



CASAMBI



## FEATURES

- ◆ CASAMBI LED DIMMER
- ◆ WHITE and MONOCHROMATIC Light Control
- ◆ Power supply (DC IN): 12-24-48 Vdc (SELV)
- ◆ Output (LED): constant voltage output (= DC IN) modulated for Resistive loads LED-strips and dimmable LED-modules
- ◆ Local Command (INPUT): N° 1 N.O. push-button
- ◆ Remote control: via Bluetooth Low Energy (CASAMBI® mobile app)
- ◆ Device configuration via CASAMBI® mobile application, parameters can be set (via Fixture):
  - Dimming curve
  - PWM modulation frequency: 600 or 4000 Hz
- ◆ Adjusting the brightness up to completed off (Dim to Dark)
- ◆ Minimum Brightness level: down to 0.1%
- ◆ ON/OFF and brightness soft dimming
- ◆ Suitable for use in Dry locations
- ◆ UL Features (see Table 5 for detailed technical specifications):
  - UL Recognized certified unit
  - Class 2 supply Input and Output (use Class 2 power supply only)
- ◆ Extended temperature range
- ◆ 100% Functional test

## PRODUCT DESCRIPTION

MINI-1CV-CASAMBI is a single-channel LED dimmer, PWM (Pulse Width Modulation) modulated at Constant Voltage (CV) and controlled remotely via Bluetooth through the CASAMBI® mobile application or locally by means one N.O. (Normally Open) pushbutton. MINI-1CV-CASAMBI can be supplied by a SELV constant voltage (12 ÷ 48) Vdc power supply and is suitable for driving loads such as White/Monochromatic LED-strips or LED-modules constant voltage. The dimmer can deliver an output current of up to 12 A and has the following protections: over-voltage and under-voltage protections, reverse polarity protection and input fuse protection.

MINI-1CV-CASAMBI enables you to make not only simple brightness adjustments but also more dynamic lighting control systems. This is made possible through the creation of multiple scenarios, animations, timers, daylight controls, and more.

Through the CASAMBI® mobile application and smartphones equipped with Bluetooth technology, it is possible to configure via Fixtures multiple parameters, including light temperature control and maximum/minimum brightness levels. CASAMBI® mobile application can be downloaded free of charge from the Apple APP Store and Google Play Store.

→ For the most up-to-date manual, please visit our website: [www.dalcnet.com](http://www.dalcnet.com) or scan the QR Code on product's label.

→ For the correct functioning of the CASAMBI® mobile app, please visit the forum on the Casambi website:

<https://support.casambi.com/support/home>



## PRODUCT CODE

CODE	POWER SUPPLY	OUTPUT LED	LOCAL COMMAND	APP CONFIG.
MINI-1CV-CASAMBI	12-24-48 Vdc	1 x 12 A <sup>1,2</sup>	N°1 N.O. Pushbutton	CASAMBI® mobile app

Table 1: Product Code

## PROTECTIONS

The following table shows the types of ingress and egress protection/detection present on the device.

ACRONYM	DESCRIPTION	TERMINAL	PRESENT
OVP	Over-voltage Protection <sup>3</sup>	DC IN	✓
UVP	Under-voltage Protection <sup>3</sup>	DC IN	✓
RVP	Reverse voltage (polarity) Protection <sup>3</sup>	DC IN	✓
IFP	Input Fuse Protection <sup>3</sup>	DC IN	✓

Table 2: Protection and Detection Features

## REFERENCE STANDARDS

STANDARD	TITLE
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 requirement
EN 61347-1	Lamp Controlgear – Part 1: General and safety requirement
EN 61347-2-13	Lamp Controlgear – Part 2-13: Particular requirement for d.c. or a.c. supplied electronic Controlgear for LED modules
UL 1310	Standard for Safety. Class 2 Power Units.
UL 8750 & CSA C22.2 No. 250.13-17	Standard for Safety. Light Emitting Diode (LED) Equipment for Use in Lighting Products.

Table 3: Reference standards

<sup>1</sup> For specifications in a UL certified plant, refer to Table 5.

<sup>2</sup> The maximum output current depends on the operating conditions and ambient temperature of the system. For the correct configuration, check the maximum power that can be delivered in the §[Technical specifications](#) and §[Thermal Characterization](#) sections.

<sup>3</sup> Protections refer to the control logic of the board.

## TECHNICAL SPECIFICATIONS

### CE TECHNICAL SPECIFICATIONS

Description	Acronym	Values			Units of Measure	Note
		Min		Max		
POWER SUPPLY INPUT (DC IN)						
Nominal Supply Voltage <sup>4</sup>	V <sub>IN</sub>	12	24	48	Vdc	-
Supply Voltage range	V <sub>IN-RNG</sub>	10.8	÷	52.8	Vdc	-
Supply Current (max)	I <sub>IN</sub>	12			A	-
Efficiency at full load	E <sub>FF</sub>	> 95			%	-
Standby power absorption	P <sub>STBY</sub>	< 0.5			W	-
OUTPUT (LED)						
Output Voltage	V <sub>OUT</sub>	= V <sub>IN</sub>			Vdc	-
Output Current (max)	-	@60°C		@40°C	-	-
	I <sub>OUT</sub>	10	÷	12	A	
Rated Power Output	-	@12V	@24V	@48V	-	Rated @T <sub>A</sub> <35 °C
	P <sub>OUT</sub>	144	288	576	W	
Load type	L <sub>TYPE</sub>	Resistive (LED)			-	-
DIMMING						
Dimming curve	C <sub>DIM</sub>	Logarithmic, Linear			-	Selection via CASAMBI® mobile app
Method	M <sub>DIM</sub>	PWM			-	Pulse Width Modulation
PWM frequency <sup>5</sup>	f <sub>DIM</sub>	600, 4000			Hz	Selection via CASAMBI® mobile app
Dimming range <sup>5</sup>	RNG <sub>DIM</sub>	0.1	÷	100	%	Defined by project
Minimum dimming level	-	@600Hz		@4kHz	-	-
	D <sub>MIN_LOG</sub>	0.1		0.5	%	Logarithmic curve
	D <sub>MIN_LIN</sub>	0.4		0.5	%	Linear curve
Dimming resolution	Res <sub>DIM</sub>	1666		1000	step	Defined by project
ENVIRONMENTAL						
Operating Frequencies <sup>5</sup>	f <sub>OP</sub>	2402	÷	2483	MHz	For CASAMBI® BLE SoC
Maximum Emitted Power <sup>5</sup>	P <sub>BT-max</sub>	7			dBmW	Over Bluetooth transmission
Storage Temperature	T <sub>STORE</sub>	-40	÷	+60	°C	Minimum values defined by design
Working Ambient temperature	T <sub>A</sub>	-10	÷	+60	°C	Depends on ventilation conditions
Max Temperature @T <sub>c</sub> point	T <sub>C</sub>	-	-	+75	°C	-
Working Environment type	ENV <sub>TYPE</sub>	Dry location			-	-
Connector type	C <sub>TYPE</sub>	Screw terminals			-	-
Wiring Section	WS <sub>SOLID</sub>	0.05	÷	2.5	mm <sup>2</sup>	Defined by project
	WS <sub>STRAND</sub>	30	÷	12	AWG	
Strip length	WS <sub>STRIP</sub>	6.5			mm	-
Protection class	IP <sub>CODE</sub>	IP20			-	-
Case material	M <sub>CASE</sub>	Plastic			-	-
Packaging unit	UP	1			pcs	-
Dimensions	-	L	A	P		-
	MD	44	57	25	mm	Case
	PD	56	68	35	mm	Packaging
Weight	W	44			g	Including packaging

Table 4: Technical specifications

<sup>4</sup> The product must only be powered by a SELV power supply with constant voltage output U<sub>out</sub> < 60Vdc certified according to IEC/EN 61347.

<sup>5</sup> The parameters are derived from the configuration of the Casambi module.

## UL TECHNICAL SPECIFICATIONS

If the MINI-1CV-CASAMBI shall be installed in a UL certified environment, please refer to the values in Table 5. These values are binding to ensure UL compliance within the system, which the installer must strictly adhere to.


Description	Acronym	Values			Unit of Measure	Note	
		Min		Max			
UL Certification							
Product type	UL <sub>TYPE</sub>				-	UL Recognized certified device	
Manufacturer Certification file	UL <sub>FILE</sub>	E514299			-	-	
INPUT (DC IN)							
UL Input type	TYPE <sub>IN</sub>	CLASS 2			-	-	
Power Supply restrictions	SUP <sub>LIM</sub>	CLASS 2 input only			-	Use Class 2 power supplies only	
Nominal supply voltage	V <sub>IN</sub>	12	24	48	Vdc	-	
Supply Voltage range	V <sub>IN-RNG</sub>	10.8	÷	52.8	Vdc	-	
Current absorption (max)	I <sub>IN_UL</sub>	5	4.16	2	A	While respecting the limits on I <sub>OUT_UL</sub> and P <sub>OUT_UL</sub>	
Nominal Power absorption	P <sub>IN_UL</sub>	60	100	100	W		
Efficiency at full load	E <sub>FF</sub>	> 95			%	-	
Standby power consumption	P <sub>STBY</sub>	< 0.5			W	-	
OUTPUT (LED)							
UL Output type	TYPE <sub>OUT</sub>	CLASS 2			-	-	
Output voltage	V <sub>OUT</sub>	= V <sub>IN</sub>			-	-	
	-	@12V	@24V	@48V	-	-	
Output current (max)	I <sub>OUT_UL</sub>	5	4.16	2	A	For each channel and total	
Nominal power output	P <sub>OUT_UL</sub>	60	100	100	W		
Load type	L <sub>TYPE</sub>	LED ARRAY			-	Resistive LED loads only	
DIMMING							
Dimming curve	C <sub>DIM</sub>	Logarithmic, Linear			-	Selection via CASAMBI® mobile app	
Method	M <sub>DIM</sub>	PWM			-	Pulse Width Modulation	
PWM frequency	f <sub>PWM</sub>	600, 4000			Hz	Selection via CASAMBI® mobile app	
Dimming range <sup>5</sup>	RNG <sub>DIM</sub>	0.1	÷	100	%	Defined by project	
Minimum dimming level	-	@600Hz		@4kHz	-	-	
	D <sub>MIN_LOG</sub>	0.1		0.5	%	Logarithmic curve	
	D <sub>MIN_LIN</sub>	0.4		0.5	%	Linear curve	
Dimming resolution	Res <sub>DIM</sub>	1666		1000	step	Defined by project	
ENVIRONMENTAL							
Operating Frequencies <sup>5</sup>	f <sub>OP</sub>	2402	÷	2483	MHz	For CASAMBI® BLE SoC	
Maximum Emitted Power <sup>5</sup>	P <sub>BT-max</sub>	7			dBmW	Over Bluetooth transmission.	
Storage Temperature	T <sub>STORE</sub>	-40	÷	+60	°C	Minimum values defined by design	
Working Environment Temp.	T <sub>A</sub>	-10	÷	+40	°C	Minimum values defined by design	
Max Temperature at T <sub>c</sub> point	T <sub>C_UL</sub>				+60	°C	Measured under Q2
Working Environment type	ENV <sub>TYPE</sub>	Dry location			-	-	
Connector type	C <sub>TYPE</sub>	Screw terminals			-	-	
Wiring Section	WS <sub>SOLID</sub>	0.05	÷	2.5	mm <sup>2</sup>	Defined by design	
	WS <sub>STRAND</sub>	30	÷	12	AWG		
Stripping	WS <sub>STRIP</sub>	6.5			mm	-	
Protection Class	IP <sub>CODE</sub>	IP20			-	-	
Enclosure Material	M <sub>CASE</sub>	Plastic			-	-	
Packaging Unit (Piece/Unit)	PU	1			pcs	-	
Dimensions	-	L	H	D	-	-	
	MD	44	57	25	mm	Mechanical enclosure	
	PD	56	68	35	mm	Packaging	
Weight	W	44			g	Including packaging	

Table 5: UL Technical Specifications

## Tc POINTS POSITIONING

The following figures show the positioning of the maximum temperature points (*T<sub>c</sub> point*, highlighted in red) reached by the electronics inside the enclosure for CE and UL standards, located on the front (Top) and on the back (Bottom) sides.



Figure 1: Position of the CE Tc point

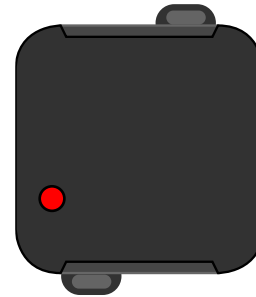


Figure 2: Position of the UL Tc point

## INSTALLATION




**ATTENTION!** Installation and maintenance must always be carried out in the absence of voltage.

Before proceeding with the connection of the device to the power supply, make sure that the voltage of the power source is disconnected from the system.



The device should only be connected and installed by qualified personnel. All applicable regulations, legislation, standards, and building codes must be adhered to. Incorrect installation of the device may cause irreparable damage to the device and connected loads.

The following paragraphs show the diagrams of the dimmer's wiring to the local control, the load, and the supply voltage. It is recommended to follow these steps to install the product safely:

1. **Load wiring:** connect the load to the "LED" terminals respecting the indicated polarity.
2. **Local command wiring:** connect the Pushbuttons wires to the "INPUT" terminal with the  symbol.
3. **Power Supply wiring:** connect a 12-24-48 Vdc constant voltage SELV power supply (depending on the nameplate data of the LED load) to the "+" and "-" terminals of the DC IN terminal.
4. **Remote control pairing:** power ON the MINI-1CV-CASAMBI and follow the pairing instructions provided on CASAMBI® mobile app.



## LOAD WIRING

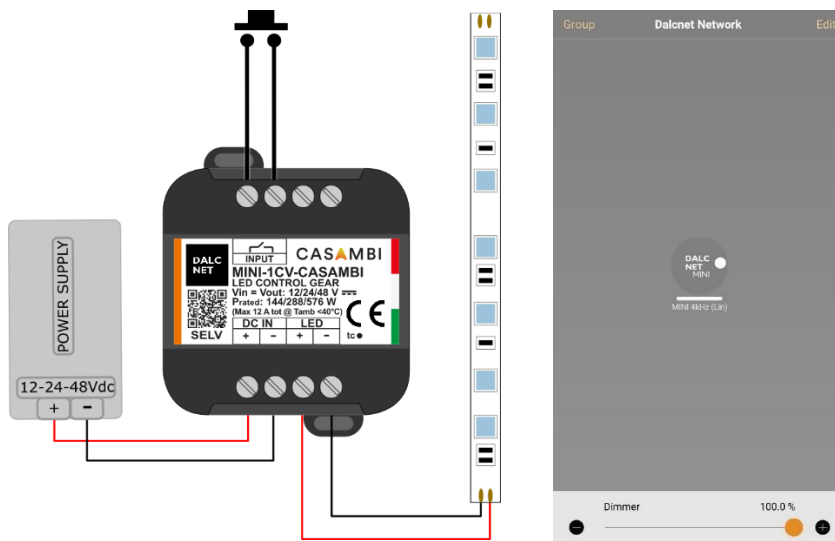



Figure 3: Wiring diagram

MINI-1CV-CASAMBI has 1 output channel that can be driven independently.

The connection diagram on the side allows you to drive 1 DC resistive load, on the LED output channel.

## LOCAL COMMAND WIRING

MINI-1CV-CASAMBI can be controlled via Local Command with Normally Open (N.O.) pushbuttons or voltage-free dry contact. No other voltage signals shall be applied to these contacts.

 To connect the MINI-1CV-CASAMBI to local command, simply connect the pushbuttons to the INPUT1 and INPUT2 terminals. The following image shows the indicated connection diagram for short distances (<10 m).

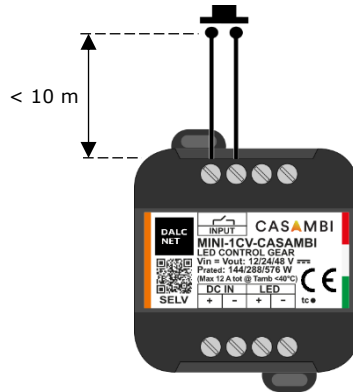



Figure 4: Local Command connection diagram for Short Distances

## POWER SUPPLY WIRING

 MINI-1CV-CASAMBI can be powered by a 12 Vdc, 24 Vdc or 48 Vdc constant voltage SELV (and Class 2 if installed within a UL certified plant) power supply and supplies the same voltage (dimmed) to the output. Once load and remote control (DALI bus) are wired, connect the power supply respecting the polarity conventions to the "+" and "-" labels of the DC IN terminal.

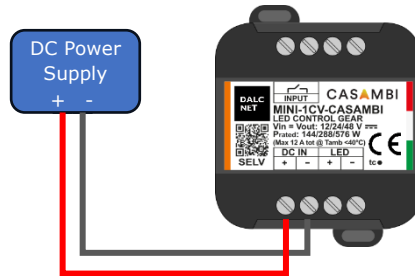


Figure 5: Power Supply wiring diagram

## LOCAL COMMAND: PUSHBUTTON

MINI-1CV-CASAMBI has one dry contacts input for N.O. pushbutton<sup>6</sup>, through which different operating parameters can be managed. Each action on the pushbutton activates a specific function for the type of control selected via CASAMBI® mobile app.

For all other functions consult the documentation of the CASAMBI® mobile app at: <https://support.casambi.com/support/home>

### PUSHBUTTON FUNCTIONALITY FOR "CONTROLS A LUMINAIRE"

In *Controls a Luminaire* mode, both connected pushbutton takes over ON/OFF control and luminaire brightness functions.



ACTION	FUNCTION
 Quick press	ON/OFF of the channel (of LED module connected)
 Long press (> 1s)	Brightness adjustment (Dimming)

Table 6: Pushbutton functionality for "Controls a Luminaire"

### PUSHBUTTON FUNCTIONALITY FOR "CONTROLS AN ELEMENT"

In *Controls an Element* mode, the pushbutton takes over ON/OFF control functions dedicated to a device element inside the CASAMBI® network and to adjust the element value.



ACTION	FUNCTION
 Quick press	ON/OFF of the selected device element
 Long press (> 1s)	Element value adjustment

Table 7: Pushbutton functionality for "Controls an Element"

### PUSHBUTTON FUNCTIONALITY FOR "CONTROL A GROUP"

In *Control a Group* mode, the connected button takes on functions dedicated to control a group of LED modules and their brightness adjustment.



ACTION	FUNCTION
 Quick press	ON/OFF of the configured Group of devices
 Long press (> 1s)	Brightness adjustment (Dimming)

Table 8: Pushbutton functionality for "Control a Group"

<sup>6</sup> By default, the N.O. pushbutton is set as "Control a luminaire" and controls the output of the MINI-1CV-CASAMBI.

## PUSHBUTTON FUNCTIONALITY FOR "CONTROL SCENE"

In *Control scene* mode, the button takes over brightness adjustment and ON/OFF of the programmed scenario.



ACTION	FUNCTION
 Quick press	ON/OFF of the configured Scene
 Long press (> 1s)	Brightness adjustment (Dimming)

Table 9: Pushbutton functionality for "Control scene"

## PUSHBUTTON FUNCTIONALITY FOR "CONTROL ALL LUMINAIRES"

In *Control all Luminaires* mode, the button takes over ON/OFF control and brightness functions of all luminaires.



ACTION	FUNCTION
 Quick press	ON/OFF of all luminaires
 Long press (> 1s)	Brightness adjustment (Dimming)

Table 10: Pushbutton functionality for "Controls all Luminaires"

## PUSHBUTTON FUNCTIONALITY FOR "CYCLES SCENES"

In *Cycles scenes* mode, the button takes over brightness adjustment and selection through the programmed scenario list.



ACTION	FUNCTION
 Quick press	Cycle through the list of scenes
 Long press (> 1s)	Brightness adjustment of current scene (Dimming)

Table 11: Pushbutton functionality for "Cycle scenes"

## PUSHBUTTON FUNCTIONALITY FOR "ACTIVE/STANDBY"

In *Active/Standby* mode, the button takes over brightness adjustment and selection between two programmed scenes.



ACTION	FUNCTION
 Quick press	Switch between two programmed scenes
 Long press (> 1s)	Brightness adjustment of current scene (Dimming)

Table 12: Pushbutton functionality for "Active/Standby"



## REMOTE CONTROL: CASAMBI®

CASAMBI® is a lighting control system based on Bluetooth Low Energy (BLE) technology. This technology allows for the creation of customized and flexible wireless lighting networks that can be easily configured and controlled via Android/iOS smartphones or tablets.

### PROFILE MAPPING: FIXTURES

MINI-1CV-CASAMBI supports the following fixtures (selectable by CASAMBI® mobile app) that provides adjustment of the light intensity for the single output channel.

NAME OF PROFILE	# PROFILE	DESCRIPTION
<b>MINI 4kHz (Lin)</b>	<b>9531 (Default)</b>	<b>One channel PWM dimmer</b> Output PWM Frequency = 4000Hz Linear dimming curve PWM resolution 1000step
<b>MINI 4kHz (Log)</b>	23372	<b>One channel PWM dimmer</b> Output PWM Frequency = 4000Hz Logarithmic dimming curve PWM resolution 1000step
<b>MINI 600Hz (Lin)</b>	24661	<b>One channel PWM dimmer</b> Output PWM Frequency = 600Hz Linear dimming curve PWM resolution 1666step
<b>MINI 600Hz (Log)</b>	22989	<b>One channel PWM dimmer</b> Output PWM Frequency = 600Hz Logarithmic dimming curve PWM resolution 1666step

Table 13: Profile list

## FLICKER PERFORMANCE

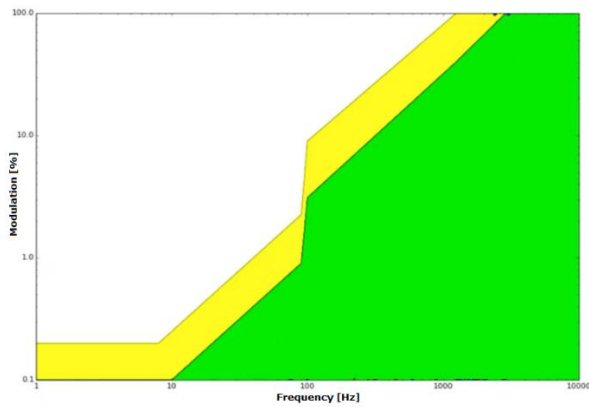


Figure 6: Flickering Perception Threshold

Thanks to its 4kHz dimming frequency, the MINI-1CV-CASAMBI effectively reduces the occurrence of the Flicker phenomenon. Depending on an individual's sensitivity and the nature of their activities, flickering can impact one's well-being, even if the changes in luminance are beyond the threshold detectable by the human eye.

The graph shows the phenomenon of Flickering in function at the frequency, measured throughout the dimming range.

The results show the low-risk zone (yellow) and the no-effect zone (green). Defined by IEEE 1789-2015<sup>7</sup>.

## THERMAL CHARACTERIZATION

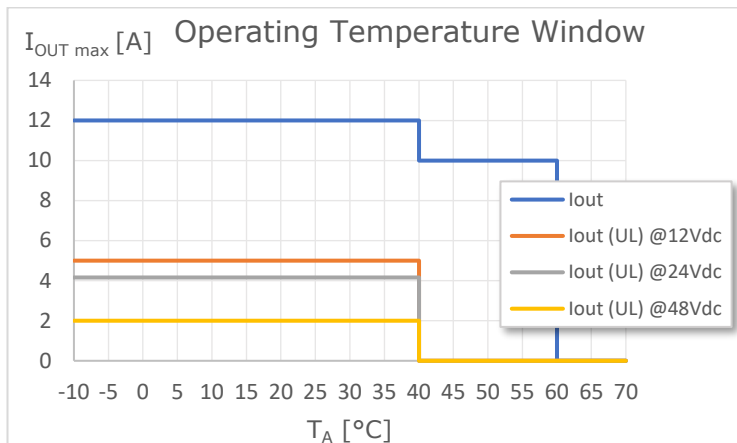


Figure 7: Operating Temperature Window

Figure 7 shows the maximum output current values that can be provided by the MINI-1CV-CASAMBI as a function of the operating temperature<sup>8</sup> (or ambient temperature,  $T_A$ ) of the operation, summarized below:

- ◆  $T_A = (-10 \div +40) ^\circ\text{C} \rightarrow I_{\text{OUT}} \leq 12 \text{ A}$
- ◆  $T_A = (+40 \div +60) ^\circ\text{C} \rightarrow I_{\text{OUT}} \leq 10 \text{ A}$
- ◆  $T_A = (-10 \div +40) ^\circ\text{C} \rightarrow I_{\text{OUT\_UL@12V}} \leq 5 \text{ A}$
- ◆  $T_A = (-10 \div +40) ^\circ\text{C} \rightarrow I_{\text{OUT\_UL@24V}} \leq 4.16 \text{ A}$
- ◆  $T_A = (-10 \div +40) ^\circ\text{C} \rightarrow I_{\text{OUT\_UL@48V}} \leq 2 \text{ A}$

These maximum current (total) values can only be applied under suitable ventilation conditions.

## DIMMING CURVES

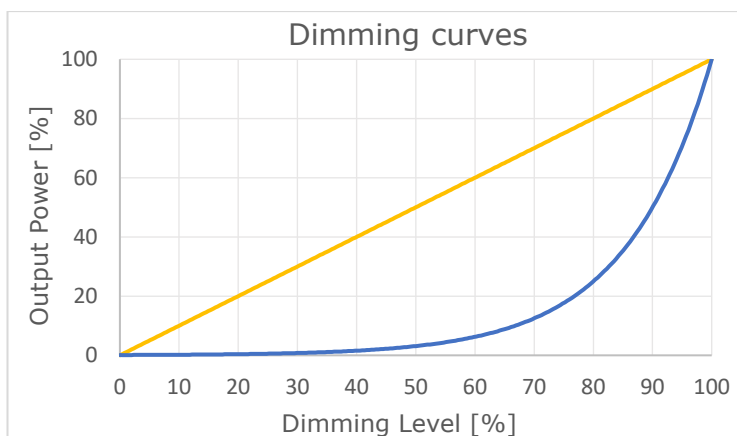


Figure 8: Dimming Curves

Figure 8 shows the dimming curves supported by the MINI-1CV-CASAMBI dimmer.

<sup>7</sup> Institute of Electrical and Electronics Engineers (IEEE). IEEE std 1789: Recommended Practices for Modulating Current in High-Brightness LEDs for Mitigating Health Risks to Viewers.

<sup>8</sup> If the product is installed inside an electrical panel and/or junction box,  $T_A$  refers to the temperature inside the panel/box.

## MECHANICAL DIMENSION

Figure 9 details the mechanical measurements and overall dimensions [mm] of the outer casing.

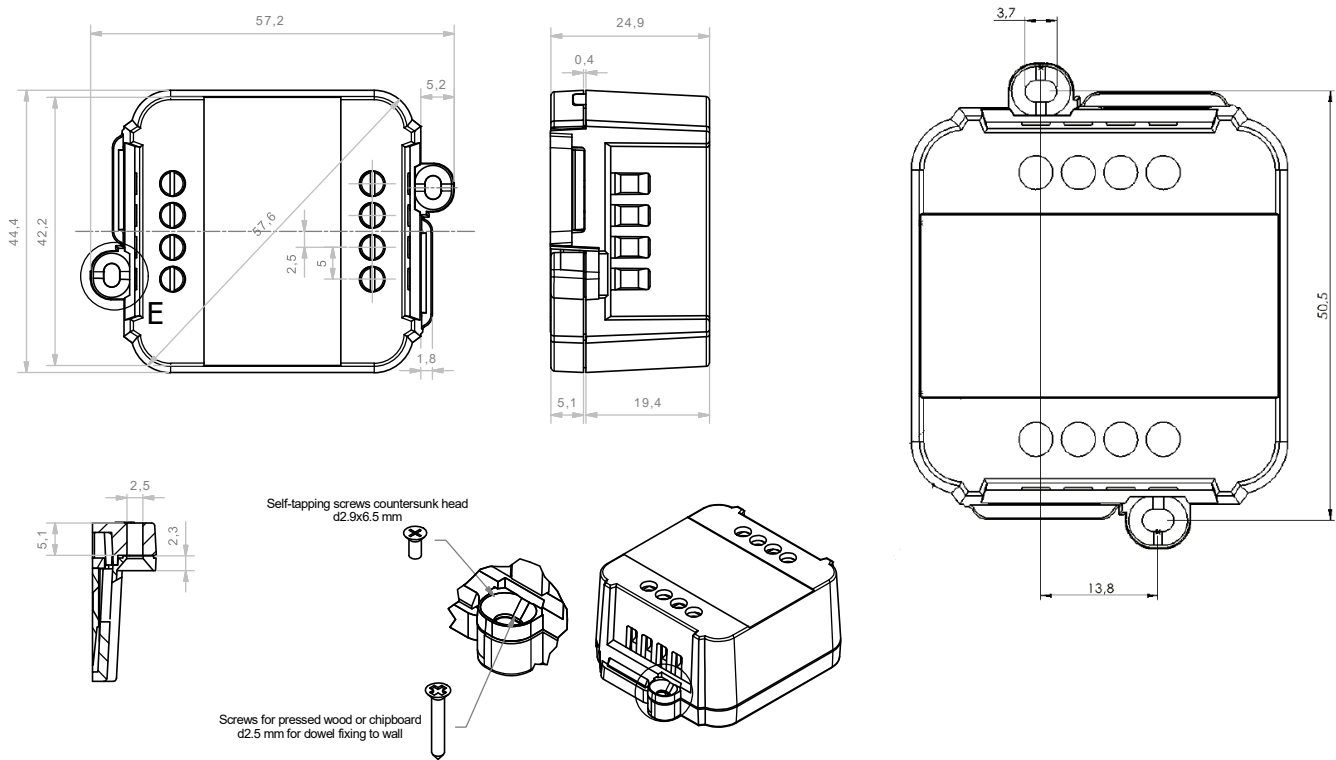


Figure 9: Mechanical dimensions

## TECHNICAL NOTES

### INSTALLATION



**WARNING!** Installation and maintenance should always be performed in the absence of DC voltage.

Before proceeding with the installation, adjustment, and connection of the device to the power supply, make sure that the voltage is disconnected from the system.



The device should only be connected and installed by qualified personnel. All applicable regulations, legislation, standards, and building codes in force in the respective countries must be adhered to. Incorrect installation of the device may cause irreparable damage to the device and connected loads.

Maintenance must only be conducted by qualified personnel in compliance with current regulations.

The product must be installed inside an electrical panel and/or junction box protected against surges/overvoltages.

The product is suitable for use in dry places, away from sources of moisture. Installation and use must take place in a dry environment.

The external power supply must be protected. The product must be protected by a properly sized circuit breaker with overcurrent protection.

Keep 230 Vac (LV) circuits and non-SELV circuits separate from SELV safety ultra-low voltage circuits and any product connections. It is strictly forbidden to connect, for any reason, directly or indirectly, the 230 Vac mains voltage to the product (control terminals included).

The product must be installed in a vertical or horizontal position, i.e. with the faceplate/label/top cover facing up or vertically. No other positions are allowed. The bottom position, i.e. with the faceplate/label/top cover facing downwards, is not allowed.

During installation, it is recommended to reserve adequate space around the device to facilitate its accessibility in case of future maintenance or updates (e.g. via smartphone).



Use in thermally harsh environments may limit the output power of the product.

For devices embedded within luminaires, the  $T_A$  ambient temperature range is a guideline to be carefully observed for the optimal operating environment. However, the integration of the device within the luminaire must always ensure proper thermal management (e.g. correct mounting of the device, proper ventilation, etc.) so that the temperature at the  $T_C$  point does not exceed its maximum limit under any circumstances. Proper operation and durability are only guaranteed if the maximum temperature of the  $T_C$  point is not exceeded under the conditions of use.

### POWER SUPPLY AND LOAD



The device must be powered only with SELV type power supplies (and Class 2 if installed within a UL certified plant) with limited current at constant voltage, short circuit protection and power suitably sized according to the specifications indicated in the product data sheet. No other types of power are allowed.

Size the power supply with reference to the load connected to the device. If the power supply is oversized compared to the maximum current drawn, insert an overcurrent protector between the power supply and the device.

Connecting to an unsuitable power supply may cause the device to work outside of the specified design limits, voiding its warranty.

In the case of power supplies equipped with earth terminals, it is mandatory to connect ALL the protection earth points (PE= Protection Earth) to a state-of-the-art and certified earthing system.

The power cables of the device must be correctly sized with reference to the connected load and must be isolated from any non-SELV voltage wiring. It is recommended not to exceed 10m of connection between the power source and the product. Use double-insulated cables. If you want to use connection cables between the power source and the product longer than 10m, the installer must ensure the correct operation of the system. In any case, the connection between the power supply and the product must not exceed 30m.

The manufacturer recommends ensuring a cumulative leakage current of less than 3.5 mA on the control circuit.



The device has been designed to work with Resistive LED loads only. Connecting and powering unsuitable loads may cause the device to operate outside of the specified design limits, voiding its warranty. In general, the operating conditions of the device should never exceed the specifications indicated in the product data sheet.

Observe the intended polarity between the LED module and the device. Any polarity reversal results in no light emission and can often damage the LED modules.


It is recommended that the connection cables between the product and the LED module be less than 3m long. Cables must be properly sized and should be insulated from any non-SELV wiring or parts. It is recommended to use double-insulated cables. If you want to use connection cables between the product and the LED module longer than 3m, the installer must ensure the correct operation of the system. In any case, the connection between the product and the LED module must not exceed 30m.

It is not allowed to connect diverse types of loads in the same output channel.


### LOCAL COMMAND




The length of the connection cables between the local control (N.O. button or other) and the product must be less than 10m. Cables must be sized correctly. Depending on the connection used, they must be isolated from any non-SELV live wiring or parts. It is recommended to use double-insulated cables, if deemed appropriate also shielded.

All devices and control signals connected to local commands with the symbol , must not supply any type of voltage.


## BLUETOOTH LOW ENERGY (BLE) WARNINGS AND MOBILE APP NOTES

-  The BLE antenna is located inside the device, near the top of case.
- BLE typically has a range of about 10 to 50 meters, depending on the environment and obstacles. Ensure your devices are within this range for reliable communication.
- Walls, floors, and other physical barriers can significantly reduce the effective range and signal strength of BLE devices. Position devices to minimize these obstacles.
- Other electronic devices, especially those operating on the 2.4 GHz frequency (like Wi-Fi routers), can interfere with BLE signals. Keep BLE devices away from such sources of interference.
- Ensure that all devices in your BLE network are compatible with each other and support the same BLE version. Incompatibilities can lead to communication issues.
- BLE is designed for low power consumption, but the battery life of your control devices (smartphone or tablet) can still be affected by factors like transmission frequency and data volume. Monitor and manage power settings to optimize battery life.
- BLE technology works optimally with non-metallic materials. Therefore, it is not recommended to surround the device by metal objects or reflective surfaces when using BLE communication.
- For reliable communication, make sure that the top surface is not covered or that it is free of metal objects, wiring, or other electronic devices. Any impediments could affect the quality of communication.





-  To guarantee the best performances and the full use of functions, make sure to download on your device the last release of CASAMBI® mobile app.
- Whenever CASAMBI® mobile 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® mobile app and in [Unpair from CASAMBI® Network](#) section.

## LEGAL NOTES

### TERMS OF USE

-  Dalcnet Srl (hereinafter referred to as "the Company") reserves the right to make changes to this device, in whole or in part, without prior notice to the customer. Such changes may affect technical aspects, functionality, design, or any other element of the device. The company is not required to notify you of such changes and that your continued use of the device will constitute your acceptance of the changes.
- The company is committed to ensuring that any changes do not compromise the essential functionality of the device and that they comply with applicable laws and regulations. In the event of substantial changes, the company undertakes to provide clear and timely information on the same.
- The customer is advised to periodically consult the [www.dalcnet.com](http://www.dalcnet.com) website or other official sources to check for any updates or changes to the device.

## SYMBOLOLOGIES

	All products are manufactured in compliance with European Directives, as reported in the EU Conformity Declaration.
	Independent lamp Controlgear: lamp controlgear consisting of one or more separate elements so designed that it can be mounted separately outside a luminaire, with protection according to the marking of the lamp controlgear and without any additional enclosure.
<b>CLASS 2</b>	UL Class 2 device: product compliant to UL1310 standard, designed to ensure that the device's outputs are safe to touch and does not necessitate additional safety protections at the level of outputs. Essentially, the device is designed to minimize the risk of electric shock or overheating, thereby ensuring its safety for use.
	UL Recognized certified unit for Canadian and U.S. markets: see technical specifications in Table 5.
<b>SELV</b>	"Extra Low Safety Voltage" in a circuit isolated from the mains supply by means of an isolation not inferior to that between the primary and secondary circuits of a safety isolation transformer according to IEC 61558-2-6.
	The product described in this technical datasheet at the end of its useful life is classified as waste from electronic equipment and cannot be disposed of as unsorted municipal solid waste. <b>Warning!</b> Incorrect disposal of the product may cause serious harm to the environment and human health. For correct disposal, inquire about the collection and treatment methods provided by the local authorities.

## CASAMBI



CASAMBI® is the official application through which it is possible to configure, in addition to the functions of the MINI-1CV-CASAMBI, also all the different CASAMBI® products equipped with BLE technology.

CASAMBI® mobile app can be downloaded free of charge from the Apple App Store and Google Play Store.



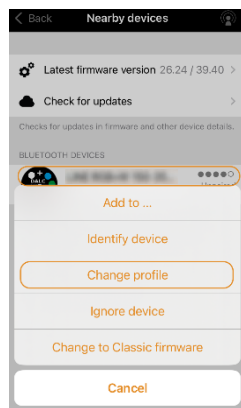
## SETTINGS

### FIXTURE CONFIGURATION

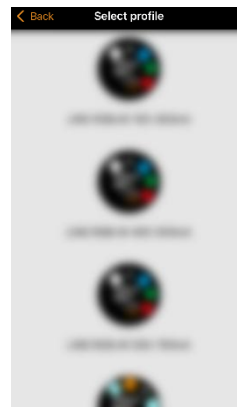
Once the technical data of the load to be connected to the device have been verified, it is possible to configure light intensity and/or light temperature by loading the Fixture on the driver. To load the Fixture on the MINI-1CV-CASAMBI, follow these steps.



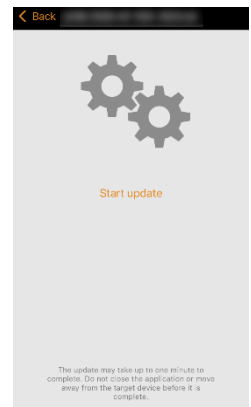
1. Power ON the device and open the CASAMBI® mobile app.
2. Select "Nearby Devices".



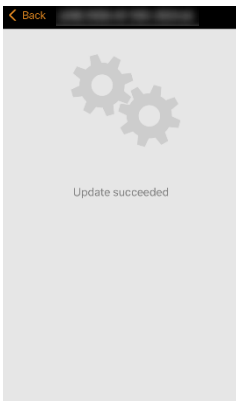
3. Tap on the icon of device, then tap on "Change profile".



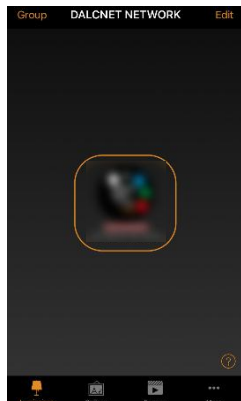
4. Select the desired profile (refer to Table 13).



5. Tap "Start Update".



6. Wait for the profile to load correctly.



7. Once the device has been inserted in the Network, double tap on the product icon to show the device configuration.



8. Inside the device configuration, the LED module brightness can be set by provided sliders.

## UNPAIR DEVICE FROM CASAMBI® NETWORK

If MINI-1CV-CASAMBI 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® mobile app, "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 MINI-1CV-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 <sup>9</sup>.

A second method to unpair the product is to connect an N.O. push button to an "INPUT" terminal of the MINI-1CV-CASAMBI and during the decoupling procedure press the button.

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<sup>9</sup> The discharge time of the power supply secondary depends on the construction characteristics of the power supply used.