

Actuators - Series **MX**

RMG 4 S  
RMG 4 C-Load

RME 4 S  
RME 4 C-Load

**1.0 Designated use**

**MX** series actuators include

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

The actuators are suitable to be used for **EIB KNX** (European Installation Bus) in combination with the theben product database ETS (EIB 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.

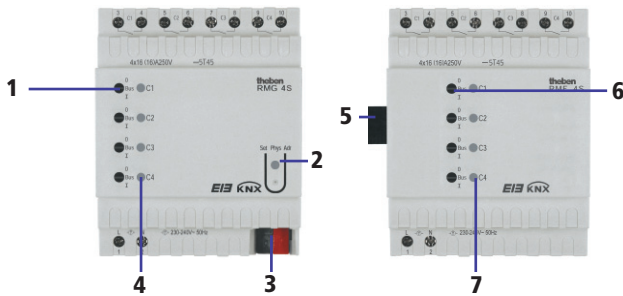
Any combination of **MX** series modules is possible, e.g.

- 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.

**2.0 Description**

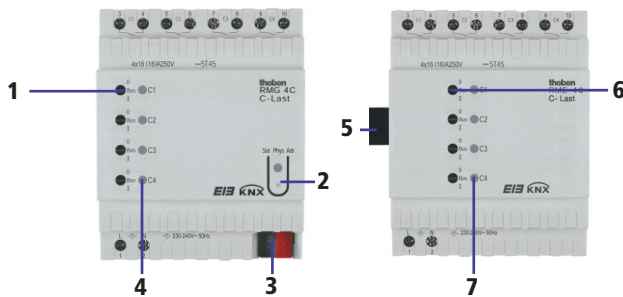
**RMG 4 S** Basic device

**RME 4 S** Upgrade module



**RMG 4 C-Last**  
Basic device module /  
C for capacitive loads

**RME 4 C-Last**  
Upgrade module /  
C for capacitive loads



**RMG 4 S / RMG 4 C-Load**

- 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 / RME 4 C-Load**

- 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

**Manual selector switch permanently - ON / OFF - Bus operation**

**Manual switch in position:**

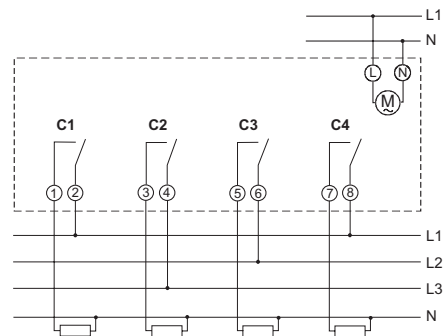
- The relay status is determined by the messages on the **Bus**.
- The relay contact is in permanently **ON** position.
- The relay contact is in permanently **OFF** position.

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

**3.0 Electrical connection**

The bus line must be arranged, connected and installed in accordance with the valid regulations to DIN-VDE and also the EIB Handbook and ZVEI/ZVEH. Work may be carried out only by trained electricians qualified to EIB. Compliance is required with the national regulations and valid safety requirements. Tampering with or making modifications to the device will invalidate the guarantee.

**Connection for actuators RMG 4 S, RME 4 S and RMG / RME 4 C-Load**



**Please note:**

- 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.

**4.0 Bus connection / (mains) power failure**

**Information in the event of power failure**

- **RMG 4 S and RME 4 S:**  
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 and RME 4 C-Load:**  
The relay positions remain unchanged.

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

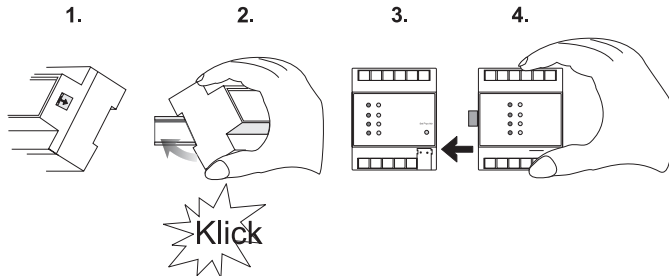
- The relays assume their configured status after approx. 1 second. This makes the devices suitable for use in systems designed to VDE 108.

**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.

## 5.0 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 3.0.  
The bus is connected to the basic module.



## 6.0 Technical data

### RMG 4 S / RME 4 S

#### 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 10<sup>6</sup>  
Nominal voltage: 230 V AC, 50 to 60 Hz (L1, L2 or L3)  
Nominal current: 16 A (250 V AC, cos  $\phi$  = 1)

Switching different phases: 10 A (250 V AC, cos  $\phi$  = 0,6) 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  $\mu$ 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  $\mu$ F), 6 x 58 W (7,0  $\mu$ F, 2 x 100 W (18  $\mu$ 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  $\mu$ F), 4 x 150 W (12  $\mu$ F, 2), 1 x 250 W (30  $\mu$ F)

#### Sodium vapour lamps:

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

Protection rating: IP 20  
Ambient temperature:  $-5$  °C ...  $+50$  °C  
Protection class: II  
Protection rating: IP 20 in accordance with EN 60529

### RMG 4 C-Load / RME 4 C-Load

#### 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  $\phi$  = 1)

Switching different phases: 16 A (250 V AC, cos  $\phi$  = 0,6) 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  $\mu$ F  
Filament bulbs: 3680 W

#### Fluorescent lamps

- Uncorrected: 3680 W  
- Parallel-corrected: 2500 W / 200  $\mu$ 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  $\mu$ F

#### Dulux lamps

- Uncorrected: 3680 W  
- Parallel-corrected: 3000 W / 200  $\mu$ 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/downloads/downloads\\_24.htm](http://www.theben.de/downloads/downloads_24.htm).

Please refer to the Handbook for detailed functional descriptions.

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