theben

310 498

Operating Instructions for Heating Actuator- EIB

Heating actuator HMG 8 and expansion units
Heating modules HME 8 and HMX 4
Switching modules RME 8 and RMX 4
Window contact module FME 8

1.0 Use in accordance with the intended application

The heating actuator of type ***HMG 8*** is suitable for use with the European Installation bus- EIB in connection with the theben -product database. It is fitted with the BCU 2 for the bus communication.

Basic device HMG 8

- 8 heating outputs, each capable of handling up to 10 thermal actuators

Expansion units

- ***HME 8*** 8 additional heating outputs
- ***HMx 4*** 4 additional heating outputs
- ***RME 8*** 8 switching outputs
- ***RMX 4*** 4 switching outputs
- ***FME 8*** 8 window contact inputs with safety extra low voltage (SELV)

2.0 Electrical connection

Both routing and connecting up the bus cable as well as installation work must be carried out in accordance with the applicable regulations and guidelines of DIN-VDE, as well as with the EIB Handbook from ZVEI/ZVEH. The work may only be carried out by qualified electricians with appropriate EIB training. National norms and the applicable safety regulations shall be observed. Any changes made to the device will invalidate the guarantee.

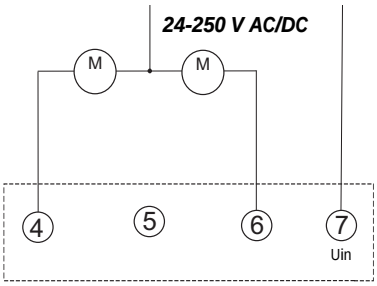
2.1 Network connection

Each module must be connected to a standard main power source.

Connecting the expansion module

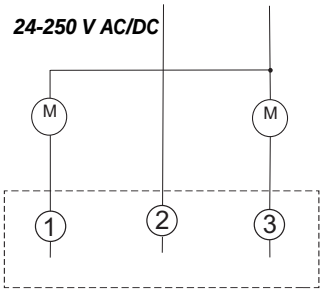
Be sure to use the same phase and fused circuit as used for the base module supply voltage to the logic system (L-, N connections).

2.2 Thermal actuators HMG 8, HME 8



- Uin is for a commun voltage supply to the actuators (230 V~, same phase as for the actuators).
- It is galvanically isolated from the standard main power source so that 24 V~ thermal actuators can also be used.

2.3 Thermal actuator HMX 4

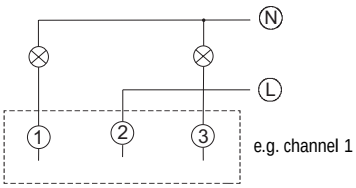


e.g. channel 1

- Uin 1 and Uin 2 are galvanically isolated from each other and the standard mains power source so that 24 V~ thermal actuators can also be used.

2.4 Switching outputs RME 8, RMX 4

Lighting connection



e.g. channel 1

Please note:

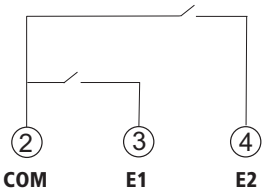
- Switching differently -phased external conductors in one device is generally allowed.

refer to the product manual for:

=> Using contactors or relays when actuating in order to achieve higher switching capacities

=> Switching of savety extra low voltage

2.5 Window contacts FME 8



- The COM ports provide an SELV for the window contacts.
- All COM ports are internally connected to each other.

2.6 Bus connection

Behaviour without ETS programming

The connected expansion modules are detected and actuated.

- ***HME 8 and HMX 4***
  - Actuator behavior: when switched on, it is in heating mode.
  - The output value is 50 %.
  - Can be manually operated for testing purposes.
- ***RME 8 and RMX 4***
  - Relays stays off.
  - Can be manually operated (manual ON/OFF)
- ***FME 8***
  - LED status display
- ***see also section 6.0***

3.0 Behaviour during a power or an operational failure

Note concerning power failure

All relays - irrespective of their assigned parameters - drop during a power failure. This means that the electric circuit is opened.

Note concerning a bus failure only

Provided power is still being supplied the relays can be switched from the device´s keypad in the event the bus fails.

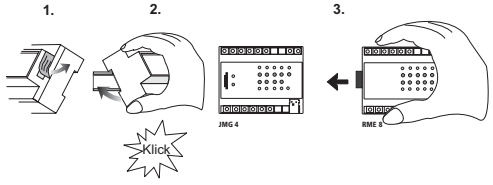
4.0 Expansion modules

The heating module ***HMG 8*** can be expanded by using max. 1 expansion module. No new EIB programming is required when replacing a defective device.

- Remove the strip of insulation of the right-hand side of the ***HMG 8*** device (fig. 1).
- Keep the strip of insulation for further use by attaching underneath the opening for the plug-in contact.
- Snap the modules ***HMG 8*** and the expansion module onto the multi-terminal rail (fig. 2).
- Push the module ***HMG 8*** and the expansion module completely together (fig. 3).
- ***Connection***

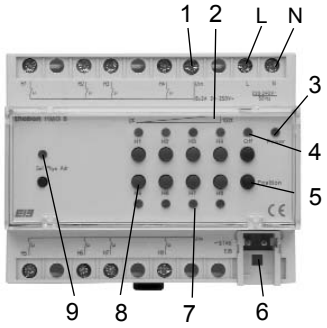
  Connect up the switch actuator in accordance with the circuit diagram shown in chapter 2.2.
- ***Removal instructions***

  When moving the expansion module, always protect the opening of the remaining actuator ***HMG 8*** by covering with a strip of insulating tape!



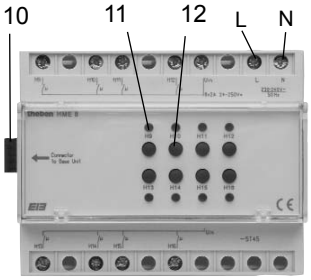
5.0 Description

Basic device HMG 8

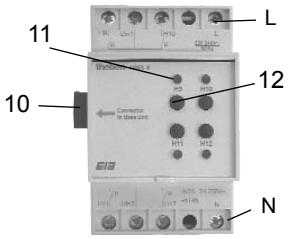


- ***1*** a common power supply for thermal actuators
- ***2*** Output status display for each channel (% value)
- ***3*** ***Power LED*** (blinks, if no bus communication or programmed expansion device, refer to handbook
- ***4*** Summer mode ***ON/OFF***
- ***5*** ***Position button*** (see also section 6.0)
- ***6*** ***Bus connection***
- ***7*** Current relay status ***ON/OFF*** (blinks during manual, forced or emergency operation)
- 8 Channel button
- ***9*** ***Set Phys Adr*** programming key and LED for physical address

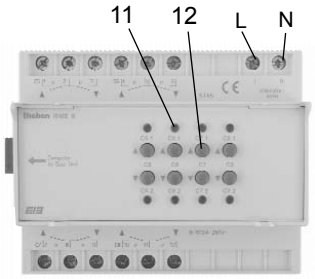
Expansion modules HME 8, HMX 4



- ***10*** ***Interface*** between expansion module and the basic device
- ***11*** ***LED*** ON = contact (like basic device)
- ***12*** ***Keys*** (like basic device)



Expansion modules RME 8, RMX 4



- ***10*** ***Interface*** between expansion module and the basic device
- ***11*** ***LED*** ON = contact (like basic device)
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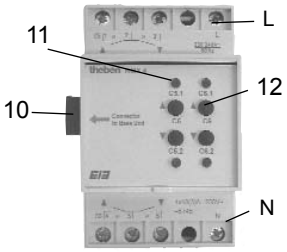
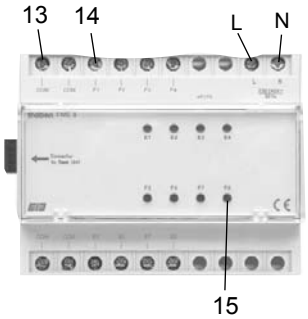


Window contact module FME 8



- ***13*** COM = output voltage (all COM ports are internally linked)
- ***14*** Inputs
- ***15*** LED status displays

If you use the window contact module ***FME 8*** with ***JMG 4 DC***, see operating instructions for ***JMG 4 DC.***

6.0 Manual operation

Manual operation of HMG 8

- After a channel button is pressed, its relay is switched on for 2 actuation cycles (two PWM periods). With the parameter setting "Actuator behavior: no heating after switch on" the relay is switched off so that the valve is opened. Pressing the channel button once again ends the manual mode.

- Pressing the position button at the same time as a channel button displays the status of the channel (controlled value - output value) on the LEDs for channels H1 to H4 as a % value in the following steps: 0 %, >0 %, >25 %, >50 %, >75 %.

7.0 Commissioning

The ETS-database can be found ***www.theben.de/downloadseite.htm#g***. Please refer to the handbook for more detailed description of these functions (e.g. lights, priority sequence, etc.).

8.0 Technical data

	HMG 8	***HME 8, HMX 4***	***RME 8/ RMX 4***	***FME 8***
Operating voltage Rated frequency Power consumption	230 V/240 V ±10 % 50 Hz approx. 4 VA			
EIB current cons.	≤ 8 mA	----	----	----
Contact-making mat. Contact type	AgSnO potential-free make contact element			----
Switching capacity cos φ= 1 cos φ= 0,6	2 A (250 V~) ----	2 A (250 V~) ----	10 A (250 V~) 6 A (250 V~)	---- ----
Incandescent lamp cap. Halogen lamp cap.	---- ----	---- ----	1400 W 1400 W	---- ----
Terminal dimensions (cross section)	heavy duty, 0.5 mm² (0.8 diameter) to 4 mm² flexible lead with ferrule, 0.5 mm² bis 2.5 mm²			
Permissible ambient temperature Protection class Protection type Device standard	-5 °C ... +45 °C (-5T45) II following proper installation IP 20 meeting EN 60529 EN 60730			
Appliance	45 x 105 x 60 mm (6 TE) + (HME 4, RMX 4 3TE)			
Window contact load	---- ----	---- ----	---- ----	20 V/ 2mA typical max. cable length: 200 m

Refer to the handbook for more detailed switching capacity information for other types of lighting

The device is appropriate for use under the conditions of usual contamination. Also observe any technical information on the device´s nameplate deviating from this! Subject to terminal improvements. The devices meet the requirements of the European Directives 73/23/EWG (Low-voltage Directive) and 89/336/EWG (Directive).

Ensure when using these devices togehter with other devices in one system that there is no radio interference caused by the whole system.

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