

MAXinBOX SHUTTER 4CH

TECHNICAL DOCUMENTATION

Shutter actuator with up to 4 Shutter Channels

ZIO-MBSHU4

FEATURES

- Up to 4 shutter channels
- Manual output operation with push button and LED status indicator
- 20 logic functions
- Output timing
- Total data saving on KNX bus failure
- Integrated KNX BCU
- 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 directives (CE-mark on the right side)

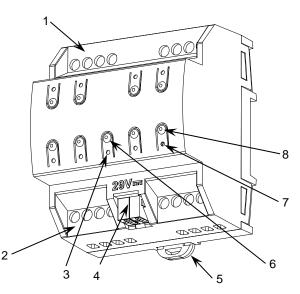


Figure 1: MAXinBOX SHUTTER 4CH

1. Upper outputs	2. Lower outputs	3. Programming/Test LED	4. KNX connector
5. Fixing clamp	6. Programming/Test button	7. Output status LED	8. Output control button

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.

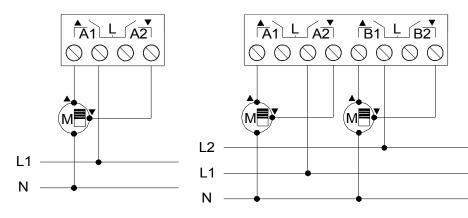
Programming/Test LED: programming mode indicator (red). When the device enters the safe mode, it blinks (red) every half second. The manual mode is indicated by the green color. During the start-up (reset or after KNX bus failure) and if the device is not in safe mode, it starts a blue blinking sequence.

GENERAL SPECIFICATIONS					
CONCEPT		DESCRIPTION			
Type of device		Electric operation control device			
Voltage (typical)		29 VDC SELV			
KNX supply	Voltage range		2131 VDC		
	Maximum consumption	Voltage	mA	mW	
		29 VDC (typical)	5.8	168.2	
	consumption	24 VDC ¹	10	240	
	Connection type		Typical TP1 bus connector for 0.80 mm Ø rigid cable		
External power supply		Not required			
Operation temperature		0 °C +55 °C			
Storage temperature		-20 °C +55 °C			
Operation humidity		5 95%	595%		
Storage humidity		595%			
Complementary characteristics		Class B			
Protection class / Overvoltage category		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 mounted inside electrical panels with DIN rail (IEC 60715)			
Minimum clearances		Not required			
Response on KNX bus failure		Data saving according to parameterization and relays contacts opening			
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		253 g			
PCB CTI index		175 V			
Housing mate	Housing material / Ball pressure test temperature		PC FR V0 halogen free / 75 °C (housing) - 125 °C (connectors)		

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

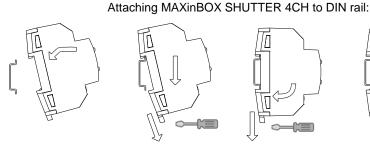
OUTPUTS SPECIFICATIONS AND CONNECTIONS					
CONCEPT		DESCRIPTION			
Number of outputs		4 shutter channels			
Output type / Disconnection type		Potential-free outputs through bistable relays / Micro-disconnection			
Rated current per output		AC 8(4) A @ 250 VAC (2000 VA) DC 5 A @ 30 VDC (150 W)			
Maximum 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 mm ² (IEC) / 26-10 AWG (UL)			
Outputs per common		2			
Maximum response time		15 ms			
Mechanical lifetime (min. cycles)		1 000 000			

WIRING DIAGRAMS

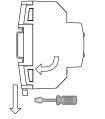


▲ In order to ensure the expected status of the relays, please check that the device is connected to the KNX bus before energizing the power circuit.

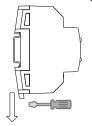
Figure 2: Wiring example (from left to right): one shutter on channel A and two shutters on channels A and B with different phases.

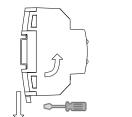






Removing MAXinBOX SHUTTER 4CH from DIN rail:





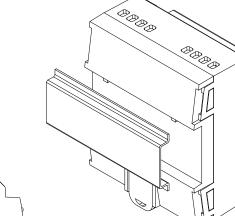


Figure 3: Mounting MAXinBOX SHUTTER 4CH on DIN rail

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.
- 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.