



DIMMER CLL-CH1B

USER'S HANDBOOK

DIMMER CLL-CH1B

USER'S HANDBOOK

PREAMBLE



WARNING: read the instructions included in this manual before carrying out the installation.

ATTENZIONE: prima di compiere qualsiasi operazione leggere attentamente le istruzioni contenute nel manuale.



The Device is powered with direct current (DC) and developed, realized and assembled in compliance with Directive 04/108/EEC and it is CE marked according to the technical norm IEC 60945 rev.4.

L'apparato è alimentato in corrente continua (DC) ed è progettato e realizzato in conformità alla Direttiva Comunitaria 04/108/ECC e risulta marcato CE secondo la norma tecnica CEI EN 60945 rev.4.



The MANUFACTURER declines any responsibility in the event of:

- Usage operational procedures of the device not in compliance with what is described in this handbook;
- Damages caused as a result of repairs or modifications of the DEVICE carried out by non-authorized persons;
- Normal deterioration of the DEVICE itself.

IL COSTRUTTORE non accetta responsabilità nei casi in cui:

- Le procedure operative di utilizzo dell'apparato descritte nel manuale non siano rispettate
- Si verifichino danni in seguito a installazione, riparazione o modifiche dell'apparato eseguite da personale non autorizzato;
- A seguito di normale deterioramento dell'apparato.



WEEE Directive. Instructions for product disposal: This product must be disposed off at the end of its life cycle using appropriate disposal means or returned back to our company for appropriate disposal.

Direttiva RAEE. Indicazione per smaltimento prodotto a fine vita: Questo apparecchio deve essere smaltito a fine vita utilizzando gli appositi Consorzi di smaltimento autorizzati oppure riconsegnato alla nostra azienda che provvederà direttamente allo smaltimento.



- The CLL-CH1B Dimmer, appropriately set, is dedicated to the light intensity control of monochromatic L.E.D. Strips (Halogen bulbs) and CLL and CLL V. 2.0 series (Cantalupi L.E.D. Lighting) L.E.D. illuminating systems.
- The device can be powered with voltages from 11,4 to 30VDC, depending on the requirements of the connected devices.
- The device manages one channel that can supply up to a maximum of 6A and can be controlled, according to the chosen setting, by push-button or 1-10 v analogue signal.
- The device is equipped with one PWM line for the management of the Master-Slave function.
- Il Dimmer CLL -CH1 opportunamente settato è dedicato al controllo della intensità luminosa di sistemi a led strip monocromatiche (lampade alogene) e sistemi illuminanti a led della serie CLL e CLL V. 2.0 (Cantalupi Led Lighting)
- L'apparato può essere alimentato con tensioni da 11,4 a 30VDC in base alle esigenze degli apparati collegati.
- L'apparato gestisce 1 canale che può erogare fino ad un massimo di 6A e può essere controllato, secondo la configurazione scelta, sia da pulsante che da segnale analogico 1 -10 v
- L'apparato possiede 1 linea in PWM per la gestione della funzione Master-Slave.

Volatage supply range: 11,4 - 30Vdc
 Max Load: 6A
 Stand-by absorption: 60mA
 Temp. range: 0° C - +40°C
 Power fuse: 6,3A
 Exit prot: Resettable 6A fuse
 Thermal prot: Sonda NTC
 Signaling LED: Green LED, Red LED, Yellow LED
 Fix: DIN rail mounted
 Dimension:
 18 mm / 0.70 in (Width)
 62 mm / 2.44 in (Depht)
 98,6 mm / 3.88 in (Height)

Tensione di esercizio: 11,4 - 30Vdc
 Carico Max: 6A
 Assorbimento a vuoto: 60mA
 Temp. di esercizio: 0° C - +40°C
 Fusibile alimentazione: 6,3A
 Prot. Uscita: Fusibile 6A ripristinabile
 Prot. termica: Sonda NTC
 Led di segnalazione: Verde, Rosso, Giallo
 Fissaggio: DIN rail mounted
 Dimensioni:
 18 mm / 0.70 in (Larghezza)
 62 mm / 2.44 in (Profondità)
 98,6 mm / 3.88 in (Altezza)

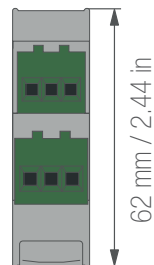
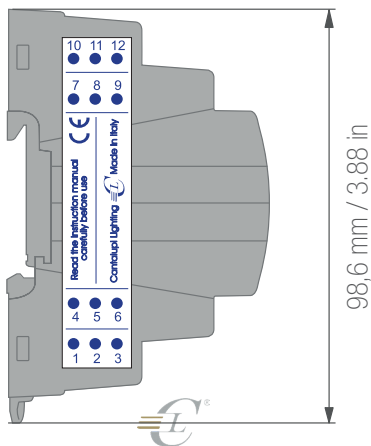
Drawing / Disegno

(Width)

(Depht)

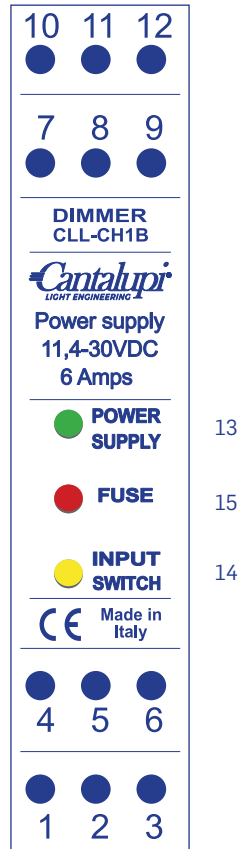
(Height)

18 mm / 0.70 in



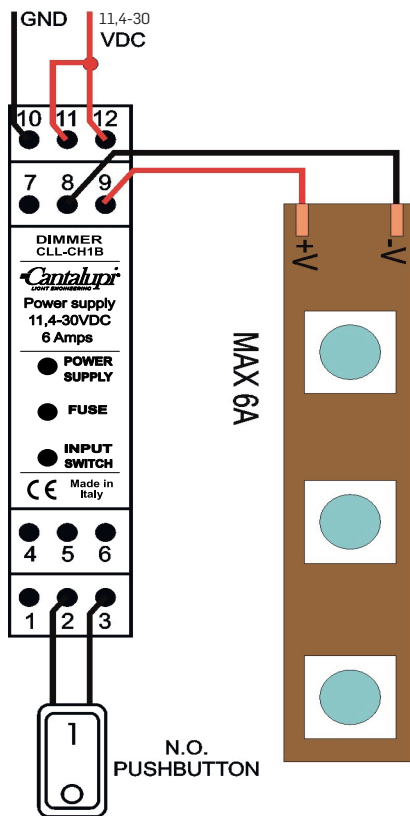
- 1 + 1-10v analogue signal
- 2 Push-button
- 3 GND Reference
- 4 Slave setting
- 5 GND Reference
- 6 PWM In/Out
- 7 GND Out
- 8 DRV
- 9 +V Out
- 10 Negative power supply
- 11 MODE
- 12 Positive power supply
- 13 Green power supply LED
- 14 Yellow LED input pressure
- 15 Red alarm LED

- 1 + 1-10v segnale analogico
- 2 Pulsante
- 3 GND Riferimento
- 4 Settaggio Slave
- 5 GND Riferimento
- 6 PWM In/Out
- 7 GND Out
- 8 DRV
- 9 +V Out
- 10 Negativo Alimentazione
- 11 MODE
- 12 Positivo Alimentazione
- 13 LED verde di presenza alimentazione
- 14 LED giallo pressione ingresso
- 15 LED rosso di allarme



Monochromatic L.E.D. Strips and halogen lamps.

Led Strip Monocromatiche e lampade alogene



This setting allows a maximum load of 6A.

Questa configurazione prevede un carico massimo di 6A.

CONNECTIONS / COLLEGAMENTI

Connect the MODE terminal to the positive power supply

Collegare il terminale MODE al positivo di alimentazione

CLL System (Old Models)

Sistema CLL (Modelli Vecchi)

This setting allows a maximum load of 6A.

Questa configurazione prevede un carico massimo di 6A.

The MODE terminal must be connected to the GND power supply

Il terminale MODE deve essere collegato al GND di alimentazione

CLL V.2.0-V.3.0 System

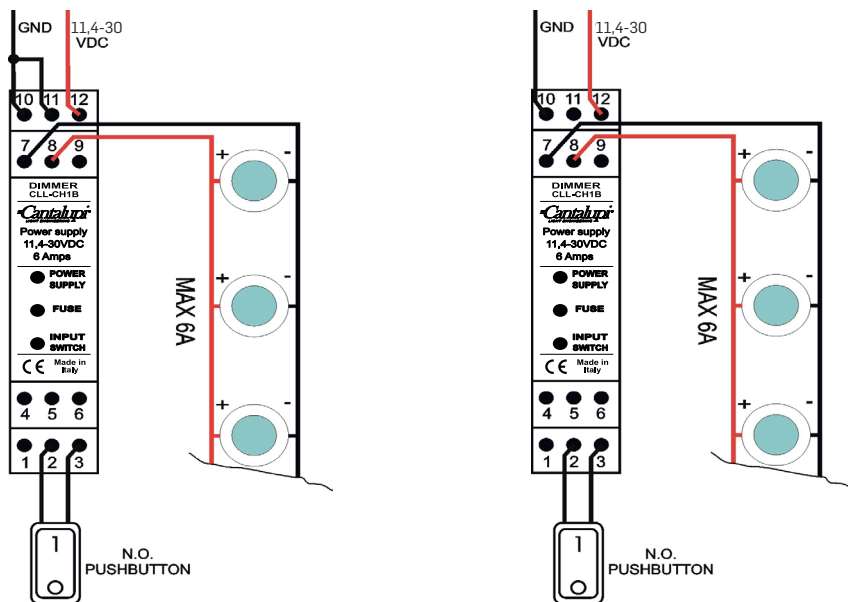
Sistema CLL V.2.0-V.3.0

This setting allows a maximum load of 6A.

Questa configurazione prevede un carico massimo di 6A.

The MODE terminal must be not connected

Il terminale MODE non deve essere collegato



This setting is designed for controlling exclusively CLL Cantalupi Lighting illuminating devices.

The output connecting line CANNOT exceed 20m (65,62 ft.) in length.

Do not use power supplies with a ripple higher than 20%.

Questa configurazione è designata esclusivamente per il controllo di apparati illuminanti CLL della Cantalupi Lighting. La linea di collegamento dell'uscita non deve superare i 20m di lunghezza.

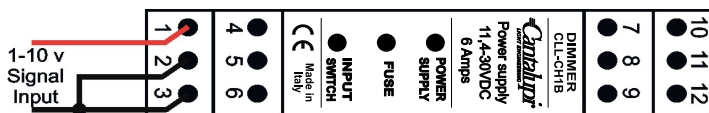
Non utilizzare alimentazioni che abbiano un ripple superiore al 20%.



CONNECTIVITY / CONNETTIVITA'

Dimmer control with 1-10V analogue signal (Source/Sink)

Controllo del dimmer con segnale analogico 1-10V (Source/Sink)



With this setting it is possible to control the dimmer, regardless of the chosen MODE, with an analogue signal from 1 to 10V. The setting allows the signal application to the terminal 1 while the GND must be applied to pins 2 and 3 (jumped). The IN impedance is 100 Kohm. The signal can be Source type or Sink type (potentiometer 47 Kohm).

Con questa configurazione è possibile controllare il dimmer, indipendentemente dal MODE scelto, con un segnale analogico da 1 a 10V. La configurazione prevede l'applicazione del segnale al terminale 1 mentre il riferimento (GND) deve essere applicato ai morsetti 2 e 3 (ponticellati). L'impedenza di ingresso è di 100 Kohm. Il segnale può essere sia di tipo Source sia di tipo Sink (potenziometro 47 Kohm).

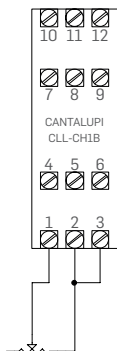
WARNING: This function is available only with the 24VDC (20-30VDC) power supply.

ATTENZIONE: Questa funzione è attiva solo con alimentazione a 24VDC (20-30VDC).

CONNECTIVITY / CONNETTIVITA'

Dimmer control by potentiometer

Controllo del dimmer con potenziometro



Potentiometer 15k0hm 1/4W 10%
Optimum value 15k0hm linear
Range value allowed 10k0hm - 47k0hm linear

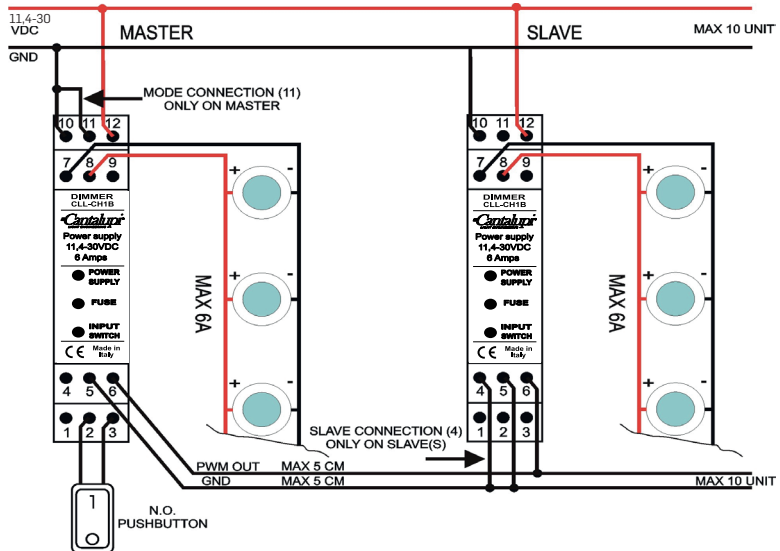
Potenziometro 15k0hm 1 / 4W 10%
Valore ottimale 15k0hm lineare
Il valore di intervallo consentito 10k0hm - 47k0hm lineare



CONNECTIVITY / CONNETTIVITA'

Master – Slave (10 Slaves max)

Master – Slave (max 10 Slave)



CONNECTIVITY / CONNETTIVITA'

THERMAL FAULT IN THE MASTER SLAVE WIRING

FAULT TERMICO NEL CABLAGGIO MASTER SLAVE

(either with button or with 1-10)

(sia con pulsante che con 1-10)

Case 1: Overload on the Master

In this case the entire dimmer chain will go off, ie all the outputs of the dimmers connected to the Slave will switch off. Only the red led on the master will flash, indicating that the overload has occurred on him. The output can be reactivated by changing the 1-10 or by pressing the button again.

Caso 1: Sovraccarico sul Master

In questo caso si spegnerà l'intera catena dei dimmer, ovvero tutte le uscite dei dimmer collegati in Slave si spegnerà. Solamente il led rosso del master lampeggerà, segnalando quindi che il sovraccarico è avvenuto su di lui. L'uscita può essere riattivata modificando 1-10 o premendo di nuovo il pulsante.



Case 2: Overload on the Slave

If the Slave reaches the protection threshold temperature, the red LED will start to flash and the output will switch off. The output will remain off as long as the temperature on the thermal probe does not drop to 60 °, after which the output will turn itself on again, also turning off the blink of the red LED. The Slaves are always connected and managed by the Master, on which the control signal (1-10 or button) will continue to be present.

Caso 2: Sovraccarico sullo Slave

Se lo Slave raggiunge la temperatura soglia della protezione, il led rosso comincerà a lampeggiare e l'uscita si spegnerà. L'uscita rimarrà spenta fintanto che la temperatura sulla sonda termica non scende a 60°, dopo di che l'uscita si riaccenderà da sola, spegnendo anche blink del led rosso. Gli Slave sono collegati e gestiti sempre dal Master, sul quale il segnale di controllo (1-10 o pulsante) continuerà ad essere presente.

The CLL-CH1B dimmers can be connected to each others through the PWM connection so as to increase the quantity of devices (CLLs or LED strips) controllable by one push-button or by a 1-10V analogue signal (synchronized channels). The push-button or the analogue signal will have to be applied only to the Master dimmer. The MODE setting, for choosing the type of the connected devices (CLL or LED strips), will have to be done only to the Master dimmer. The SLAVES will be automatically set as the MASTER. In addition, the SLAVES, in order to be recognized by the system, will have to be connected to terminal 4 as well as terminal 5 to the GND of the PWM signal. The PWM wires between each dimmer will have to be as shorter as possible (max 5 cm - 2 inches) so as to avoid any interferences.

I dimmer CLL-CH1B possono essere collegati tra di loro tramite collegamento in PWM per aumentare la quantità di apparati (CLL o led strip) controllabili tramite 1 pulsante o con segnale analogico 1-10V (canali sincronizzati). Il pulsante o il segnale analogico andrà applicato solo al dimmer Master. La configurazione del MODE per la scelta del tipo di apparati che si andranno a collegare (CLL o led strip) andrà effettuata solo sul dimmer Master. Gli SLAVES si setteranno automaticamente come il MASTER. Sugli SLAVES andrà collegato inoltre (per essere riconosciuti dal sistema come tali) il terminale 4 assieme al terminale 5 al GND del segnale PWM. I cavi del PWM dovranno essere i più corti possibile (max 5 cm tra dimmer e dimmer) per evitare interferenze.

Note: Stabilized adapters from 24V DC at 250-320-480W are available for 110/220V AC power supply voltage.

N.B. Per tensioni di alimentazione 110/220V AC sono disponibili alimentatori stabilizzati da 24V DC con potenza da 250-320-480W



Certificate of Authenticity

Congratulations for choosing this item by Cantalupi Lighting. This Certificate attests to the fact that the item you have purchased is made in Italy and conformable to European Directives.

Conditions of Warranty

The consumer has the rights foreseen by the Italian Law which remain unprejudiced by the guarantee provisions indicated here following. The guarantee is offered by Cantalupi Lighting srl Via Fosso Legnami 217 55054 Massarosa (LU) Italy. All rights of guarantee are strictly dependant on presentation to the company Cantalupi Lighting srl of a document proving purchase of the product and purchase date (invoice bearing the description of the item) and the batch number (printed on the label fixed to the item). The holder of the warranty right is the buyer or the user of the product. All articles sold by Cantalupi Lighting srl are guaranteed for a minimum period of 2 (two) years from the date of purchase of the product at zero duty (work) hours. The warranty covers all manufacturing faults and Finishing not in compliance to our quality standards.

The product is not covered by the warranty in the following cases:

- Incorrect or improper installation;
- Products damaged by negligence;
- Products damaged by incorrect connection;
- Products damaged use of detergents;
- Damages and breakage that may have occurred during transport;
- Warranty requests of Cantalupi Lighting srl for presumed defects or problems caused by incorrect installation and/or improper testing;
- Maintenance carried out by personnel not authorized by Cantalupi Lighting srl;
- Use of non original spare parts;
- Damage resulting from uses other than those prescribed by Cantalupi Lighting srl;
- Removal or cancellation of the product label;
- Dismantling or removal of the components of the item.

The guarantee does not specify complete replacement of the item. The warranty only covers the replacement of the parts needed for product's return to working order and relative labour. Replacement or repair is solely at the discretion of Cantalupi Lighting srl. Cantalupi Lighting srl is not responsible for direct, consequential, incidental or special damages deriving from any defect covered by the guarantee or otherwise, this including lost profits, lost service, and any damage to or replacement of capital goods or property. The guarantee is recognized in any country where the product is sold, inside and outside the European Union, according to the specific legal regulations in force. The above replaces any other verbal or written information communicated to the purchaser. No person or persons are authorized to communicate information, on behalf of Cantalupi Lighting srl, that differs from the present statement. Intervention under the guarantee does not result in entitlement to extension/renewal of the guarantee period. Defective parts replaced under guarantee remain the property of Cantalupi Lighting srl.

After Sales Warranty Service

The guarantee does not include packing and transport costs, or any travel expenses that might result from any intervention requested at the customer's site. Following a customer's request for travel intervention, Cantalupi Lighting srl reserves itself the right to communicate the conditions and costs according to the work that needs to be performed and if it is in Italy or abroad. The buyer is responsible for all costs resulting from the removal and re-installation of the product.

In addition, the customer is not entitled to claim any refund for additional expenses or for the immobilization of the boat.

Installation instructions and symbols

- 1) Please read carefully each symbol on the product label, check the meanings listed below, and respect the listed limitations.
- 2) Always disconnect the power source before installing or repairing any lighting device
- 3) Check the label for the maximum voltage (V) and wattage (W) limits before supplying power to the product
- 4) Follow carefully all current installation and maintenance regulations
- 5) Cantalupi Lighting srl is not responsible for the misuse or negligence of any lighting device. It also required that installation will be completed by qualified personnel, in compliance with safety instructions as presented herewith.

Precautions

Do not touch unit parts until you have first determined if the part is hot. Wait until they have cooled and no longer present a burn hazard before handling.

Do not touch or handle the unit with bare hands. Use a soft cloth or gloves.

Short description of Symbols and graphic marks (CEI EN 60598-1)

Compulsory mark of conformity with European instructions to be indicated on electrical products with a **voltage between 50Vac e 1000Vac** (in alternating current).

The "resistance" offered by the device to solid or liquid penetration is indicated by the prefix **IP** (International Protection) followed by two significant numbers, the first one indicating the grade of protection against penetration of solid bodies and the second one against penetration of liquids.

IP20: (2) protection against penetration of solid bodies of dimensions larger than 12mm and (0) no protection against penetration of liquids.

IP40: (4) protection against penetration of solid bodies of dimensions larger than 1 mm and (0) no protection against penetration of liquids.

IP55: (5) protection against dust and (5) protection against water jets from any direction.

IP65: (6) total protection against dust and (5) protection against water jets from any direction.

N.B: the protection only regards external parts, correctly installed on the ceiling.



• Indicates that the device is suitable for installing on "normally flammable" surface.



• Indicates that the device's protection against electric shock is based on a low voltage input (50V max). Never use ground connections.



• Mm/in Indicates the cut-out diameter for device installation.



• **WEEE Directive . Instructions for product disposal.**

This product must be disposed off at the end of its life cycle using appropriate disposal means or returned back to our company for appropriate disposal.



CANTALUPI LIGHTING SRL
VIA FOSSO LEGNAMI, 217
55040 PIANO DI MOMMIO (LU)
ITALY

TEL. +39 0584 42791
FAX +39 0584 427999

www.cantalupilighting.it
info@cantalupilighting.it