HeatingBOX 24V 4X

Heating actuator for up to 4 outputs 24 VAC/DC

ZCL-4HT24

TECHNICAL DOCUMENTATION

FEATURES

- 4 configurable outputs for 24 VAC/DC valve control (refer to note 2)
- 4 thermostats
- 10 logic functions
- Manual control through buttons and status LED indicators
- Common 24 VAC/DC input supply for all the outputs
- Total data saving on KNX bus failure
- Integrated KNX BCU (TP1-256)
- Dimensions 67 x 90 x 36 mm (2 DIN units)
- DIN rail mounting according to IEC 60715 TH35, with fixing clamp
- Conformity with the CE, UKCA, RCM directives (marks on the right side)

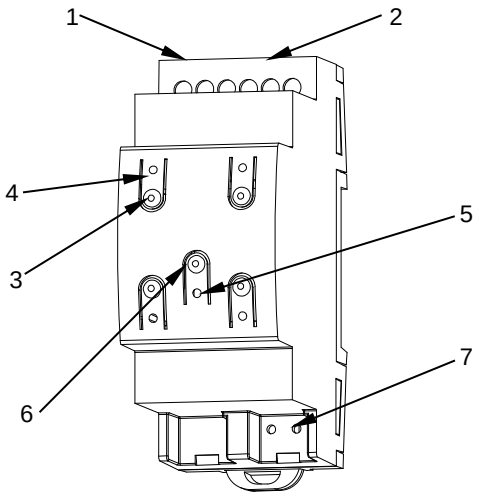


Figure 1: HeatingBOX 24V 4X

1. 24 V input (phase or positive)	2. Valve outputs	3. Output control button	4. Output status Indicator LED
5. Programming/Test LED	6. Programming/Test button		7. KNX connector

Programming/Test button: short press to set programming mode. If this button is held while plugging the device into the KNX bus, it enters the safe mode. If this button is held for more than 3 seconds, the device enters the test mode.

Programming/Test LED: programming mode indicator (red). When the device enters the safe mode, it blinks (red) every half second. The manual mode is indicated by the green color. During the start-up (reset or after KNX bus failure) and if the device is not in safe mode, it emits a red flash.

GENERAL SPECIFICATIONS

CONCEPT			DESCRIPTION	
Type of device			Electric operation control device	
KNX supply	Voltage (typical)		29 VDC SELV	
	Voltage range		21-31 VDC	
	Maximum consumption	Voltage	mA	mW
		29 VDC (typical)	5.85	169.65
		24 VDC[1]	10	240
	Connection type		Typical TP1 bus connector for 0.8 mm Ø rigid cable	
External power supply			24 VAC 50/60 Hz or 24 VDC	
Operation temperature			0 .. +55 °C	
Storage temperature			-20 .. +55 °C	
Operation humidity			5 .. 95%	
Storage humidity			5 .. 95%	
Complementary characteristics			Class B	
Protection class			III	
Operation type			Continuous operation	
Device action type			Type 1	
Electrical stress period			Long	
Degree of protection			IP20, clean environment	
Installation			Independent device to be mounted inside electrical panels with DIN rail (IEC 60715)	
Minimum clearances			Not required	
Response on KNX bus failure			Data saving according to parameterization	
Response on KNX bus restart			Data recovery according to parameterization	
Operation indicator			The programming LED indicates programming mode (red) and test mode (green). Each output LED indicates its status (fixed=active output; flashing=overload or short-circuit). Several overloads or short-circuits in a short period of time results in the temporal block of the device (blue blinking programming LED)	
Weight			84 g	
PCB CTI index			175 V	
Housing material			PC FR V0 halogen free	

[1] Maximum consumption in the worst-case scenario (KNX Fan-In model).

OUTPUTS SPECIFICATIONS AND CONNECTIONS		
CONCEPT		**DESCRIPTION**
Number of outputs		4
Output type		Solid state switching device
Maximum recommended load per output (AC/DC)	Quantity of valves [2]	5
	Stationary current	1 A (RMS)
	Maximum inrush current	6 A
Short-circuit protection		YES
Overload protection		YES
Connection method		Screw terminal block (0.5 Nm max.)
Cable cross-section		1.5-4 mm² (IEC) / 26-10 AWG (UL)

[2] This value could be more restrictive depending on the valve stationary current and inrush current.

EXTERNAL POWER SUPPLY SPECIFICATIONS AND CONNECTIONS	
CONCEPT	**DESCRIPTION**
Voltage	24 VAC 50/60 Hz - 24 VDC
Connection method	Screw terminal block (0.5 Nm max.)
Cable cross-section	1.5-4 mm² (IEC) / 26-10 AWG (UL)

WIRING DIAGRAMS

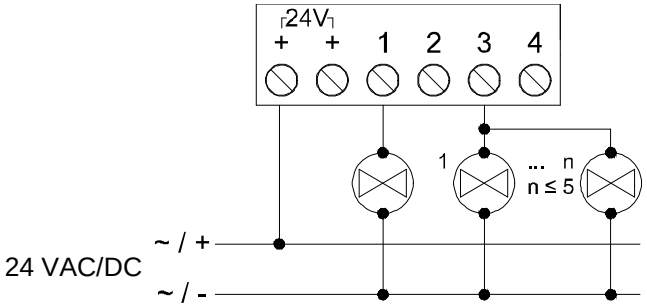
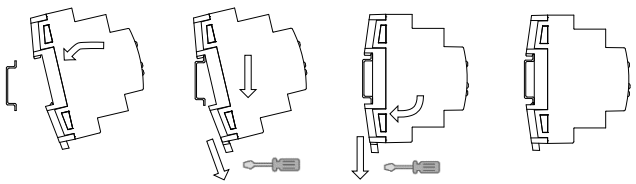


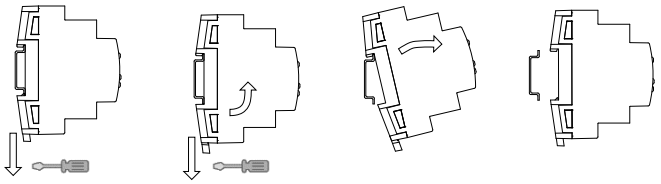
Figure 2: Wiring example: one valve per output and several valves per output.

- **NOTE 1**: Simultaneous connection of one valve to several outputs is not allowed.
- **NOTE 2**: Only for DC valves: a wrong polarity in the connection of auxiliary power may result in malfunction of the overload/short-circuit notification.

Attaching HeatingBOX 24V 4X to DIN rail:



Removing HeatingBOX 24V 4X from DIN rail:



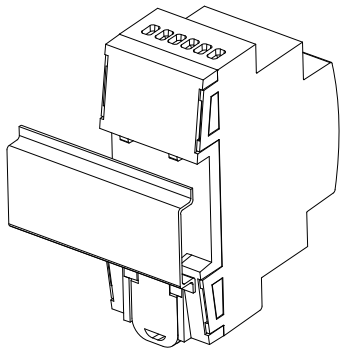


Figure 3: Mounting HeatingBOX 24V 4X on DIN rail

SAFETY INSTRUCTIONS AND ADDITIONAL NOTES

- Installation should only be performed by qualified professionals according to the laws and regulations applicable in each country.
- Do not connect the mains voltage nor any other external voltage to any point of the KNX bus; it would represent a risk for the entire KNX system. The facility must have enough insulation between the mains (or auxiliary) voltage and the KNX bus or the wires of other accessories, in case of being installed.
- The facility must be equipped with a device that ensures the omnipolar sectioning. Installation of a 10 A mini-circuit-breaker is recommended. To prevent accidents, it must remain open in case of manipulation of the device.
- Once the device is installed (in the panel or box), it must not be accessible from outside.
- Keep the device away from water (condensation over the device included) and do not cover it with clothes, paper or any other material while in use.
- The WEEE logo means that this device contains electronic parts and it must be properly disposed of by following the instructions at https://www.zennio.com/en/legal/weee-regulation.