

FEATURES

- 2 x 0-10VDC individual outputs for fan control.
- 4 individual outputs (suitable for capacitive loads, maximum 140µF).
- 4 analog/digital inputs.
- Manual output operation in 0-10VDC and individual outputs with push button and status LED indicator.
- 10 logical functions.
- Output timing facilities.
- Total data saving on power failure.
- Integrated KNX BCU.
- Dimensions 67 x 90 x 79mm (4.5 DIN units).
- DIN rail mounting (EN 50022), through pressure.
- Possibility to connect different phases in adjoining outputs.
- Conformity with the CE directives (CE-mark on the right side).

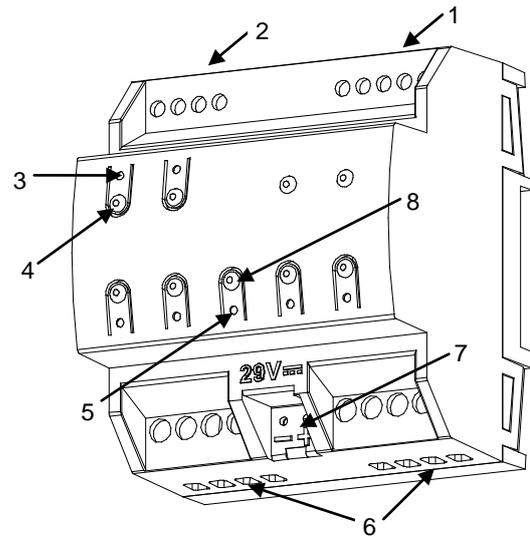


Figure 1. MAXinBOX FC 0-10V FAN

1. Analog/Digital inputs	2. 0-10VDC outputs	3. Output status LED indicator	4. Output control button
5. Programming/Test LED	6. Lower outputs	7. KNX connection	8. Programming/Test 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 into 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		
KNX supply	Voltage (typical)	29VDC SELV		
	Voltage range	21...31VDC		
	Maximum consumption	Voltage	mA	mW
		29VDC (typical)	11	319
24VDC ⁽¹⁾	15	360		
Connection type		Typical TP1 bus connector for rigid cable 0.80mm Ø		
External power supply		No		
Operation temperature		from 0°C to +55°C		
Storage temperature		from -20°C to +70°C		
Operation humidity		5 to 95% RH (no condensation)		
Storage humidity		5 to 95% RH (no condensation)		
Complementary characteristics		Class B		
Safety 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 (EN 50022).		
Minimum clearances		Not required.		
Response on KNX bus failure		Data saving according to parameterization		
Response on KNX bus restart		Data recovering according to parameterization		
Operation indicator		The programming LED indicates programming mode (red) and test mode (green). Each output LED indicates its status		
Weight		248g		
PCB CTI index		175V		
Housing material		PC FR V0 halogen free		

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

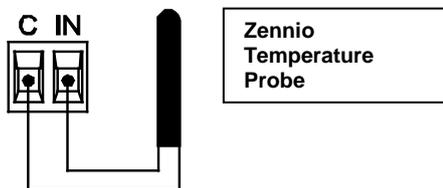
INDIVIDUAL OUTPUT SPECIFICATIONS AND CONNECTIONS		
Contact type		Potential free outputs through bistable relays with tungsten pre-contact.
Disconnection type		Micro-disconnection
Rated current by output		~16A (6) * 250VAC (4000VA) ■16A (6) * 30V DC (480W)
Maximum power per output	Resistive load	4000W
	Inductive load	1500VA
Maximum inrush current		800A/200µs 165A/20ms
Number of outputs		4 outputs
Outputs per common (channel)		1 individual output
Different phase connection		Possibility to connect different phases in adjoining outputs
Total maximum current in device		40A
Connection type		Screw terminal block
Recommended cable section		0.5mm ² to 4mm ² (26-10 AWG)
Maximum response time		50ms
Lifetime	Mechanical (min)	3 million operations (60cpm)
	Electrical (min.)	100.000 cycles at max. current (6cpm and resistive load)

0-10V OUPUT SPECIFICATIONS AND CONNECTIONS	
Output voltage	From 0 to 10VDC
Maximum load per output	1.5mA
Number of 0-10V outputs	2
0-10V outputs per common	1
Connection type	Screw terminal block
Recommended cable section	0.5mm ² to 2.5mm ² (26-12 AWG)

INPUT SPECIFICATIONS AND CONNECTIONS	
CONCEPT	DESCRIPTION
Number of inputs	4
Inputs per common	4
Input voltage	+3.3VDC for the common
Input current	1.0mA @ 3.3VDC (each input)
Input impedance	Aprox. 3.3kΩ
Switching type	Dry voltage contacts between input and common
Connection method	Screw terminal block
Maximum cable length	30m
NTC probe length	1.5m (max. 30m)
NTC accuracy (@ 25°C)	±0.5°C
Temperature resolution	0.1°C
Cable cross-section	0.5mm ² to 2.5mm ² (26-12 AWG)
Maximum response time	10ms

Any combination of the next accessories is allowed in the inputs:

Temperature Probe



Motion Sensor

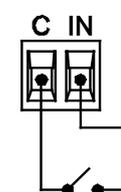


Up to two motion sensors can be plugged into the same device input (parallel wiring)

Motion sensor screw terminal.

Motion sensor references:
ZN110-DETEC-P⁽²⁾
ZN110-DETEC-X

Switch/Sensor/ Push button



(2) The micro switch number 2 in the ZN110-DETEC-P sensor **must be in Type B position** to work properly.

SAFETY INSTRUCTIONS

- 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 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 <http://zennio.com/wEEE-regulation>.



WIRING AND ASSEMBLY DIAGRAMS

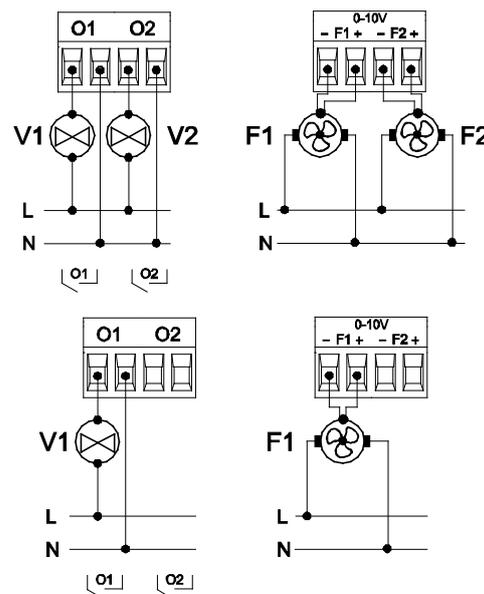
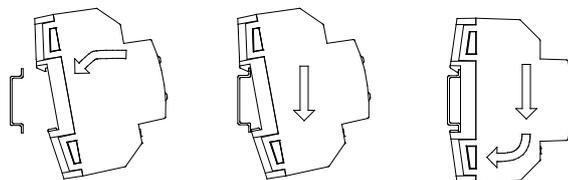


Figure 2: (From up to down and from left to right) Terminal block 1 and 0-10V outputs wiring examples for two valves, two fans, one valve and one fan.

⚠ 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.

Attaching MAXinBOX FC 0-10V FAN to DIN rail:



Removing MAXinBOX FC 0-10V FAN from DIN rail:

