

PX097

# DMX Repeater

User manual



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

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# 1 Description

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DMX Repeater is a universal repeater and splitter of the DMX signal.

The device allows to create ramifications in the complex stage DMX installations and to amplify the DMX signal, that means, enables to connect next 32 receivers and to lengthen the DMX line. According to the DMX standard, the receivers in a DMX route must be connected in series.

In addition, in the last device a terminator must be installed. It is impermissible to split the DMX line by simply "splitting the wire". Because the connection of receivers into one chain can be very troublesome in the case of complex installations, the possibility of creating DMX branching and amplifying the control signal is provided, which is what DMX Repeater provides.

With the PX097 repeater you can split the incoming DMX signal into two independent branches and amplify the DMX signal. The device has an optical isolation between input and two outputs. Obviously, connecting the receivers to particular output routes must be performed according to the rule of line in series, with the terminator installed in the last device.

## 2 Safety conditions

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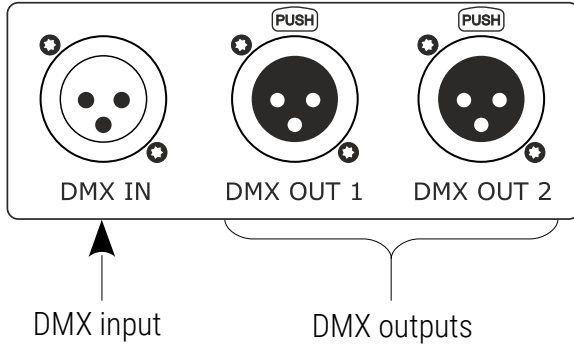
Repeater PX097 is a device powered directly from standard 230V AC grid, what cause electric shock when safety rules are not observed. Therefore it is necessary to observe the following:

1. Repeater installation must be performed by a person holding the appropriate qualifications, according to the manual.
2. Repeater can be connected only to socket which has protecting installation in working order (3-wire grid).
3. All the conductors should be protected against mechanical and thermal damage.
4. In the event of damage to any of the wires, replace it with a cable with the same technical parameters.
5. Only a shielded cable should be use to connect the DMX signal.
6. Do not connect the device with a damaged (cracked) housing.
7. Repeater should be strictly protected against contact with water and other liquids.
8. All repairs and connection of the DMX signal can only be carried out with the power off.
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. Cleaning only with damp duster – PX097 has to be cut off the power supply.

### 3 Connectors

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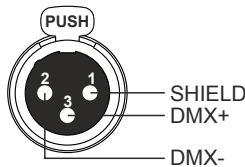
### 4 DMX signal connection

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Frequently, the seemingly fault operation of DMX devices is caused by their incorrect connection in the DMX network. DMX protocol strictly defines the rules for creating a control installation.

#### 4.1 Sockets

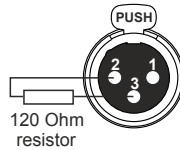
The drawing describing the individual outputs is the socket.



**NOTE!** The DMX cable shield cannot be connected to the device ground.

## 4.2 Terminator

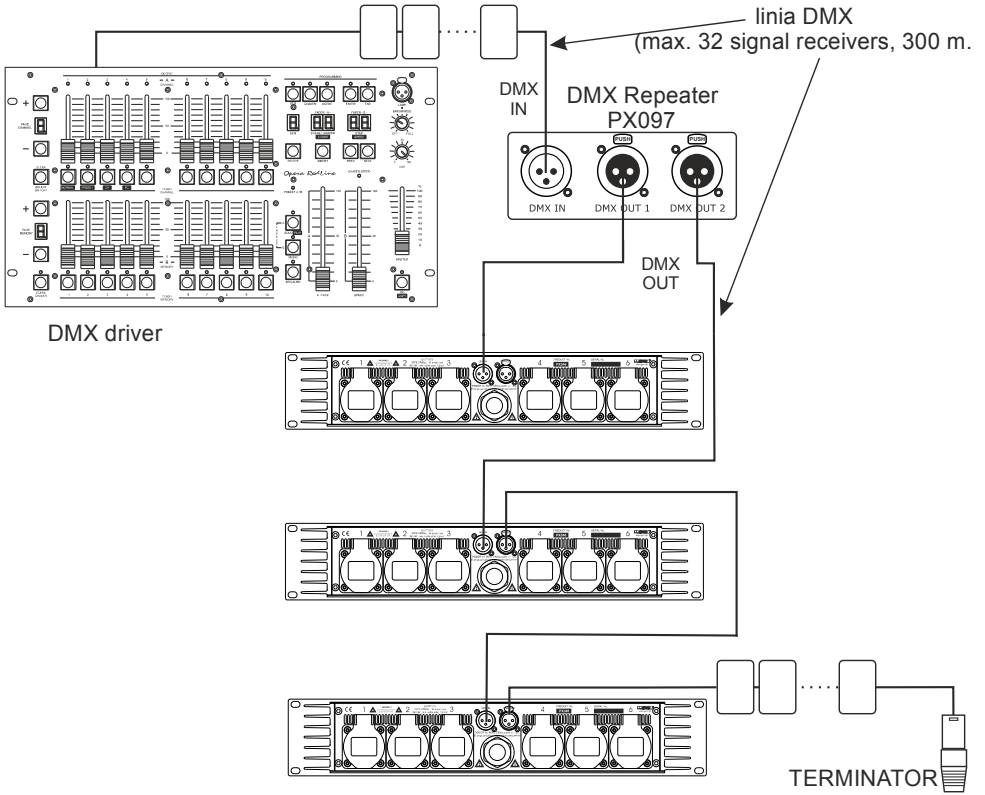
According to the DMX standard, the last device on the line should have a terminator (120 Ohm resistor) connected.



## 4.3 Rules for creating DMX connections

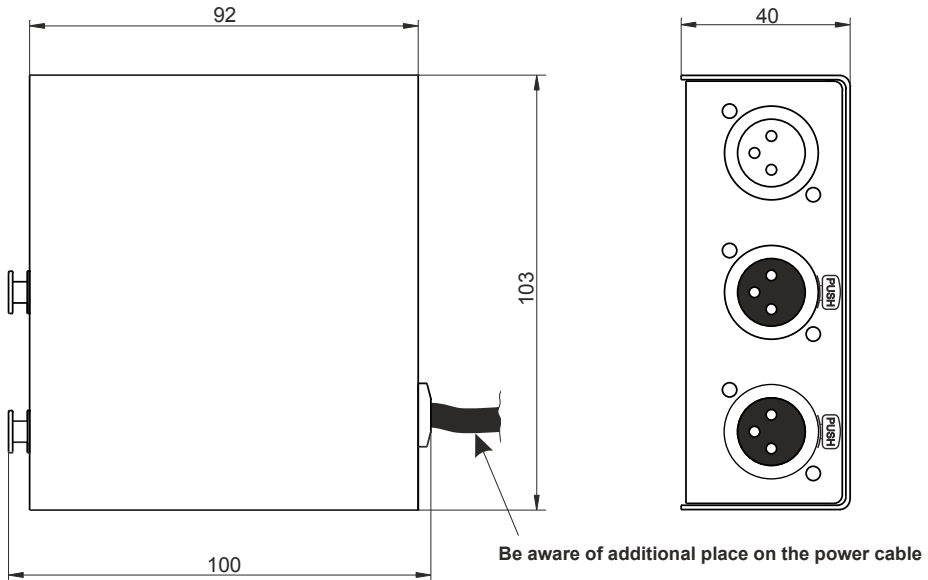
1. To connect the device application of the microphone cable is strictly recommended (two strands in a shield).
2. The device have to be connected in series.
3. When the PX097 repeater is applied, each of two outputs is treated as a beginning of a new DMX line.
4. The maximal number of devices in a DMX line is 32.
5. The maximal length of a DMX line is 300 meters.
6. In the last device of each DMX line between 2<sup>nd</sup> and 3<sup>rd</sup> pin of an XLR output socket a terminator (120 Ohm resistor) must be installed.

# 5 Connection scheme



## 6 Dimensions

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## 7 Technical data

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type	PX097
DMX I / O lines	1 / 2
DMX line connectors	3- / 5-pin XLR plug / socket
isolation I / O breakdown voltage	> 5000V
power supply	230V AC, 50Hz
power consumption	6,5W
housing material	steel
weight	0.7kg
dimensions	width: 103mm height: 92mm depth: 40mm



## DECLARATION OF CONFORMITY

PXM Marek Żupnik spółka komandytowa  
Podłęże 654, 32-003 Podłęże

we declare that our product:

*Product name:* DMX Repeater

*Product code:* PX097

meets the requirements of the following standards, as well as harmonised standards:

PN-EN IEC 63000:2019-01

EN IEC 63000:2018

PN-EN 61000-4-2:2011

EN 61000-4-2:2009

PN-EN IEC 61000-6-1:2019-03

EN IEC 61000-6-1:2019

PN-EN 61000-6-3:2008

EN 61000-6-3:2007

and meets the essential requirements of the following directives:

2011/65/UE **DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL** of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment  
Text with EEA relevance.

2014/30/UE **DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL** of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility (recast)  
Text with EEA relevance.

  
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