

4-channel switching actuator 16 A

Order no.: 1004 00

8-channel switching actuator 16 A

Order no.: 1006 00

2-channel switching actuator 16 A

Order no.: 1040 00

**4-channel switching actuator 16 A
C-load with current detection**

Order no.: 1045 00

**8-channel switching actuator 16 A
C-load with current detection**

Order no.: 1046 00

System information

This device is a product of the Instabus KNX/EIB-system and complies with KNX directives. Technical knowledge obtained in Instabus KNX training courses is a prerequisite to proper understanding.

The functionality of this device depends on 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 unit is effected by means of KNX-certified software. The full functionality with KNX commissioning software from version ETS3.0d. onwards.

The product database, technical descriptions and conversion programs and other utilities are available in the Internet at www.gira.de.



Safety instructions

Electrical equipment must be installed and fitted by qualified electricians only. Observe the current accident prevention regulations.

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

The device is not suited for safe disconnection of the mains supply.

Do not connect mains voltage consumers together with SELV/PELV consumers to the same switching actuator.

Do not connect three-phase AC motors to the actuator.

The current detection and load monitoring functions must not be used for safety-related applications, e.g. overload detection.

These operating instructions are part of the product and must be left with the final customer.

Use line m.c.b. with the corresponding rated current at the outputs.

Function

Designated use

- Switching of electrical consumers AC 230 V or 24V AC/DC with potential-free contacts
- Mounting on DIN rail in fixed installations (power distributions or small boxes).

4-channel and 8-channel switching actuators for C-loads

- Switching of capacitive loads with resulting higher inrush currents

Product features

- Bus-independent manual switching of relays
- Operation as n.c. or n.o. contacts
- Logic operation and forced-control functions
- Switching checkback mode
- Switching status indicator and manual switching
- Central switching function with group checkback
- Inhibit function for each channel
- Time functions: ON-delay, OFF-delay, staircase lighting timer with early-warning function
- Incorporation in light-scenes
- Operating hours counter, bus-configurable
- Input monitoring for cyclical updates with safety circuit
- No additional power supply



Actuator relay outputs switching with short time delay after actuation via central telegram.

Additional properties of the C-load switching actuators

- Current detection: measurement of load current for each channel
- Threshold values for load monitoring, e.g. load failure message

Operation

Manual operation

The switching state of the relays is indicated by the switching position indicators (1) on the front panel. The indicators can be used at the same time for manual switching of the relay outputs.

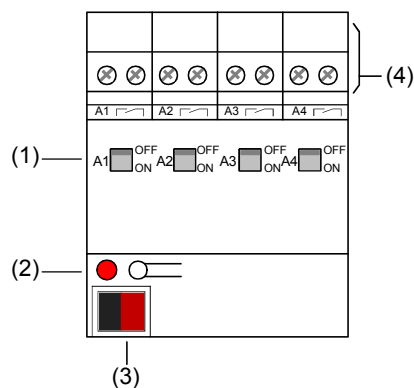
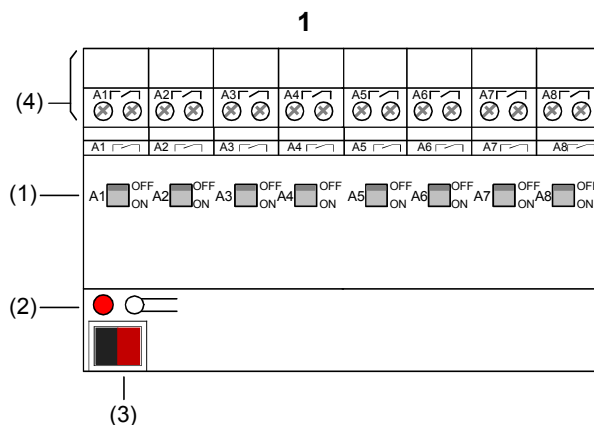
- Slide switching position indicator (1) into the **ON** position.
The relay contact is closed and the consumer is activated.
- Slide switching position indicator (1) into the **OFF** position.
The relay contact is open and the consumer is deactivated.



The switching position indicator shows directly the state of the relays independently of the mode of operation of the output (n.o. or n.c. contact).

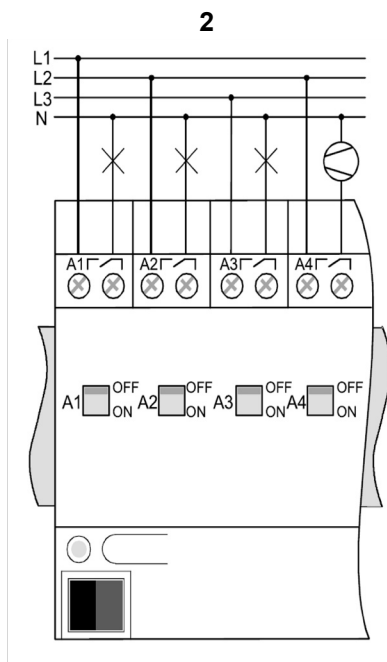
Manual relay switching independent of the bus. No checkback via the bus for manual switching.

Software-disabled outputs can be switched manually.



- (1) switching status indicators / manual switching
(2) programming button and LED
(3) Instabus KNX/EIB terminal
(4) relay output terminals

Connection



Information for qualified electricians



DANGER

Electric shock in case of accidental contact with live parts. Electric shocks may be fatal.

Before working on the device, disconnect the mains voltage and cover up live parts in the surroundings.

Installation and electrical connection

Installation of the device

Observe the admissible temperature range. Ensure sufficient cooling.

- Snap the device onto a DIN EN 60715 mounting rail. The connecting terminals must be at the top.

Connection of the device

Observe the admissible loads.



The connection to different phase conductors is possible.

For current detection, the device is equipped with contactless current sensors. Magnetic fields in the immediate vicinity can result in false current measurement results. If possible, lay feed and return line closely side by side. Do not install devices producing magnetic fields in the immediate vicinity of the actuator, e. g. doorbell transformer, power contactor, etc.



Do not connect three-phase AC motors to the actuator.

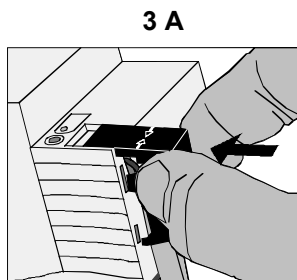
On delivery, the switching state is undefined.

- Set the relays to the **OFF** position.
- Connect as shown in the example (Fig. 2).
- Connect the bus with the bus terminal (Fig. 1, 3).

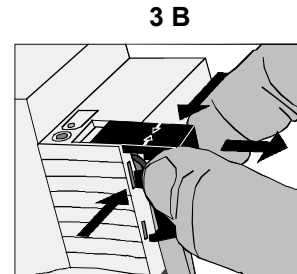
Sliding on the protective cap

To protect the bus lines against dangerous voltages at the connecting terminal, slide on the protective cap.

- Lead out the bus line at the rear of the device.
- Slide the cap over the bus terminal (Fig. 3 A) until it is heard to engage.

**Removing the cap**

- Press the sides of cap and withdraw (Fig. 3 B).

**Commissioning**

- Switch on the bus voltage
- Assign a physical address and download the application software (with commissioning software).
- Switch on the mains voltage at the outputs.

Technical data**General**

Medium:	TP1
Mode of commissioning:	S-Mode
Instabus KNX/EIB supply:	21...32 V DC
Instabus KNX/EIB connection:	Connecting terminals
Connection of outputs:	Screw terminals
solid wire:	0.5 ... 4 mm ²
stranded wire without ferrule:	0.5 ... 4 mm ²
stranded wire with ferrule:	0.5 ... 2.5 mm ²
Screw terminal tightening torque:	max. 0.8 Nm
Output contact type:	potential-free n.o. contact (μ-contact)

Ambient temperature:	-5 °C...+45 °C
Storage temperature:	-25 °C...+70 °C

Max. heat dissipation	
2-channel switching actuator:	max. 2 W
4-channel switching actuators:	max. 4 W
8-channel switching actuators:	max. 8 W

Mounting width	
2-channel, 4-channel switching actuators:	72 mm (4 modules)
8-channel switching actuators:	144 mm (8 modules)

2-channel, 4-channel and 8-channel

KNX/EIB power consumption:	typically 150 mW
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Weight:	
4-channel switching actuator:	ca. 220 g
8-channel switching actuator:	ca. 400 g

4-channel and 8-channel C-load

KNX/EIB power consumption: typically 240 mW

Current detection (sinus)

Frequency: 50/60 Hz

Detection range: 0.25...16 A sinus

Detection accuracy: < 1 A: ± 100 mA
 > 1 A: $\pm 8\%$ of actual value

Weight

4-channel switching actuator: C-load ca. 270 g

8-channel switching actuator: C-load ca. 500 g

Switching capacity

	2-ch., 4-ch. and 8-ch.	4-ch. and 8-ch. C-load
Switching voltage	230 V AC 400 V AC	230 V AC 400 V AC
Switching capacity 230 V AC	16 A AC1 10 A AC3	16 A AC1 10 A AC3
Fluorescent lamps load	10 AX	16 AX
Switching capacity 400 V AC	10 A AC1 6 A AC3	10 A AC1 6 A AC3
Switching capacity DC (ohmic)	16 A 24 V	16 A 24 V
Min. switching capacity	100 mA, 12/24 V	100 mA, 12/24 V
Max. switch-on current	400 A, 150 μ s 200 A, 600 μ s	600 A, 150 μ s 300 A, 600 μ s
Resistive load	3600 W	3680 W
Capacitive load	10 A, max. 140 μ F	16 A, max. 200 μ F
Lamp loads		
Incandescent lamps	2500 W	3680 W
230-V halogen lamps	2500 W	3680 W
LV halogen lamps with conv. transformer with Gira Tronic transformer	1200 VA 1500 VA	2000 VA 2500 VA
Fluorescent lamps T5/T8 non-compensated parallel compensated Lead-lag circuit:	2500 W 1300 W, 140 μ F 2300 W, 140 μ F	3680 W 2500 W, 200 μ F 3680 W, 200 μ F
Compact fluorescent lamps non-compensated parallel compensated	2500 W 1300 W, 140 μ F	3680 W 2500 W, 200 μ F
Mercury vapour lamps non-compensated parallel compensated	2000 W 2000 W, 140 μ F	3680 W 3680 W, 200 μ F
Electronic ballasts	list of types see product documentation	

Help in case of trouble

Operation via the bus impossible

- Cause 1: No bus voltage
Switch on the bus voltage; check installation.
- Cause 2: Application software halted, programming LED flashing
Disconnect the device from the bus, reconnect after 5 seconds.
- Cause 3: No or faulty application software.
Have the programming checked and rectified.

Acceptance of guarantee

We accept the guarantee in accordance with the corresponding legal provisions.

Please return the unit postage paid to our central service department giving a brief description of the fault:

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Service Center
Dahlienstrasse 12
D-42477 Radevormwald

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