theben

Heating actuators - Series MX KNX

HMG 4 KNX (Basic device) 491 0 210
HME 4 KNX (Extension module) 491 0 211

309 321 01

1.0 Designated use

The heater actuators for the **series MX** are for controlling the heating valves via silent triac outputs.

The heater actuators are suitable for use with the European Installation - Bus **KNX** in combination with the **theben** product database. ETS (Engineering Tool Software) enables application programs to be selected, and specific parameters and addresses to be assigned and transferred to the device.

A basic module can be expanded simply by adding up to 2 extension modules.

MX can be combined with all Mix series devices

2.0 Safety

⚠ WARNING

Danger of death through electric shock or fire!

➢ Installation should only be carried out by professional electrician!

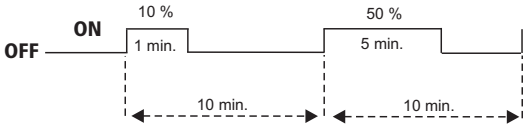
The professional installation of bus lines and commissioning of devices requires compliance with the provisions of EN 50428 for switches or similar installation equipment for use in building construction technology. Tampering with, or making modifications to, the device invalidates the guarantee.

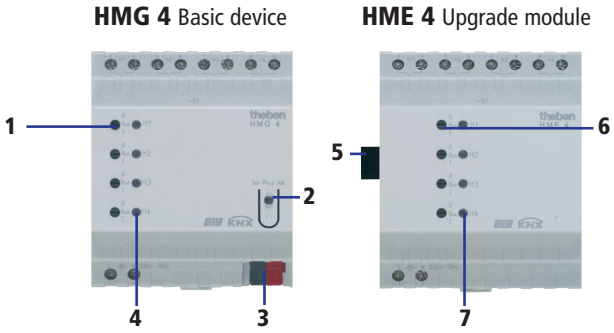
Tampering with or making modifications to the device will invalidate the warranty.

3.0 Description

- The device controls thermal actuators via silent and non-wearing triac outputs.
- The heating output can be continuously adjusted as and when required. This is achieved by converting a continuous control variable into a PWM (pulse width modulation) output signal.

Example:





HMG 4

1 Manual selector switch: e.g. Permanently On / Off or Bus
2 Programming key and LED for physical address
3 Bus connection: Ensure correct polarity!
4 **LEDs** on = channels **H1 ... H4** switched on

HME 4

5 Plug as connection between upgrade module and basic device
6 Manual selector switch: e.g. Permanently On / Off or Bus
7 **LEDs** on = channels **H1 ... H4** switched on

Manual selector switch permanently – ON / OFF – Bus operation

Manual switch in position:

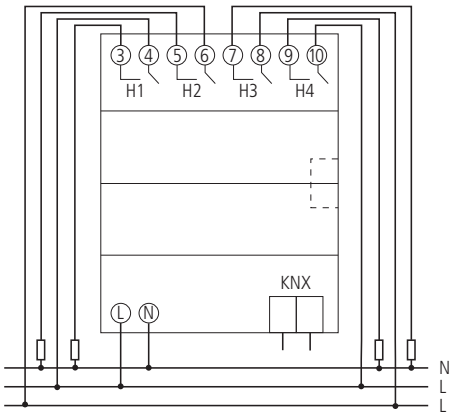
The status of the triac is determined by the bus messages.

The triac is permanently **switched on.**

The triac is permanently **switched off.**

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

3.0. Electrical connection



HMG 4 or HME 4

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.
- Switching protectors can be activated for controlling electric heaters, for example.

5.0 Bus connection / (mains) power failure

Information in the event of power failure

- If the mains power should fail, all triacs switch-off, irrespective of the software configuration. This means that the power circuit is interrupted.

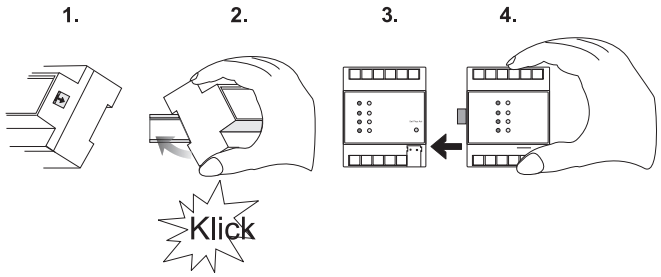
Information in the event of bus failure

- If a mains supply is available, the triacs can be operated using the manual switches should the bus fail.
- The behaviour after bus failure can be set via the application, e.g. emergency mode.

6.0 Connecting an extension module

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

- **Connection:**
- 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

HMG 4 / HME 4

Mains power supply

Operating voltage:	230 V AC ± 10 %, 50 Hz
Power draw:	2.5 VA

Bus power supply

Power draw:	max. 10 mA
Connection:	bus terminal

Outputs

Quantity:	4
Type of contact:	Triac
Nominal voltage:	24-230 V AC, 50 to 60 Hz (L1, L2 or L3)
Nominal current:	0.5 A

This corresponds to 5 x 24 V AC **theben** actuators (Order no. 907 0 262)

Switching of different phases:	possible
Switching of SELV voltages:	possible if all channels of a module switch protective low voltage

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/EEC (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 Handbook KNX for detailed functional descriptions.

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