Multi station
Art. No. : 23066REGHE

Operating instructions

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. 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.

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.

Danger of electric shock on the SELV/PELV installation. Do not connect loads for mains voltage and SELV/PELV together on a single switch actuator.

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

2 Device components

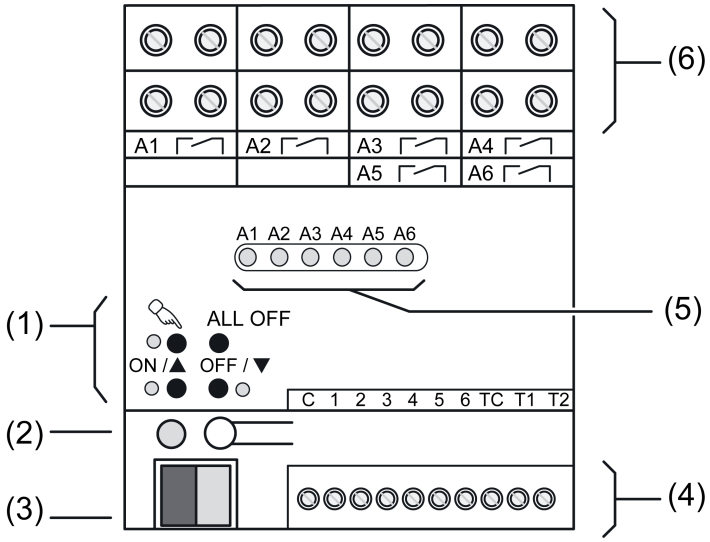

Figure 1

(1) Keypad for local control
(2) Programming button and LEDs
(3) Bus connection
(4) Input terminals
(5) Status LED
(6) Output terminals

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. The latest versions of product database and the technical descriptions are available on our website.

Intended use

- Switching of electrical loads with potential-free contacts
- Switching of electrically-driven Venetian blinds, roller shutters, awnings and similar hangings
- Switching of electrothermal actuators
- Polling of conventional switching or push-button contacts, window contacts etc. in KNX systems, for reporting of states, meter levels, operation of loads, etc.
- Polling of external temperature sensors for heating control
- Logic functions to control building functions
- Mounting on DIN rail according to EN 60715 in distribution boxes

Product characteristics

- Actuator functions Switching, Venetian blind, electrothermal drives
- Actuator function switchable in pairs
- Integrated push-button interface with 6 inputs
- 2 inputs for temperature sensors
- Outputs can be operated manually
- Feedback in manual mode and in bus mode
- Scene function
- Disabling of individual outputs manually or by bus

Switching function

- Max. 6 switching outputs
- Operation as NO or NC contacts
- Logic and restraint function
- Feedback function
- Central switching function with collective feedback
- Time functions: switch-on delay, switch-off delay, staircase lighting timer with run-on time

Blind function

- Max. 3 Venetian blind outputs
- Suitable for 230 V AC motors
- 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

Actuator function

- Max. 2 outputs for electrothermal drives
- Switching operation or PWM operation
- Actuators with characteristics opened or closed without power controllable
- Emergency operation in case of bus voltage failure for summer and winter
- Protection against seized valves
- Forced position
- Cyclical monitoring of the input signals can be parameterized

i PWM operation: electrothermal actuators only have the positions Open and Closed. In PWM operation, switch-on and switch-off during the drive's cycle time achieves an almost constant behaviour. Cycle times < 15 minutes shorten the lifespan of the relay outputs

Heating controller

- 2 internal controllers to control two independent rooms
  Control for heating or cooling operation, optionally with additional level
- Two-point, PWM or PI control
- Predefined heating types (hot water heating, blower convector, etc.) or individual parameters possible

Inputs

- 6 inputs for push-buttons
- Input functions switching, dimming, shutter control, light scene extension unit, brightness or temperature value transmitter
- 2 inputs for external temperature sensors

Logic functions

- Up to 10 logic operations with up to 8 inputs each, e.g. for AND, OR and exclusive OR operations
- Conversion of data point types, e.g. 1-bit to 8-bit
- Comparison operations, e.g. <, >, ≤, ≥
- Arithmetic functions, e.g. +, –, *, :

4 Operation

Continuous manual mode

- Activate: Press the ✎ button for approx. 5 s.
  LED ✎ lights up, LED **A1** flashes.
- Deactivate: Press the ✎ button for approx. 5 s.

Short-time manual operation

- Activate: Press the ✎ button briefly.

Automatic return to bus operation 5 s after last operation

Operating an output in manual mode

- Keep pressing the ✎ button until the LED (5) of the selected output flashes.
- Press the **ON/▲** or **OFF/▼** button.
  Short: Switch on / switch off, adjust slats or stop.
  Long: Move hanging upwards/downwards.
  LED **ON/▲** on: Output on
  LED **OFF/▼** on: Output off

Switch off all

- Activate permanent manual operation.
- Press the **ALL OFF** button.

Block/enable individual outputs

- Activate permanent manual operation.
- Keep pressing the ✎ button until the LED (5) of the selected output flashes.
- Press the **ON/▲** and the **OFF/▼** button simultaneously for at least 5 s.
  The status LED **A1...** of the blocked output flashes quickly.

5 Information for electrically skilled persons

Mortal danger of electric shock.
Disconnect device. Cover up live parts.

Fitting the device

Observe the temperature range. Ensure adequate cooling.

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

Connecting the device

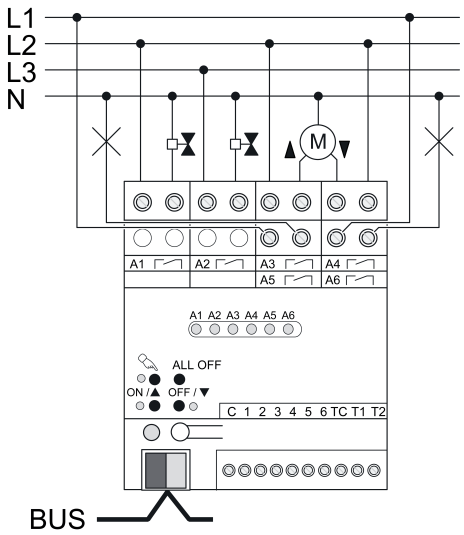

Figure 2

- Connect bus line with connecting terminal.
- Attach the cover cap to the bus cable connection as protection against hazardous voltages.
- For switched loads, configure the outputs as a switching output.
- For Venetian blind operation, configure the outputs as a Venetian blind output. Two adjacent relay outputs form a Venetian blind output. In each case, the left-hand relay output **A1, A3, A5** is intended for the up direction ▲, and the right-hand load output **A2, A4, A6** for the down direction ▼.
- Connect electrothermal drives to relay outputs **A1, A2** .

i Delivery state: The outputs can be operated using a keypad. Outputs are set as venetion blind outputs.

Switching inputs

DANGER!

When the mains voltage is connected to the input terminals (4), the bus voltage is connected to the mains potential.

People at remote devices may also receive an electric shock. Connected bus devices are destroyed.

Never connect to the inputs to the mains voltage of FELV circuits.

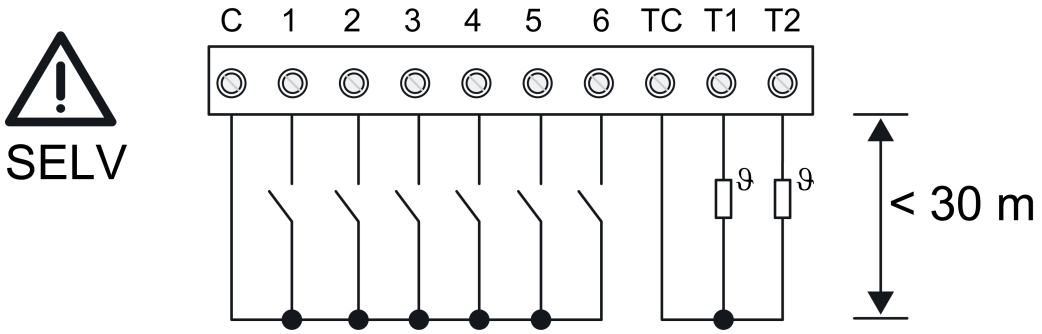

Figure 3

Do not route input cables parallel to mains cables. Otherwise, EMC interference may occur.

For cable lengths **> 3 m** , use a shielded two-wire cable.

- Connect window contacts, NO or NC push-buttons to the terminals **C** and **1...6** .
- Connect the temperature sensor to the terminals **TC** and **T1** or **T2** .

Venetian blind outputs: Measuring the hanging and slat travel time

The blind/shutter travelling time is important for position and scene runs. For slatted Venetian blinds the slat adjusting time is by design part of the overall blind/shutter travelling time. The opening angle of the slats is therefore set as the operation time between the positions "Open" and "Closed".

The upwards travel generally lasts longer than the downwards travel, and is taken into account as the operation time extension in %.

- Measure upwards and downwards operation time of the hanging.
- Measure slat adjusting time between "Open" and "Closed".
- Enter the measured values in the parameter setting – Downwards travel in minutes/seconds and operation time extension in percent.

Load the address and the application software

- Switch on the bus voltage.
- Press the programming button.
  The programming LED lights up.
- Assign physical address.
  The programming LED goes out.
- Write the physical address on the device label.
- Load the application software into the device.

6 Technical data

KNX	
KNX medium	TP 256
Commissioning mode	S-mode
Rated voltage KNX	DC 21 ... 32 V SELV
Current consumption KNX	max. 20 mA
Current consumption KNX	min. 4 mA
Connection type for bus	device connection terminal
Power loss	max. 6 W
Ambient conditions	
Ambient temperature	-5 ... +45 °C
Storage/transport temperature	-25 ... +70 °C
Relay outputs	
Contact type	µ contact, potential-free NO contact
Switching voltage	AC 250 V ~
Minimum switching current AC	100 mA

Switching current AC1	16 A
Switching current AC3	6 A
Fluorescent lamps	16 AX
Switch-on current 200 µs	max. 800 A
Switch-on current 20 ms	max. 165 A
Switching voltage DC	DC 12 ... 24 V
Switching current DC 24 V	6 A
Connected load 230 V	
Ohmic load	3000 W
Blind, fan motors	1380 VA
Lamp loads 230 V	
Incandescent lamps	3000 W
HV halogen lamps	2500 W
HV-LED lamps	max. 400 W
Electronic transformers	1500 W
Inductive transformers	1200 VA
Fluorescent lamps T5/T8	
uncompensated	1000 W
parallel compensated	1160 W (140 µF)
twin-lamp circuit	2300 W (140 µF)
Compact fluorescent lamps	
uncompensated	1000 W
parallel compensated	1160 W (140 µF)
Mercury vapour lamps	
uncompensated	1000 W
parallel compensated	1160 W (140 µF)
Electrothermal actuators	
Cycle time	min. 15 min
Load connections	
Connection mode	Screw terminal
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
Inputs	
Rated voltage	DC 3.3 V SELV
Signal duration	min. 100 ms
NO contacts	max. 50
NC contacts	max. 50
Cable length	max. 30 m
Input connections	
single stranded	0.08 ... 1.5 mm²
Finely stranded without conductor sleeve	0.08 ... 1.0 mm²
Finely stranded with conductor sleeve	0.14 ... 0.5 mm²
Fitting width	72 mm / 4 modules
Weight	approx. 290 g

7 Accessories

Connection cover	Art. No. 2050 K
External sensor	Art. No. FF7.8

8 Warranty

The warranty follows about the specialty store in between the legal framework as provided for by law.

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