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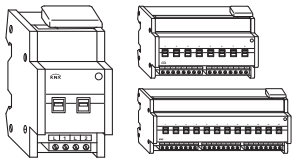
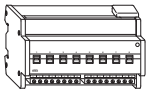
Schneider Electric

Switch actuator REG-K/x230/16 with current detection and manual mode

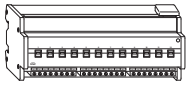
Operating instructions



Switch actuator REG-K/ 2x230/16 with current detection and manual mode
Art. no. MTN647395



Switch actuator REG-K/ 8x230/16 with current detection and manual mode
Art. no. MTN647895



Switch actuator REG-K/ 12x230/16 with current detection and manual mode
Art. no. MTN648495

For your safety

DANGER
Risk of fatal injury from electrical current.
The device may only be installed and connected by trained electricians. Observe the country-specific regulations as well as the valid KNX guidelines.

WARNING
Do not use the current detection function for applications relevant to safety.

CAUTION
The device can be damaged.
- Only operate the device in accordance with the specifications stated in the Technical Data.
- All devices that are installed next to the actuator must be equipped with at least basic insulation.
- Connect only pure ohmic loads to a channel with direct current (DC).

Getting to know the switch actuator

The switch actuator REG-K/x230/16 with current detection and manual mode (hereinafter referred to as **actuator**) can switch

– two loads (MTN647395) or
– eight loads (MTN647895) or
– twelve loads (MTN648495)

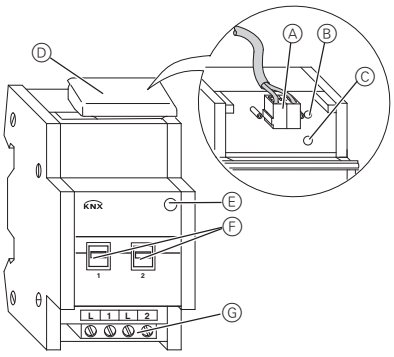
via separate, floating make contacts.

You can also manually switch the connected loads with manual switches on the actuator without bus voltage.

The actuator has a bus coupler. It is installed on a DIN rail (DIN 60715), with the bus connection made via a bus connecting terminal. It is supplied with power from the bus voltage. A data rail is not required.

The actuator also has integrated current detection which measures the load current of each channel.

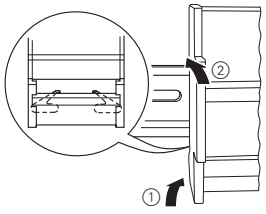
Connections, displays and operating elements



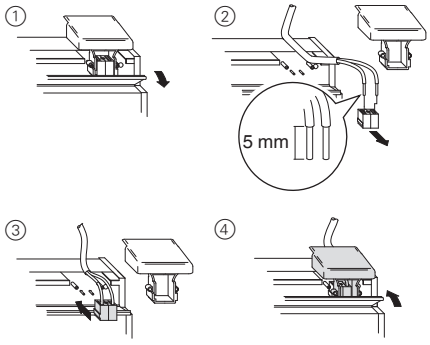
Ⓐ Bus connecting terminal, max. 4 core pairs
Ⓑ Programming LED (red LED)
Ⓒ Programming button
Ⓓ Cable cover
Ⓔ Operational LED "RUN" (green LED)
Ⓕ Manual switch
Ⓖ Screw terminals

Mounting the actuator

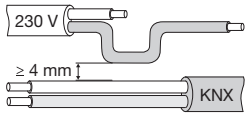
① Set the actuator onto the DIN rail.



② Connect KNX.



WARNING
Risk of fatal injury from electrical current. The device can be damaged.
Safety clearance must be guaranteed in accordance with IEC 60664-1. There must be at least 4 mm between the individual cores of the 230 V supply cable and the KNX cable.

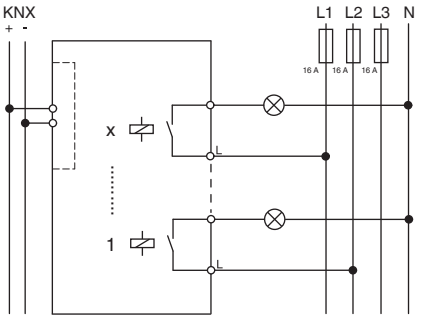


DANGER
Risk of fatal injury from electrical current.
Voltage may be present at the outputs when the mains voltage is connected to the system.
If subjected to strong vibrations during transportation, the switch contacts might change to the enabled state.
After connecting the bus voltage, set the relays of the channels to the position desired simply by switching "On/Off" or by changing the manual switch to "OFF".

③ Connect the bus voltage.
④ Wait at least 30 seconds.
⑤ Set the relays of the channels to the position desired simply by switching "On/Off" or by changing the manual switch to "OFF".

CAUTION
The actuator can be damaged.
Protect the switch contacts with a series-connected 16 A circuit breaker.

⑥ Connect the load.



⑦ Connect the mains voltage.

You can now check the function of the connected load using the manual switch, without having to load the application from the ETS. (See the "Operating the actuator" section.)

Commissioning the actuator

① Press the programming button.

The programming LED lights up.

② Load the physical address and application into the device from the ETS.

The programming LED goes out.

The operational LED lights up: The application has been loaded successfully, the device is ready to be operated.

Operating the actuator

Connected devices are usually controlled using push-buttons or by remote control. However, you can manually switch each of the actuator's channels on and off directly at the manual switches.

What should I do if there is a fault?

The green operational LED "RUN" is not lit.

Cause	Solution
The bus voltage has failed.	Check bus voltage; only manual operation is possible.
The application was not loaded properly.	Load it again.

Technical data

Power supply from KNX: DC 24 V, approx. 16 mA

For alternating current (AC) per channel:

Nominal voltage:	AC 230 V, 50/60 Hz
Nominal current:	16 A, cos φ = 0.6
Incandescent lamps:	AC 230 V, max. 3600 W
Halogen lamps:	AC 230 V, max. 2500 W
Fluorescent lamps:	AC 230 V, max. 2500 VA, with parallel compensation
Capacitive load:	AC 230 V, 16 A, max. 200 µF
Motor load	AC 230 V, max. 1000 W
Switching frequency:	max. 10x per minute at nominal load
Fuse:	one 16 A circuit breaker connected upstream per channel

Current detection (load current):

Detection range (sine effective value):	0.1 A to 16 A
Sensing accuracy:	+/- 8% from the existing current value (sine) and +/- 100 mA
Frequency:	50/60 Hz
Display:	100 mA
Sensing speed (τ):	200 ms

For direct current (DC) per channel:

Nominal voltage:	DC 12-24 V +10%, 0.1-16 A
Nominal current:	16 A
Switching frequency:	max. 10x per minute at nominal load
Fuse:	one circuit breaker capable of operating with direct current per channel, connected upstream

Current detection (load current):

Detection range:	0.1 A to 16 A

CAUTION: Connect only pure ohmic loads to a channel with direct current (DC).

Sensing accuracy:	+/- 8% from the existing current value (sine) and +/- 100 mA
Display:	100 mA
Sensing speed (τ):	200 ms

Ambient temperature	
Operation:	-5 °C to 45 °C
Environment:	Can be used at up to 2000 m above mean sea level (MSL)
Max. humidity:	93% relative humidity, no moisture condensation
Operating elements:	1 programming button 1 manual switch per channel
Display elements:	1 red LED: programming check 1 green LED: ready for operation, "RUN"
KNX connection:	Two 1 mm pins for bus connecting terminal
Load connection:	one 2-gang screw terminal per channel for max. 2.5 mm^2 with one conductor or max. 1.5 mm^2 with two conductors

Device width:	
MTN647395	2.5 modules = ca. 45 mm
MTN647895	8 modules = ca. 140 mm
MTN648495	12 modules = ca. 210 mm

Schneider Electric Industries SAS

If you have technical questions, please contact the Customer Care Center in your country.

www.schneider-electric.com

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