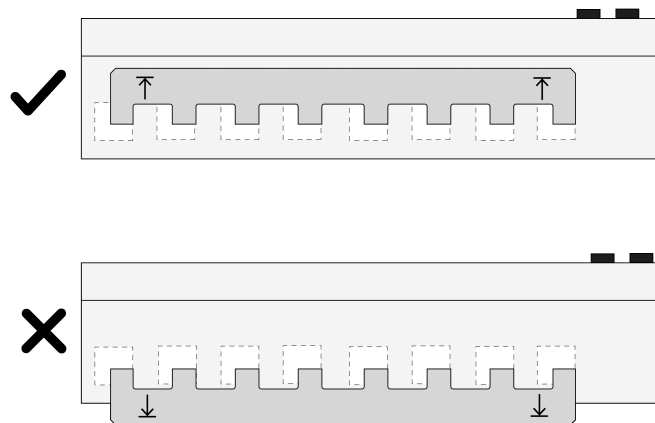


Figure 6: Installing the phase busbar

6 Technical data

Ambient temperature	-5 ... +45 °C
Storage/transport temperature	-25 ... +70 °C
Switching current	
AC1 according to DIN EN IEC 60947-4-1	16 A
External ballasts	16 A, 140 µF
Switch-on current 200 µs	Max. 800 A
Switch-on current 20 ms	Max. 165 A
Switching voltage	AC 250 V ~
Current carrying capacity	
Neighbouring outputs	Σ 20 A
Loads per output	
Motors	1380 VA
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
Fluorescent lamps, compensated	1160 VA
Terminals	
Connection mode	Screw terminals
Stripping length	8 mm
Phillips screwdriver	PZ1
Connection torque for screw terminals	Max. 0.8 Nm
Clampable conductor cross-section	
Single stranded	0.5 ... 4 mm ²

Finely stranded without conductor sleeve	0.5 ... 4 mm ²
Finely stranded with conductor sleeve	0.5 ... 2.5 mm ²
Installation width	
Order no. 5023 00, 5033 00	72 mm / 4 HP
Order no. 5028 00, 5038 00	144 mm / 8 HP
Order no. 5030 00, 5040 00	216 mm / 12 HP
Weight	
Order no. 5023 00, 5033 00	approx. 230 g
Order no. 5028 00, 5038 00	approx. 500 g
Order no. 5030 00, 5040 00	approx. 740 g
KNX	
KNX medium	TP256
Commissioning mode	S mode
Rated voltage KNX	DC 21 ... 32 V SELV
KNX current consumption	
Order no. 5023 00, 5028 00, 5033 00, 5038 00	5 ... 18 mA
Order no. 5030 00, 5040 00	5 ... 24 mA

7 Accessories

Set of 1-pole phase busbars for 16-gang switch actuator / 8-gang Venetian blind actuator, for Gira One and KNX	Order no. 8313 00
Set of 1-pole phase busbars for 24-gang switch actuator / 12-gang Venetian blind actuator, for Gira One and KNX	Order no. 8314 00
Set of end caps for phase busbar	Order no. 8315 00

8 Warranty

The warranty is provided by the specialist trade in accordance with statutory requirements. Please submit or send faulty devices postage paid together with a fault description to your responsible salesperson (specialist trade / installation company / electrical specialist trade). They will forward the devices to the Gira Service Center.

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