

PX 163

MATRIX DRIVER 48 x 500mA

Manual



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Manufacturer reserves the right to make modifications of the product in order to improve device operation.

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1. General description

The PX163 is a 48-channel driver for RGB matrix systems.

Matrix Driver 48 x 500mA is perfect device to control of illumination of big areas composed of many modular elements. The facades - LED screens or illuminated floors can be used as an example.

A built-in DMX signal receiver enables to control all 48 channels using the DMX-512 protocol. A wide range of power supply voltage (7 - 24V DC) and a high outputs load capacity (up to 0.5A per channel) allow to connect great number of LEDs and - what follows - achieve the effect of a steady illumination of the whole surface. By dint of 8-bit resolution the control of particular channels is completely smooth. The additional advantage is implementation of a high-tech solution - "flicker-free" control frequency, it allows to use the PX163 driver in the installations created for TV industry applications.

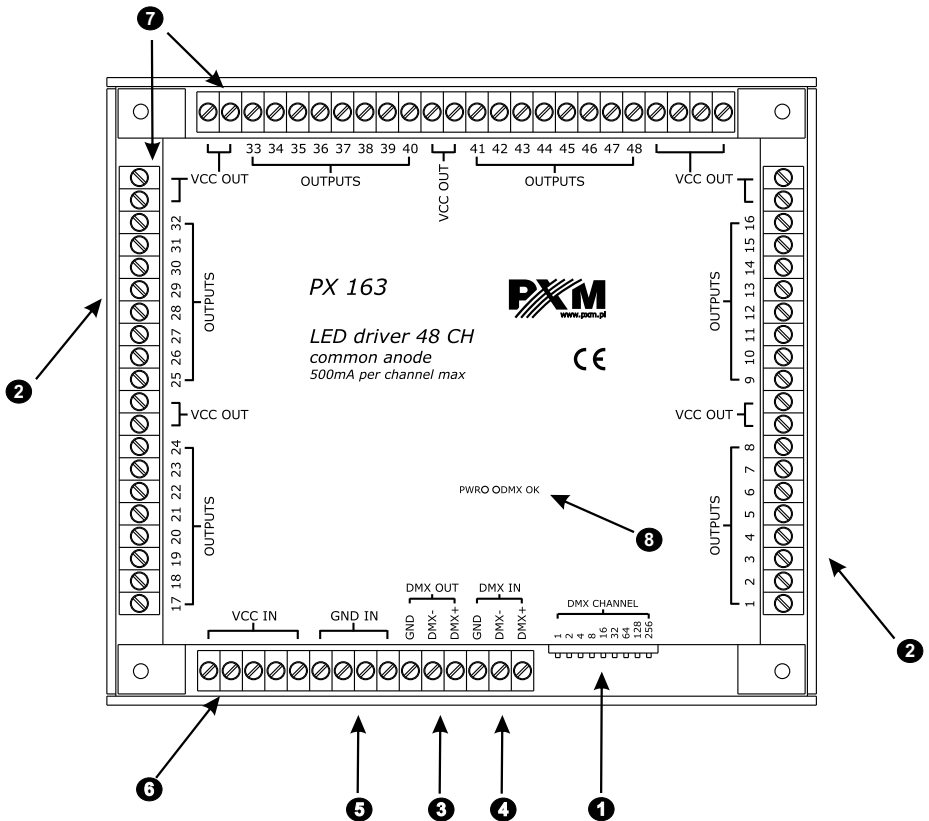
The driver is manufactured in a "common anode" version, what allows to connect LEDs on a common "+" wire. Small and flat casing of dimensions 158 x 140 x 35 mm is adapted for on-wall mounting. The terminal block connectors guarantee a quick and easy installation.

2. Safety conditions

MATRIX DRIVER 48 x 500mA powered with safe voltage 7-24V; however, during its installation and use the following rules must be strictly observed:

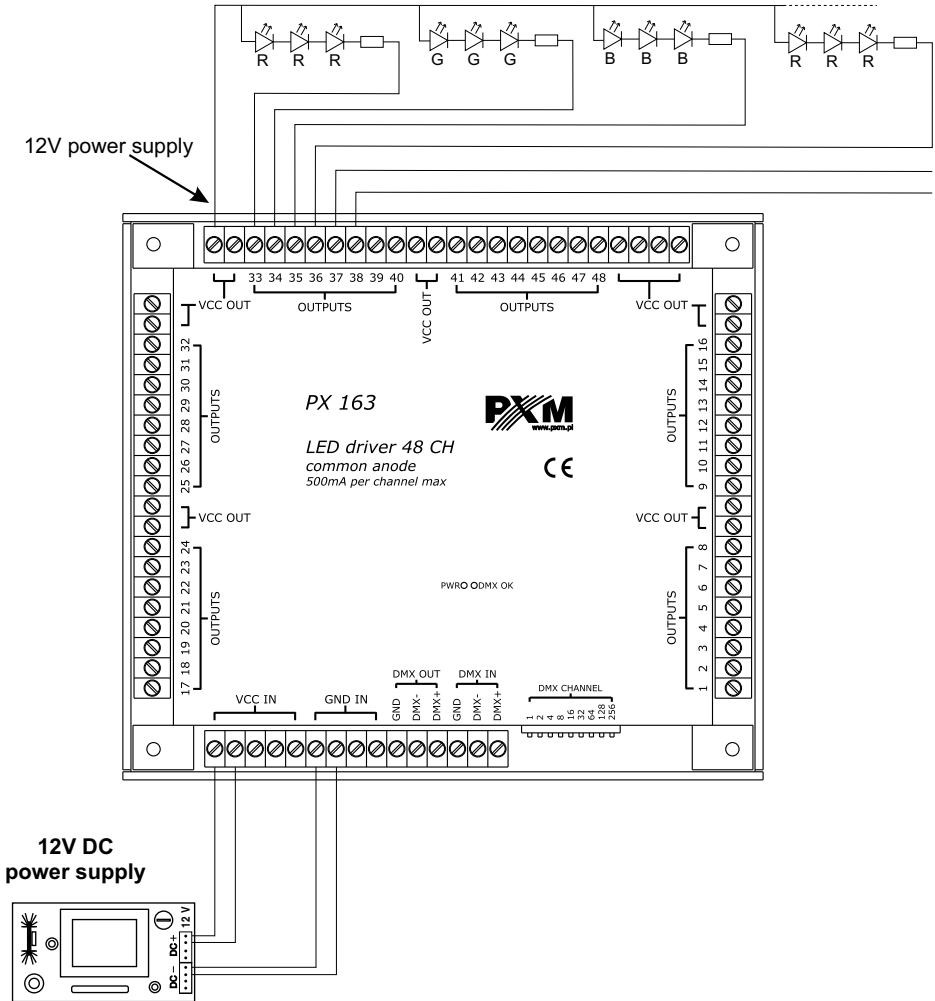
1. Installation of equipment, in particular, power connection should be made by a licensed person, in accordance with this manual.
2. The device may only be connected to DC current (stabilized voltage) with current-carrying capacity compatible with technical data.
3. Product is designated only to indoor usage. In case of any outdoor usage it should be protected against any weather conditions.
4. All the conductors should be protected against mechanical and thermal damage.
5. In the event of any conductor damaging, it should be replaced with the one of the same technical specification.
6. Connection of DMX signal should be made with shielded conductor.
7. All repairs and connections of outputs or DMX signal can only be made with power off.
8. PX163 should be strictly protected against contact with water and other liquids.
9. All sudden shocks - particularly dropping - should be avoided.
10. The device cannot be turned on in places with humidity exceeding 90%.
11. The device cannot be used in places with temperature lower than +2°C or higher than +40°C.
12. For cleaning use only a damp cloth.

3. Product description



- ① DMX CHANNEL
- ② Control outputs: 48 (OUTPUTS)
- ③ DMX output (DMX OUT)
- ④ DMX input (DMX IN)
- ⑤ GND input: 4 (GND IN)
- ⑥ Power supply input: 5 (VCC IN)
- ⑦ Power supply outputs: 16 (VCC OUT)
- ⑧ Power and DMX status LEDs

4. Connection scheme



Receivers are connected to the outputs and power supply, as shown in the figure above. For each line you can determine number of light sources, depending on the wattage and the carrying capacity of each line is 500mA max. Therefore, when connecting all receivers, sum all the lines and choose a suitable power supply.

WARNING!!!

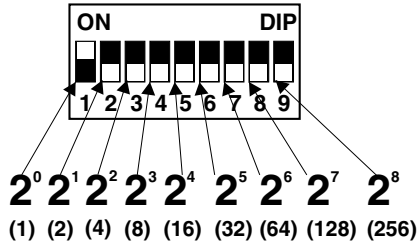
Current carrying capacity of a single power supply line can not be greater than 10 A!!!

In order to increase the current carrying capacity of the connection, make connections to several input lines.

5. DMX address setting

DMX CHANNEL

PX 163 is using 48 consecutive DMX channels. Address of the first channel is set in binary code using a switch DMX CHANNEL. Setting the value is accomplished by adding the value of component bits. Here are some examples of setting the start address.

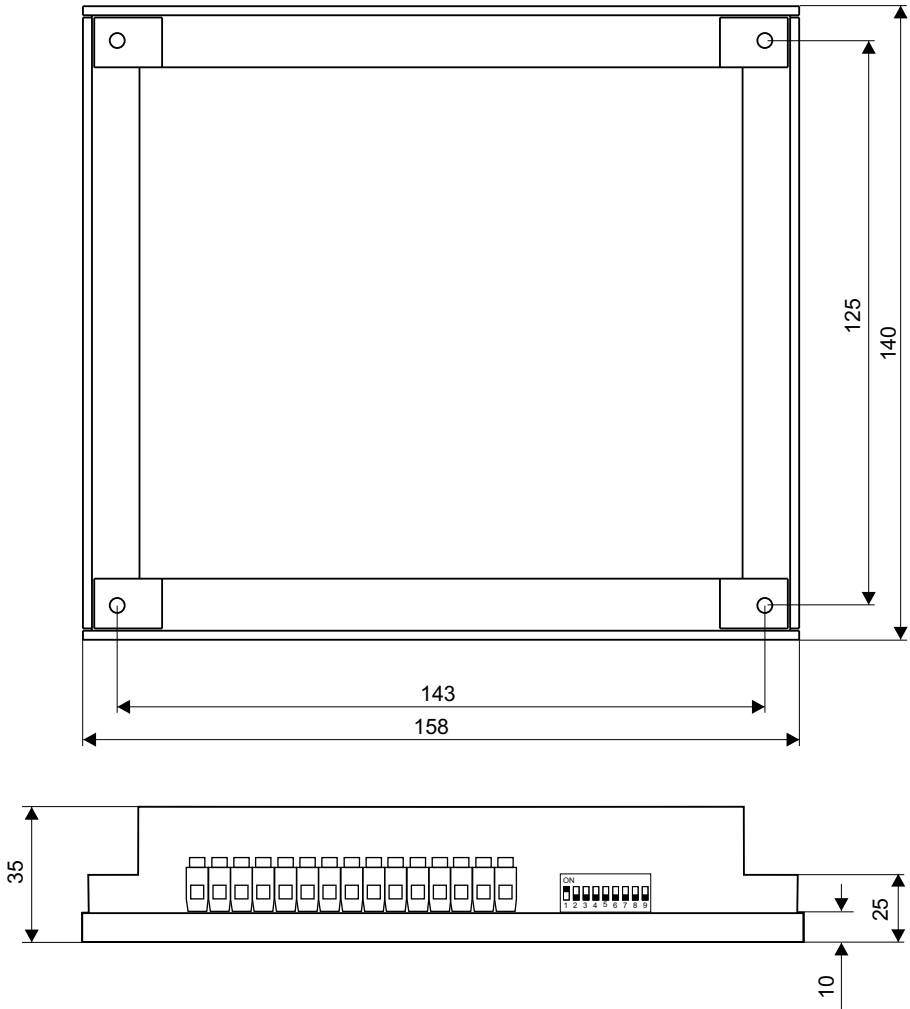


1		11		100	
2		12		101	
3		13		102	
4		14		103	
5		70		104	
6		71		105	
7		72		249	
8		73		250	
9		74		251	
10					

6. Brightness control frequency

The PX163 is using flicker-free technology, which allows to avoid unpleasant flicker effect caused by lack of proper synchronization between control signal and the LEDs. Applied refresh rate is 1 kHz.

7. Dimensions



8. Technical Data

DMX channels: 512
power supply: 7 - 24V DC
current consumption: 24A max.
number of output channels: 48
outputs load capacity: max. 0,5 A / channel

dimensions: width: 158 mm
height: 140 mm
depth: 35 mm



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DECLARATION OF CONFORMITY according to guide lines 89/336/EWG

Name of producer: PXM s.c.

Address of producer: ul. Przemysłowa 12
30-701 Kraków, Poland

declares that the product:

MATRIX DRIVER 48 x 500mA

Name of product:

PX 163

Type:

answers the following product specifications:

EMC: PN-EN 55103-1
PN-EN 55103-2

Additional informations:

1. GND wire of the power cable must be connected to an efficient grounding system.

PXM S.C.

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Kraków, 01.06.2008

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