

4-channel constant voltage PWM dimmer for DC LED loads

ZDILX4V2 TECHNICAL DOCUMENTATION

FEATURES

- 4 constant voltage configurable channels (combinable independent channels, RGBW channel, RGB+W channels and combinable TW channels)
- 1 relay to control the LEDs power supply or for independent use
- Supports KNX Data Secure
- Master Light control
- External 12-40 VDC power supply
- Manual output operation with push button and LED status indicator
- Total data saving on KNX bus failure
- Integrated KNX BCU (TP1-256)
- Dimensions 137 x 55 x 30.5 mm
- Surface-mounted inside panels, distribution boxes or false ceiling
- Conformity with the CE, UKCA, RCM directives (marks on the right side)

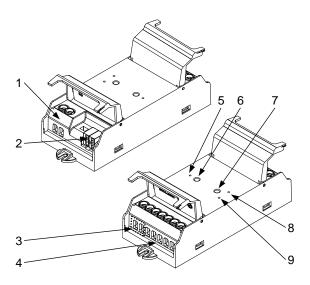


Figure 1: Lumento X4 v2

Power Supply Relay	2. KNX connector	3. External power supply	4. Output channels	5. Programming LED
6. Programming button	7. Test butt	ton 8. Powe	er supply LED	9. Error notification LED

PROGRAMMING 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. In order to perform a KNX Secure factory reset, while the device is in safe mode, press the button for 10 seconds until the programming LED changes its state.

TEST BUTTON: short press changes sequently each channel to 100%. A long press regulates the active channel.

PROGRAMMING LED: programming mode indicator (red). When the device enters the safe mode, it blinks (red) every half second. During the start-up (reset or after KNX bus failure) and if the device is not in safe mode, it emits a red flash. The Test-On mode is indicated through green color.

CONCEPT		DESCRIPTION	DESCRIPTION			
Type of device		Electric operation control device				
Voltage (typical)		29 VDC SELV				
	Voltage range		21-31 VDC			
KNX supply Maximu		Voltage	mA	mW		
		29 VDC (typical)	5.2	150.8		
	consumption	24 VDC ¹	10	240		
	Connection ty	pe	Typical TP1 bus connector for 0.	Typical TP1 bus connector for 0.8 mm Ø rigid cable		
External power supply		12-40 VDC				
Operation temperature		0 +55 °C				
Storage temp	•		-20 +55 °C	-20 +55 °C		
Operation hu			5 95%			
Storage humi			5 95%			
Complementary characteristics		Class B				
Protection class / Overvoltage category		II / III (4000 V)	II / III (4000 V)			
Operation type		Continuous operation				
Device action type		Type 1				
Electrical stress period		Long	Long			
Degree of protection		IP20, clean environment				
Installation		Independent device to be surf	Independent device to be surface-mounted inside electrical panels or			
		boxes. The installation is also possible in false ceiling.				
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 error LED notifies the existence of an error.				
Weight		134 g				
PCB CTI index		175 V	175 V			
Housing material		PC FR V0 halogen free				

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

OUTPUTS SPECIFICATIONS AND CONNECTIONS		
CONCEPT	DESCRIPTION	
Number of outputs	4	
Output type / Disconnection type	Solid state switching device	
Maximum load per output	8 A	
Total maximum current in device	20 A	
Load type	LED strip (monochrome, RGB, RGBW or TW) with common anode (+)	
Short-circuit protection	YES	
Overheating protection	YES	
Connection method	Screw terminal block (0.5 Nm max.)	
Cable cross-section	1.5-4 mm ² (IEC) / 26-10 AWG (UL)	

^{*} In case of channel parallel parameterization, these outputs must be wire-connected.

EXTERNAL POWER CONNECTIONS	SUPPLY SPECIFICATIONS AND
CONCEPT	DESCRIPTION
Voltage	12-40 VDC (voltage in concordance with voltage LED strips to be connected)
Current	Depending upon the load to be controlled up to a maximum of 20 A
Connection method	Screw terminal block (0.5 Nm max.)
Cable cross-section	1.5-4 mm² (IEC) / 26-10 AWG (UL)

RELAY SPECIFICATIONS AND CONNECTIONS				
CONCEPT		DESCRIPTION		
Number of outputs		1		
Output type / Disconnection type		Potential-free outputs through bistable relays with tungsten pre-contact / Micro-disconnection		
Relay rated current		AC 16(6) A @ 250 VAC (4000 VA) DC 7 A @ 30 VDC (210 W)		
Maximum load	Resistive	4000 W		
per output	Inductive	1500 VA		
Maximum inrush current		800 A/200 μs		
		165 A/20 ms		
Short-circuit protection		NO		
Overload protection		NO		
Connection method		Screw terminal block (0.5 Nm max.)		
Cable cross-section		1.5-4 mm² (IEC) / 26-10 AWG (UL)		
Maximum response time		10 ms		
Mechanical lifetime (min. cycles)		3 000 000		
Electrical lifetime (min. cycles)		100000 @ 8 A / 25000 @ 16 A (VAC)		

*PARALLEL CHANNEL (C) (4) (3) (2) (1) *PARALLEL CHANNEL

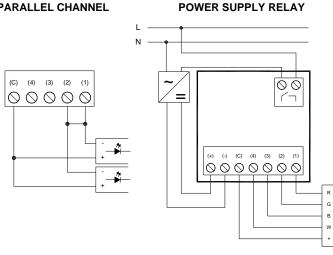
WIRING DIAGRAMS

RGB + W CHANNELS

(C) (4) (3) (2) (1)

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RGBW CHANNEL (C) (4) (3) (2) (1) R G B W + TW CHANNELS (C) (4) (3) (2) (1) C W + C W +



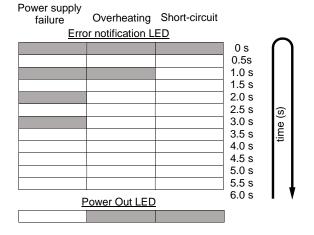


Figure 2: Error notification LED codes



DIMENSIONS (mm)

SAFETY INSTRUCTIONS AND ADDITIONAL NOTES

30.5

137.4

125.8

120.8

0

0

- 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 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.