PX165-IP-TH
Splitter
DMX IP TH

User manual

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

1   Description

A splitter, a DMX signal distributor, allows for the creation of branches in extensive DMX installations. Connecting a large number of receivers in series can be troublesome, which is why the possibility of creating branches of the DMX track using a splitter was created.

With the PX165-IP-TH you can split the input DMX signal into 4 independent branches. The individual output lines are galvanically separated from both the input and from each other. The splitter operates in *bypass* mode – the input signal is exactly the same as the output.

The DMX IP TH splitter is manufactured in an IP65 housing adapted for mounting on standard 35mm DIN rails.
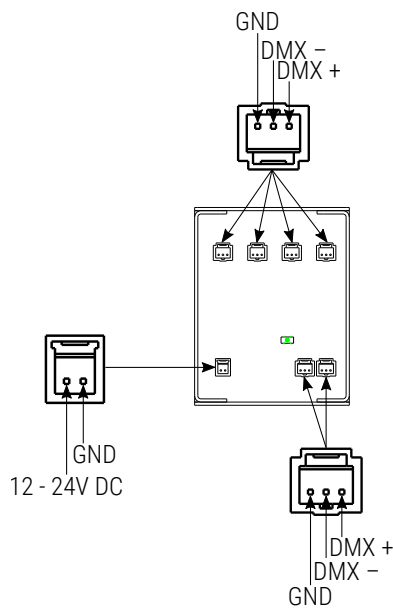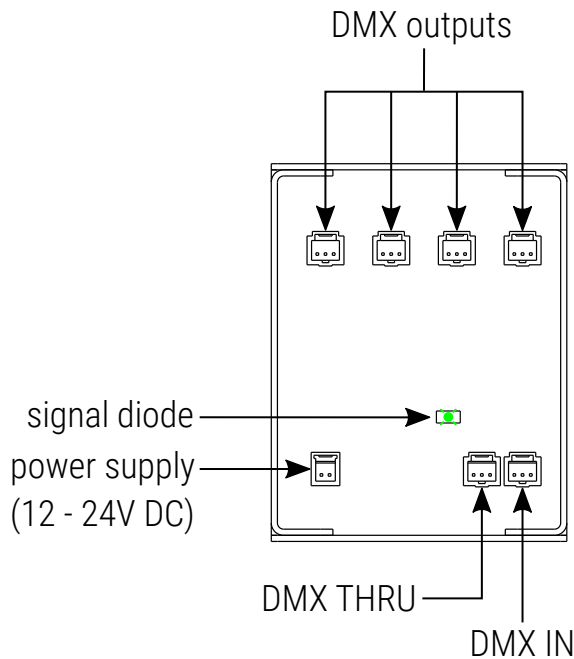
The set includes:
- 1 x power cord with plug,
- 6 x DMX cables with plug.

2   Safety conditions

PX165-IP-TH s a device powered with safe voltage up to 12 – 24V DC; however, during its installation and use the following rules must be strictly observed:

1. The device may only be connected to 12 – 24V DC (stabilized voltage) with current-carrying capacity compatible with technical data.
2. All the conductors should be protected against mechanical and thermal damage.
3. In the event of damaging any conductor, it should be replaced with a conductor of the same technical data.
4. Only a shielded cable should be use to connect the DMX signal.
5. All repairs and connections of outputs can only be made with cut off power supply.
6. All sudden shocks, particularly dropping, should be avoided.
7. Do not connect a damaged (cracked) device to the power supply.
8. Use only a slightly damp cloth for cleaning – the device must be completely disconnected from the power supply at this time.

3   Connectors and control elements

DMX outputs

signal diode

power supply
(12 - 24V DC)

DMX THRU

DMX IN

GND
DMX −
DMX +

GND
12 - 24V DC

DMX +
DMX −
GND

4   Connecting the DMX signal

The PX165-IP-TH must be connected to the DMX line in series, without branches on the control cable. This means that a control cable must be run to the *DMX IN* connector on the PX165-IP-TH and then from the *DMX THRU* connector to the next DMX receivers.

If the PX165-IP-TH is the last device in the DMX line (there is no receiver connected to the *DMX THRU* output), a terminator – a 120 Ohm resistor – should be soldered to the red and blue wires in the *DMX THRU*.

NOTE! The terminator and GND wire (black) should be protected from moisture, for example with heat shrink tubing.

Each of the four splitter outputs is treated as the start of a new DMX line. A maximum of 32 devices can be connected with a DMX line length of up to 300 meters. In the last device, a terminator must be connected on each DMX output line.

A plug should be connected to the unused DMX output connector and the wires should be protected from moisture, e.g. with heat shrink tubing.

NOTE! A maximum of 4 splitters can be connected in a cascade (the diagram is on the next page).

max. 32 devices
(including splitters)

max. 4 splitters in cascade

max. 32 devices
(including splitters)
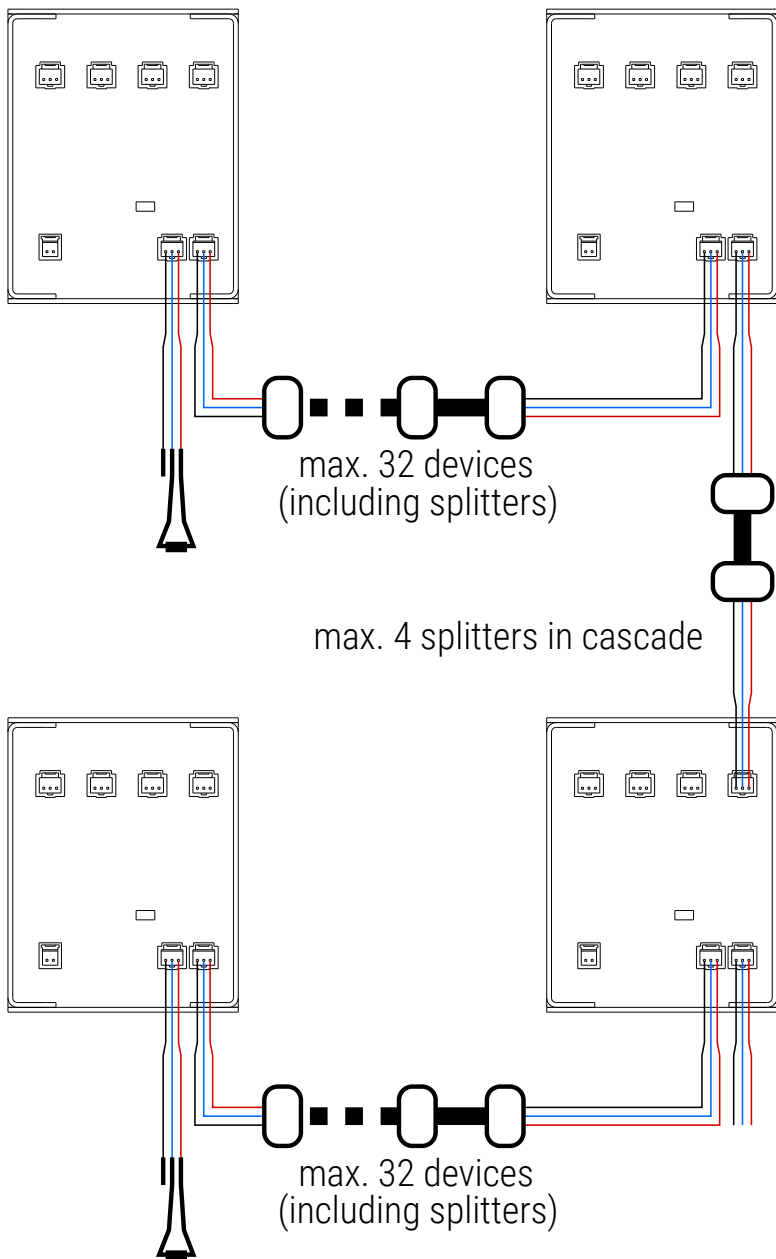
5   Indicator lights

There are diodes on the device housing that indicate the operating status of the device.

Action	Function
green diode flash every ~3s	the device does not receive the DMX signal
green diode flash every ~1s	the device receives a DMX signal

6   Device update

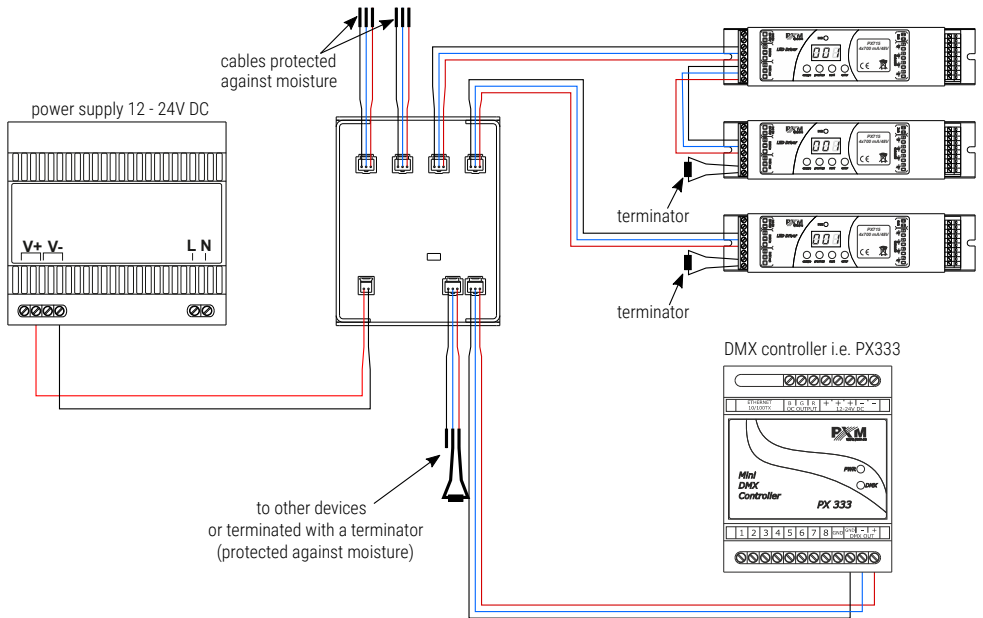The update is possible using the PX313 USB/RS485 In device – details can be found in the manual for this module.

The device update was also presented in detail on our YouTube channel.

https://www.youtube.com/watch?v=TKBV03szddU
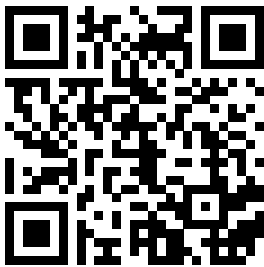
7   Connection scheme
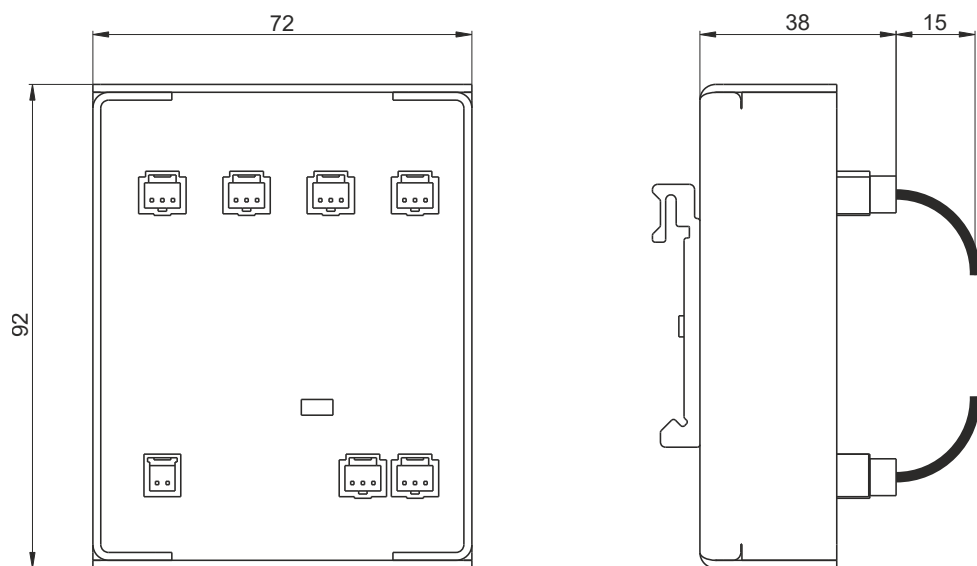

Wires:

- <u>power supply:</u>
  - 12 – 24V DC red
  - GND **black**
- <u>DMX:</u>
  - DMX + red
  - DMX – blue
  - GND **black**

8   Dimensions

NOTE! Remember to leave at least 1.5 cm for cables connected to the device using plugs.

9   Technical data

type	PX165-IP-TH
power supply	12 – 24V DC
DMX channels (IN = OUT)	24 – 512
number of DMX inputs	1
number of DMX outputs	4
number of modes	1 (bypass)
optical isolation of DMX lines	yes
insulation breakdown voltage IN/OUT	>1000V
power consumption	max. 5W
tightness class	IP65
weight	0.35kg
dimensions	width: 72mm heigth: 82mm depth: 38mm (+15mm for cable)

DECLARATION OF CONFORMITY

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

we declare that our product:

Product name: Splitter DMX IP TH

Product code: PX165-IP-TH

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
PN-EN 60529:2003	EN 60529:1991

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 harmonization of the laws of the Member States relating to electromagnetic compatibility (recast)
Text with EEA relevance.

2014/35/UE **DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL** of 26 February 2014 on the harmonization of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits

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