# DLC1248 multi channel EASY RGB / EASY TW Device Manual





### **FEATURES**

- SEQUENCER+FADER+DIMMER+DRIVER
- DC Input 12-24-48 Vdc
- Command: N.O. push button
- Tunable white control or RGB color control
- Current outputs or voltage outputs for LED strip
- Typical efficiency > 95%
- Adjusting the brightness up to completed off
- Soft start and stop
- Optimized output curve
- Extended temperature range
- 100% Functional test 5 Years warranty
- → For the whole and updated *Device Manual* refer to producer's website: <u>http://www.dalcnet.com</u>

## CONSTANT CURRENT VARIANTS (common anode)

Application (2 channels output): tunable white Application (3 channels output): RGB color

CODE	Supply voltage	Output	Channels	Command	
DLC1248-2CC350	12-48V DC	2 x 350mA	2	N.O. push button	
DLC1248-2CC500	12-48V DC	2 x 500mA	2	N.O. push button	
DLC1248-2CC700	12-48V DC	2 x 700mA	2	N.O. push button	
DLC1248-3CC350	12-48V DC	3 x 350mA	3	N.O. push button	
DLC1248-3CC500	12-48V DC	3 x 500mA	3	N.O. push button	
DLC1248-3CC700	12-48V DC	3 x 700mA	3	N.O. push button	

## > CONSTANT VOLTAGE VARIANTS (common anode)

Application (2 channels output): tunable white Application (3 channels output): RGB color

CODE	Supply voltage	Output	Channels	Command	
DLC1248-2CV	12-48V DC	2 x 1,6 A max.	2	N.O. push button	
DLC1248-3CV	12-48V DC	3 x 1,6 A max.	3	N.O. push button	

## PROTECTIONS

		2/3 CC	2/3 CV
ОТР	Over temperature protection <sup>1</sup>	✓	✓
OVP	Over voltage protection <sup>2</sup>	✓	✓
UVP	Under voltage protection <sup>2</sup>	✓	$\checkmark$
RVP	Reverse polarity protection <sup>2</sup>	$\checkmark$	$\checkmark$
IFP	Input fuse protection <sup>2</sup>	✓	$\checkmark$
SCP	Short circuit protection	×	$\checkmark$
OCP	Open circuit protection	$\checkmark$	×
CLP	Current limit protection	$\checkmark$	✓

<sup>&</sup>lt;sup>1</sup> Thermal Protection on the output channel in case of high temperature. The thermal intervention is detected by transistor (>150°C) or current regulation (depending of the booster variant). <sup>2</sup> Only control logic protection

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## > REFERENCE STANDARDS

EN 61347-1	Lamp controlgear - Part 1: General and safety requirements
EN 55015	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
EN 61547	Equipment for general lighting purpose – EMC immunity requirements
EN 50581	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of
	hazardous substances

## > TECHNICAL SPECIFICATIONS

		Variants				
		Constan	t current	Constan	it voltage	
		2 channels	3 channels	2 channels	2 channels	
Supply voltage			DC min: 10,8 Vdc max	:: 52,8 Vdc		
Output voltage		min: Vin/4 max: Vin-0,9V		=Vin		
Input current		max 1,4A	max 2,1A	max 3,2A	max 4,8A	
Output current		350/500/700 mA/ch		max 1,6 A/ch		
		max 1,4A	max 2,1A	max 3,2A	max 4,8A	
Nominal power <sup>3</sup>	@12V	8,4/12/16,8 Wmax	12,6/18/25,2 W max	38,4 Wmax	57,6 Wmax	
	@24V	16,8/24/33,6 Wmax	25,2/36/50,4 Wmax	76,8 Wmax	115,2 Wmax	
	@48V	33,6/48/67,2 Wmax	50.4/72/100,8 Wmax	153,6 Wmax	230,4 Wmax	
Power loss in standby mode		<500	0mW	<50	0mW	
Type of Load		R-	L-C	R-	·L-C	
Thermal shutdown		150°C		150°C		
D-PWM dimming frequency		250Hz				
D-PWM resolution		16 bit				
D-PWM range		0,1-100 %				
Storage temperature		min: -40 max: +60 °C				
Ambient temperature <sup>1</sup>		min: -10 max: +60 °C				
Wiring		2.5mm <sup>2</sup> solid – 1.5mm <sup>2</sup> stranded - 30/12 AWG				
Wire preparation length		5,5-6,5 mm				
Protection grade		IP10				
Casing material		Plastic				
Packaging unit (pieces/unit)		Single Carton Box 1pz				
Mechanical dimensions		44 x 44 x 25 mm				
Packaging dimensions		68 x 56 x 35 mm				
Weight		40g				

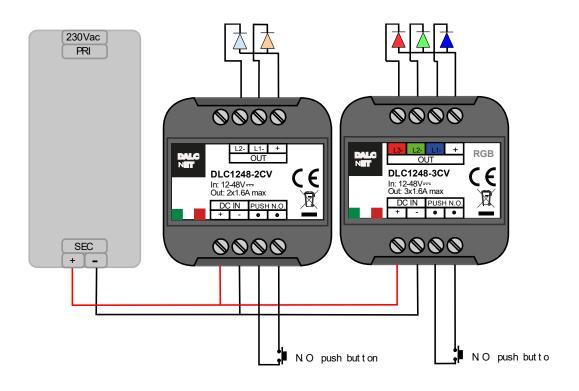
<sup>3</sup> Maximum value, dependent on the ventilation conditions

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# > INSTALLATION

Connect the switching supply, connect the N.O. push button, connect leds.



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## > FUNCTION

The outputs status is memorized and reloaded in the case of supply interruptions.

## > TUNABLE WHITE

Tunable White is managed by a N.O. push button in the following variants:

DLC1248-2CC350		DLC1248-2CC500	DLC1248-2CC700	DLC1248-2CV	
Кеу	Function				
		Click	ON/OFF		
		Doppio Click	Maximum Intensi	Maximum Intensity	
		Long pressure (>1s) from OFF	Turn ON at 10% (	night), then dimmer UP/DOWN	
		Long pressure (>1s) from ON	Color temperatur	e UP/DOWN	

## > RGB COLOUR

*RGB* colours are managed by a N.O. push button in the following variants:

DLC1248-3CC350 DLC1248-3CC		DLC1248-3CC500	DLC1248-3CC700	DLC1248-3CV
Кеу	Function			
		Click	ON/OFF	
		Long pressure (>1s) from OFF	Change rotation sp	eed*
		Long pressure (>1s) from ON	Start/stop color ro	tation

\*Color rotation speed is selectable from 4 predefined levels.

The selected speed is visualized with a white strobe output:

-10 flash/s for the rotation of 6 seconds

-5 flash/s for the rotation of 30 seconds

-2 flash/s for the rotation of 6 minutes

-1 flash/s for the rotation of 30 minutes

#### > TECHNICAL NOTES

Installation:

• Installation and maintenance must be performed only by qualified personnel in compliance with current regulations.

- The product must be installed inside an electrical panel protected against overvoltages.
- The product must be installed in a vertical or horizontal position with the cover / label upwards or vertically; Other positions are not permitted. It is not permitted to bottom-up position (with the cover / label down).
- Keep separated the circuits at 230V (LV) and the circuits not SELV from circuits to low voltage (SELV) and from any connection with this product. It is absolutely forbidden to connect, for any reason whatsoever, directly or indirectly, the 230V mains voltage to the bus or to other parts of the circuit. Power supply:
- For the power supply use only a SELV power supplies with limited current, short circuit protection and the power must be dimensioned correctly. In case of using power supply with ground terminals, all points of the protective earth (PE = Protection Earth) must be connected to a valid and certified protection earth.
- The connection cables between the power source "low voltage" and the product must be dimensioned correctly and they should be isolated from every wiring or parts at voltage not SELV. Use double insulated cables.
- Dimension the power supply for the load connected to the device. If the power supply is oversized compared with the maximum absorbed current, insert a protection against over-current between the power supply and the device.

• For the constant current output, the voltage of LED module (Vf) must be less of 5V at the voltage of power supply.

#### Command:

- The length of the connection cables between the local commands (N.O. Push button or other) and the product must be less than 10m; the cables must be dimensioned correctly and they should be isolated from every wiring or parts at voltage not SELV. Use double insulated shielded and twisted cables.
- All the product and the control signal connect at the local command (N.O. Push Button or other) must be SELV (the devices connected must be SELV or supply a SELV signal)

Outputs:

• The length of the connection cables between the product and the LED module must be less than 10m; the cables must be dimensioned correctly and they should be isolated from every wiring or parts at voltage not SELV. Is preferable to use shielded and twisted cables.

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