



## FEATURES

- Input DC: 12/24/48 Vdc (Supply Voltage range 10,8Vdc – 52,8Vdc)
- N°4 Low voltage “Relay Driver” output to command external power relays
- N°4 Analog output 0-10V / 1-10V to command Power Supplies with DIM Function or Led Driver and Dimming device 0/1-10V
- Remote Command: CASAMBI APP
- Local Commands: n° 4 Push Buttons N.O.
- Conversion from Casambi signal to 0/1-10V command
- Extended temperature range: min: -25°C .. max: +60°C
- 100% functional test – 5 years warranty

→ For the whole and updated **Device Manual** refer to producer’s website: <http://dalcnet.com>

➤ **PRODUCT CODE DIMMER CONVERTER**

CODE	Power Supply	Output	Channel	Command
ADC1248-4CH-CASAMBI	12/24/48 V DC	4x 0-10V / 1-10V 4x Relay Driver	4 Analog 4 Relay Driver	CASAMBI APP 4x N.O. Push buttons

➤ **PROTECTIONS**

<b>OTP</b>	Over temperature protection <sup>1</sup>	✓
<b>OVP</b>	Over voltage protection <sup>2</sup>	✓
<b>UVP</b>	Under voltage protection <sup>2</sup>	✓
<b>RVP</b>	Reverse polarity protection <sup>2</sup>	✓
<b>IFP</b>	Input fuse protection <sup>2</sup>	✓
<b>SCP</b>	Short circuit protection	✓
<b>CLP</b>	Current limit protection	✓

➤ **TYPE OF PROFILE**

Type	# Profile	Name of profile	Description
DIMMER CONVERTER	4050	DIM CONVERTER	N°1 Master Dimmer and n°4 independent channels. Simultaneous output control 0/1-10V & relay driver
	11119	4CH DRIVER RELAY	N°4 Channels for ON/OFF control of Driver Relay outputs only

<sup>1</sup> Protection on the control logic and analog output

<sup>2</sup> Protection on the Relay Driver output

## ➤ 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 purposes - EMC immunity requirements

## ➤ TECHNICAL SPECIFICATION

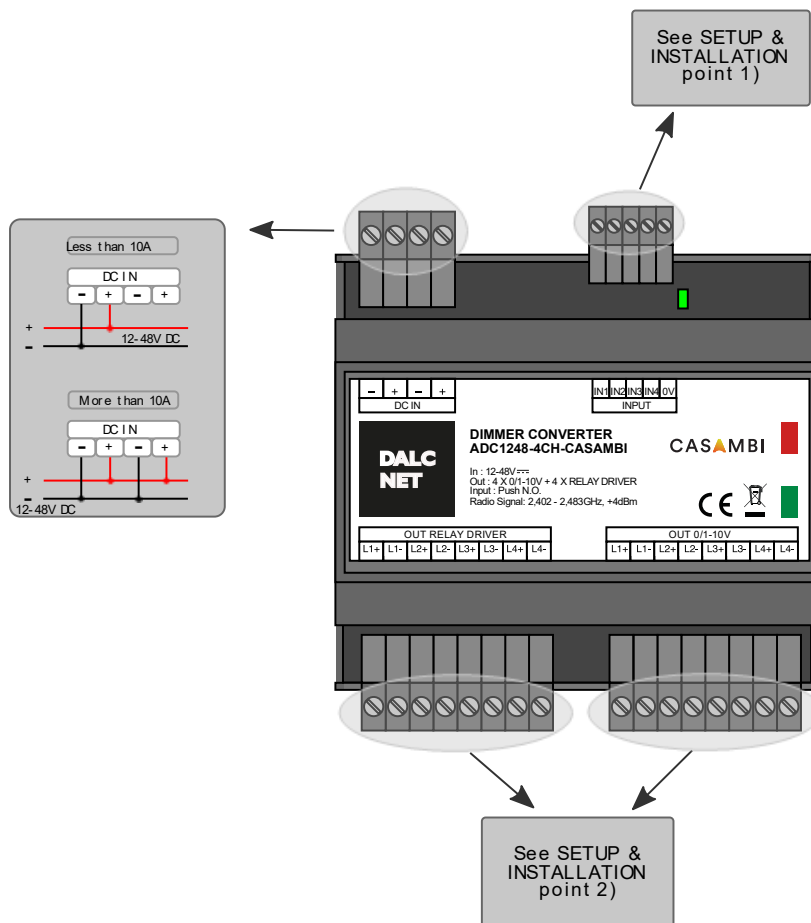
FEATURES DIMMER CONVERTER	
Supply Voltage "Vin"	Min: 10,8 Vdc .. Max: 53,5 Vdc
Analog Output	4 0/1-10V output
Relay Driver Output	4 Relay Driver Output
Output status	1 channel status LED indicate whether a load is On or OFF
Thermal shutdown	150°C <sup>3</sup>
Storage Temperature	Min: -40 .. Max: +60 °C
Ambient Temperature <sup>3</sup>	Min: -40 .. Max: +60 °C
Protection grade	IP10
Wiring Buttons & Bus	1.5 mm <sup>2</sup> solid – 1 mm <sup>2</sup> stranded – 30/14 AWG
Wiring Power, Out relay driver & Out 0/1-10V	2.5 mm <sup>2</sup> solid – 1.5 mm <sup>2</sup> stranded – 30/12 AWG
Mechanical Dimension	106 x 91 x 62 mm – DIN RAIL 6M
Packaging Dimension	156 x 124 x 71 mm
Weight	205g

FEATURES RELAY DRIVER OUTPUT	
Output Voltage	=Vin <sup>4</sup>
Output Current	Max 500mA per channel <sup>5</sup>

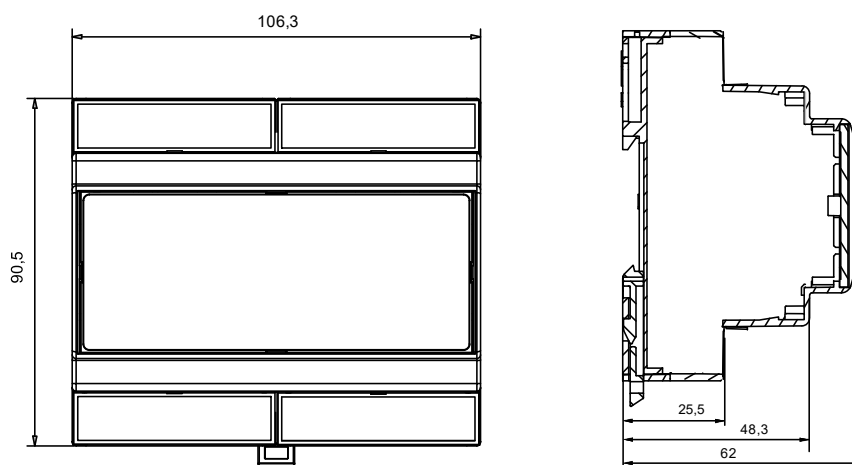
FEATURES ANALOG OUTPUT 0/1-10V	
0-10V – Sink or Source Current	10mA/ch <sup>6</sup>
1-10V – Sink or Source Current	10mA/ch <sup>6</sup>

<sup>3</sup> Thermal shutdown on the Relay Driver outputs.<sup>4</sup> Maximum switching voltage to relay, must be dimensioned to power supply of DIM CONVERTER.<sup>5</sup> Maximum value, dependent on the ventilation conditions.<sup>6</sup> The analog outputs 0/1-10V are SINKING/SOURCING, it is possible to control devices with command input both 0-10V that 1-10V

### ➤ INSTALLATION



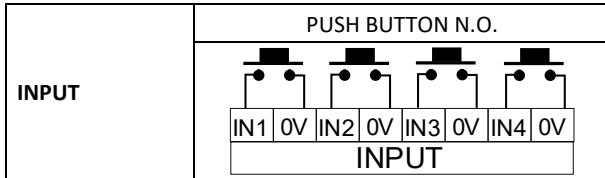
### ➤ MECHANICAL DIMENSION (without connectors)





### ➤ SETUP INSTALLATION

1) **LOCAL COMMAND** – Connection and functions of the N.O. push button with and without memory



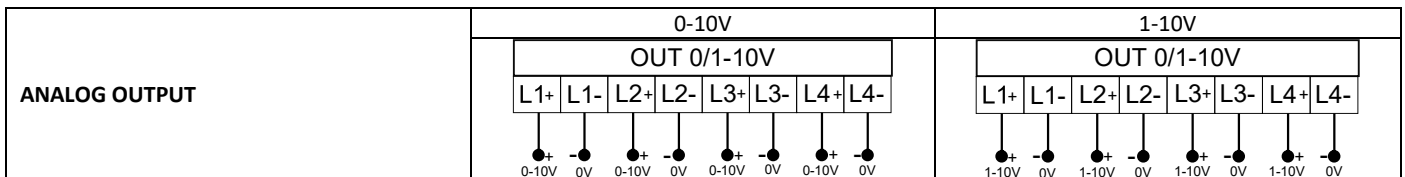
Input	Function	Output 0/1-10V		Driver Relay output	
		Variation of output 0/1-10V		Relay output OFF	Relay output ON
IN1	Variation OUT 1	Single Click : ON / OFF Long Click (>1s) : Analog output variation 0/1-10V		Click OFF	Click ON
IN2	Variation OUT 2			Click OFF	Click ON
IN3	Variation OUT 3			Click OFF	Click ON
IN4	Variation OUT 4			Click OFF	Click ON

REMARKS: For the control with the Push Buttons N.O. see the documentations in the website: <http://www.casambi.com>  
For the length of the cables see the Technical Note

2) **DIM CONVERTER OUTPUT** – Type of output connection.

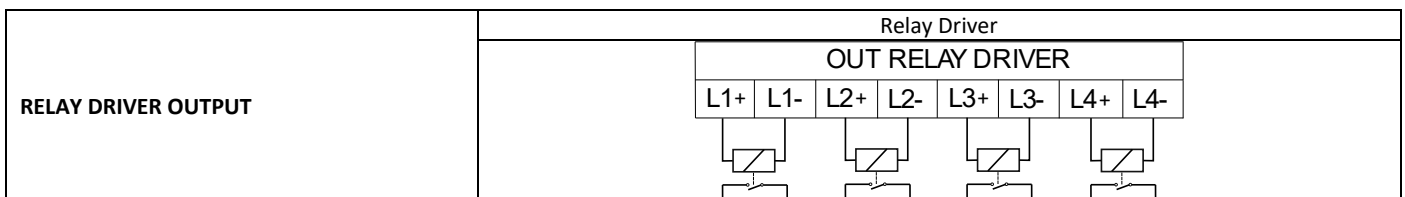
For each single analog output (0/1-10V) is associated a single Relay Driver output.

- The analog output L1+,L1- → "OUT 0/1-10V"; Is associated with Relay Driver output L1+,L1- → "OUT DRIVER RELE' "
- The analog output L2+,L2- → "OUT 0/1-10V"; Is associated with Relay Driver output L2+,L2- → "OUT DRIVER RELE' "
- The analog output L3+,L3- → "OUT 0/1-10V"; Is associated with Relay Driver output L3+,L3- → "OUT DRIVER RELE' "
- The analog output L4+,L4- → "OUT 0/1-10V"; Is associated with Relay Driver output L4+,L4- → "OUT DRIVER RELE' "



The 4 analog output are Sink / Source. It is possible to control device with command input both 0-10V that 1-10V. It is possible to control either devices with 0-10V input command, and devices with 1-10V in command.

Example: The four analog output command the power supply with DIM FUNCTION, Led Driver with 0/1-10V command or dimmable devices 0/1-10V, as LED driver Dalcnet.

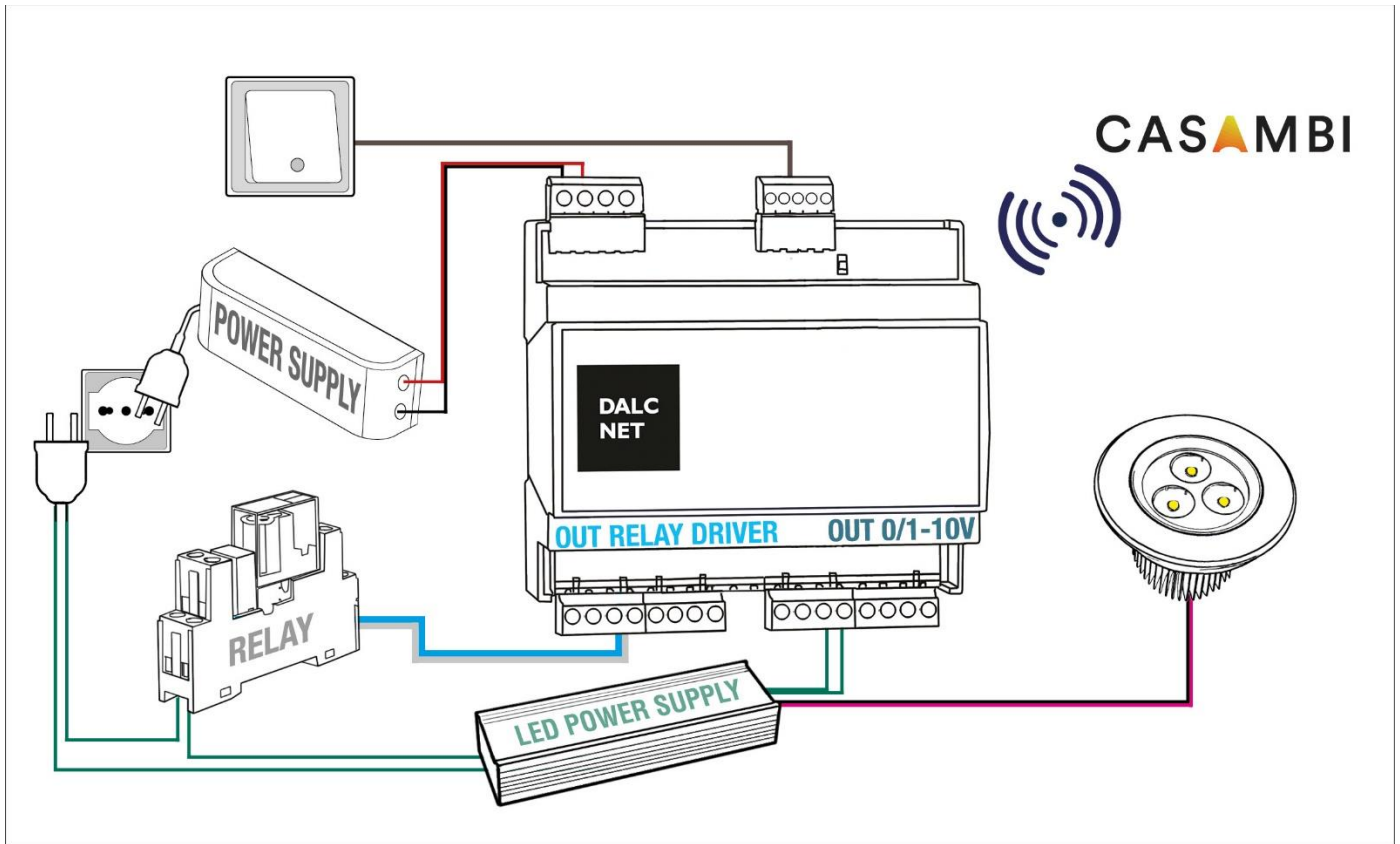


The 4 Relay Driver outputs command the external power relay.

REMARKS: Make sure each relay is protected against return voltage. Each relay must be associated with a flyback diode.

Example: By connecting the external power relay at the Relay Driver output of the DIM CONVERTER. It is possible to control the switch on/off of the power line of any connected power supplies.

## Example of application



Thanks to DIM CONVERTER CASAMBI is possible to command the power supplies with DIM Function (with 0/1-10V command) to dim the load connected to it.

The command to manage the outputs of DIM CONVERTER could be analog (Push buttons N.O.) or from Casambi command.

Moreover, thanks to the low voltage Relay Driver outputs, it is possible to connect the power Relay. The Power Relay allow to control the power lines (230Vac) for switching on/off the power supplies controlled by the associated analog outputs.

Note: The Power Relays are not supplied with DIM CONVERTER CASAMBI. The switching voltage to relay, must be dimensioned to the power supply of Device "DIM CONVERTER CASAMBI".



➤ **TECHNICAL NOTE:**

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.

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.

**WARNING: For optional functionality of the Bluetooth signal, do not put the device into metal or aluminium boxes and do not shield the device.**

**As any other Bluetooth product, should not be placed in a metal enclosure or next to large metal structures. Metal will effectively block all radio signal which are crucial to the operation of the product.**