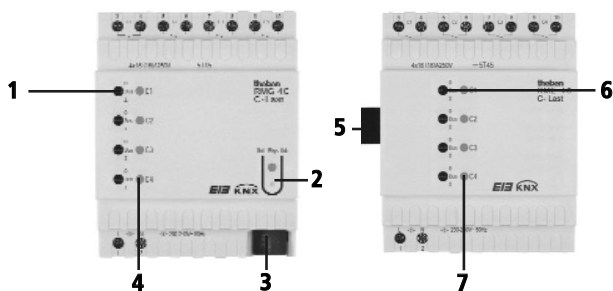


Actuators - Series MIX 1

RMG 4 S KNX 491 0 204 RMG 4 C-Load KNX 491 0 206
 RME 4 S KNX 491 0 205 RME 4 C-Load KNX 491 0 207

RMG 4 C-Load KNX
 Basic device module /
 C for capacitive loads

RME 4 C-Load KNX
 Upgrade module /
 C for capacitive loads



1.0 Designated use

MIX 1 series actuators include

- **RMG 4 S KNX** (4-channel basic module for standard applications)
- **RMG 4 C-Load KNX** (4-channel basic module for capacitive loads and high switch-on peaks)
- **RME 4 S KNX** (4-channel upgrade module for standard applications) and
- **RME 4 C-Load KNX** (4-channel upgrade module for capacitive loads and high switch-on peaks)

The actuators are suitable to be used for **KNX** (European Installation Bus) in combination with the theben product database ETS (KNX Tool Software) enables application programs to be selected, specific parameters and addresses to be assigned and transferred to the device. A type BCU 2.1 bus coupling is integrated into the basic modules. A basic module can be expanded simply by adding up to 2 upgrade modules.

Any combination of MIX 1 series modules is possible, e.g.

- RMG 4 S + RME 4 S + RME 4 S** (12 x switch)
- RMG 4 S + RME 4 S + DME 2** (8 x switch + 2 x dim)
- RMG 4 C-Last + DME 2 + DME 2** (4 x C-load + 4 x dim)
- RMG 4 S + RME 4 S + RME 4 C-Last** (8 x switch + 4 x C-load)
- etc.

Manual selector switch permanently – ON / OFF – Bus operation

Manual switch in position:

- The relay status is determined by the messages on the **Bus**.
- The relay contact is in permanently **ON** position.
- The relay contact is in permanently **OFF** position.

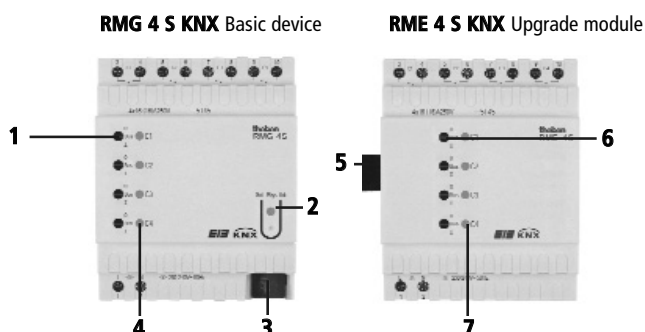
Please note: Manual switching can also be used in the event of a bus voltage failure.

2. Safety

WARNING
 Danger of death through electric shock or fire!
 > Installation should only be carried out by professional electrician!

The professional installation of bus lines and commissioning of devices requires compliance with the provisions of EN 50428 for switches or similar installation equipment for use in building construction technology. Tampering with, or making modifications to, the device invalidates the guarantee.

3.0 Description



RMG 4 S KNX/RMG 4 C-Load KNX

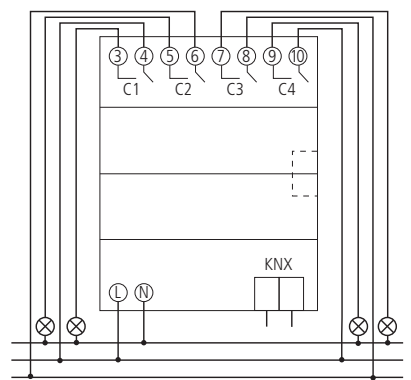
- 1** LEDs On = Contacts **C1 ... C4** closed
- 2** Programming keys and LED for physical address
- 3** Bus connection: Ensure correct polarity!
- 4** Manual selector switch: e.g. Permanently On/Off or Bus

RME 4 S KNX/RME 4 C-Load KNX

- 5** Plug as connection between upgrade module and basic device
- 6** LEDs On = Contacts **C1 ... C4** closed
- 7** Manual selector switch: e.g. Permanently On/Off or Bus

4.0 Electrical connection

Connection for actuator RMG 4 S KNX



- It is permitted to connect different phases in one device.
- It is possible to connect contactable protective low voltage, if all 4 channels of a module switch protective low voltage.

5.0 Bus connection / (mains) power failure

Information in the event of power failure

- **RMG 4 S KNX and RME 4 S KNX:**
 If the mains power should fail, all relays fall to neutral, irrespective of the software configuration. This means that the power circuit is interrupted.
- **RMG 4 C-Load KNX and RME 4 C-Load KNX:**
 The relay positions remain unchanged.

Information in the event of power failure (for both devices)

- The relays assume their configured status after approx. 1 second. This makes the devices suitable for use in systems designed to VDE 108.

Information in the event of bus failure

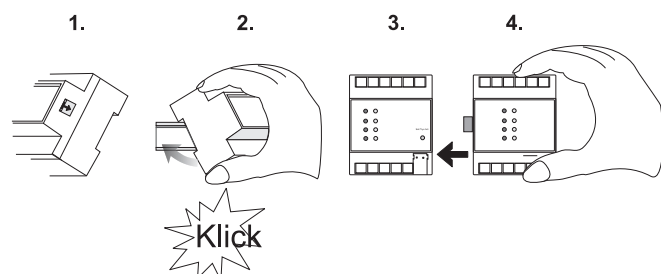
- If a mains supply is available, the relays can be operated using the manual switches should the bus fail.
- The relay status after bus failure can be set via the application.

6.0 Connecting an upgrade module

- Open the slide on the right-hand side of the module.
- Lock the module onto the distributing bus bar.
- Push the modules together.

Connection:

- Ensure correct polarity of the bus connection terminal.
- Close the actuator as shown on the wiring diagram in chapter 4.0.
The bus is connected to the basic module.



7.0 Technical data

RMG 4 S KNX/ RME 4 S KNX

Mains power supply

Operating voltage: 230 V AC \pm 10 %, 50 Hz
Power draw: 2,5 VA

Bus power supply

Power draw: max. 10 mA
Connection: bus terminal

Output

Quantity: 4
Type of contact: floating closer
Contact opening: \leq 3 mm
Mechanical switching play: $>$ 1 x 10⁶
Nominal voltage: 230 V AC, 50 to 60 Hz (L1, L2 or L3)
Nominal current: 16 A (250 V AC, $\cos \varphi = 1$)
10 A (250 V AC, $\cos \varphi = 0,6$)
Switching different phases: possible
Connecting protective low voltage: possible if all channels of a module switch protective low voltage

Switching capacity

Resistive load: 3680 W
Capacitive load: max. 42 μ F
Filament bulbs: 2300 W
High-voltage halogen lamps: 2300 W

Fluorescent lamps:

- Uncorrected: 26 x 40 W, 20 x 58 W, 10 x 100 W
- Parallel-corrected: 10 x 40 W (4,7 μ F), 6 x 58 W (7,0 μ F, 2 x 100 W (18 μ F))
- Duo-switching (KVG): 10 x (2 x 58 W), 5 x (2 x 100 W)

Low-energy fluorescent lamps:

- with EVG QTEC 1 x 58 (Osram) 12 x 58 W
- with EVG QTEC 1 x 36 (Osram) 9 x 36 W
- with EVG QTEC 2 x 58 (Osram) 7 x (2 x 58 W)
- with EVG QTEC 2 x 36 (Osram) 5 x (2 x 36 W)
- with EVG HF 450-1 1 x 58 (Osram) 7 x 58 W
- with EVG HF 432-1 1 x 36 (Osram) 13 x 36 W
- with EVG HF 450-2 2 x 58 (Osram) 4 x (2 x 58 W)
- with EVG HF 432-2 2 x 58 (Osram) 9 x (2 x 36 W)

Low-energy compact fluorescent lamps:

- Type Opal (KVG) (Osram) 2300 W
- Type Dulux EL (EVG) (Osram) 8 x 7 W, 7 x 11 W, 7 x 15 W, 7 x 20 W, 7 x 23 W
- Type PLCE (EVG) (Philips) 14 x 9 W, 13 x 11 W, 7 x 23 W

Mercury vapour lamps:

- Uncorrected: 6 x 125 W, 3 x 250 W
- Parallel-corrected: 4 x 70 W (12 μ F), 4 x 150 W (12 μ F, 2), 1 x 250 W (30 μ F)

Sodium vapour lamps:

- Uncorrected: 3 x 250 W, 1 x 500 W
- Parallel-corrected: 2 x 150 W (20 μ F), 1 x 250 W (37 μ F)

Ambient temperature: -5 °C ... $+45$ °C

Protection class: II in accordance with EN 60730-1

Protection rating: IP 20 in accordance with EN 60529

RMG 4 C-Load KNX/ RME 4 C-Load KNX

Mains power supply

Operating voltage: 230 V AC \pm 10 %, 50 Hz
Power draw: 2,5 VA

Bus power supply

Power draw: max. 10 mA
Connection: bus terminal

Output

Quantity: 4 closers
Type of contact: floating
Nominal voltage: 230 V AC, 50 to 60 Hz (L1, L2 or L3)
Nominal current: 16 A (250 V AC, $\cos \varphi = 1$)
16 A (250 V AC, $\cos \varphi = 0,6$)
Switching different phases: possible
Connecting protective low voltage: possible if all 4 channels of a module switch protective low voltage

Switching capacity

Resistive load: 3680 W
Parallel-corrected: max. 200 μ F
Filament bulbs: 3680 W

Fluorescent lamps

- Uncorrected: 3680 W
- Parallel-corrected: 2500 W/200 μ F
- Duo-switching: 3680 W

Halogen lamps 230 V AC: 3680 W

High-voltage halogen lamps with transformer: 2000 W

Mercury/Sodium vapour lamps

- Uncorrected: 3680 W
- Parallel-corrected: 3680 W/200 μ F

Dulux lamps

- Uncorrected: 3680 W
- Parallel-corrected: 3000 W/200 μ F

The device is suitable for use in conditions with a normal level of pollution. Observe deviating technical data on the device rating plate! Technical changes reserved. The devices comply with European Directives 73/23/EEC (low-voltage directive) and 89/336/EEG (EMC Directive).

If the devices are combined with others for use within a system, ensure that the system as a whole does not cause radio interference.

The ETS database can be found under www.theben.de

Please refer to the KNX Handbook for detailed functional descriptions.

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