FANinBOX 110V 1CH

4-speed ceiling fan controller @ 110 VAC

ZCLFB110C1 **TECHNICAL DOCUMENTATION**

FEATURES

- Controller for a ceiling fan with an AC motor powered by 110 VAC
- External 110 V 50/60 Hz power supply
- Up to 4 speeds control for ceiling fans
- Manual control through push button and LED indicator
- 10 logic functions
- Total data saving on KNX bus 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, RCM directives (marks on the right side)

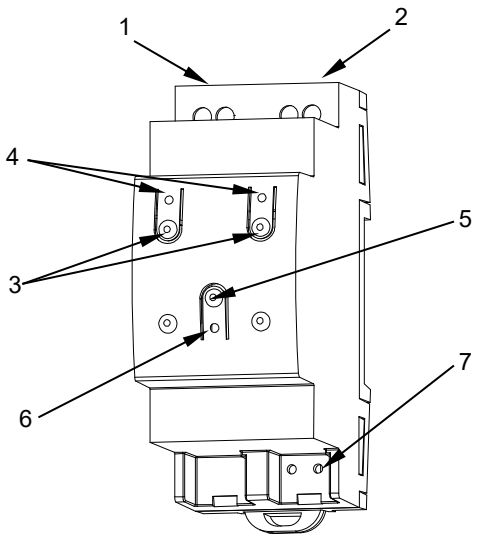


Figure 1: FANinBOX 110V 1CH

1. Power supply input	2. Fan output	3. Speed control buttons	4. Speed indicator LEDs
5. Programming/Test button	6. Programming/Test LED	7. KNX Connector	

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 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			Electric operation control device	
KNX supply	Voltage (typical)		29 VDC SELV	
	Voltage range		21-31 VDC	
	Maximum consumption	Voltage	mA	mW
		29 VDC (typical)	3.9	113.1
		24 VDC[1]	10	240
	Connection type		Typical TP1 bus connector for 0.8 mm Ø rigid cable	
External power supply			110 VAC 50/60 Hz	
Operation temperature			0 .. +55 °C	
Storage temperature			-20 .. +55 °C	
Operation humidity			5 .. 95%	
Storage humidity			5 .. 95%	
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	
Response on KNX bus restart			Data recovery according to parameterization	
Operation indicator			The programming LED indicates programming mode (red) and test mode (green). The output LEDs indicate its status (fixed = full speed; fast/slow flashing = high/slow speed; off = stopped)	
Weight			109 g	
PCB CTI index			175 V	
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	1
Output type	Relays based control device
Maximum recommended load per output	100 W
Minimum load per output	30 W
Short-circuit protection	NO
Overload protection	NO
Connection method	Screw terminal block (0.4 Nm max.)
Cable cross-section	0.5-2.5 mm² (IEC) / 26-12 AWG (UL)
Outputs per common	1
Maximum response time	15 ms
Mechanical lifetime (min. cycles)	3 000 000
Electrical lifetime (min. cycles)[1]	100000 @ 8 A / 25000 @ 16 A (VAC)

[1] Lifetime values could change depending on the load type.

EXTERNAL POWER SUPPLY SPECIFICATIONS AND CONNECTIONS	
CONCEPT	**DESCRIPTION**
Voltage	110 VAC
Connection method	Screw terminal block (0.4 Nm max.)
Cable cross-section	0.5-2.5 mm² (IEC) / 26-12 AWG (UL)

WIRING DIAGRAMS

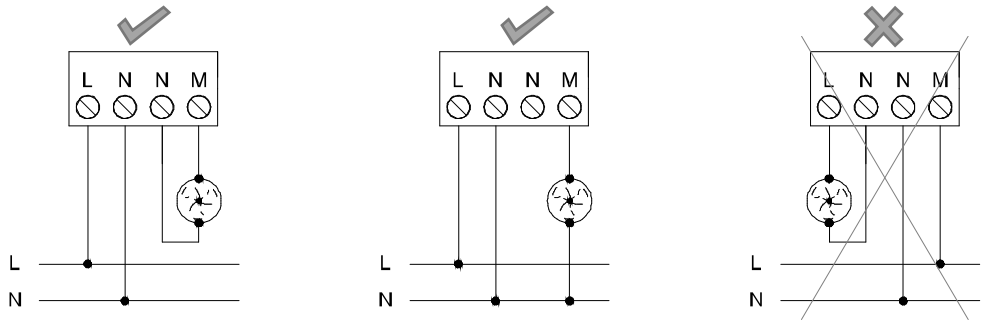


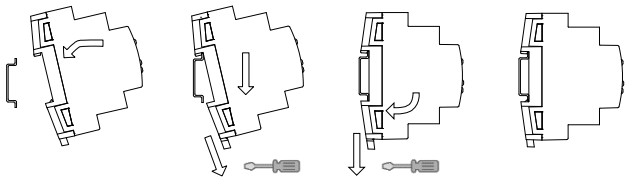
Figure 2: Wiring diagram of a fan

⚠ 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.

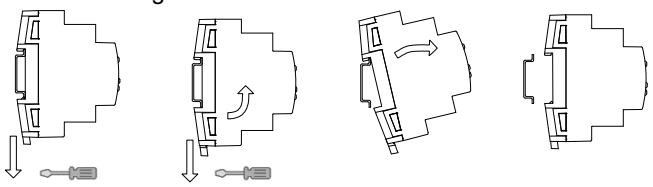
⚠ **Use for ceiling fans. Do not use other load to avoid damages**.

⚠ **The ceiling fan motor must be connected directly to the FANinBOX device without going through its driver**

Attaching FANinBOX 110V 1CH to DIN rail:



Removing FANinBOX 110V 1CH from DIN rail:



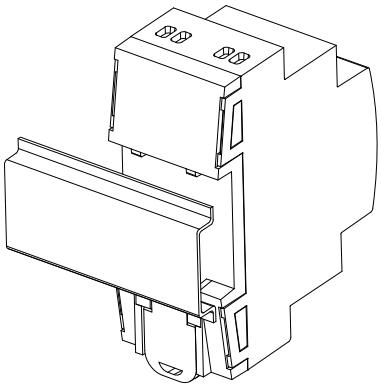


Figure 3: Mounting FANinBOX 110V 1CH on DIN rail

⚠ 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 https://www.zennio.com/en/legal/weee-regulation.
- This device contains software subject to specific licences. For details, please refer to https://zennio.com/licenses.