

## 4-channel constant current dimmer for DC LED loads ZDI-RGBCC4

#### **Technical Documentation**

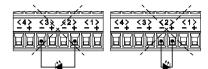


**Important warning:** the following rules when not considered may result in load or device irreversible damages

# Right load wiring

### Wrong load wiring





#### **FEATURES**

- Control of constant current RGBW LED loads or 4 independent channels.
- Output currents: 220mA, 300mA, 350mA, 500mA, 550mA, 630mA, 700mA, 750mA, 900mA and 1A.
- External power supply required (12-30 VDC).
- LED test function.
- KNX BCU integrated.
- CE directives compliant.

1. KNX connector	2. Programming button	3. Test button
<ol> <li>Output channels</li> </ol>	5. Test LED	6. Current selector switch
7. Programmin	g LED 8. Extern	al power supply

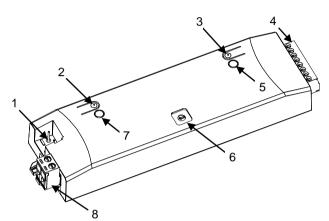


Figure 1: LUMENTO C4

Type of c	levice		Electric operation control device		
Voltage (typical)		al)	29VDC		
KNX supply	Voltage range		2131VDC		
		Voltage	mA	mW	
	Maximum consumption	29VDC (typical)	8	232	
	Consumption	24VDC	10	240	
	Bus connection		Typical bus connector TP1, 0.50mm2 section		
External	power supply		from 12 to 30VDC		
Power supply cable section		n	1.5 mm² to 2.5 mm²		
Type of c	ontrol		Current control		
Ambient	temperature		0°C to +45°C		
Storage t	emperature		-5°C to +50°C		
Ambient	humidity		3 to 95% RH (no condensation)		
Storage I	numidity (relative	)	3 to 95% RH (no condensation)		
Complem	nentary character	ristics	Class B		
Safety class			III		
Operation type			Continuous operation		
Device action type			Type 1		
Electrical solicitations period		od	Long		
Protection class			IP20, clean environment		
Assembly			Independent control assembly device. Connect LUMENTO as near as possible to both, the load to dimmer and the external power supply		
Bus power	er failure respons	se .	Data saving		
Response when restarting bus		g bus	Data recovery		
PCB CTI index			175 V		
Enclosure			PC FR V0 halogen free		
Size			Without terminal blocks: 159x44x22.7mm / With terminal blocks: 162x44x22.7mm		
Weight			85g.		
Operation indication			Programming LED: programming mode (red lighting), safe mode (red blinking).  Test LED: in test mode, 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 in orange light. If there is not an external power supply connected it blinks in orange. If the currents selected by parameter and by selector switch don't match it blinks in white. Overheating protection: the test LED lights in red (continuous level1 of protection, blinking with level 2 of protection).		

OUTPUT SPECIFICATIONS AND CONNECTIONS		
Maximum current per channel 1A @ 25°C ambient temperature		
Number of channels	4	
Output currents	220mA, 300mA, 350mA, 500mA, 550mA, 630mA, 700mA, 750mA, 900mA or 1A	
Connection type	Terminal block (screw)	
Cable section	1.5 mm² to 2.5 mm²	
Load type	Load with positive and negative terminals.	
Shortcut protection	Yes	
Overheating protection	Yes	

INPUT SPECIFICATIONS AND CONNECTIONS		
Voltage range	12 to 30VDC	
Connection type	Terminal block (screw)	
Cable section	1.5 mm² to 2.5 mm²	





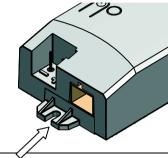
External power supply:
+ and - terminals of

+ and - terminals of external power supply from 12 to 30 VDC. It is recommended to use the closest external power supply value to the load working voltage.

**Correspondence:** 1: Red channel 2: Green channel 3: Blue channel 4: White channel +: Positive terminal -: Negative terminal



Connecting load terminals to different output channels may result in **load or device irreversible damages**.



Assembly:

Screw mounting, 2 holes of 3.5 mm diameter. Screws not included.

#### TEST AND PROGRAMMING BUTTON AND LED

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

Programming LED: programming mode indicator (red). When the device goes into safe mode, it blinks (red) every half second.

Test button: if this button is held during 3 seconds when the load in connected, it goes into test mode.

**Test LED:** it indicates which channel (red=channel 1/R, green=channel 2/G, blue=channel 3/B, white=channel 4/W) is being tested during test mode. In addition, it shows errors in the installation and/or parameterization (see section "test LED error identification").

#### **OUTPUT CURRENT SELECTOR SWITCH**

I Out*:	Switch Position		I Out*:	
220 mA	0		5	630 mA
300 mA	1	235	6	700 mA
350 mA	2	0 🛑 5	7	750 mA
500 mA	3	SPIG	8	900 mA
550 mA	4		9	1 A

\*it is mandatory that the output current chosen by ETS parameter and the current selected with the switch match. On the contrary, the load cannot be controlled and the test LED will blink in white.

#### **TEST LED ERROR IDENTIFICATION**

Depending on the color, the test LED indicates different errors:

Color	Error
Blinking white	Output current selection
Blinking orange	No auxiliary power supply detected
Continuous orange	Wrong auxiliary power supply polarization
Blinking red	Overheating level 1
Continuous red	Overheating level 2



#### **SAFETY INSTRUCTIONS**

- Do not connect mains voltage (230V) or any other external voltages to any point of the KNX bus. Connecting an external voltage might put the entire KNX system at risk.
- Make sure during the installation that there is always sufficient insulation between the mains voltage 230V and the bus or the
  extension inputs.
- When overheating protection is active, the device will switch off the load and will ignore any order from the KNX bus. For further information, please read the user manual.
- The output current selected in the LUMENTO C4 should never exceed the current required for the load, which is specified by the manufacturer. Not following this recommendation could damage the load.