## USER GUIDE LEDL-D/P

## Dimming interface for voltage LED $12-24-48 \mathrm{Vdc}$.

Brightness regulator for LED modules $12-24-48 \mathrm{Vdc}$.
Brightness adjustment through:

- push-button (PUSH 12-24-48Vdc),
- push-button (PUSH 230Vac)
- DALI signal,
-1-10V signal (active or passive),
- 0-10V signal (active or passive),
- potentiometer 100KOhm (logarithmic) (settings by dip-switch).
With «LEVEL MEMORY » and «STATUS MEMORY» function.
Ability to select PWM frequency 244 Hz or $2000 \mathrm{~Hz}(2 \mathrm{KHz})$
SLAVE version only for signal repetition (LEDL-S).
PWM OUT: 2000 Hz (HIGH PERFORMANCE).
NOTE: In the case of incorrect setting of the DIP-SWITCH , at power up, the interface switches ON and causes the LED to flash with a frequency of 1 sec ON and 1 sec OFF.


## Operation

DALI, PUSH, 0-10V / 1-10V, SLAVE.
The operating mode is selected through the DIP-SWITCH which is located beneath the terminal cover (see the side table).

- 0-100\% Logarithmic brightness adjustment, with DALI signal, with push-button, $0-10 \mathrm{~V}$ or 1-10V interface (the lowest level in PUSH modality is different from 0 to distinguish it from OFF).
General Characteristics
Plastic case.
Device for independent mounting.
Electric class protection II.
Protection degree IP20.

| $\begin{aligned} & \text { CODICE } \\ & \text { CODE } \end{aligned}$ | Tensione di ingresso Input voltage <br> (Vdc) | Tensione di uscita Output voltage (Vdc) | Corrente di uscita Output current (A) | Potenza di uscita Output power <br> (W) |  |  | Comando Command |  | Versione Version | $\begin{aligned} & \mathrm{CC} \\ & \mathrm{CV} \end{aligned}$ | Peso Weight <br> (g) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | @12Vdc | @24Vdc | @48Vdc |  |  |  |  |  |
| LEDL-D/P | 12-24-48 | 12-24-48 | 12 | 144 | 288 | 576 |  | USH \| DALI | 0-10V | 1-10V | MASTER - SLAVE | CV | 100 |
| LEDL-S |  |  |  |  |  |  |  | - | SLAVE |  |  |

## OPERATING MODE

There are distinct modes of operation read on startup (the settings have to be made by dip-switch before powering on)

1) ON/OFF (no dimming) (factory settings)
2) PUSH (push-button) dimming (control OFF , 2-100\%) three profiles:

SLOW, FAST, UP/DOWN;
3) DALI (control OFF, 2-100\%) - Power on: 100\% - System fail level:100\%
4) $\mathbf{1 - 1 0 V}$ Dimming, brightness reduction until reaching a preset minimum without switching off;
5) 0-10V Dimming, brightness reduction until completely shut off;
6) SLAVE.

The operating modes PUSH, DALI, $0-10 \mathrm{~V}$ and $1-10 \mathrm{~V}$ are alternatively between them.

- Time dimming ( $0-100 \%$; 100-0\%): SLOW profile=8 seconds,

FAST profile=5 seconds; UP/DOWN profile=8 seconds;

- Low level in PUSH modality is different from 0 to distinguish it from OFF.

Restart after a power failure:

- In ON/OFF modality, it starts from ON;
- In 0-10V or $1-10 \mathrm{~V}$ dimmer mode, the input value is read and ON according to the scheduling;
- In PUSH dimmer mode, it starts from the last data set;
- In DALI dimmer mode, it starts from the last data set.


## Default DALI (factory configuration):

- Power on: 100\%

System fail level: 100\%

## TECHNICAL FEATURES

## INPUT:

Supply voltage: $12-24-48 \mathrm{Vdc}$
Terminal $1 \times 2,5 \mathrm{mmq}$.
Cable clamp for cable diameter $\varnothing=4 \ldots 6 \mathrm{~mm}$

## OUTPUT:

Output voltage: $12-24-48 \mathrm{Vdc}$
SELV insulation
Terminal $1 \times 0,5 \ldots 1,5 \mathrm{mmq}$
Cable clamp for cable diameter $\varnothing=3 \ldots 8 \mathrm{~mm}$.
NB: Output power must be supplied by a single driver!


## PUSH MODE (Settings by DIP-SWITCH)

- Short pressure on push-button for ON/OFF modality (on and off ramps).
- Long pressure on push-button for DIMMER modality. Three profiles.


## SLOW PROFILE (Settings by DIP-SWITCH)

- Press the push-button, the dimming starts up to the maximum (or minimum) and then, after 1s, reverses.
Time from minimum to maximum: 8 seconds.
FAST PROFILE (Settings by DIP-SWITCH)
- Press the push-button, the dimming starts up to the maximum (or minimum) and
then, after 1s, reverses.
Time from minimum to maximum: 5 seconds.


## UP/DOWN PROFILE (Settings by DIP-SWITCH)

- Press the push-button, the dimming reverses its direction. Arrived to the minimum (or maximum), the status is maintained.
Time from minimum to maximum: 8 seconds.
- Memory of the last data dimming. At each ON, the driver starts from the last data set.
- Method of resynchronisation (sometimes the system could be out of sync, i.e. some lamps will be on, others off, etc): in OFF/ON position, press the push-button for a long time (30sec), the drivers will be 100\% and the system will now be resynchronised.
- Maximum total cable length to retractive switch (PUSH): 15 m . - Maximum number of SLAVE devices: 10.


## DALI MODE (Settings by DIP-SWITCH)

-DALI Interface: limit for the control input current is 2 mA in receiv mode, at least 250 mA in transmission mode.

## 1-10V MODE (Settings by DIP-SWITCH)

- You can use commercial dimmer 1-10V. The LED brightness varies proportionally to the signal sent to the terminal from 2 to $100 \%$.
- You can use 100 K potentiometers. The variation in the brightness of the LEDs is in proportional or logarithmic depending on the model used potentiometer (recommended logarithmic).
- Set the dip-switch 5 to position ON for resistive potentiometers: Iout max $1,4 \mathrm{~mA}$ - Set the dip-switch 5 to position OFF for active systems (Konnex interface, EIB, potentziometer touch screen, PC, Domotic Systems, ecc.): impedance 100K.


## 0-10V MODE (Settings by DIP-SWITCH)

- You can use systems 0-10V. The LED brightness varies from 0 to $100 \%$ proportionally to the signal sent to the terminal.
Set the dip-switch 5 to position OFF. Impedance 100K
- setting dip-switch 5 to ON it still have the possibility to turn off completely even using resistive potentiometers: lout max $1,4 \mathrm{~mA}$
SLAVE MODE (Settings by DIP-SWITCH) :
- You can use LEDL-D/P as SLAVE.

SLAVE B MODE (only for LE42DP) :

- You can use LEDL-D/P as SLAVE with LE42DP as MASTER.

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Use the LEDL-D/P as SLAVE
You can use the LEDL-D/P as SLAVE.

- Set to ON the 1, 2, 3 positions of the dip-switch. Set to OFF positions 4,5.
- The terminal for input 1-10V signal is used as input for MASTER OUT signal.
- You can connect up to 10 Slaves.


## Use the LEDL-S

Use the LEDL-S following the diagram.


## Use of LE42DP or LE20DP driver as MASTER

You can use the LE42DP or LE20DP as MASTER, in this case you can use as SLAVE only LEDL-D/P set as SLAVE.

|  | Reference Standards <br> EN55015 <br> EN61347-1 <br> EN61347-2-13 <br> EN61547 <br> EN62384 |
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## MADE IN ITALY



