Zennio®

RGB CONTROLLER
ZN1DI-RGBX4

LUMENTO X4
LED DIMMING

Technical Documentation

FEATURES

- Control of RGBW LED or 4 independent channels.
- External power supply required (12 or 24 VDC).
- LED test function.
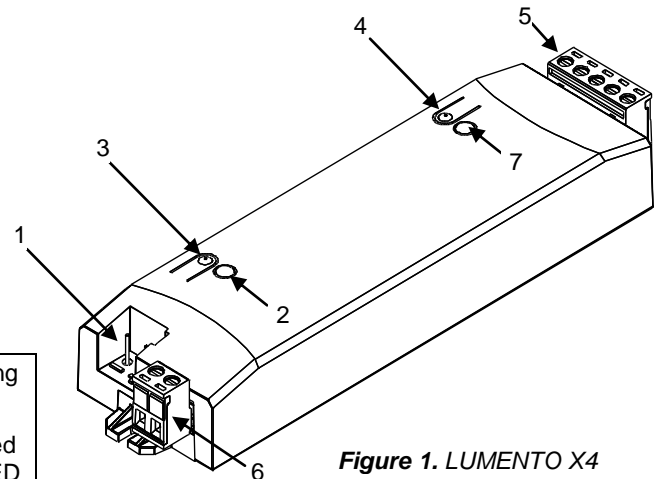- Integrated KNX BCU.
- Conformity with the CE directives.

1. KNX connector	**2.** KNX programming and internal test LED	**3.** KNX programming button
4. Test button	**5.** LED control terminal block	**6.** External power supply	**7.** Test and reversed polarity indicator LED

Figure 1. LUMENTO X4

KNX programming button: short button press to set the programming mode. If this button is held while plugging the device to the KNX bus, it enters into safe mode.

KNX programming and internal test LED: the red LED indicates programming mode. When the device goes into safe mode, it blinks red every 0.5 seconds. The blinking blue LED indicates internal test.

Test button: it tests the functioning of channels connected to the device. Push and hold for 3 seconds to get in/out of the testing mode.

Test LED and polarity: tricolored LED that indicates which channel (red=channel 1/R, green=channel 2/G, blue=channel 3/B, qhite=channel 4/W) is being tested. Orange light indicates reverse polarity in external power supply.

GENERAL SPECIFICATIONS

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Type of device		Electric operation control device
KNX supply	Voltage (typical)	29VDC
	Voltage range	21…31VDC
	Power consumption	145mW
	Connection type	Typical bus connector TP1, 0.80mm2 section
External power supply		12 or 24VDC
Power supply cable section		1.5 mm² to 2.5 mm²
Type of control		PWM (150, 300, 488 or 600 Hz)
Operation temperature		0ºC to +45ºC
Storage temperature		-5ºC to +50ºC
Operation humidity		30 to 85% RH (no condensation)
Storage humidity		30 to 85% RH (no condensation)
Complementary characteristics		Class B
Protection class		II
Operation type		Continuous operation
Device action type		Type 1
Electrical stress period		Long
Protection degree		IP20, clean environment
Installation		Surface mounted independent device. Connect LUMENTO as near as possible to both, the LED to dimmer and the external power supply
Response on KNX bus failure		Data saving
Response on KNX bus restart		Data recovery
PCB CTI index		175V
Housing material		PC-ABS FR V0 halogen free
Dimensions		Without terminal blocks: 144x44x22mm / With terminal blocks: 157x44x22mm
Weight		104g
Operation indication		Programming/internal test LED indicates: programming mode (red lighting), safe mode (red blinking) and internal test (blue blinking). Test LED indicates: white, test channel 4 (W); red, test channel 1 (R); green, test channel 2 (G); blue, test channel 3 (B). Reverse polarity of external power supply is indicated by the test LED with orange light.

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OUTPUTS SPECIFICATIONS AND CONNECTIONS

Maximum current per channel	2.5A @ 25ºC ambient temperature
Number of channels	4
Total power connected	120W (12VDC) or 240W (24VDC)
Connection type	Pluggable screw terminal block
Cable section	1.5 to 2.5mm²
Load type	Common anode
Shortcut protection	Yes
Overheating protection	Yes

WIRING AND ASSEMBLY DIAGRAMS
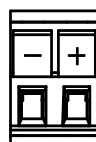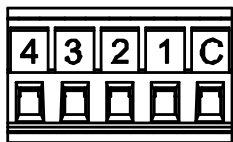
External power supply:
+ and - terminals of external power supply 12 or 24VDC
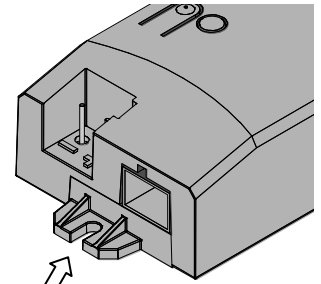
Assembly:
Screw mounting, 2 holes of 3.5mm diameter. Screws not included.

LED
The LED load is connected to the terminal block, matching the anode or the anode common terminal of the LED stripes with C (anode). The cathode can be connected to several output channels if it is necessary more than 2.5A (up to 10A) for the LED strip, **as long as the length and section of the wires used for the connections between the outputs and the strip are the same.**

Correspondence
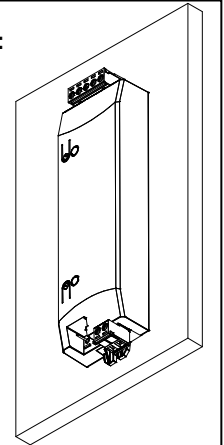**C**: Anode   **1**: Red   **2**: Green   **3**: Blue   **4**: White

Recommended installation:
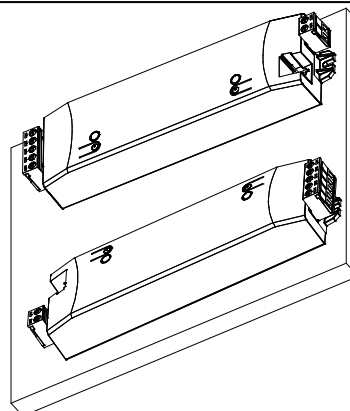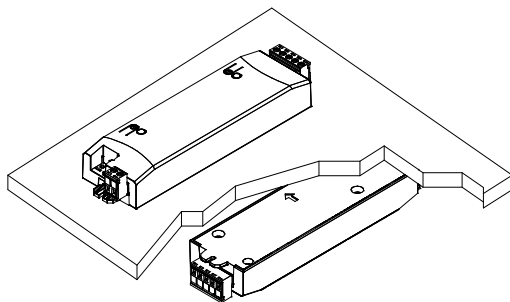
NOT recommended:
Vertical position.

If there is not any other possibility, install terminal block up (see fig.)

⚠ 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, 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.