CBU-DALI-GATEWAY

Device Manual

Made in Italy

FIXTURE ID 24810

FEATURES

- CONVERTER+CASAMBI+DALI+GATEWAY
- Input: DC 12-24-48 Vdc
- Command: CASAMBI APP
- Local Control programmable from CASAMBI APP: n°1 button Normally Open
- Casambi signal to DALI protocol converter and vice versa
- Possibility to control devices with DALI control via CASAMBI APP
- Ability to Address DALI Devices
- Extended temperature range
- 100% Function Test

PRODUCT DESCRIPTION

The device receives the command signal from the Casambi APP and depending on the fixture set sends the signal in a predetermined sequence of DALI addresses.
See pag.7 for the DALI Addresses map.

With the "CBU DALI GATEWAY" profile, the device receives commands from an external DALI Master and sends control signals to the Casambi lamps of the network to which it is associated. Each Casambi lamp has a DALI address.
In the case of Casambi Tunable White or RGB/RBGW devices, these will be recognized by the DALI Master as DALI DT8.

The CASAMBI APP can be downloaded free of charge from the Apple App Store and the Google Play Store.

⇢ For the regularly updated manual, consult our website:www.dalcnet.com or QR Code
⇢ For the correct functioning of the CASAMBI APP, consult the forum on the Casambi website:
https://support.casambi.com/support/home

PRODUCT CODE

CODE	POWER SUPPLY	COMMAND INCOMING	COMMAND OUTGOING	TYPE OF LOCAL COMMAND
CBU-DALI-GATEWAY[1]	12-24-48V DC	APP CASAMBI	DALI (DT6 and DT8)[2]	N° 1 N.O. Push Button

PROTECTIONS

OVP	Over voltage protection [3]	✓
UVP	Under voltage protection [3]	✓
RVP	Reverse polarity protection [3]	✓
VET	Protection with input fuse [3]	✓

[1] DALI bus power is required
[2] Address management depends on the configuration of the Casambi module.
[3] Protection on control logic

TYPE OF PROFILES

PROFILE NAME	# PROFILE	DESCRIPTION
DALI2 BROADCAST* 	**24810 Default**	**Basic Dali Broadcast Dimmer** Dali dimming curve: logarithmic. Set the power on level at maximum level (100% - 254). No addressing required.
CBU DALI GATEWAY	24814	Control of Casambi devices from DALI network
W AUTOMATIC	25136	**One-channel dimmer** - Dimmer 1: A0 address DALI dimming curve: logarithmic. Set the power level to the maximum level (100% - 254). The address is automatically assigned to the device, if necessary.
WWWW AUTOMATIC	25139	**Four-channel dimmer** - Dimmer 1: address A0 - Dimmer 2: address A1 - Dimmer 3: address A2 - Dimmer 4: address A3 DALI dimming curve: logarithmic. Set the power level to the maximum level (100% - 254). The address is automatically assigned to the device, if necessary.
TW AUTOMATIC 2700-6000K	25140	**Two-channel dimmer** - Dimmer 1: address A0 – Warm White - Dimmer 2: address A1 – Cold White DALI dimming curve: linear. Set the power level to the maximum level (100% - 254). The address is automatically assigned to the device, if necessary.
RGB AUTOMATIC	25141	**Three-channel dimmer** - Dimmer 1: address A0 – Red - Dimmer 2: address A1 – Green - Dimmer 3: address A2 – Blue DALI dimming curve: linear. Set the power level to the maximum level (100% - 254). The address is automatically assigned to the device, if necessary
RGB+W AUTOMATIC	25142	**Four-channel dimmer** - Dimmer 1: address A0 – Red - Dimmer 2: address A1 – Green - Dimmer 3: address A2 – Blue - Dimmer 4: address A3 – White DALI dimming curve: linear. Set the power level to the maximum level (100% - 254). The address is automatically assigned to the device, if necessary.
RGB+TW AUTOMATIC	25137	**Five-channel dimmer** - Dimmer 1: address A0 – Red - Dimmer 2: address A1 – Green - Dimmer 3: address A2 – Blue - Dimmer 4: address A3 – Warm White - Dimmer 5: address A4 – Cold White DALI dimming curve: linear. Set the power level to the maximum level (100% - 254). The address is automatically assigned to the device, if necessary.

* The Device is certified as DALI2 only with the profile: **24810** – DALI2 BROADCAST

PROFILE NAME	# PROFILE	DESCRIPTION
WWWW GROUP	25138	**Four DALI groups, dimmer function** - Dimmer 1: group G0 - Dimmer 2: Group G1 - Dimmer 3: Group G2 - Dimmer 4: Group G3 DALI dimming curve: logarithmic. Set the power level to the maximum level (100% - 254). The address must be assigned to the control unit using a DALI Master device
8XW GROUP	25291	**Eight DALI groups, dimmer function** - Dimmer 1: group G0 - Dimmer 2: Group G1 - Dimmer 3: Group G2 - Dimmer 4: Group G3 - Dimmer 5: Group G4 - Dimmer 6: Group G5 - Dimmer 7: Group G6 - Dimmer 8: Group G7 DALI dimming curve: logarithmic. Set the Power On Level to the maximum level (100% - 254). The address must be assigned to the control unit using a DALI Master device
DALI DT8 BC TW	25143	**1 Address to control 2 TW channels** Send DALI DT8 BROADCAST commands for devices that support the "Colour Temperature Tc" function: Dim Level and Colour Temperature. DALI dimming curve: linear. Set the power level to the maximum level (100% - 254). No addressing is required.
DALI DT8 BC RGB	11121	**1 Address to control 3 RGB channels** Send DALI DT8 BROADCAST commands for devices that support the "RGBWAF colour-type" function: Dim and RGBWAF. DALI dimming curve: linear. Set the power level to the maximum level (100% - 254). No addressing is required.
DALI DT8 BC RGB+W	11545	**1 Address to control 4 RGBW channels** Send DALI DT8 BROADCAST commands for devices that support the "RGBWAF colour-type" function: Dim and RGBWAF. DALI dimming curve: linear. Set the power level to the maximum level (100% - 254). No addressing required

REFERENCE STANDARDS

EN 61347-1	Lamp control gear – Part 1: General and safety requirements
EN 55015	Limits or methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
EN 61547	Equipment for general lighting purpose – EMC immunity requirements

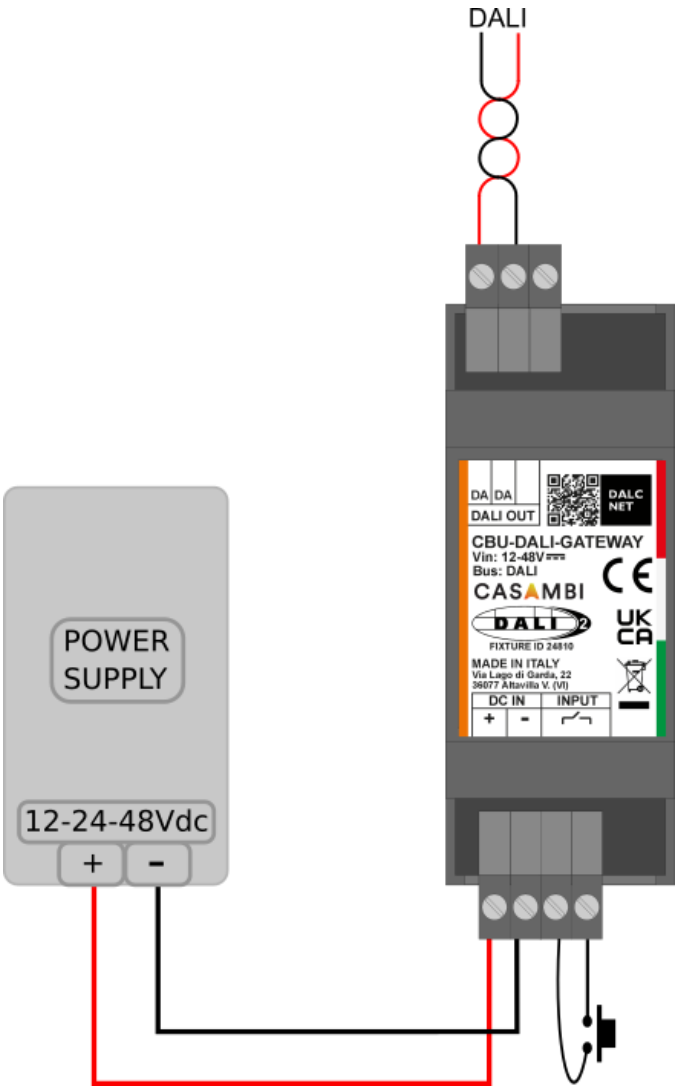
TECHNICAL SPECIFICATIONS

		CBU-DALI-GATEWAY	
Supply voltage		min: 10,8 Vdc .. max: 52,8 Vdc	
Nominal Power[4]		Min	Max
	@12V	61 mW	115 mW
	@24V	120 mW	176 mW
	@48V	230 mW	296 mW
Power loss in standby mode		<500mW	
Operating frequency[5]		2402 – 2480 MHz	
Maximum output power[5]		7dBm	
Storage temperature		min: -40 max: +60 °C	
Ambient temperature[4]		min: -10 max: +40 °C	
Type of connector		Screw terminals	
Wiring	Solid size	2,5mm 2 solid – 2,5mm^2 stranded – 30/12 AWG	
	Stranded size		
Wire strip length		5.5 – 6.5 mm	
IP protection class		IP10	
Casing material		Plastic	
Packaging units (pieces/units)		1pcs	
Mechanical dimensions		92 x 36 x 62 mm DIN RAIL 2M	
Package dimensions		124 x 71 x 48 mm	
Weight		88g	

[4] Maximum value, depending on ventilation conditions

[5] The parameters are derived from the configuration of the Casambi module

WIRING DIAGRAM



Follow the steps below for product installation as shown in the connection diagram.

- Connect the normally open button to the INPUT terminals with the " " symbol.
  Be sure not to connect live parts to the INPUT terminals.

- Connect the DALI BUS on the "DALI OUT" terminals.

- Connect the constant voltage SELV power supply to the DC IN terminal with the "+" and "-" symbols.
  Make sure you are not using a power supply with a constant current output and check that the polarity of the cables is correct.

Like any other product with Bluetooth control, be sure not to place the product inside a metal case or placed near large metal structures. The metal will greatly block the radio signal important for the operation of the device.

LOCAL COMMANDS FUNCTIONALITY

N.O. PUSH BUTTON[6]

The Casambi app allows you to program the local command with some prearranged functions.

Button No.	Function		
1	Controls a luminaire	Click Long press (>1s)	Tap to turn a luminaire on or off – hold to adjust luminaire brightness
	Controls an element	Click Long press (>1s)	Tap to turn a device element on or off – hold to adjust the element value
	Control a group	Click Long press (>1s)	Tap to turn a group on or off – hold to adjust brightness
	Control scene	Click Long press (>1s)	Tap to turn a scene on or off – hold to adjust scene brightness
	Control all luminaires	Click Long press (>1s)	Tap to turn all luminaires on or off – hold to adjust brightness
	Cycles scenes	Click Long press (>1s)	Tap to cycle through the list of scenes – hold to adjust current scene brightness
	Active/Standby	Click Long press (>1s)	Tap to switch between two scenes – hold to adjust current scene brightness
	Controls a luminaire	Click Long press (>1s)	Tap to turn a luminaire on or off – hold to adjust luminaire brightness
	Controls an element	Click Long press (>1s)	Tap to turn a device element on or off – hold to adjust the element value
	Control a group	Click Long press (>1s)	Tap to turn a group on or off – hold to adjust brightness
For all other functions, consult the CASAMBI APP documentation at: https://support.casambi.com/support/home			

UNPAIR THE DEVICE FROM THE CASAMBI NETWORK

If the device is already connected to a network for which you don't have the credentials and you wish to associate it with a new network, please follow the instructions provided in the Casambi APP's "Nearby Devices" section.
Once you have selected the unpair function and started the procedure, turn off the main power of the power supply connected to the LINE-5CV-CASAMBI and turn it on again after 1 - 2 seconds.

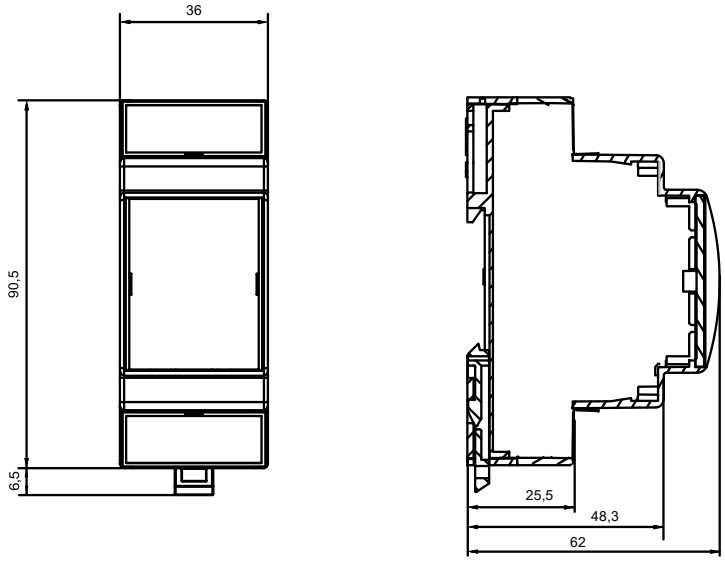
If the main power supply is switched off and on again quickly, unpair may not be done properly. Repeat the unpair sequence by allowing 1 or 2 more seconds to elapse between the moment you turn off and re-turn on the main power of the power[7].

A second method to unpair the product is to connect an N.O. push button to an "INPUT" terminal of the LINE-5CV-CASAMBI and during the decoupling procedure press the button.

6 By default, the button is set as "Control a lamp".
7 The discharge time of the power supply secondary depends on the construction characteristics of the power supply used

MECHANICAL DIMENSIONS

(Excluding terminals)



DALI MAP ADDRESSES OF THE CBU-DALI-GATEWAY

CONVERSION CASAMBI SIGNAL TO DALI PROTOCOL AND VICEVERSA

"AUTOMATIC" FIXTURE CONFIGURATION:

The "AUTOMATIC" fixtures of the CBU-DALI-GATEWAY automatically direct the UNADDRESSED devices connected to the DALI BUS.

CBU DALI GATEWAY

Casambi Slider
None

The device appears in the Gateway section of the Casambi app.

DALI2 BROADCAST

Casambi Slider
Dimmer

Address	Command
BROADCAST	Dimmer ALL

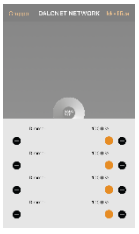
W AUTOMATIC

Casambi Slider
Dimmer

Address	Command
A0	Dimmer 0

WWWW AUTOMATIC

Casambi Slider
Dimmer 0
Dimmer 1
Dimmer 2
Dimmer 3



Address	Command
A0	Dimmer 0
A1	Dimmer 1
A2	Dimmer 2
A3	Dimmer 3

TW AUTOMATIC 2700 - 6000K

Casambi Slider
Dimmer
Color temperature

Address	Command
A0	Warm white
A1	Cold white

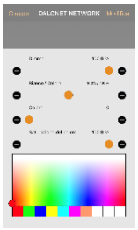
RGB AUTOMATIC

Casambi Slider
Dimmer
Color
Saturation
Map

Address	Command
A0	R – Red
A1	G – Green
A2	B – Blue

RGBW AUTOMATIC

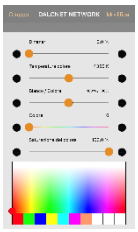
Casambi Slider
Dimmer
White / Color
Color
Saturation
Map



Address	Command
A0	R – Red
A1	G – Green
A2	B – Blue
A3	W – White

RGB TW AUTOMATIC

Casambi Slider
Dimmer
Color temperature
White / Color
Color
Saturation
Map



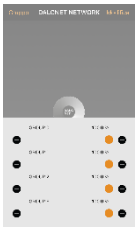
Address	Command
A0	R – Red
A1	G – Green
A2	B – Blue
A3	WW – Warm White
A4	CW – Could White

FIXTURE "GROUP" CONFIGURATION:

The "GROUP" fixtures of the CBU-DALI-GATEWAY send group commands. The DALI devices must be previously addressed and assigned to the desired group through an external DALI master.

WWWW GROUP

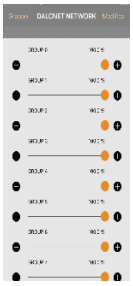
Casambi Slider
Group 0
Group 1
Group 2
Group 3



Address	Command
G0	Group 0
G1	Group 1
G2	Group 2
G3	Group 3

8W GROUP

Casambi Slider
Group 0
Group 1
Group 2
Group 3
Group 4
Group 5
Group 6
Group 7



Address	Command
G0	Group 0
G1	Group 1
G2	Group 2
G3	Group 3
G4	Group 4
G5	Group 5
G6	Group 6
G7	Group 7

FIXTURE CONFIGURATION "DT8 BC":

The "DT8 BC" fixtures of the CBU-DALI-GATEWAY send broadcast commands to devices compliant with IEC 62386-209 - "Device Type 8".

DALI DT8 BC TW

Casambi Slider
Dimmer
Color temperature

Address	Command
Broadcast	DT8 Dimming + CCT

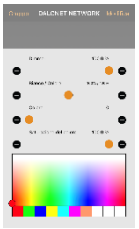
DALI DT8 BC RGB

Casambi Slider
Dimmer
Color
Saturation
Map

Address	Command
Broadcast	DT8 Dimming + RGB

DALI DT8 BC RGBW

Casambi Slider
Dimmer
White / Color
Color
Saturation
Map



Address	Command
Broadcast	DT8 Dimming + RGBW

TECHNICAL NOTE

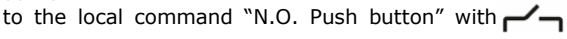
INSTALLATION

- CAUTION: The product may only be connected and installed by a qualified electrician. All applicable regulations, legislation, and building codes must be observed. Incorrect installation of the product can cause irreparable damage to the product and the connected LEDs.
- Maintenance must be performed only by a qualified electrician in compliance with current regulations.
  Pay attention when connecting the LEDs: polarity reversal results in no light output and often damages the LEDs.
- The product is designed and intended to operate LED loads only. Powering non-LED loads may push the product outside its specified design limits and is, therefore, not covered by any warranty.
  Operating conditions of the product may never exceed the specifications as per the product datasheet.
- The product must be installed inside a switchgear/controlgear cabinet and/or junction box protection against overvoltage.
- The product must be installed in a vertical or horizontal position with the label/top cover facing upwards or vertically. Other positions are not permitted. The bottom position is not permitted (label/top cover facing down).
- Keep separated 230Vac (LV) circuits and not SELV circuit from safety extra low voltage (SELV) circuit and from any connection with this product. It is absolutely forbitten to connect, for any reason whatsoever, directly or indirectly, the 230Vac mains voltage to the product (terminal block of BUS included).
- The product must be dissipated correctly.
- The use of the product in harsh environments could limit the output power.
- For built-in components inside luminaires, the ta ambient temperature range is a guideline given for the optimum operating environment. However, integrator must always ensure proper thermal management (i.e. correct mounting of the device, air flow etc.) so that the tc point temperature does not exceed the tc maximum limit in any circumstance. Reliable operation and lifetime are only guaranteed if the maximum tc point temperature is not exceeded under the conditions of use.

POWER SUPPLY

- Only use SELV power supplies with limited current for device power supply, short circuit protection and the power must be dimensioned correctly.
  In the case of power supplies equipped with ground terminals, it is mandatory to connect ALL protective ground points (PE= Protection Earth) to a properly and certified protection earth.
- The connection cables between the very low voltage power source and the product must be properly dimensioned and must be insulated from any wiring or part at non-SELV voltage. Use double insulated cables.
- Dimension the power of the power supply in relation to the load connected to the device. In case the power supply is oversized compared to the maximum absorbed current, insert a protection against over-current between the power supply and the device.

COMMAND

- The length of the cables connecting between the local commands (N.O. Push button or other) and the product must be less than 10m. The cables must be properly dimensioned and must be insulated from any non-SELV wiring or voltage. It is recommended to use double insulated cables, if deemed appropriate also shielded.
- ALL device and control signal connected to the local command "N.O. Push button" with  symbol, they must not supply any type of voltage.
- The length and type of cables connecting to the bus (DALI or other) must comply with the specifications of the respective protocols and the regulations in force. They must be insulated from any non-SELV wiring or voltage parts. It is recommended to use double insulated cables.
- ALL device and control signal connect at the BUS (DALI or other) must be SELV type (the device connected must be SELV or supply SELV signal).

ONLY CASAMBI/BLUETTOTH PRODUCT

- WARNING: For optimal functionality of the Casambi signal, do not put the device into metal or aluminium boxes and do not shield the device. As any other Casambi product, should not be placed in a metal enclosure or next to large metal structures. Metal will effectively block all radio signals which are crucial to the operation of the product.

WARNINGS

- To guarantee the best performances and the full use of functions, make sure to download on your device the last release of CASAMBI APP.
- Whenever CASAMBI APP requires an upgrade of the profile installed in the LED Dimmers, follow the instruction to do it. This allows you to stay always up to date and benefit of new functions released.
- Functionality test are done on all dimmers to ensure the right working. In case the device is still paired to "Dalcnet network", you are asked to unpair it by following the instructions on CASAMBI APP and in paragraph "UNPAIR DEVICE FROM THE CASAMBI NETWORK".