FEATURES

- 1 connection than can be configured as 0-10 V output, 0-10 V input or 4-20 mA input

- Manual operation of the 0-10 VDC outputs

- 1 fan coil module

- 1 thermostats

- 10 logic functions

- Total data saving on power 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

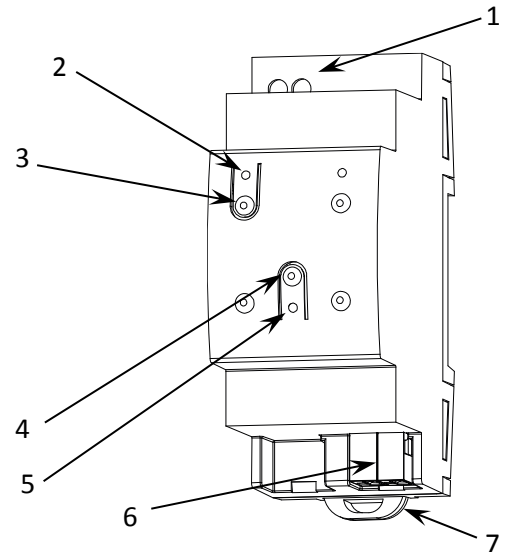- Conformity with the CE, UKCA, RCM directives (marks on the right side)

Figure 1: MINiBOX 0-10V X1

1. Multifunction input/output	2. 0-10V output status LED	3. 0-10V output control button
4. Programming/Test button	5. Programming/Test LED	6. KNX connector	7. 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)	14.9	432.1
		24 VDC[1]	20	480
	Connection type		Typical TP1 bus connector for 0.8 mm Ø rigid cable	
External power supply			Not required	
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.	
Weight			80 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).

0-10V OUTPUT SPECIFICATIONS AND CONNECTIONS

CONCEPT	DESCRIPTION
Number of outputs	2
Output type	0-10 VDC
Maximum load per output	2 mA
Connection method	Screw terminal block (0.4 Nm max.)
Cable cross-section	0.5-2.5 mm² (IEC) / 26-12 AWG (UL)
Maximum cable length	30 m
Output per common	1

0-10V / 4-20mA INPUT SPECIFICATIONS AND CONNECTIONS

CONCEPT	DESCRIPTION
Number of inputs	1
Operation voltage	0-10 VDC
Operation current	4-20 mA
Connection method	Screw terminal block (0.4 Nm max.)
Cable cross-section	0.5-2.5 mm² (IEC) / 26-12 AWG (UL)
Maximum cable length	30 m

Note: Each of the two pairs of terminals can act as an input or an output according to its parameterization.
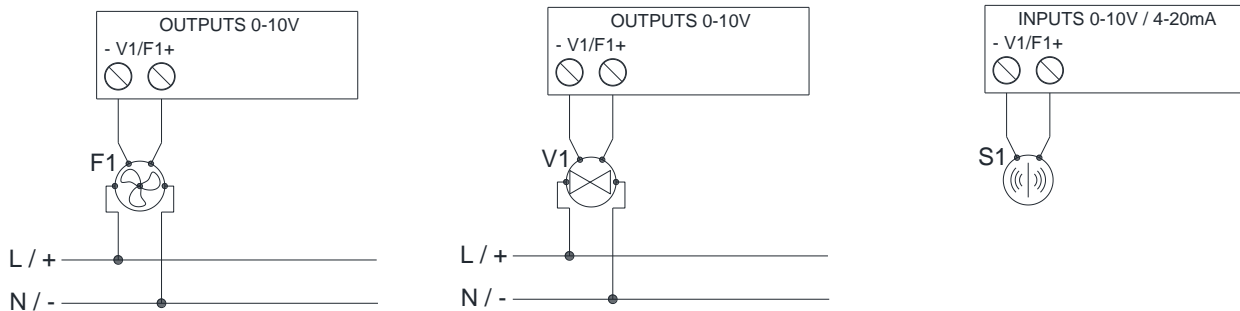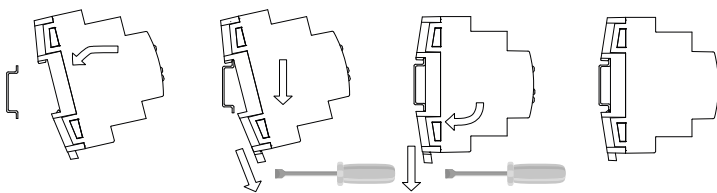
WIRING DIAGRAMS

Figure 2: Wiring examples

Attaching MINiBOX 0-10V X1 to DIN rail:

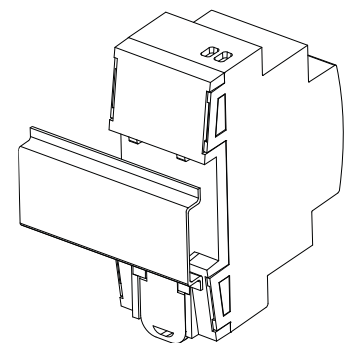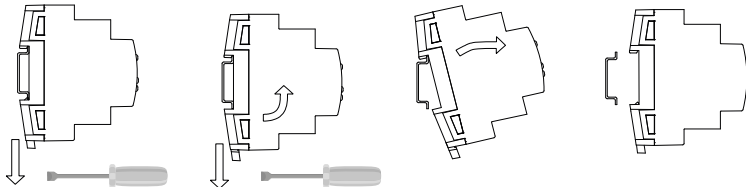Removing MINiBOX 0-10V X1 from DIN rail:

Figure 3: Mounting MINiBOX 0-10V X1 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.
- This device contains software subject to specific licences. For details, please refer to http://zennio.com/licenses.