DiNUY

MANUAL INSTRUCTIONS

1-channel LED Strip Dimmer RE EL2 LE2

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ATTENTION
- Power supply must be protected according to the current rules.
- The devices must be installed by qualified personnel and without power supply.

Description

- Modular Dimmer for 12VDC-48VDC 1-channel LED Strips, up to a maximum of 20A.
- PWM (Pulse Width Modulation) dimming technology.

Features

- 2-modules wide (35mm).
- DIN46277 rail mounting.
- Control by: pushbutton (with or without memory), potentiometer or 0/10VDC signal.
- Master/Slave function: it allows to increase the load capacity using only one control and as many Slaves as necessary. Unlimited number of Slaves can be connected.
- Protected against over-load and short-circuit.
- Built-in resettable thermal fuse.
- Anti-panic function (optional) for safety systems: if the "Panic" jumper is opened the LED strip will light at maximum, ignoring the dimming level.
- Galvanically isolated control terminals.

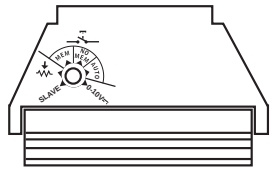
Technical Specifications

Power supply	12VDC - 48VDC
Consumption	<12mA
Valid for...	12VDC - 48VDC 1-channel LED Strip
Maximum load	20A
Control	Pusbutton, Potentiometer or 0-10VDC signal
External potentiometer control value	10Kohms
Pushbuttons	Unlimited non-luminous ones. Does not admit luminous ones
Input impedance at 0-10V control signal	100Kohms
Dimensions	2 modules: 35mm width x 65mm depth
Weight	140g
Working temperature	0ºC ~ +55ºC
Storage temperature	-30ºC ~ +70ºC
Terminals (supply)	Lift type. Up to 6mm² section
According to the Standard	EN 60669-2-1
Protection degree	IP 20

The accumulation of dimmers inside the same installation box could need forced ventilation in order to avoid excessive heating of the dimmers..

Operation

- The dimming can be performed with different controls, depending on the configuration selected:



SLAVE	Slave mode
	Control by Potentiometer
MEM	Control by Pushbutton with Memory
NO MEM	Control by Pushbutton without Memory
AUTO	Control by Pushbutton with Status Memory
0-10V ⎓	Control by Pushbutton with Status Memory

- Pushbutton control:
  - Short pulse: switch ON/OFF.
  - Long pulse: dimming.
- Potentiometer control:
  - It is possible to control the load with a potentiometer of 10Kohms.
  - At the minimum the load will be turned-off.
  - As the potentiometer is turned clockwise the light level is increased.
- 0/10VDC Signal control (active signal):
  - Any external 0-10VDC power supply can be used, isolated or not (PLCs,...).
  - 0V: the load is switched-off.
  - 10V: the load is switched-on at maximum.
- Master/Slave configuration:
  - This configuration can be used when the load exceeds the maximum load that supports the dimmer.
  - In this way, it is possible to distribute the load across multiple dimmers and extend the load.
  - For this it is necessary to spread the load on different lines, each dimmer controlling its maximum permitted load.
- Anti-panic system:
  - If this option is not used, keep the bridge between terminals (-) and (AP), thus the operation of the dimmer is normal.
  - If jumper is removed, the dimmer applies the maximum power to the load and it does not respond to the orders.

Installation

Follow these steps when installing:

1º - Configure an operating mode with the selector knob.

2º - Disconnect the power supply of the installation.

3º - Insert the dimmer on the DIN-rail of the electric cabinet. Avoid placing it together with other sources of heat, like other dimmers.
Consider the most appropiate or ventilated place.
We recommend at least one module gap between dimmers and forced ventilation in some places.

4º - Select a wiring diagram and do the installation depending on the desired operation mode.

5º - Connect the power supply.

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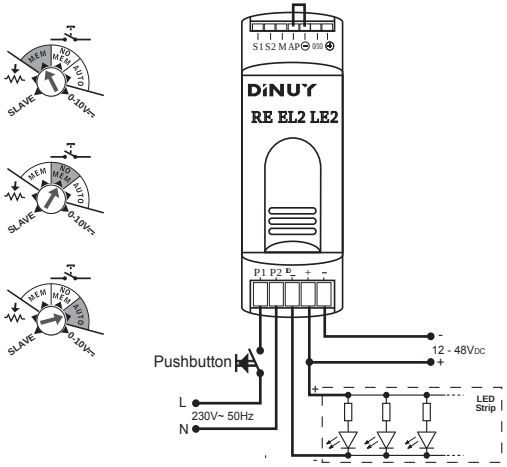
Example 1 Controlled by Pushbutton

- Colocar el selector según el modo de funcionamiento deseado en una de las siguientes posiciones:

· **MEM**: Lights will be turned on at the same level than when turned off for the last time.

· **NO MEM**:Lights will be turned on at maximum level.

· **AUTO**: Lights will be turned on at the same level than when turned off and also htey will maintain the working state (turned on/off and dimming level) when the power supply returns after an electrical cut-off.

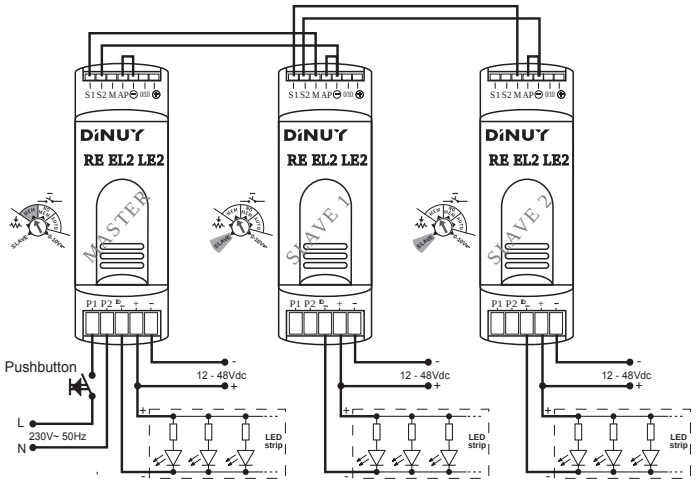


Example 2 Controlled by Pushbutton and increased with 2 slaves

- The Master dimmer must be set according to example 1. To configure as Slave the dimmers must have the selector switch in SLAVE mode.

- It is possible to add an unlimited number of slaves. The only limitations are the response time delay as slaves are added and the heat dissipation capacity of the installation box.

- It is recommended to leave a minimum separation between each dimmer (1 module separation).



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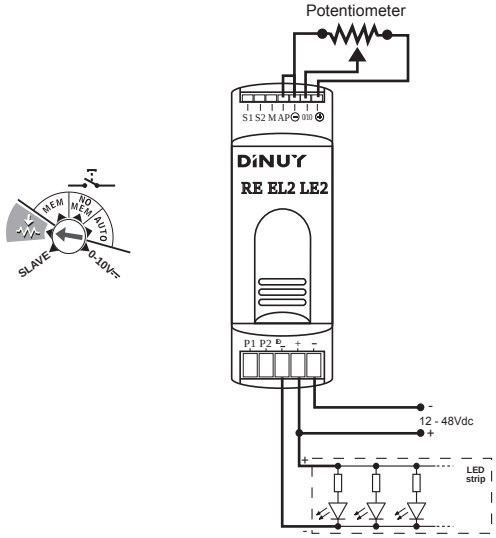
Example 3 Controlled by Potentiometer

- Selector switch must be at position.

- The lighting level depends on the position of the potentiometer.

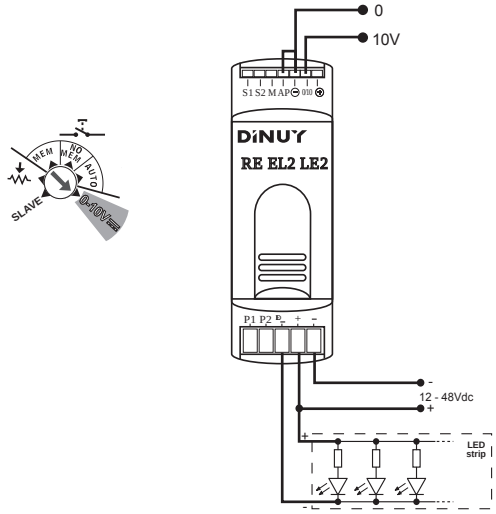
- Turning the potentiometer clockwise the light intensity will increase.



Example 4 Controlled by 0-10VDC Signal

- Selector switch must be at 0-10V position.

- The 0V level corresponds to the turned-off state. As the voltage increases to 10V the light intensity increases too.



Precautions and Limitations

- The mains supply must be protected according to existing rules.
- The devices must be installed without power supply and by qualified personnel.
- Use perfectly stabilized voltage sources.
- Luminous pushbuttons are not allowed.
- Do not exceed the maximum load of the device. Use the Master/Slave configuration to expand the load.
- Do not install dimmers next to each other. Leave free at least one module gap between them or other sources of heat and or place them in the lower part of the cabinet, where the heat may be lower.
- Design the installation cabinet properly to avoid heat problems. In some cases may require forced ventilation.
- The device may block if act overload protection and short circuit or thermal protection. Disconnect power, corrects the deficiency and turn the power on to the unit returns operational the device.

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