

### FEATURES

- 4 outputs for 12 or 24 V motorised grilles\*
- Zoning module allowing the control of up to 12 zones and up to 2 zone groups
- Manual control through buttons and status indicator LED
- 230 V supply required for feeding of the 4 outputs
- Total data saving on power failure
- Integrated KNX BCU (TP1-256)
- Dimensions 67 x 90 x 79 mm (4.5 DIN units)
- DIN rail mounting according to IEC 60715 TH35, with fixing clamp
- CE, UKCA directives compliant (marks on the right side)

\* Before connecting the device to the facility, it must be assured that the switch position agrees with the grille's voltage.

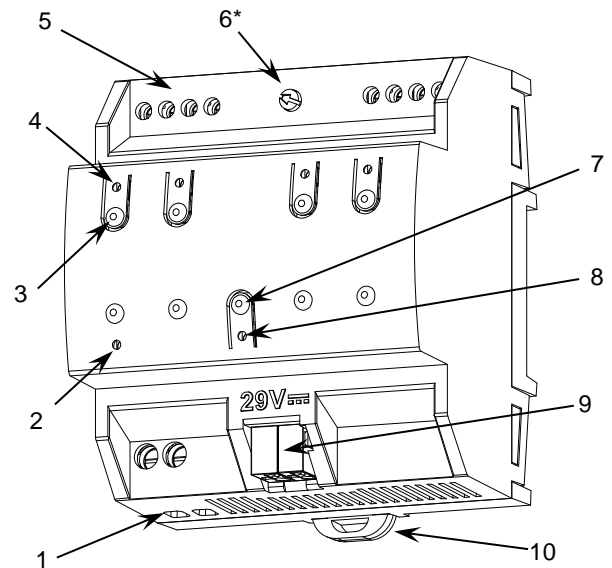


Figure 1: ZoningBOX 4

1. 230 V input	2. Power supply LED	3. Grille control button	4. Grille status LED	5. Grille outputs
6. 12/24V switch*	7. Programming/Test button	8. Programming/Test LED	9. KNX connector	10. Fixing clamp

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)	6	174
24 VDC <sup>1</sup>	10	240		
Connection type		Typical TP1 bus connector for 0.8 mm Ø rigid cable		
External power supply		230 VAC 50/60 Hz		
Operation temperature		-5 .. +45 °C		
Storage temperature		-20 .. +55 °C		
Operation humidity		5 .. 95%		
Storage humidity		5 .. 95%		
Complementary characteristics		Class B		
Protection class		II		
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		Programming LED indicates programming mode (red) and test mode (green). Power indicator LED (green) represents correct feeding. Each output LED indicates its status (fixed = open grille/dumper; off = closed grilles/dumper; flashing = error, see Fig. 2)		
Weight		192 g		
PCB CTI index		175 V		
Housing material		PC FR V0 halogen free		

<sup>1</sup> Maximum consumption in the worst-case scenario (KNX Fan-In model).

OUTPUTS SPECIFICATIONS AND CONNECTIONS		
CONCEPT	DESCRIPTION	
Number of outputs	4	
Output type / Voltage	Solid state switching device / 12 or 24 VDC (selected by switch)	
Maximum values per output	Quantity of grilles <sup>2</sup>	2
	Current (RMS)	750 mA
Short-circuit protection	YES	
Overload protection	YES	
Connection method	Screw terminal block (0.5 Nm max.)	
Cable cross-section	0.5-2.5 mm <sup>2</sup> (IEC) / 26-12 AWG (UL)	

<sup>2</sup>This value could be more restrictive depending on the current consumed by the grille.

EXTERNAL POWER SUPPLY SPECIFICATIONS AND CONNECTIONS		
CONCEPT	DESCRIPTION	
Power supply protection fuse	Voltage	250 V
	Current	4 A
	Response type	F (Fast acting)
Connection method	Screw terminal block (0.5 Nm max.)	
Cable cross-section	1.5-4 mm <sup>2</sup> (IEC) / 26-10 AWG (UL)	

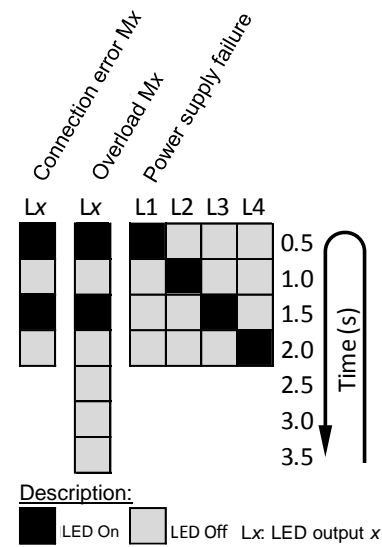
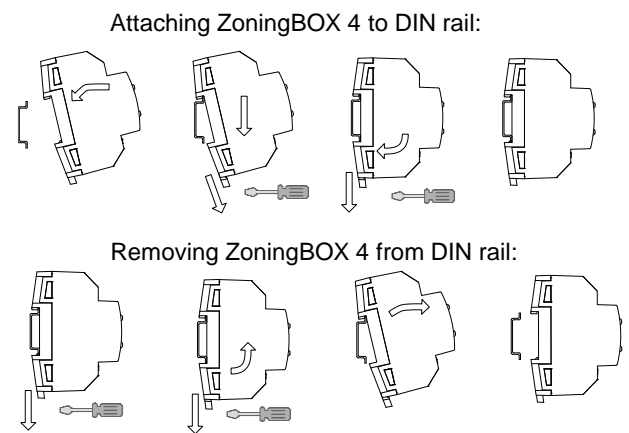
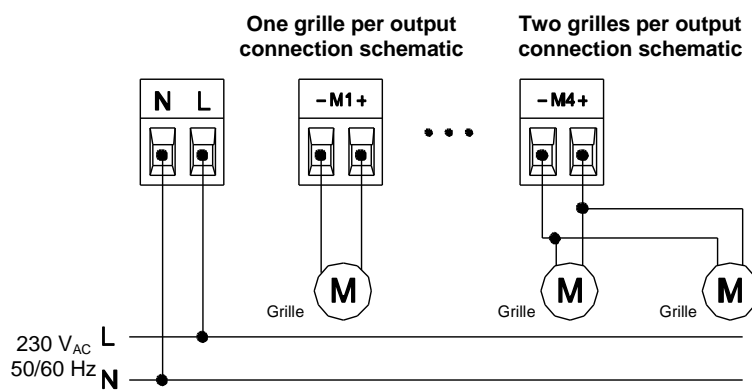


Figure 2: Error notification through grille status LED

## WIRING DIAGRAMS



### Notes:

- The simultaneous connection of a grille to several outputs nor the connection of 12 VDC and 24 VDC grilles at the same time is not allowed.
- In case of connecting two grilles to an output, those must have similar consumption characteristics.
- The polarity of the connection must be checked. This can be done, under the Test On mode, through the grille control buttons: the first press should imply an attempt to open the grille, while the second press should cause an attempt to close it. Once the device is parameterized, switched-on LEDs should correspond to open grilles.
- After connecting a grille, a synchronisation must be provoked (for example, disconnecting and connecting the KNX bus).
- Compatibility of grilles must be checked following the next steps for a complete verification:
  1. The grille must be connected to an enabled output, without other grilles in that output, (Please be careful to ensure the polarity is respected).
  2. The device must be fed with auxiliary power and then connected to the KNX bus.
  3. The grilles connected to outputs try a sequential opening movement. In positional mode, a maximum time of 25.5 s to complete the opening movement is allowed. In open/close mode, the maximum time is 3.5 s to complete the opening movement.
  4. Next, the grilles connected to outputs try a sequential closing movement. If the grille does not complete the closing movement, it is not suitable for ZoningBOX.

## 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.
- The device has a short-circuit protection fuse that, in case of activation, should only be rearmed or replaced by the Zennio technical service.
- This device contains a security short-circuit proof transformer.
- 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>.