

MODUS[®]

PLD48

PIXEL DMX LED Driver



Instruction for use

Thank you for purchasing our product.

We have made every effort to ensure a highest quality of our products to meet your expectations.

Should you have any comments please let us know.

We will be grateful for all suggestions to help us to manufacture even better products, products to fulfill your expectations,

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1. General description

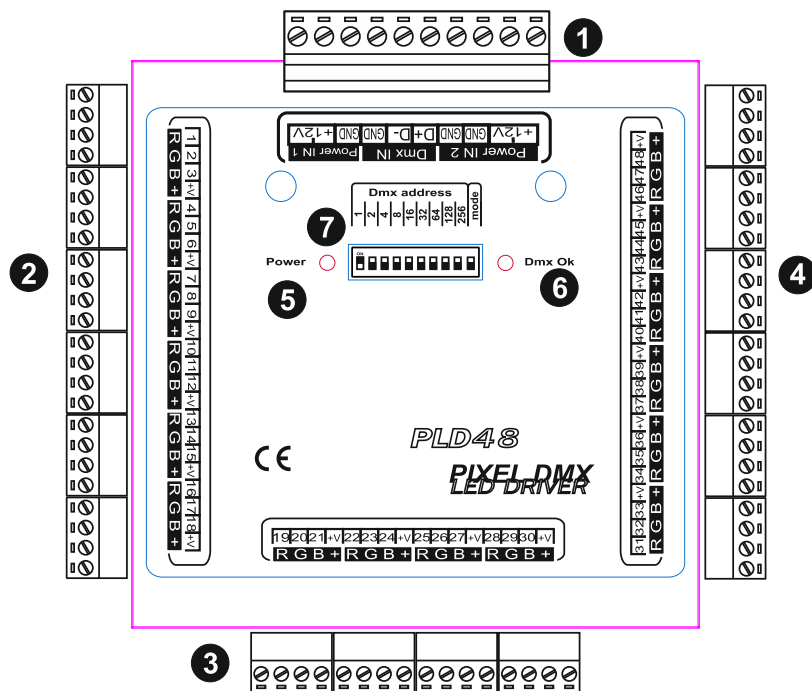
The PIXEL DMX LED driver is a 48-channel device to control RGB LEDs (LED strips, single diodes, modules etc.). The current loadability of every input is 500mA. Supply from a safe source 12VDC. Ideally suited for assembly of multi-channel matrices of LED pixel - RGB, controlled by the DMX 512 protocol. Drivers polarization enables the connection of LEDs in a common plus system (common anode). Due to a metal housing we can install a controller at places hard to reach. A system of separable screw joints we use facilitates disassembly. Every LED controlled output is secured against an overload. These protections protect not only a controller but as well a LED installation against a damage. In case of overload only this channel is turned off where a defect occurred. With such a defect remedied the driver is back to normal operation. Our device is also provided with an anti-short circuit and surge protection of the DMX512 signal line. The driver is provided with integral testing programs for a quick localization of possible assembly mistakes. A large 9-bit control definition and dimming characteristics adapted to the human eye sensitivity causes the lighting intensity to change in a linear and infinitely variable way. The driver refreshing frequency PWM (Pulse Width Modulation) is 500 Hz.

2. Basic safety conditions

The PIXEL DMX LED driver 48 x 500 mA is a device supplied with the 12 VDC safe voltage from a dedicated power supply, however, during its installation and use the following rules must be absolutely observed.

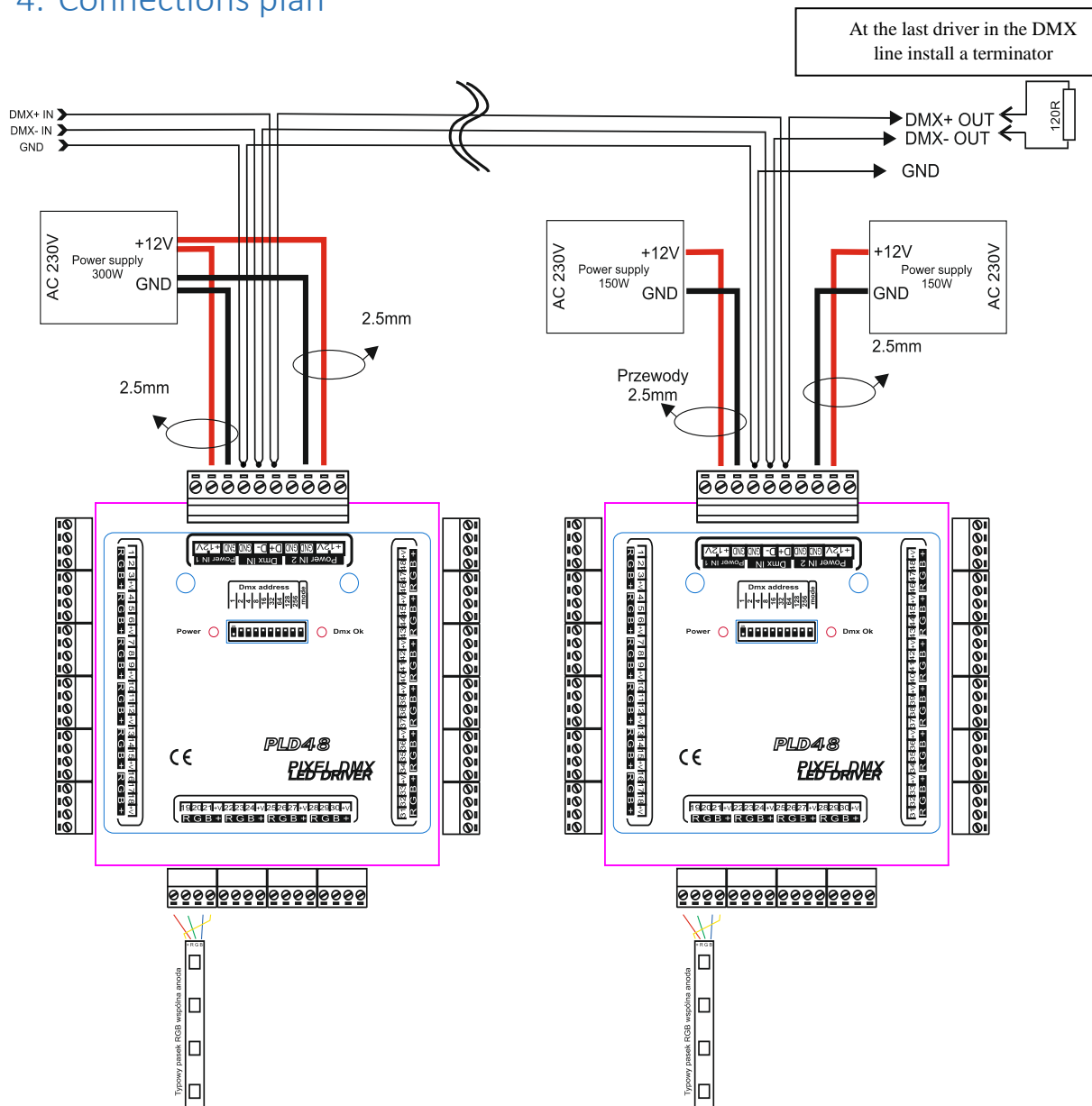
- The module must be made by an authorized person and according to its instruction.
- The device can be connected only to a regulated voltage of a loadability according to technical data.
- The module is designed for internal use. In case it is used outside it must be protected against atmospheric impact.
- Protect all wires from mechanical and thermal damage.
- Carry out all repairs with the supply switched off.
- Do not connect a device to a supply source when its damages are visible.
- Absolutely protect the PLD 48 against contact with water and other fluids.
- Avoid sudden shocks especially against a fall.
- Do not switch the device in spaces of the relative humidity above 90%.
- Do not use the device in spaces, where the temperature is lower than +20⁰C or above +40⁰C.

3. Description of the device



1. Power supply joint (GND, +12V) and DMX signal joint
2. Output joints, channels 1-18
3. Output joints, channels 19-30
4. Output joints, channels 31-48
5. Supply power indicator light
6. DMX512 signal presence indicator light
7. DIP Switch 10, setting DMX address and activation of built-in testing programs and scenes

4. Connections plan



LEDs are connected to control and supply outputs in a way presented in the figure. On every line there can be a defined amount of light, which depends on the received power and the loadability of every line is max. 500mA. Therefore with all receivers connected sum up all lines and select a feeder of an appropriate power.

CAUTION!

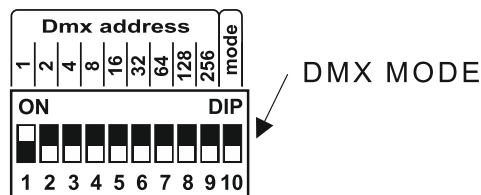
Current loadability of a single connection shall not exceed 10A!!!

In order to increase the current loadability of the power supply joint attach power supply leads parallel to a number of proper inputs (e.g. to attach 2 wires to one pin) to increase the permissible current. The driver is provided with 2 power supply inputs - one for the first 24 channels and the second for channels 24 - 48. Connect these to one feeder or to two feeders.

5. Setting the DIP SW (DMX mode, Stand-Alone Mode)

5.1. DMX mode

A 10-position DIP SW is built into the PLD48 driver. It allows both setting the DMX address and selection of built-in programs and scenes. For selection of the operation mode use the switch No. 10 ("mode"). With the switch at OFF the driver is operating in the DMX mode and at the 1 - 9 positions of switches we set the first channel address. The device will engage 48 successive DMX channels. The address of the first channel is set with the binary code. During operation in DMX mode with a proper control signal the DMX OK control light blinks with a 0.5 HZ frequency. If the signal is not proper, the control light is out. See below for an example of the DMX address setting.



5.2. Stand-alone mode

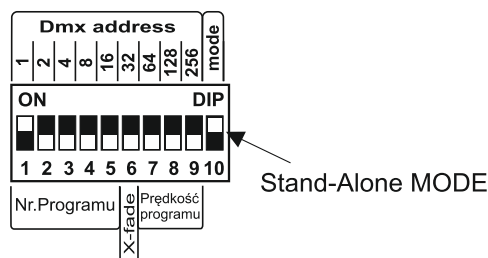
In case the switch No. 10 ("mode") is at ON position the driver recreates the built-in programs and scenes. In this mode the device does not respond to the DMX control signal. The tasks of the other switches in this mode are the following:

From 1 - 5 - program selection (one from all 32 built in)

6 selects the kind of transition between program steps – an infinitely variable transition or a step by step transition (X-FADE)

From 7 - 9 selection of the program recreation speed (7 speeds)

While the controller operates in this mode the DMX OK indicator light blinks with a 4HZ frequency.



6. Maintenance and repairs

The device comprises no elements you can repair yourself. In the event of an incorrect operation report to the seller or manufacturer.

Caution!

All single-handed repairs can cause irreparable damages or some threats.

7. Technical parameters

DMX channels 512

Power supply: 12 VDC

Power consumption: 24A max.

Number of output channels: 48

Output loadability: Max. 0.5A / channel

Dimensions:

Width 130 mm

Height 130 mm

Depth 24 mm

8. Contact

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