DALC NET

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DLX1224 multi channel BLE
EASY DIMMER
Device Manual   *FW 1.0+*

Made in Italy

Rev. 2016-08-22
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CE

FEATURES

- BLUETOOTH+SEQUENCER+FADER+DIMMER+DRIVER
- DC Input 12-24 Vdc
- RF Command: Bluetooth low energy
- Local Command: n°2 N.O. Push Buttons
- Control: Dimmer, Tunable White, RGB or RGBW Color
- Current outputs or voltage outputs for LED strip
- Typical efficiency > 95%
- Adjusting the brightness up to completed off
- Soft start and soft stop
- Optimized output curve
- Extended temperature range
- 100% Functional test - 2 Years warranty

➔   *For the whole and updated **Device Manual** refer to producer's website:* http://www.dalcnet.com

Constant current variants (common anode)
Application (4 channels output): Dimmer, Tunable White, RGB, RGBW

CODE	Supply Voltage	Output	Channels	Commands	
DLX1224-4CC350-BLE	12÷24V DC	4x350mA	4	BLE – 2 N.O. push buttons	EASY
DLX1224-4CC500-BLE	12÷24V DC	4x500mA	4	BLE – 2 N.O. push buttons	EASY

Constant voltage variants (common anode)
Application (4 channels output): Dimmer, Tunable White, RGB, RGBW

CODE	Supply Voltage	Output	Channels	Command	
DLX1224-4CV-BLE	12÷24V DC	4 x 5A (max 10A tot.)	4	BLE – 2 N.O. push buttons	EASY

Protections

OTP*	Over temperature protection
OVP	Over voltage protection
UVP	Under voltage protection
RVP	Reverse polarity protection
IFP	Internal circuit input fuse protection
SCP*	Short circuit protection
OCP*	Open circuit protection
CLP*	Current limit protection

* these protections are added in "P" variant only

LED DRIVERS

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Reference standards

EN 61347-1:2008 +A1:2011+A2:2013	Lamp controlgear - Part 1: General and safety requirements
EN 61000-3-2:2014	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)
EN 61000-3-3:2013	Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection
EN 62384:2006+A1:2009	DC or AC supplied electronic control gear for LED modules - Performance requirements
EN 55015:2013+A1:2015	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
EN 61547:2009	Equipment for general lighting purposes - EMC immunity requirements
EN 50581:2012	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances
IEC/EN 62386-101	Digital addressable lighting interface - Part 101: General requirements - System
IEC/EN 62386-102	Digital addressable lighting interface - Part 102: General requirements - Control gear
IEC/EN 62386-207	Digital addressable lighting interface - Part 207: Particular requirements for control gear - LED modules (device type 6)
IEC 60929-E.2.1	Control interface for controllable ballasts - control by d.c. voltage - functional specification

Technical Specifications

		Variant		
		Constant current		Constant voltage
		4 channels		4 channels
Supply voltage		DC min: 10.8 Vdc .. max: 26.4 Vdc		
Input current		max 2 A		max 10A
Output voltage		min: Vin/4; max: Vin-0,9V		= Vin
Output current		350mA/ch	500mA/ch	Max 5 A/ch [1]
		max 1,4 A total	**max 2 A total**	**max 10 A total** [1]
Nominal power [1]	@12V	16,8 W	24 W	120 W
	@24V	33,6 W	48 W	240 W
Thermal shutdown		150 °C		150 °C
D-PWM dimming frequency		300Hz		
D-PWM resolution		16 bit		
D-PWM range		0,1 – 100 %		
Storage Temperature		min: -40 max: +60 °C		
Ambient Temperature [1]		min: -10 max: +40 °C		
Protection grade		IP20		
Wiring		2.5mm² solid - 1.5mm² stranded - 30/12 AWG		
Mechanical dimensions		88 x 54 x 26 mm		
Packaging dimensions		106 x 59 x 36 mm		
Weight		74g		

[1] *maximum value, dependent on the ventilation conditions*

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Installation

N.O. push button

S10	S9	S8	S7	S6	S5	S4	S3	S2	S1
options									

IN2	IN1	0V
PUSH N.O.		

LED DIMMER
DLX1224 4channels
DC In : 12÷24V
Out : 4 x CC / CV

DALC NET

BLE SMART   CE

12/24Vdc
SELV

Vout
+ | -

DC IN 12/24Vdc

DC IN				OUT				
+	-	+	-	L+	L1-	L2-	L3-	L4-

Dimmer

Tunable White

RGB

RGBW

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 updown).
• 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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Setup
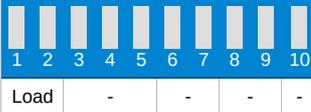
Function		● Switches from 1 to 2:	**Load Type**
	1 2 3 4 5 6 7 8 9 10	● Switches from 3 to 10:	Don't use – keep at off position
	Load - - - -		
	Note: Factory positions = all OFF		

● Switches from 1 to 2: **Load Type**

White Dimmer	Tunable White	RGB	RGBW
1 2	1 2	1 2	1 2

Local Commands Function

WHITE DIMMER FEATURE: *The intensity of all outputs is controlled by one N.O. button only.*

Button	Function		
1	Dimmer	Click	On/Off
		Double Click	Turn on at 100%
		Long pressure (>1s) from OFF	Turn on at 10% (Nighttime)
		Long pressure (>1s) from ON	Dimmer UP/DOWN

TUNABLE WHITE FEATURE: *Intensity and Color Temperature Corection can be controlled by two N.O. push buttons.*

Button	Function		
1	Dimmer	Click	On/Off
		Double Click	Turn on at 100%
		Long pressure (>1s) from OFF	Turn on at 10% (Nighttime)
		Long pressure (>1s) from ON	Dimmer UP/DOWN
2	Color Temperature	Double Click	Neutral White
		Long pressure (>1s)	Color Temperature UP/DOWN

RGB/RGBW FEATURE: *It is possible to control intensity, color and white*

Button	Function		
1	Dimmer	Click	ON/OFF
		Double Click	Turn on at 100%
		Long pressure (>1s) from OFF	Turn on at 10% (Nighttime)
		Long pressure(>1s) from ON	Dimmer UP/DOWN
2	White/Color	Click	Start/stop color rotation
		Double Click	Change from White to color and vice-versa
		Long pressure (>1s)	Change rotation speed

*Color rotation speed is selectable from 4 predefined levels.
The selected speed (set by button pressure) is visualized as a white strobe light:
- 10 flash lights/s for a 6 seconds rotation
- 5 flash lights/s for a 30 seconds rotation
- 2 flash lights/s for a 6 minutes rotation
- 1 flash light/s for a 30 minutes rotation

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- ### BLE Command

BLUEDIMMER SOFTWARE INSTRUCTIONS

Necessary conditions for the correct use of the device:

- APPLE devices with ON Bluetooth Low Energy 4.1 version

- ANDROID devices with ON Bluetooth Low Energy 4.1 version

- Dalcnet Product DLB1248 with BLE smart function

- Strip Led or spotlight

- N.O. Push-Button

- Bluedimmer App , available on the App Store and Play Store, download for free.

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APP INSTALLATION ON THE DEVICE

Download for free and install the application on your smartphone and tablet.

Download on the App Store

Download for Android

OBSERVATION:
On the version of Android 6.0 is necessary to allow at BlueDimmer application to access your location.

START UP SEQUENCE IMAGES
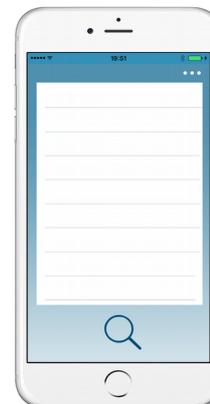
Automatic research and identification of DALCNET DLB1248 with BLE function products.

N.B.:
Manual research is possible by clicking on the lens symbol at the bottom of your device's screen.

Examples of results of the research:

- Device in blu= device associated and ready for use
- Device in black= new device to pair
- Device in grey= device already associated but not available

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HOW TO ASSOCIATE THE DEVICE TO THE BLUEDIMMER APPLICATION

1 – Select on the smartphone / tablet the connected device.
The strip led or spotlight connected to the selected device will automatically light on

2 – Keep press for 5 sec the N.O. push button connected to the light-on-led for pairing.
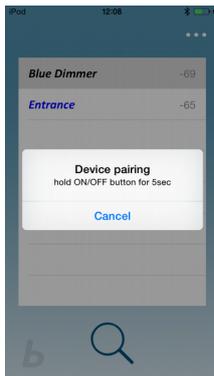
3 – On the screen will appear a box to name the strip led or spotlight controlled by DALCNET BLE device.

For ex.: you can name 'kitchen' the light in the kitchen, and 'living' the one in the living room. This is a simple way to control the lights in your house.

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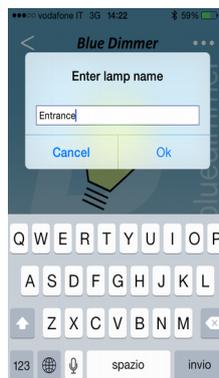
LEGEND:

on / off
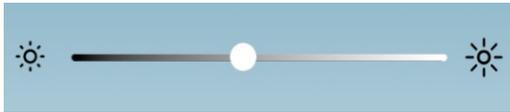
dimmer

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