PX218

RDM Controller

User manual

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

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Soft. 2.3.x
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1 Description

RDM Controller is a device that allows to change product parameter settings (supporting the RDM protocol) connected to extensive installations using the DMX-512 protocol.

It should be emphasized that devices with a DMX receiver may not necessarily support the RDM protocol and as a result will not work with PX218.

PX218 uses the RDM (Remote Device Management)protocol, which is an extension of the DMX-512 protocol, to communicate with other products. The DMX protocol is assumed to allow one-way data flow, while its extension, the RDM protocol, can send information in two directions. Thanks to this, it is possible to receive and send information, and thus the ability to monitor the operation of the devices compatible with the RDM protocol and their possible configuration of operating parameters.

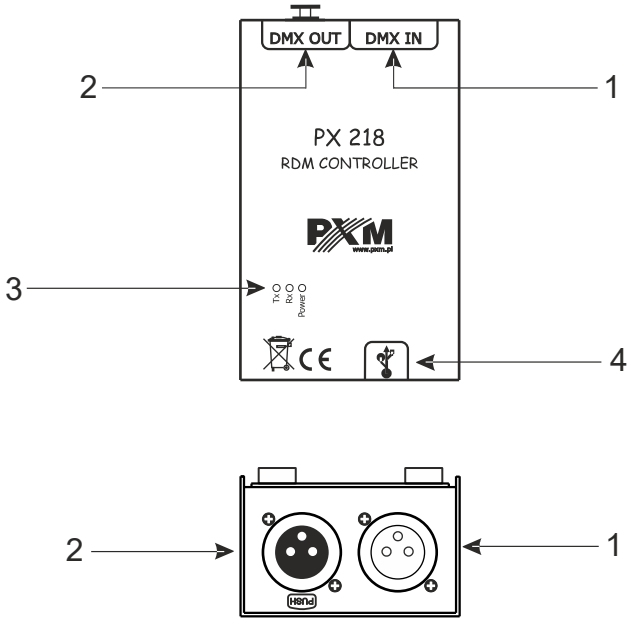
The DMX-512 standard input and output are used to connect to the DMX network. PX218 operation management is carried out using the program via a USB port. The application is available for download from the manufacturer's website (pxm.pl). To power the device, all you need is power supplied from a USB port on your computer.

2 Safety conditions

PX218 RDM Controller is a device powered directly from the USB port with safe voltage 5V DC, however, during its installation and use the following rules must be strictly observed:

1. The device can only be connected to the power supply directly from the USB port.
2. All the conductors should be protected against mechanical and thermal damage.
3. In case of damage to a conductor, it should be replaced with a conductor of the same technical parameters.
4. Connection of DMX signal can be made with a shielded conductor only.
5. All repairs, connecting and disconnecting of cables can only be made with cut off power supply.
6. The device should be strictly protected against contact with water and other liquids.
7. All sudden shocks, particularly dropping, should be avoided.
8. The device cannot be turned on in places with humidity exceeding 90%.
9. The device cannot be used in places with temperature lower than +2°C or higher than +40°C.
10. Clean with damp cloth only.

3 Connectors and control elements



1. Designations:
   2. DMX input connector (3-pin or 5-pin XLR male slot)
   3. DMX output connector (3-pin or 5-pin XLR female slot)
   4. Information diodes:
      - Power: power connection – orange diode
      - Tx: transferring data through PX218 – blue diode
      - Rx: receiving data through PX218 – green diode
   5. miniUSB interface (miniUSB type B)

4 Software installation

The software can be installed on Windows® 7 or later required. The procedure for installing the software varies depending on the operating system on the computer. Windows® 7 system is an example here.

Installation is as follows:

1. Open the installation file, a window warning about Windows® security will appear, select the *Run* option.
   The installation file is attached to the device on a CD or available for download from the manufacturer's website (pxm.pl).
2. The PX218 Installation Wizard will start, go to *Next*.
3. Select the directory where the software will be installed. Confirm your choice by clicking the *Next* button.
4. To install the PX218 software, select the components to be installed – select *PX218* and press *Next*.
5. Read the license agreement carefully, if you agree to the terms of the agreement, check *I accept the lenience* and click *Next* to continue the installation.
6. A window regarding the *Start menu shortcut* will appear, it is recommended to leave the default settings and select the *Next* button.
7. In the next window you will be informed that the PX218 is *Ready for installation*, select *Install* to install the program.
8. During the installation the USB driver installation window will appear, you must agree to the installation.

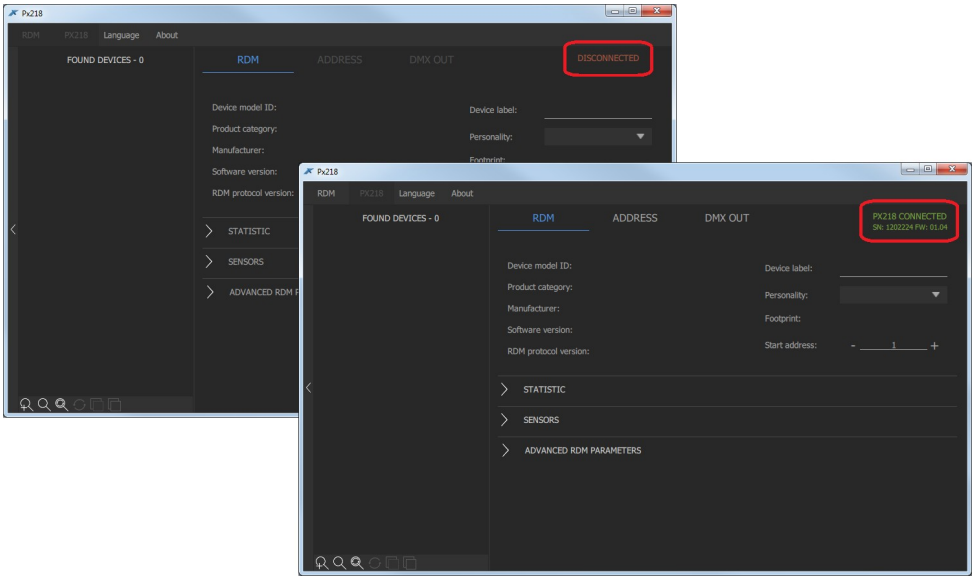
9. After the installation is completed, the wizard will display a window informing about the installation completion. Click *Finish* to complete the installer.

5 Controller software

Program designed to manage the PX218 controller via a PC allows to easily program devices supported by the RDM (Remote Device Management) protocol. It enables, among others changing the DMX channel address, device control mode, reading information from sensors installed inside individual devices, and also allows to control the DMX signal without having connected to each device separately. Connection between the controller and PC is done via USB. The application is available in two language versions – Polish and English.

5.1 Connecting the controller to a PC

After installing the software, run the application, and then connect the controller to PC with the USB cable. The device is connected to the program automatically, after connecting the device status information changes from *DISCONNECTED* to *CONNECTED*, along with which the serial number and firmware version of the controller will be displayed (screen on the next page).

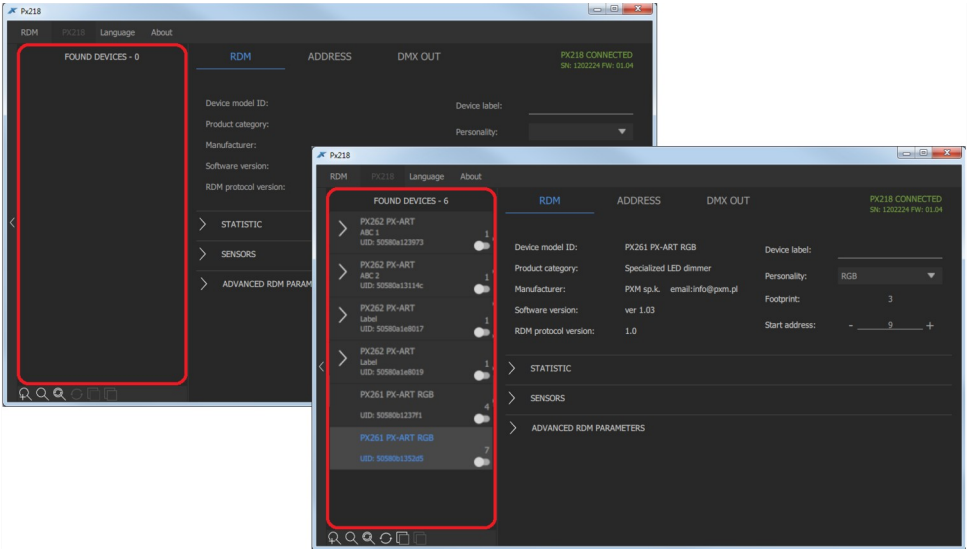


5.1.1 Searching for connected devices

After connecting the RDM Controller to the DMX line, you can start searching for devices. To do this, select the *RDM* application in the upper left corner where the following options are available:

- **Add discovery** – searches for devices bypassing any devices previously added to the list
- **Discovery** – searches only available devices, does not download any information about sensors, statistics, etc. (information about the device is downloaded when it is selected from the list)
- **Discovery with data** – searches for all devices and downloads all information about them (searching in this mode takes a long time)
- **Refresh parameters** – refreshes information about devices found so far

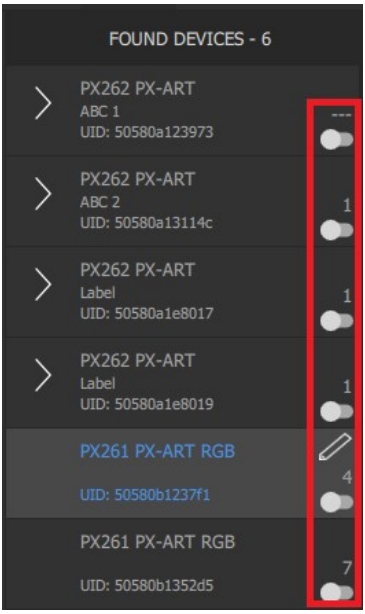
The message *Please wait* appears when searching for devices. When finished, they are added to the *Found devices* list.



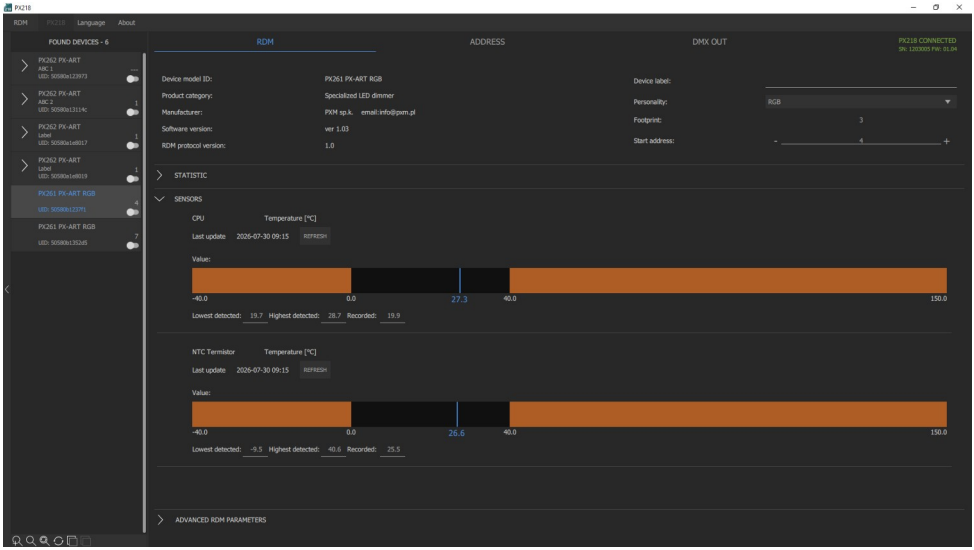
On the left side of the program all devices that communicate with PX218 are displayed. In order to obtain information and changes the parameters of the device searched by RDM Controller, select it from the list, all information that has been read will be displayed on the right side of the window.

Additionally, in other tabs (*Address* and *DMX OUT*) you can get other information and change some parameters.

The sliders located next to the devices found act as the *Identify* option, activating the slider result in identification, e.g. flashing lamp. The option is available only in the *RDM* or *Address* tab.



5.2 RDM



The first tab (*RDM*) displays basic information about the detected product. In addition to basic information, additional, expandable sections are available: *Statistic*, *Sensors* and *Advanced RDM parameters*.

The *RDM* section has the following options:

- Basic information
  - *Device model*
  - *Product category*
  - *Manufacturer*
  - *Software version*
  - *RDM protocol version*
  - *Device label* – an editable parameter that allows to describe the device
  - *Personality* – selected device operation mode

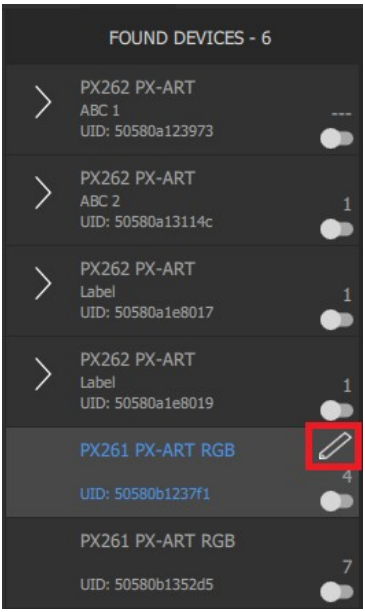
- *Footprint* – number of channels occupied by the device
- *Start address* – editable option to set the device's start address

NOTE! If the addresses of the subdevices are not set consecutively then the *Start address* is displayed in red.

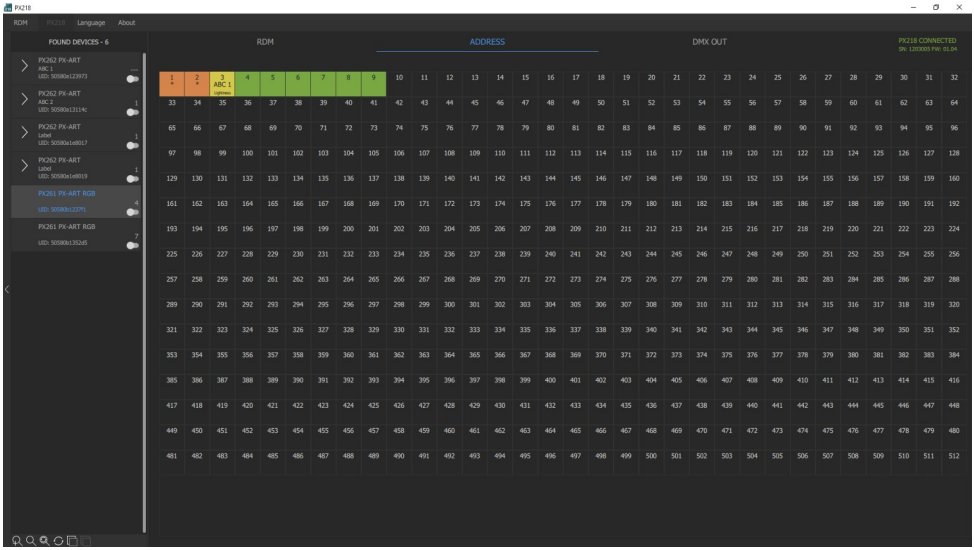


- Statistic – displays information on e.g. operation time, lamp usage time, etc.
- Sensors – shows sensor readings e.g. CPU, NTC temperature, etc. In addition to the current temperature, the program displays information about the lowest and highest temperatures recorded.
- Advanced RDM parameters – allows editing RDM parameters, depending on what has been implemented in the device

If a parameter change has been made, the “pencil” icon will be displayed next to the device where it occurred.



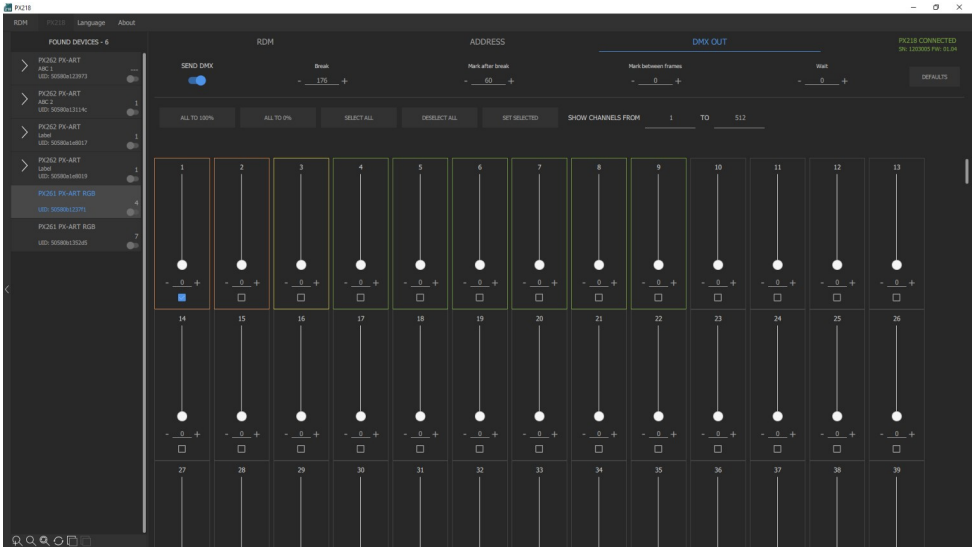
5.3 Address



The *Address* tab allows to view the currently occupied DMX channels by devices connected to the line that have RDM support. The channels occupied by the entire device are marked green, the yellow devices are marked with subdevices. Orange with the symbol "*" indicates a channel with more than one device / subdevice.

When choosing a device from the list on the left, it will be temporarily highlighted on the grid with DMX addresses in red.

5.4 DMX OUT



The last *DMX OUT* tab contains information about DMX parameters and the sent DMX signal to devices on the DMX line.

5.4.1 DMX parameters

The following DMX parameters are in the upper part of the window:

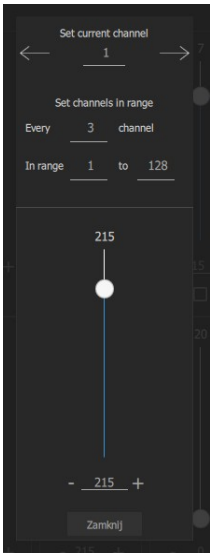
- Send DMX – slider that determines whether the DMX signal should be sent from the PX218 device
- Break
- Mark after break
- Mark between frames
- Wait

5.4.2 Send DMX

The program allows sending DMX signal in real time with a set value on individual channels, unfortunately there is no option to save the set DMX values. This function is only used to view the behavior of devices when receiving a specific value on a specific DMX channel.

Above the sliders there are the following options:

- All to 100% – all DMX outputs are set to 100% (value 255)
- All to 0% – all DMX outputs are set to 0% (value 0)
- Select all – selects all channels and allows to set DMX values on all selected channels at the same time
- Deselect all
- Set selected – displays an additional slider in the program window.
  This option allows to quickly check individual channels. Selecting the right or left arrow changes the channel and control it to 100%. Additionally, it is possible to control channels in the given range, every *n* channel. For example, every 3rd channel in the range 1 – 128.
  The selection is saved.

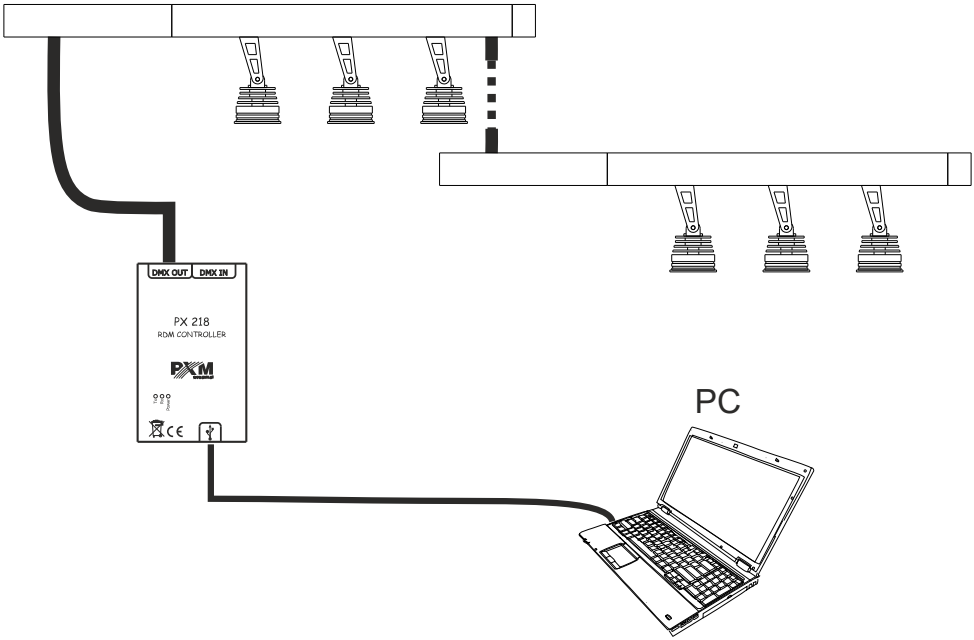


NOTE! If there are more than 16 selected channels, the DMX signal is sent after releasing the slider (releasing the mouse button).

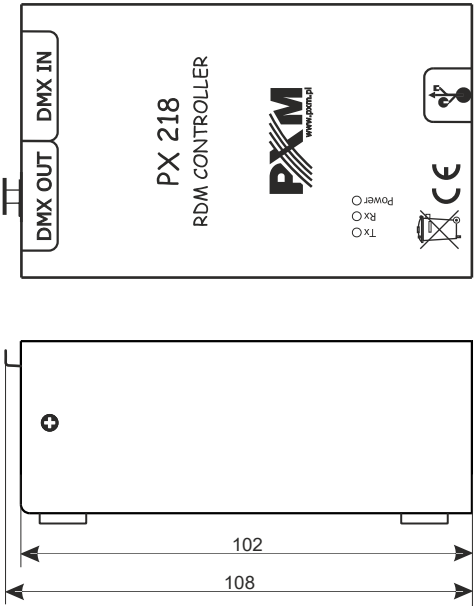
- Show channels from … to … – option that allows to limit the displayed channels to increase the readability of the window

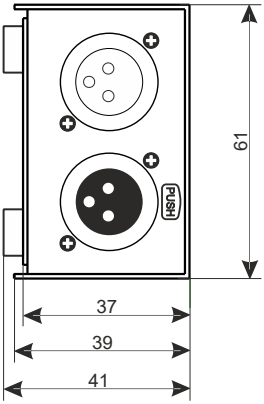
6 Connection scheme

Lamp supporting the RDM protocol, e.g. PX329



7 Dimensions





8 Technical data

type	PX218
power supply	5V DC (directly from the USB port)
available connectors	USB, 3-pin or 5-pin XLR slot / plug
communication with PC	yes (USB USB Mini-B interface)
weight	0.25kg
dimensions	width: 61mm height: 108mm depth: 41mm

Podłęże, 30.07.2026

DECLARATION OF CONFORMITY

PXM sp. z o.o.
Podłęże 654, 32-003 Podłęże

we declare that our product:

Product name:	RDM Controller
Product code:	PX218

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

PN-EN IEC 63000:2019-01	EN IEC 63000:2018
PN-EN 55103-2:2012	EN 55103-2:2009
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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mgr inż. Marek Żupnik.