

# EMO EIB

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**Motorized actuator  
for direct connection to the  
European Installation Bus**



To be precise.



## Description



The EMO EIB proportional actuator is designed for connection to the European Installation Bus (EIB).

The connection is made directly, a separate bus coupling is not necessary. In addition, there is no need for an external auxiliary voltage supply as the actuator is supplied with voltage from the bus.

Enabling contactless programming of the physical address is made with the aid of the programming magnet. A programming LED acts as a status indicator. The maintenance-free actuator operates at an extremely low noise level. The compact body made of top quality plastic includes the motor, gears, stroke recogni-

tion and the entire communications and control electronics.

The EMO EIB design with two binary inputs provides the possibility of integrating additional communication objects (see list of the communication objects).

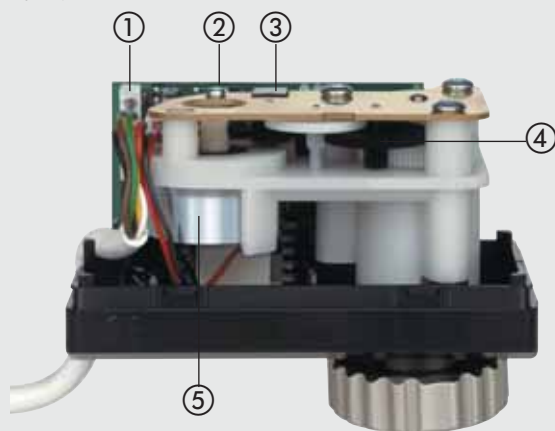
The EMO EIB is intended for installation on all HEIMEIER thermostatic valve bodies and three-way valves. Adapters enable the mounting of thermostatic valve bodies of other manufacturers, see leaflet EMO T or EMOtec.

The electrical connection is made by means of a 2-wire cable protected against polarity inversion, or, with the two-binary input design, with a 6-wire body-strengthened cable.

## Assembly

### EMO EIB

With two binary inputs



- ① Communications and control electronics
- ② Service LED
- ③ Position detection

- ④ Spur gear
- ⑤ Direct current motor (noise-decoupled)

- No auxiliary voltage required
- Automatic stroke recognition
- Runs extremely quietly
- Integrated communications electronics
- Certified according to EIB standard
- Design with two binary inputs

## Function

When being put into operation, a self-calibration routine recognises the stroke position of the valve in the closed and completely opened positions. The 8 bit controlled variable received via the EIB is then allocated to the effective valve stroke in a linear relationship. This results in the high 256 position resolution of the valve stroke. The motor switches off as soon as the stroke position corresponds to the control variable received. Stability in this position is ensured by the self-lo-

king gears. The force in the closing range is adjusted for thermostatic valve bodies with soft sealing valve discs.

For the connection of, for example window contacts, an adjustable forced position can be activated for energy saving purposes.

The EMO EIB design with two flexibly configurable binary inputs is suitable for the direct connection of buttons, switches, conventional sensors etc.. Besides

this an adjustable min. and max. limit of the control variable is integrated.

Following a fixed predetermined number of changes in position, and after each interruption of the system voltage, the actuator automatically runs through a self calibration routine.

## Communication objects | EMO EIB

Communication objects	EMO EIB with two binary inputs	EMO EIB Standard
<b>Object no. / &lt;Description&gt;</b>	<b>Type / Name – Function *)</b>	<b>Type / Name – Function</b>
0 / < Control variable>	8 bit or 1bit / input – control variable*)	8 bit / input – control variable
1 / <Actual value>	8 bit / output – control variable (actual position)	8 bit / output – control variable (actual)
2 / <Status (actuator)>	8 bit or 1 bit / output – operating condition*)	8 bit / output – operating condition
3 / <Forced position 1>	1 bit / input – switch	1 bit / input – constrained position
4 / <Forced position 2>	1 bit / input – switch	–
5 / <Min. limit>	1 bit / input – switch	–
6 / <Max. limit>	1 bit / input – switch	–
7 / <Binary input 1>	1 bit or 8 bit / switch, short term operation, value, light scene*)	–
8 / <Binary input 1>	1 bit or 4 bit / long term operation, dimming*)	–
9 / <Binary input 2>	1 bit or 8 bit / switch, short term operation, value, light scene*)	–
10 / <Binary input 2>	1 bit or 4 bit / long term operation, dimming*)	–
11 / <Limit value smaller/larger>	8 bit or 1 bit / output – switch*)	–

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## Technical data

EMO EIB	With two binary inputs	Standard
Voltage supply:	from EIB-Bus (SELV according to IEC 364-4-41)	from EIB-Bus (SELV according to IEC 364-4-41)
– system voltage	24 V DC (+ 6 V / - 4 V)	24 V DC (+ 6 V / - 4 V)
– power consumption	typical 10 mA (= 240 mW), corresponds approx. to 2 BA modules	typical 10 mA (= 240 mW), corresponds approx. to 2 BA modules
Participants per EIB line:	max. 64 (depending on the nature of the voltage supply and participants)	max. 64 (depending on the nature of the voltage supply and participants)
Binary inputs:	2 freely configurable binary inputs	–
– assignment; max. reliable length	external, floating contacts	–
– signal current/voltage	NO/NC type; total length 10 m approx. 1 mA / 20 V – pulse 5 ms	–
Valve stroke:	max. 4.2 mm	min. 1.0 mm; max. 4.0 mm
Running time:	25 s/mm	25 s/mm
Protection (according to EN 60529):	IP 42 (horizontal installation), IP 43 (vertical installation)	IP 42 (horizontal installation), IP 43 (vertical installation)
Safety class:	⚡ III; III according to EN 60730	⚡ III; III according to 60730
Body, colour:	plastic, white according to RAL 9016	plastic, white according to RAL 9016
Connection cable:	1 m fixed; type J(E)YY 3 x 2 x 0.6 (custom lengths available on request)	1 m fixed; type Y(St)Y 1 x 2 x 0.6 (custom lengths available on request)
Connection to the bus:	2-pole with bus terminal block; with polarity inversion protection	2-pole with bus terminal block; with polarity inversion protection
– the binary inputs	2 x 2-pole with bus or connecting terminal	–
CE certification (EMC / LV):	EN 50081-1, EN 50082-1 / EN 50090-2-2	EN 50022, EN 50081/82 / EN 60730
Ambient temperature:	0°C to 50°C in operation	0°C to 50°C in operation
Temperature of the medium:	max. 100 °C	max. 100 °C
Storage temperature:	–20°C to +70°C	–20°C to +70°C
Installation:	fits all HEIMEIER thermostatic valve bodies and three-way valves	

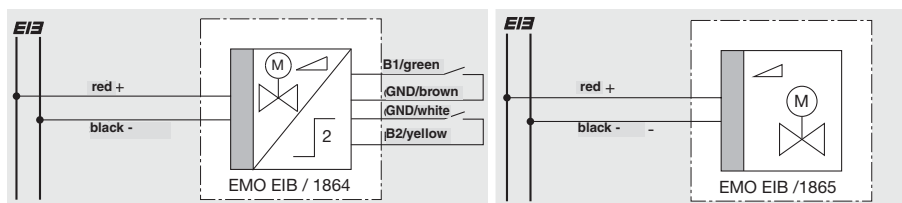
Max. permissible pressure difference with which the valve is still closed: see brochure Thermostatic valve bodies; three-way reversing valve; three-way-mixing valve control valves for underfloor heating.

## Article numbers

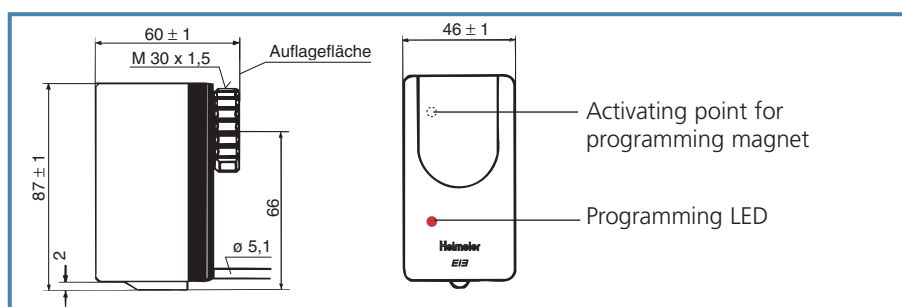
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## Connection diagram



## Dimensions



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