PX838-RDM

LED Lamp Splitter

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

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 PX838-RDM 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 can operate in three modes:

- *filtering* – incoming RDM packets are discarded and the output DMX signal is completely regenerated with the following parameters:
  - Break – 320µs,
  - MAB – 30µs,
  - MBF – 10µs,
  - WAIT – 200µs,
  - the number of sent channels is 24 – 512 depending on the number of input channels – PX838-RDM recognizes how many DMX channels are received,
- *bypass* – the output signal is exactly the same as the input signal – RDM is not supported,
- *normal* – the splitter allows for bidirectional transmission of RDM packets.

PX838 is a device that allows you to connect many LED lamps to one power supply and DMX controller. It is adapted to connect 4 lamps. If all output connectors are not occupied in the LED splitter, jumpers should be used between the pins of the DMX control signal.

The splitter is placed in a plastic housing with IP65 protection class.

The product is dedicated to work with PX837-H and PX837-F lamps.

Wire colors

Version 1

- white – V+ (24V DC),
- brown – V-,
- yellow – DMX- IN,
- green – DMX+ IN.

Version 2

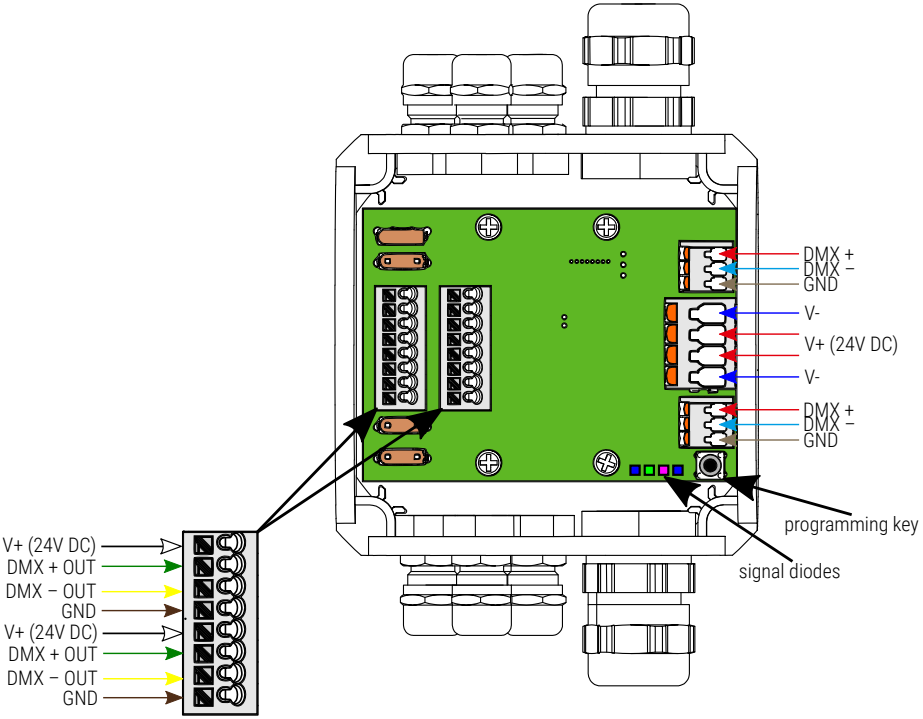
- red – V+ (24V DC),
- red-black – V-,
- green- black – DMX- IN,
- green – DMX+ IN.

2 Safety conditions

The PX838-RDM device is designed to distribute the 24V DC power supply and control signal to the PX837-H and PX837-F lamps, however, the following rules must be strictly observed during its installation and use:

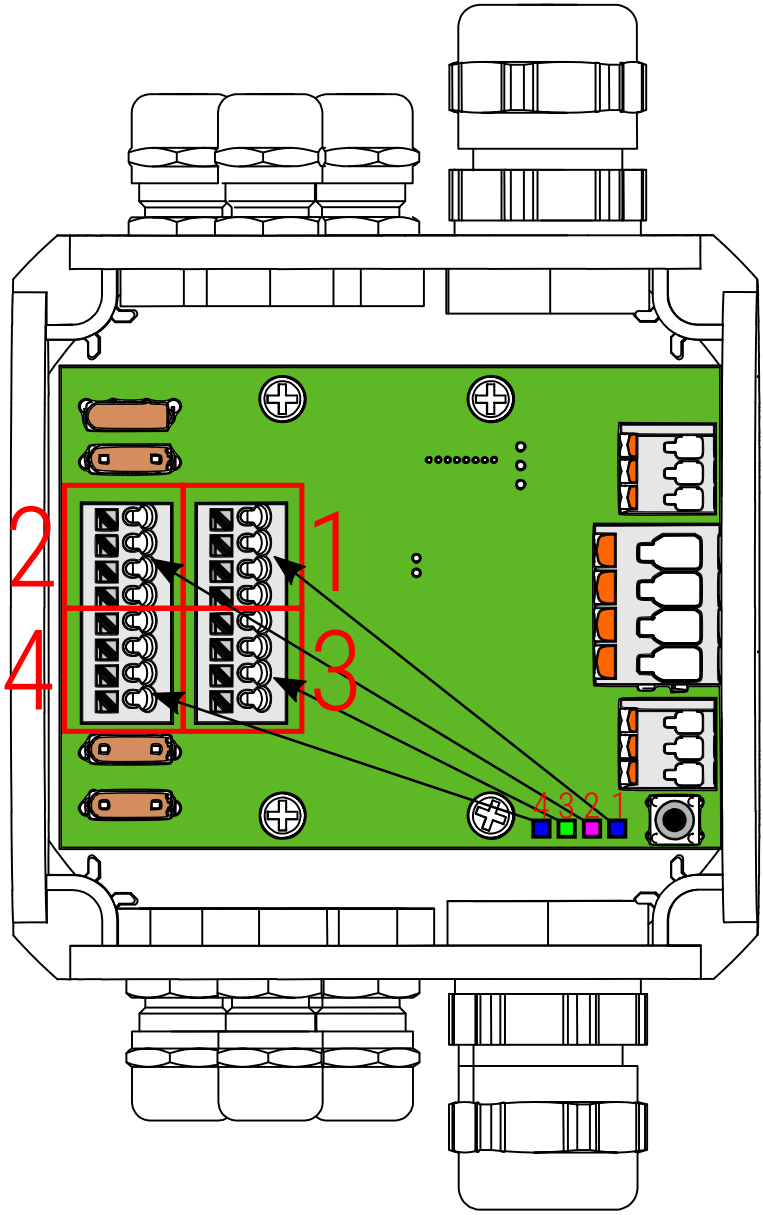
1. The device may only be connected to 24V DC.
2. All the conductors should be protected against mechanical and thermal damage.
3. In the event of damaging any conductor, it should be replaced with a conductor of the same technical data.
4. Only a shielded cable should be use to connect the DMX signal.
5. All repairs and connection of the DMX signal can only be carried out with the power off.
6. All sudden shocks, particularly dropping, should be avoided.
7. Clean with damp duster only.

3 Connector description



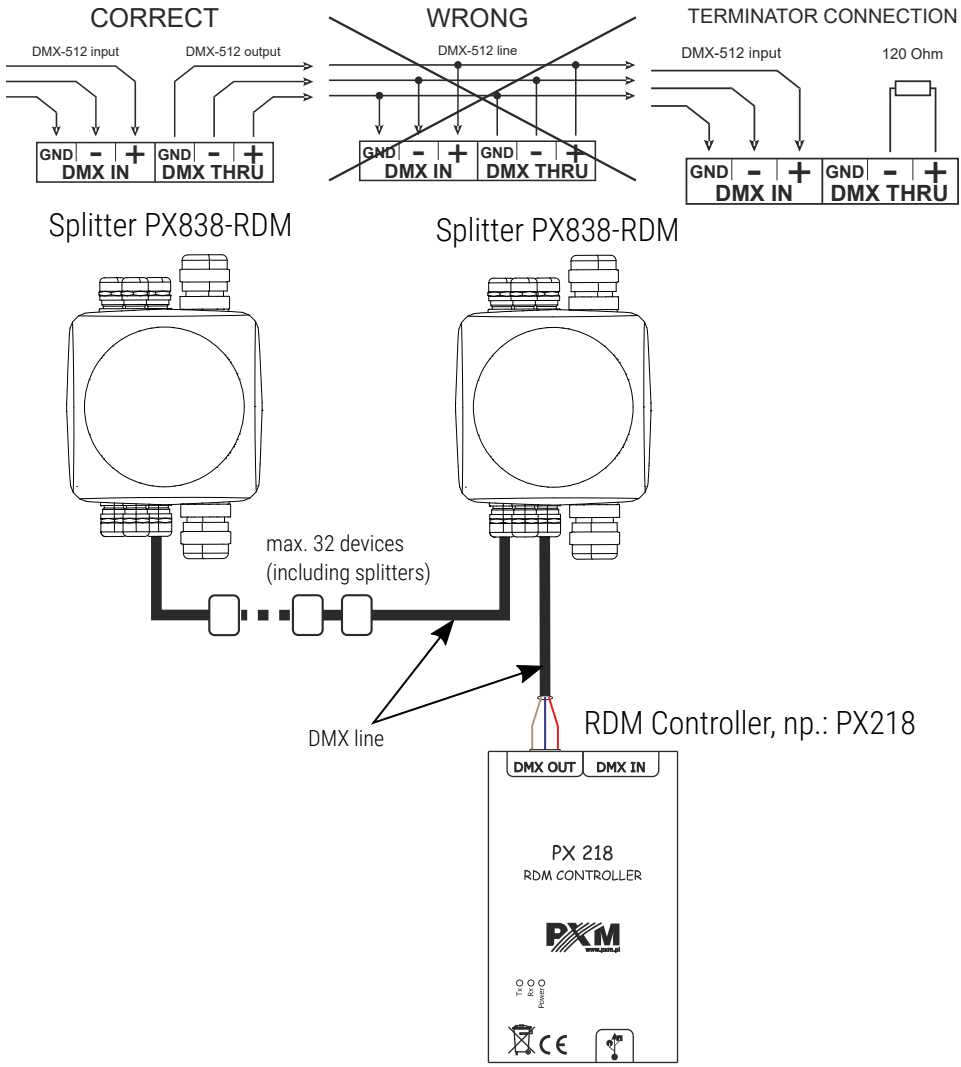
NOTE! The exact connection diagram can be found in the section 9. Connection scheme.

Diagram of diodes and outputs:



4 Connecting the DMX signal

If the PX838-RDM is the last device in the DMX line (there is no receiver connected to the ***DMX*** output), a terminator – a 120 Ohm resistor – should be connected to the ***DMX*** "***+***" and "***-***" terminals.



5 Indicator lights

Inside the device there are diodes indicating the operating status of the device.

Action	Function
all diodes flash every ~3s	the device does not receive the DMX signal
all diodes flash every ~1s	the device receives a DMX signal
Meaning of diode colors	
green	bypass
blue	mode with RDM support (normal splitter operation mode)
magenta	filtering

NOTE! The description of operating modes can be found in section 6. Output operating mode.

6 Output operating mode

Each output can be individually assigned one of the three modes indicated by the appropriate color of the diodes (5. Indicator lights):

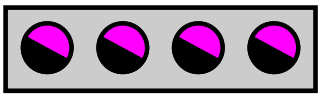
- *bypass* – the DMX signal is refreshed but the output signal is exactly the same as the input signal – RDM is not supported,
- *normal* – the DMX signal is refreshed – only in this mode RDM packets are transmitted bidirectionally,
- *filtering* – incoming RDM packets are discarded and the output DMX signal is completely renewed with the following parameters:
  - *Break* – 320µs,
  - *MAB* – 30µs,
  - *MBF* – 10µs,
  - WAIT – 200µs,
  - number of channels: 24 – 512*,

NOTE! The operating modes can be changed using the button located on the housing. An example of changing the operating mode is on the next page.

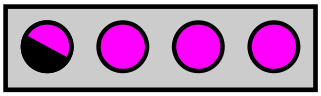
** – depending on the number of input channels – PX838-RDM recognizes how many DMX channels are received*

Example of changing the operating mode of output number 3 from *filtering* mode to *bypass* mode:

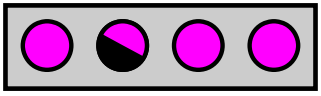
1. The diodes flash every ~1s or every ~3s (depending on whether there is a DMX input signal).



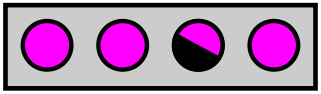
2. Press the button for ~2s.
3. The first LED flashes (or is responsible for the last edited output – in the example let's assume that the first one flashes), the rest light up.



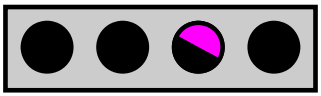
4. Click the button to go to the next output.
5. The second diode flashes, the others light up.



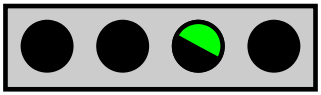
6. Click the button to go to the next output.
7. The third LED flashes, the others light up.



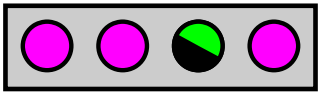
8. Output number 3 is selected.
9. Press and hold the button for ~2s.
10. The third LED flashes, the others go out.



11. Clicking the button changes the mode.



12. After changing the mode, press and hold the button for ~2s.
13. The third LED flashes, the others light up.

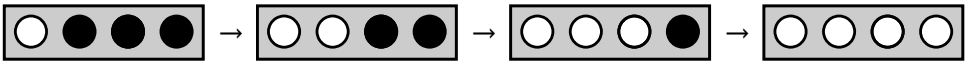


14. At this point you can repeat the steps for the other output by returning to point 6 or leave the device for ~10s – the LEDs will start flashing every ~1s or ~3s (depending on whether there is a DMX input signal).

7 Factory settings

To restore factory settings – *normal* mode on all outputs – press and hold the programming button while powering up until all the diodes light up white. When all the diodes light up white, you can release the button.

1. Press the button (keep pressed).
2. Turn on the power.
3. Wait until all the LEDs light up white.



4. Release the button.

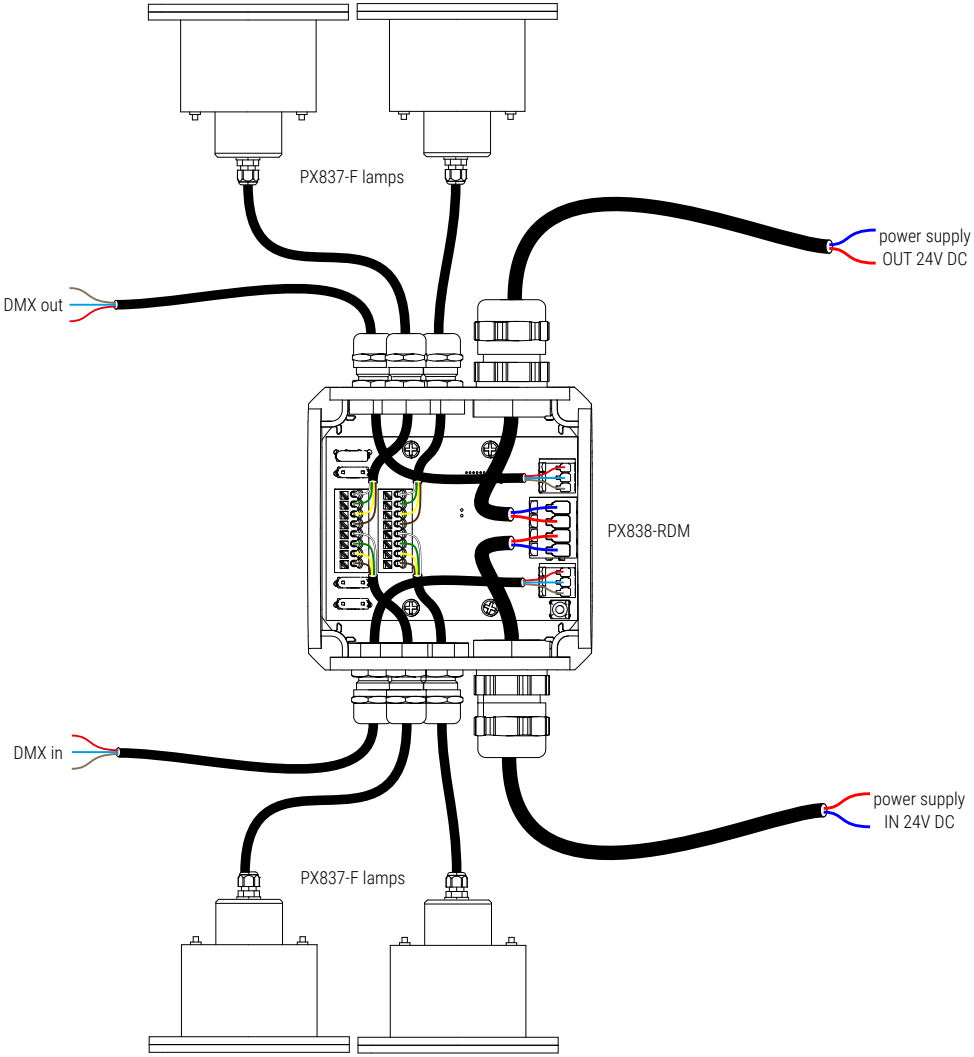
8 Device update

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.

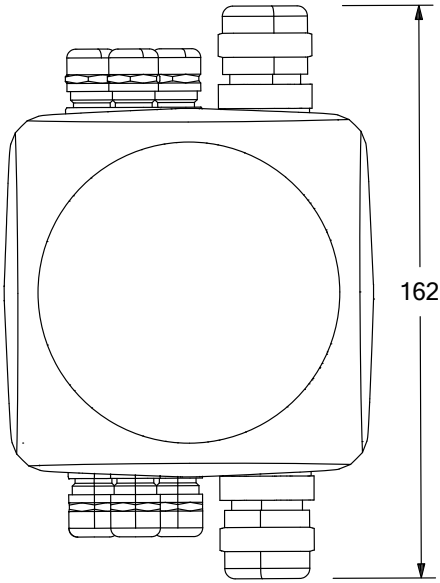
https://www.youtube.com/watch?v=TKBV03szddU

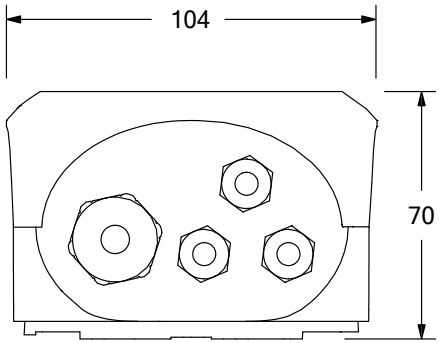
9 Connection scheme



NOTE! Insert cylindrical plugs into unused conduits and then screw the plugs shut to maintain the enclosure's seal. Plugs are included in the kit.

10 Dimensions





Cable diameter:

- power cord: 6 – 12mm
- DMX cable: 3.5 – 7mm
- lamp power cord: 3.5 – 7mm

11 Technical data

type	PX838-RDM
power supply	24V DC
DMX channels (IN = OUT)	24 – 512
number of lamp outputs	4
number of modes	3 (filtering / bypass / normal)
RDM protocol support	yes (in "normal" mode)
housing	plastic
optical isolation of DMX lines	yes
insulation breakdown voltage IN/OUT	>1000V
number of cable gland	8
power consumption	max. 5W
IP class	IP65
color	black
weight	0.3kg
dimensions	width: 162mm height: 104mm depth: 70mm

Podłęże, 26.01.2026

DECLARATION OF CONFORMITY

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

we declare that our product:

Product name:	LED Lamp Splitter
Product code:	PX838-RDM

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 IEC 61000-6-3:2021-08	EN IEC 61000-6-3:2021

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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