**TECHNICAL DOCUMENTATION** 



## Shutter Actuator with up to 4 Shutter Channels with KNX Secure

ZIOMBSH4V3

## **FEATURES**

- Up to 4 shutter channels
- Possibility of controlling blinds/shutters with 2 or 3 dry contacts\*
- Manual output operation with push button and LED status indicator
- Supports KNX Data Secure
- 20 logic functions
- Output timing
- Total data saving on KNX bus 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
- Possibility of connecting different phases in adjacent outputs
- Conformity with the CE, RCM directives (marks on the right side)

 $<sup>^{\</sup>star}$  In case of 3 dry contacts, an individual output on another actuator is required for the stop contact

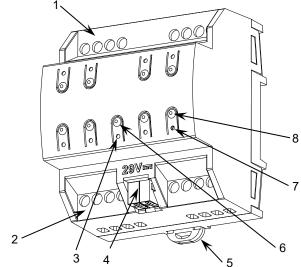


Figure 1: MAXinBOX SHUTTER 4CH v3

Upper outputs	<ol><li>Lower outputs</li></ol>	<ol><li>Programming/Test LED</li></ol>	<ol><li>KNX connector</li></ol>
<ol><li>Fixing clamp</li></ol>	<ol><li>Programming/Test button</li></ol>	<ol><li>Output status LED</li></ol>	<ol><li>Output control button</li></ol>

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. In order to perform a KNX Secure factory reset, while the device is in safe mode, press the button for 10 seconds until the programming LED changes its state.

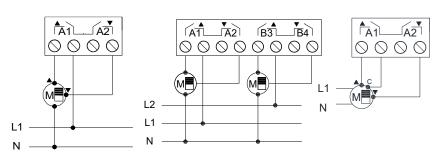
Programming/Test LED: programming mode indicator (red). When the device enters the safe mode, it blinks (red) every half second. The test mode is indicated by the green color. During the start-up (reset or after KNX bus failure) and if the device is not in safe mode, it starts a blue blinking sequence.

	GENERAL SPECIFICATIONS					
CONCEPT		DESCRIPTION				
Type of device	Type of device			Electric operation control device		
Voltage (typical)		29 VDC SELV				
	Voltage range	)	21-31 VDC	21-31 VDC		
KNX supply	Maximum	Voltage	mA	mW		
	consumption	29 VDC (typical)	4.10	118.9		
	Consumption	24 VDC <sup>1</sup>	10	240		
	Connection type		Typical TP1 bus connector for	Typical TP1 bus connector for 0.8 mm Ø rigid cable		
External power			Not required	Not required		
Operation ten	Operation temperature		0 +55 °C	0 +55 °C		
Storage temp	Storage temperature		-20 +55 °C	-20 +55 °C		
Operation humidity		5 95%	5 95%			
Storage humidity		5 95%				
Complementary characteristics		Class B	Class B			
Protection class / Overvoltage category		II / III (4000 V)	II / III (4000 V)			
Operation type		Continuous operation				
Device action type		Type 1				
Electrical stress period		Long				
Degree of protection / Pollution degree		IP20 / 2 (clean environment)				
Installation		Independent device to be mount 60715)	Independent device to be mounted inside electrical panels with DIN rail (IEC 60715)			
Minimum clea	Minimum clearances		Not required			
Response on	KNX bus failure	)	Data saving according to parameterization and relays contacts opening			
Response on	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				
Weight		250 g				
PCB CTI index		175 V	175 V			
Housing mate	Housing material / Ball pressure test temperature		PC FR V0 halogen free / 75 °C	PC FR V0 halogen free / 75 °C (housing) - 125 °C (connectors)		

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

OUTPUTS SPECIFICATIONS AND CONNECTIONS					
CONCEPT		DESCRIPTION			
Number of outputs		4 shutter channels			
Output type / Disconnection type		Potential-free outputs through bistable relays / micro-interruption			
Rated current per output		AC 8(4) A @ 250 VAC (2000 VA) DC 5 A @ 30 VDC (150 W)			
Maximum load per output	Resistive	2000 W			
	Inductive	1000 VA			
Different phases connection		Possibility of connecting different phases. It is not allowed to connect power supplies of different order, SELV with NO SELV, in the same block.			
Short-circuit protection		NO			
Overload protection		NO			
Connection method		Screw terminal block (0.5 Nm max.)			
Cable cross-section		1.5-4 mm² (IEC) / 26-10 AWG (UL)			
Outputs per common		2			
Maximum response time		15 ms			
Mechanical lifetime (min. cycles)		1 000 000			

## **WIRING DIAGRAMS**



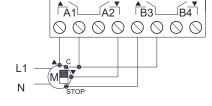
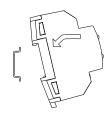
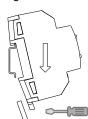


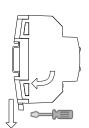
Figure 2: Wiring example (from left to right): one shutter on channel A, two shutters on channels A and B with different phases, one shutter with 2 dry contacts and one shutter with 3 dry contacts.

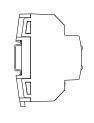
⚠ In order to ensure the expected status of the relays, please check that the device is connected to the KNX bus before energizing the power circuit.

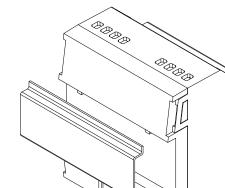




















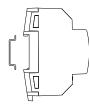


Figure 3: Mounting MAXinBOX SHUTTER 4CH v3 on DIN rail

## 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 home automation 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 <a href="https://www.zennio.com/en/legal/weee-regulation">https://www.zennio.com/en/legal/weee-regulation</a>.
- This device contains software subject to specific licences. For details, please refer to <a href="https://zennio.com/licenses">https://zennio.com/licenses</a>.

