PX333

Mini DMX

Controller

User manual

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1   Description

PX333 controller was designed for applications requiring a dynamic decorative light control, such as salons SPA, saunas and multirooms. It also perfectly fulfill its function as a controller for illumination of small architecture, interior or private apartments.

For communication with the environment it uses 8 *On/Off* inputs (to which can be connected, for example buttons, motion detectors or twilight switches) and LAN interface. This allows the PX333 controller to be connected to computer network and thereby control the device using the Android™ smartphone. It is also possible to control it from PC. The PXM company provides the PxMini application to operate the device on PCs with Windows® or Linux operating systems.

PX333 sends 64 DMX-512 channels and has 3 OC outputs with a load capacity of 1500mA each, allowing for direct control of LEDs. DMX output channels can be divided into 16 zones controlled independently.

The device is designed to control both rapid and slow changes in lightning; it is also suitable for controlling intelligent devices. PX333 memory allows storing 32 scenes and 8 programs.

The Mini DMX Controller comes with implemented support for the Modbus protocol which allows to control the controller using external devices.

2 Safety conditions

PX333 is a device powered with safe voltage 12 – 24V DC, however, during its installation and use the following rules must be strictly observed:

1. The device can 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 case of damage to a conductor, it should be replaced with a conductor of the same technical parameters.
4. Connecting 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 then +40°C.
10. Clean with damp cloth only.

3   Connectors and control elements
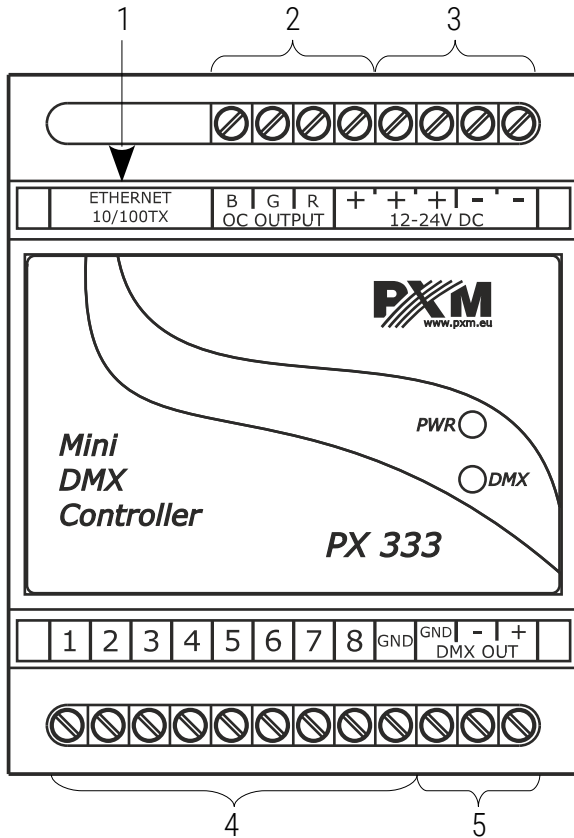
Designations:

1. Ethernet connector

2. Output of LEDs with common anode

3. Power supply 12 – 24V DC

4. 8 on / off inputs with ground (GND)

5. DMX output (64 channels)

4   Operation of the controller

PX333 allows to save 32 scenes and 8 programs with 64 steps each.

Scene – a static set of values at the output channels for which rise time, duration and fall time are given

Program – a set of consecutive scenes. For the program, it is possible to set the speed, the master program and smoothness of transitions between steps. It is also possible to play a program in the loop.

Scenes and programs may be added to the group (groups are not inter-territorial). There are 16 groups available.

The selected scene or program can be started using the application, or using an appropriately programmed control inputs. Events are used to program a response to signal from the control inputs. The controller has 9 events: the first one is responsible for the response to the activation of the controller, the other one is responsible for the response to signal on subsequent inputs.

The following actions can be assigned to the events:

- enable / disable / switch for the scene
- play / pause / stop / switch and master function: increase, decrease, set for the program
- next and previous for the list elements
- enable / disable all: increase, decrease, set for the zone

The controller has the ability to save a list of scenes and programs. They are used to start the selected scenes and programs in a given order using a single control button. Scenes and programs can be listed in any order; what is more, the list elements can be repeated.

To create scenes and programs in a more convenient way, in the driver it is possible to save information about the device assigned to the individual DMX channels. The program library contains 7 various devices which differ in the amount and type of channels.

The following are available:

- single-channel monochrome lamp
- dual-channel Dynamic White lamp
- three-channel RGB lamp
- four-channel RGBW lamp
- four-channel media player
- seven-channel EQ media player

5   Network settings of the controller

The controller stores the static network configuration. It is always used when static addressing mode was selected or in automatic addressing mode, when it was not possible to get the configuration settings from the DHCP server.

The controller can run in one of two modes:

- automatic addressing from DHCP server
- static addressing

In automatic mode (DHCP), after connecting to the network the controller attempts to get the network configuration from a DHCP server (e.g router). Thanks to this, manual configuration of networks parameters is not needed. In the absence of a DHCP server on the network the controller will operate according to the static configuration (manual setup).

When choosing static addressing, the network parameters configure should be in such a way that the controller is able to operate on the subnet and there is no conflict of IP addresses (devices in the network must have unique IP addresses).

The default network settings of the controller:

- **DHCP**: enabled
- **IP**: 192.168.0.50
- **Mask**: 255.255.255.0
- **Gate**: 192.168.0.1

If the controller operate in automatic mode in the network and receive IP address from the DHCP server, the detaching of the network cable will result in the loss of IP address and another attempt to get new IP address from the DHCP server. If that fails, the controller switches to operate with a static configuration.

It is recommended to use automatic addressing and connect the controller to the network with a running DHCP server.

Should the controller be connected directly to the computer (no DHCP server), the network parameters must be manually set of both the computer and the controller to operate in one network.

5.1 Change of the computer network configuration

The procedure for changing the computer network configuration varies depending on the operating system. Windows® 7 system is an example here.

Change of the computer network configuration in the Windows® 7 operating system in done in the following :

1. Click **[Start]**

2. Select **[Control Panel]** tab

3. Go to **[Network and Internet]** tab
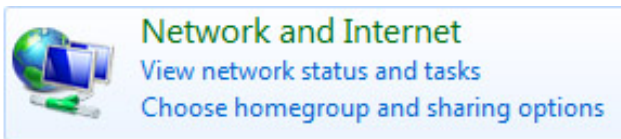
4. Enter **[Network and Sharing Center]**
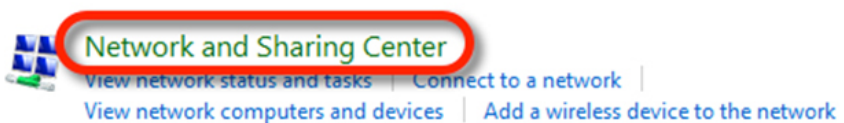
5. In the left panel select the **[Change adapter settings]**
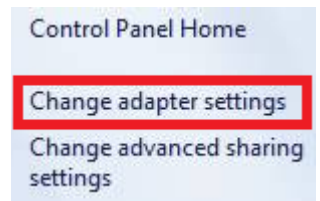
6. Right-click on **[Połączenie lokalne]** (Local area connection) and choose the **[Properties]**
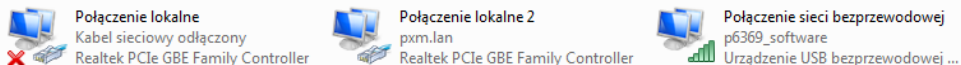
7. In the new window that appears, select **[Internet Protocol Version 4 (TCP/IPv4)]** and then press properties
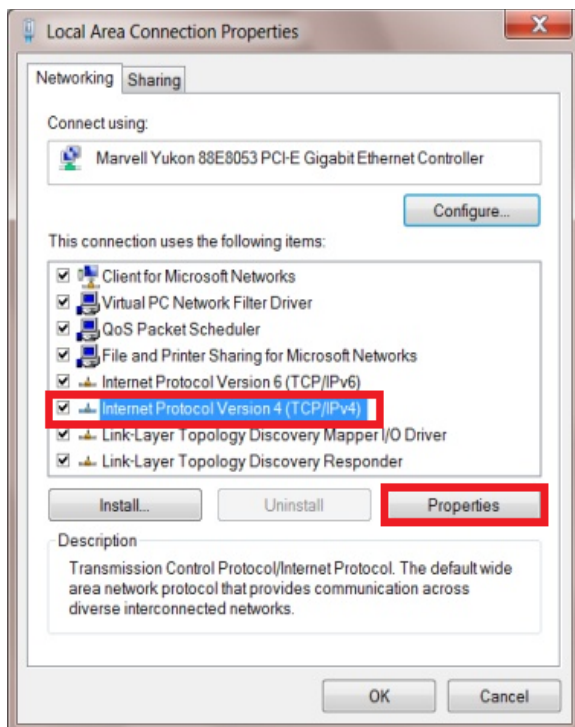
8. In the next window, select **[Use the following IP address:]**
    To connect directly (computer – driver) with a controller that has a default configuration, use the sample settings:
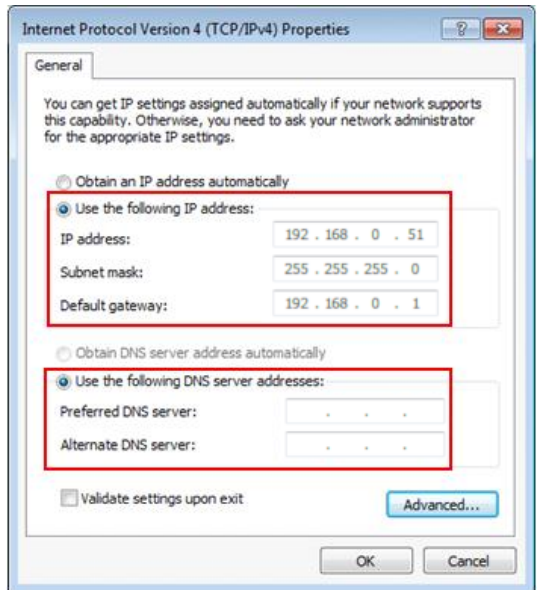
IP address:	192.168.0.51
Subnet mask:	255.255.255.0
Default gateway:	192.168.0.1

5.2   Connecting controller directly to the PC

When connecting the controller directly to a computer it is recommended to use a braided cable. Newer network cards will work both on a braided cable or a non-braided cable, but older ones may require braided cable.

PC:
e.g:
IP:192.168.0.1
Mask: 255.255.255.0
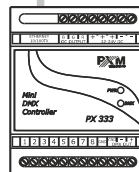
PX333:
e.g:
IP:192.168.0.50
Mask: 255.255.255.0
DHCP ☐ (recommended)

5.3   Connecting the controller using a router

When connecting the controller to the router, there are two options for network settings. The first of these is the use router with a DHCP server running, the network configuration on all devices in the network is set automatically. The second option is to connect the controller and devices cooperating with it to a switch or router that does not support DHCP server, in this case all devices in the network must have manually configured network settings in such a way that each device operates in the same network and has a unique IP address.

5.3.1 Automatic addressing

Below is a diagram of the operation of the devices with the DHCP server running:

Smarphone:
smartphone receives
kconfiguration on its own

Router:
e.g:
IP:192.168.0.100
Mask: 255.255.255.0
DHCP server running

PX333:
IP, mask and gate
from DHCP
DHCP enabled

PC:
„Obtain an IP address
automatically"
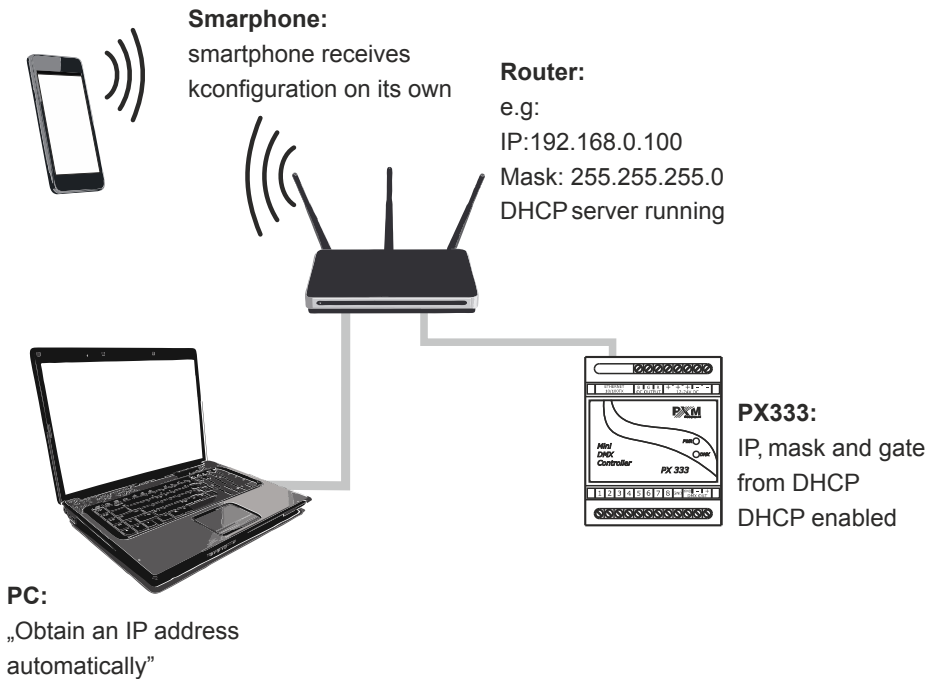
5.3.2 Static addressing

Below is an example diagram of network settings of the controller and devices cooperating with it, in the case when DHCP server in the network is not running.

Smartphone:
IP: 192.168.0.3
Masa: 255.255.255.0
Gate: 192.168.0.1

Router:
IP:192.168.0.1
Masa: 255.255.255.0
DHCP server ☐

PX333:
IP: 192.168.0.50
Masa: 255.255.255.0
Gate: 192.168.0.1
DHCP ☐

PC:
IP: 192.168.0.2
Masa: 255.255.255.0
Gate: 192.168.0.1
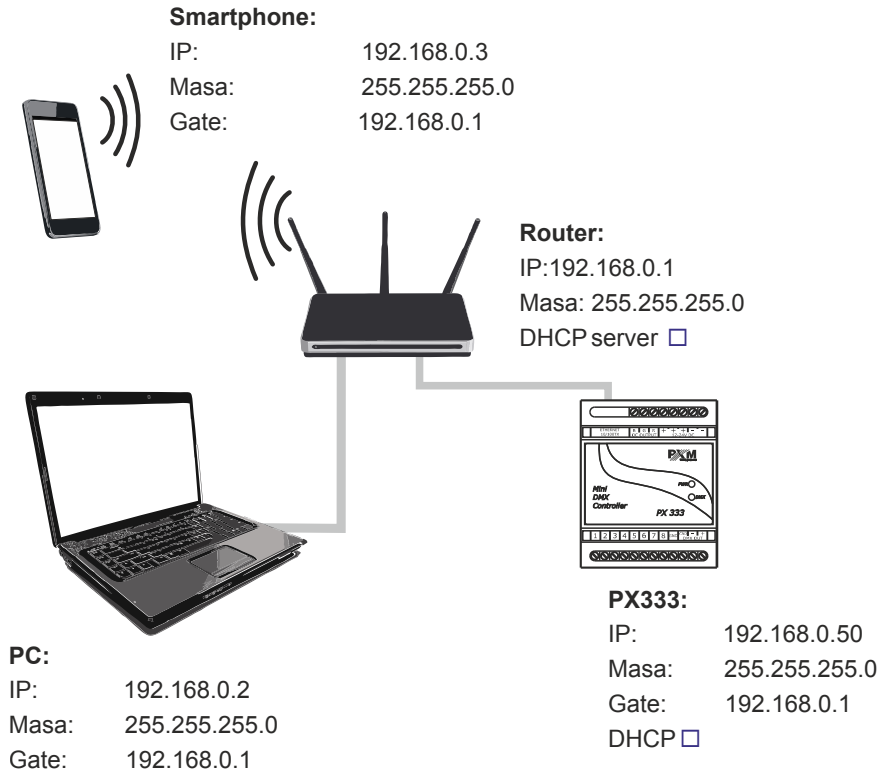
6   Logging onto the controller

Logging into the controller is possible from local network and from external network (Internet). In both cases, the device can be logged in from a PC using the controller configuration software (PX333 software), PxMini and

from a mobile device via the PX333 Mini DMX Controller application (PxMini and PX333 Mini DMX Controller are used to control the controller which has already been loaded configuration). There is always an ADMIN user in the driver, who has the maximum level of permission. The default password of the ADMIN user is empty, the *password* field should be left blank. It is recommended to change the password and use the accounts of the other three users. When logging in, only the password is entered without a login, after the password the device will recognize which user should log in.

6.1   Logging in to the controller in the local network

If the controller is connected to the local network, the smartphone and PC are set up correctly, the PX333 application on the PC, smartphone and PxMini will automatically search for the driver. When connecting any of the applications with the driver, it will be required to enter the password (the driver recognizes the password to which the user is to log in).

6.2   Remote logging (external network)

The controller allows you to log in to the device from an external network via the internet, for this purpose it should be:

- have an external IP address on the router assigned by the internet provider and be able to establish connection from outside (incoming packets are not blocked by the provider's and router's firewall)

- redirect appropriate ports to the IP address of the controller working in the local network (so-called forwarding port):
  - 50001 and 50002 for all applications
- unblock selected ports in the router's firewall
- the address of the driver / drivers in the local network can not change (the driver must have a static IP address set or the DHCP server must assign the same addresses to the same devices each time)

NOTE! In most routers available on the market, you can set a static IP address by the DHCP server based on the MAC address of the device. For example, for a device with the MAC address 70:B3:D5:EF:B1:60 the IP address 192.168.1.15 will always be assigned by the DHCP server (example below).

Most routers available on the market usually have several parameters in port forwarding options:
- port or port range for redirection
- the IP address of the device to be redirected to
- protocol type (TCP / UDP or both)

6.2.1 Logging in via the PX333 application on a PC

a) one controller works in the local network with the following settings:

- external IP address: 66.77.88.99 (example address)
- IP address: 192.168.1.10
- mask: 255.255.255.0
- target device port: 50001 i 50002
- protocol: TCP or TCP/UDP (in this case option "*Both*")

below is the screen of the example setting in the router

Port range forwarding sets up public services on your network, such as web servers, ftp servers, e-mail servers, and other specialized Internet applications. When you have set up one service, then the communication requests from the Internet to your router's WAN port will be converted to the specified LAN IP address.

NO.	Start port-End port	LAN IP	Protocol	Enable	Delete
1.	50001 — 50002	192.168.1. 10	Both ▼	☑	☐
2.	—	192.168.1.	TCP ▼	☐	☐
3.	—	192.168.1.	TCP ▼	☐	☐
4.	—	192.168.1.	TCP ▼	☐	☐
5.	—	192.168.1.	TCP ▼	☐	☐
6.	—	192.168.1.	TCP ▼	☐	☐
7.	—	192.168.1.	TCP ▼	☐	☐
8.	—	192.168.1.	TCP ▼	☐	☐
9.	—	192.168.1.	TCP ▼	☐	☐
10.	—	192.168.1.	TCP ▼	☐	☐

Well-known service ports: DNS(53) ▼   Add to ID 1 ▼

Ok   Cancel

If there is no option to set the port range in the router, create two separate rules for each port separately (separately for 50001 and 50002).

If everything is correctly configured to connect to the controller from the (external) internet network, select the *Connect with controller* option in the application window and enter the IP address of the router in the *IP* field (assigned by the internet provider, in this case 66.77.88.99), The user's *password* and in the *Port* field enter the port number 50001.

Create new configuration file

Open existing configuration file

Connect to device

Address:	66.77.88.99
Password:	●●●●●●●●●●●
Login as admin: ☐	
Port:	50001
Connect	Cancel

Connect with controller

The connection diagram:

Router:
IP:192.168.1.1
Masa: 255.255.255.0
DHCP server ☐
Redirecting port 50001 and 50002
to the device address (192.168.1.10)

external IP address
e.g 66.77.88.99

INTERNET

PX333:
IP: 192.168.1.10
Masa: 255.255.255.0
Gate: 192.168.1.1
DHCP ☐

internet connection

b) more than one controller works in the local network with the following settings:

- external IP address: 66.77.88.99 (example address)
- IP address of the first controller: 192.168.1.10
- IP address of the second controller: 192.168.1.11
- mask: 255.255.255.0
- target device port: 50001 and 50002 for the first controller, 60001 and 60002 for the second controller (for ports 60001 and 60002, the target port in the internal network must be 50001 and 50002 – screen)
- protocol: TCP or TCP/UDP (in this case option "*Both*")

Below is the screen of the example setting in the router:

A virtual server defines the mapping from the WAN service port to the LAN server. All requests from the Internet to the designated service port will be redirected to the device specified by the server IP Address.

	Service Port	IP Address	Internal Port	Protocol	Status	
☐	50001-50002	192.168.1.10	50001-50002	TCP or UDP	Enabled	
☐	60001	192.168.1.11	50001	TCP or UDP	Enabled	
☐	60002	192.168.1.11	50002	TCP or UDP	Enabled	

Add New	Enable Selected	Disable Selected	Delete Selected

Refresh

The connection is exactly the same as in example 1, except that he ports 50001 and 50002 are for the first device, and the 60001 and 60002 are for the second device.

Connection example:

Router:
IP:192.168.1.1
Mask: 255.255.255.0
DHCP server ☐
Port forwarding to appropriate IP addresses

66.77.88.99: 50001

external IP address e.g:
66.77.88.99: 50001
66.77.88.99: 60001

INTERNET

PX333:
IP: 192.168.1.10
Mask: 255.255.255.0
Gate: 192.168.1.1
DHCP ☐

66.77.88.99: 60001

internet connection

PX333:
IP: 192.168.1.11
Mask: 255.255.255.0
Gate: 192.168.1.1
DHCP ☐
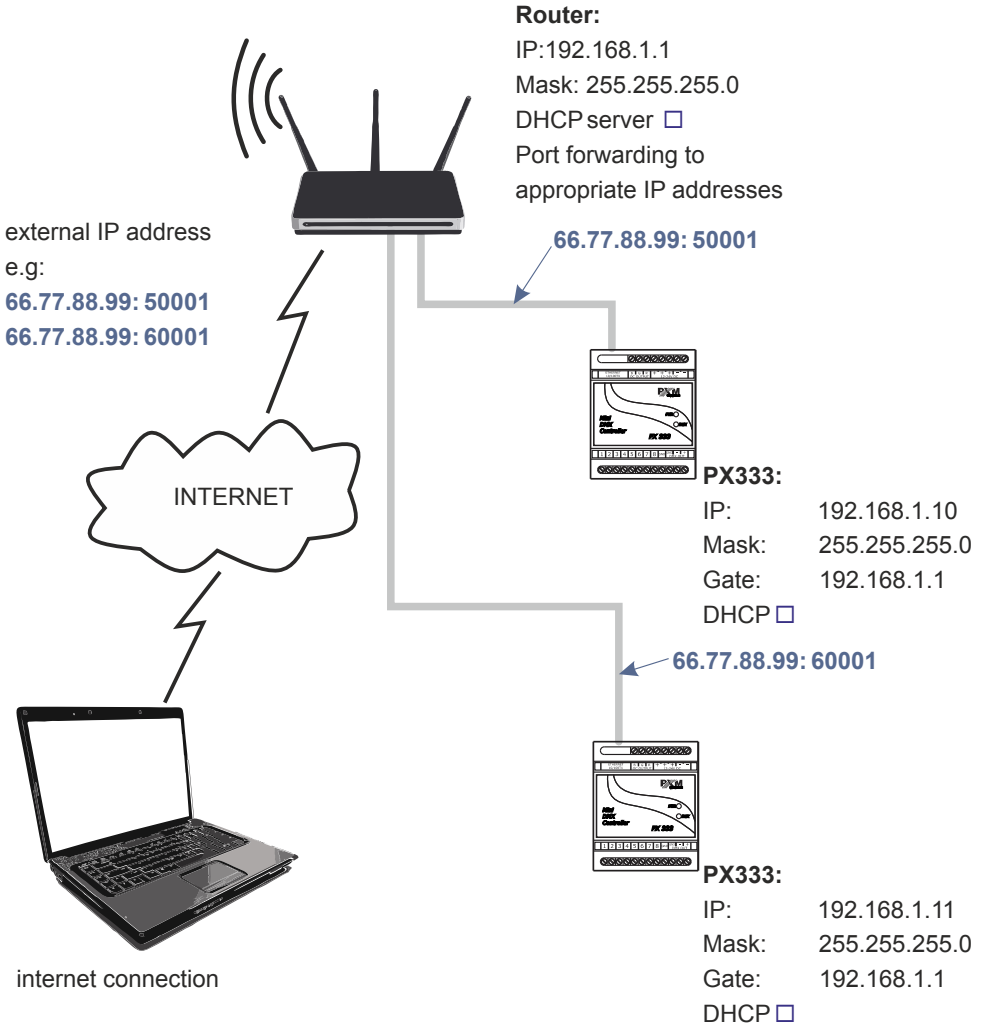
6.2.2 Login from the PxMini application and smartphone application

The controller works in the local network with the following settings:

- external IP address: 66.77.88.99 (example address)

- IP address: 192.168.1.10

- mask: 255.255.255.0

- target device port: 50001 i 50002

- protocol: TCP or TCP/UDP (in this case option "*Both*")

Below is the screen of the example setting in the router:

Port range forwarding sets up public services on your network, such as web servers, ftp servers, e-mail servers, and other specialized Internet applications. When you have set up one service, then the communication requests from the Internet to your router's WAN port will be converted to the specified LAN IP address.

NO.	Start port-End port		LAN IP	Protocol	Enable	Delete
1.	50001	50002	192.168.1. 10	Both ▼	☑	☐
2.			192.168.1.	TCP ▼	☐	☐
3.			192.168.1.	TCP ▼	☐	☐
4.			192.168.1.	TCP ▼	☐	☐
5.			192.168.1.	TCP ▼	☐	☐
6.			192.168.1.	TCP ▼	☐	☐
7.			192.168.1.	TCP ▼	☐	☐
8.			192.168.1.	TCP ▼	☐	☐
9.			192.168.1.	TCP ▼	☐	☐
10.			192.168.1.	TCP ▼	☐	☐

Well-known service ports: DNS(53) ▼   Add to ID   1 ▼

Ok   Cancel

If there is no option to set the port range in the router, create two separate rules for each port separately (separately for 50001 and 50002).

If everything is correctly configured to connect to the controller from the (external) Internet network, select the *Remote Access* in the application (PxMini or smartphone application), and then enter the *User's password* and *IP* address (assigned by the Internet provider, in this case 66.77.88.99). In the PxMini application in the *Port1* field enter the port number 50001, and in the *Port2* field enter 50002, in the mobile application only one port (50001) is entered.

Router:
IP:192.168.1.1
Mask: 255.255.255.0
DHCP server ☐
Redirecting port 50001 and 50002
to the device address (192.168.1.10)

external IP address
e.g 66.77.88.99

INTERNET

PX333:
IP: 192.168.1.10
Mask: 255.255.255.0
Gate: 192.168.1.1
DHCP ☐

internet connection
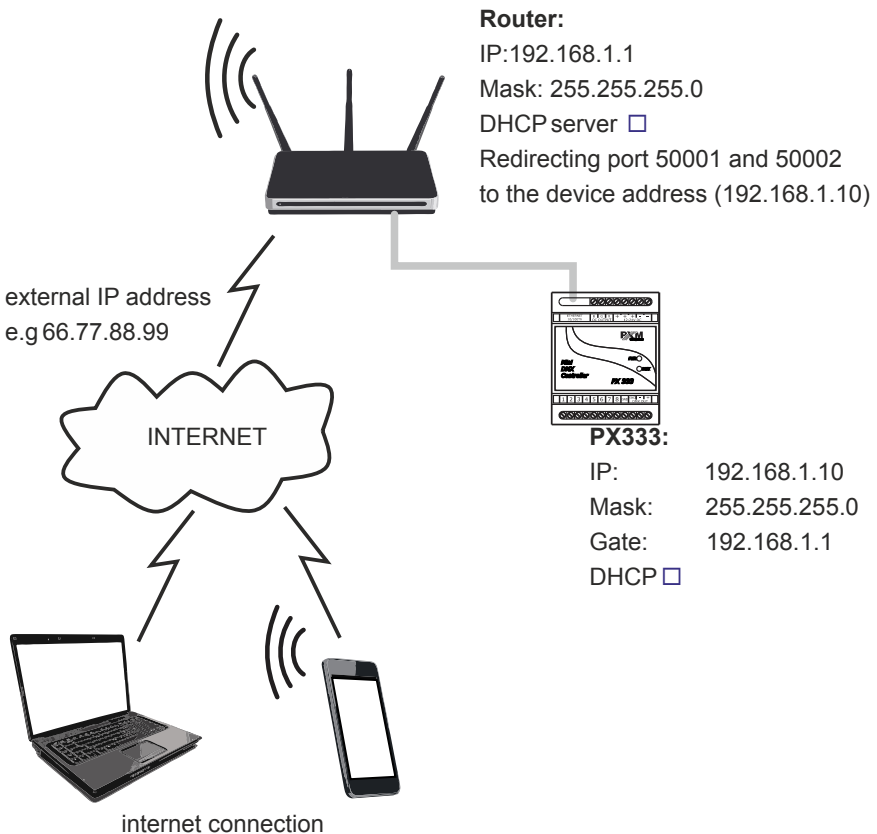
7   Software installation

The device comes with a CD, which contains:

- data sheet
- controller and PC software manual
- installers of programs cooperating with the controller (PxMini Windows, PxMini Linux, PX333 software)
- file with device firmware update (the last version at the time of recording the disc)

NOTE! All these files can be found on the manufacturer's website (pxm.pl). The firmware update is recommended to be downloaded from the product page, as there is always the latest version of the device firmware update.

7.1   Windows®

The software can be installed on VISTA™, Windows® 7, Windows® 8 or Windows® 10. 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 an installation file, click [**Next**] to go to the software installation. The installation file is attached to the driver on a CD or available for download from the manufacturer's page (pxm.pl)

PX333 Setup

Setup - PX333

Welcome to the PX333 Setup Wizard.

Next   Quit
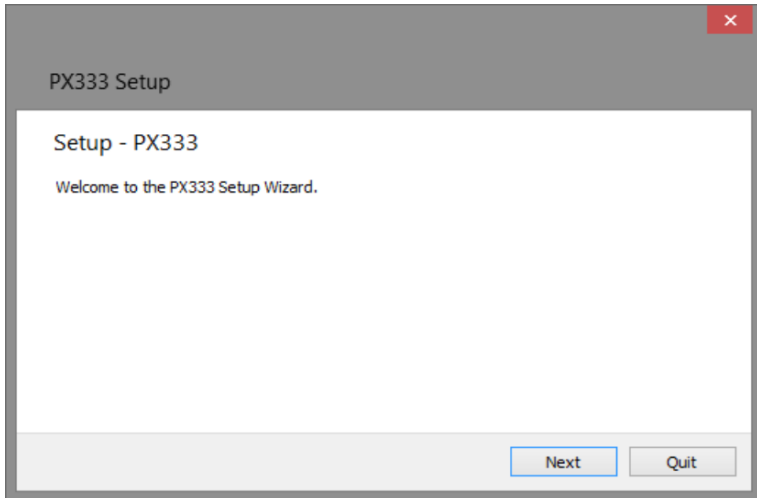
2. Select the folder in which the software is to be installed. Confirm your selection by clicking the [**Next**] button.

PX333 Setup

Installation Folder

Please specify the folder where PX333 will be installed.

C:\Program Files (x86)\PXM\Px333   Browse...
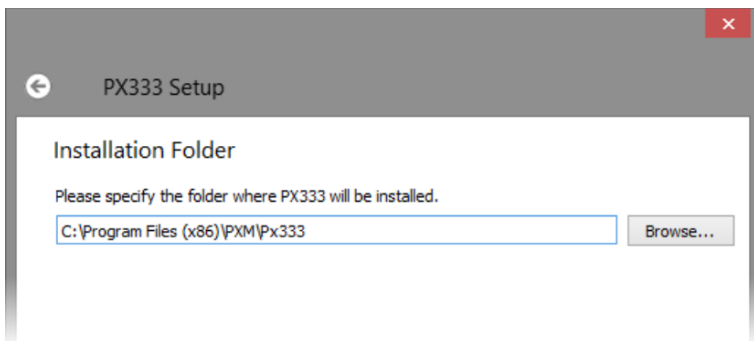
3. Select components that you want to install and then click [Next].
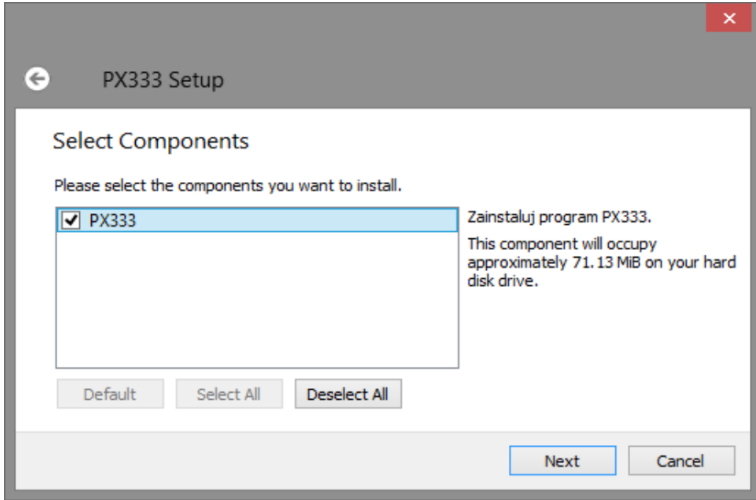
4. Read the license agreement carefully; if you agree to the terms of this agreement, click [Next] to continue the installation.
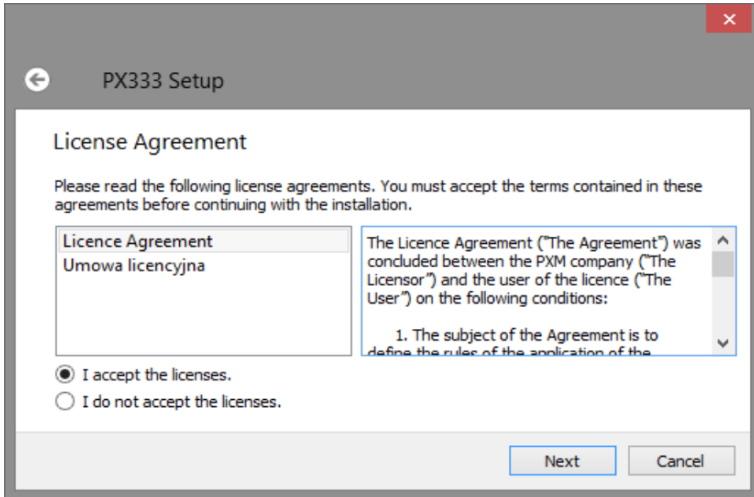
5. Select the start menu in which you want to create a shortcut to the program. You can also rename the directory, then click [Next].
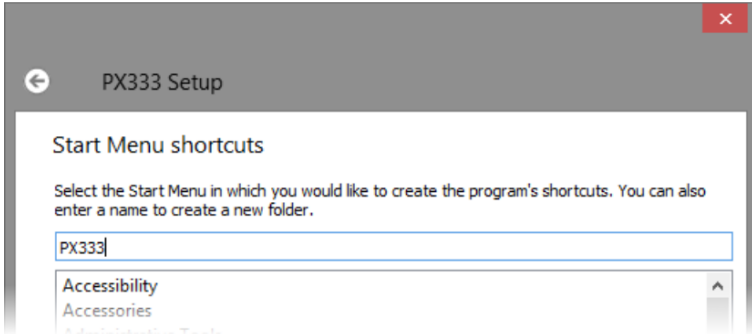
6. The installer will ask whether you want to install the software, click [Install], if you agree.

7. When the window indicating that the installation procedure was successful pops up, click [Finish] to exit the installation wizard. If you want to go to the program, in the selection window select [Run PX333 now].

8. Windows® displays a security alert of the system and to be able to use the PX333 software, you need to allow access.

7.2   Android™

The PX333 mobile application can be installed on Android™ 4.0 or later.

To install software:

1. Upload *.apk installation file available on manufacturer's page to the phone memory.

2. Go to phone settings and then check "*Allow installation of apps from sourced other than The Play Store*" in the [**Security**] tab.

3. Open the application through the system [**File Manager**].
   The screen for the installed new software pops up. This screen displays information on the phone function that the application will use.

4. To install the application press the *"Install"* button.

After a successful installation process, the application will be available in the application menu of the phone.

NOTE! The application can also be downloaded from the Google Play store by searching for the phrase "*PX333*" or by scanning the QR code.

8   Signaling of indicators

The controller is equipped with two indicator lights:

Indicator	Normal operation	Bootloader mode
PWR	indicator lights continuously	indicator blinks
DMX	indicator blinks	indicator is off

9   Firmware upgrade

The procedure for firmware upgrade on the PX333 controller:

1. Connect the controller directly to the computer using a network cable. For older computers, it is recommended to use a crossover cable – the cable is attached to the controller.

2. Set the following parameters on the computer network interface card:
   IP address: 192.168.0.1
   mask: 255.255.255.0
   (for more information, see chapter 5.1 Change of the computer network configuration)

3. While holding down the default settings button (located in the hole in the side of the controller housing), turn on the power supply of the controller.

4. The orange PWR indicator of the controller should blink (the blue DMX indicator in inactive).

5. Run the "*PX333_FLASHER.exe*" program on your computer.

6. Click on "*Search*", the controller should be displayed on the list.

7. Select the controller from the list and click on "*Login*" (leave the password blank).

8. Click on "*Upgrade Firmware*", select the **.upg* file with upgrade and click [OK].

9. After the upgrade, the controller should automatically reset.

10 Restoring default settings

To restore default settings during the normal operation of the device, press the physical button located on the device housing and hold it for 5 seconds (see figure below). If the DMX indicator lights for 2 seconds, it means that default settings are restored.

Then, it is recommended to turn off and on the power supply.

If default settings are restored, it will delete the created setup, users and network configuration.

Default network configuration will be restored:

- **IP address**: 192.168.0.50
- **subnet mask**: 255.255.255.0
- **DHCP**: enabled

button for the restoration of default settings
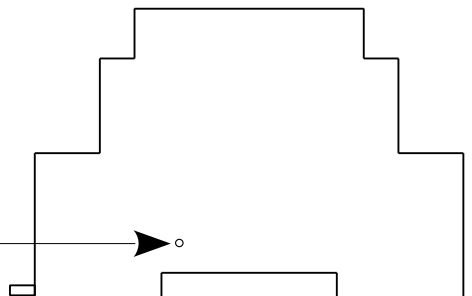
11 Construction and functionality of PC applications

main menu

connection with the controller

side panel

main panel (work area)
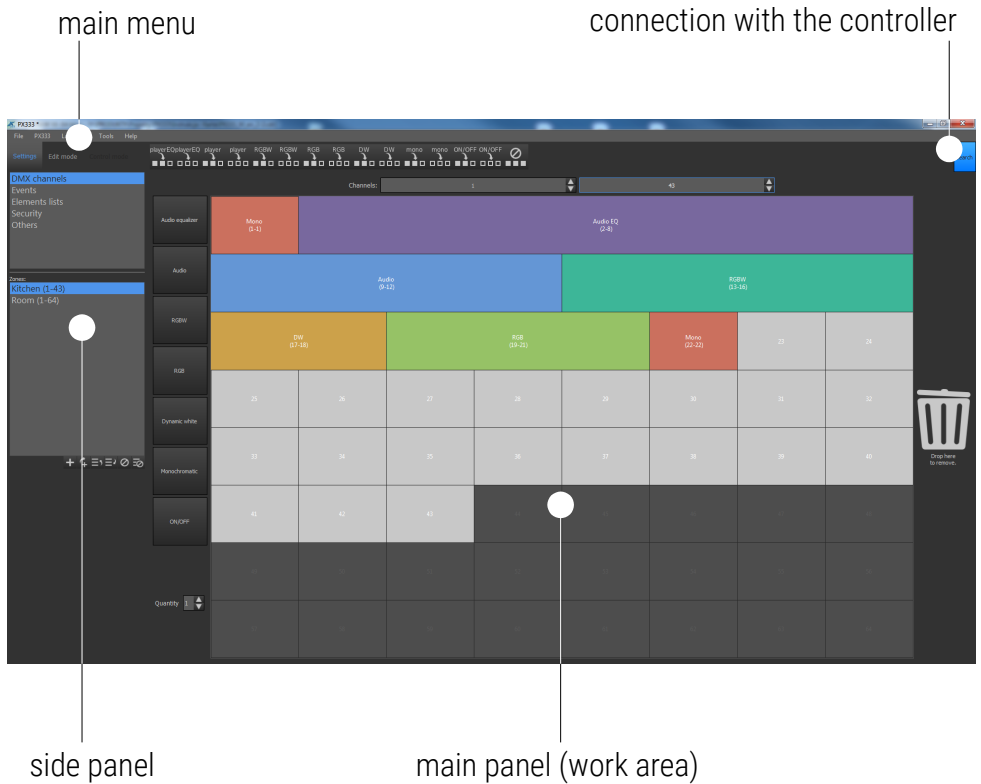
    The information presented in the program are grouped on the left side panel, divided into the following tabs: [**Settings**], [**Edit mode**], [**Control mode**] and in the main menu as a drop-down menu: [**File**], [**PX333**], [**Language**], [**Tools**] and [**Help**]. In addition, the central part of the application window is a work area (main panel). The contents of the main panel are changed depending on the tab selected in the left panel.

The left panel consists of three tabs:

[**Settings**] – edition of zones, devices, events, lists, security options in the controller, a preview of DMX channels (only where it is connected to the controller) and [**Others**] – i.e. PWM settings and a description of the controller

[**Edit mode**] – editing programs and scenes

[**Control mode**] – ability to turn on and off scenes and programs directly from the application; it is active only when connected to the controller

12   Construction and functionality of a mobile application

hide / show the application menu

menu or name of the currently displayed tab

additional options

logout from the controller

drop-down side menu with a list of available tabs

application window work area (main panel)

The contents of the main panel are changed depending on the tab selected in the left panel. The main menu on devices with high resolution is still visible on the left side of the screen. For smaller devices it is available in drop-down side panel.
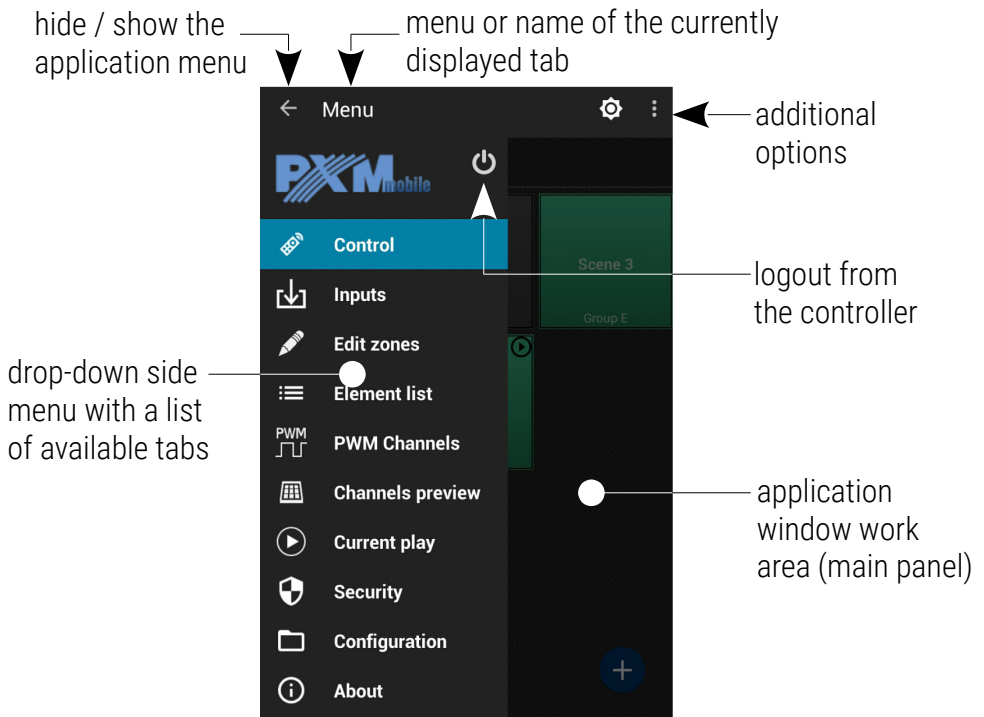
Side panel tabs and their functions:

[Control] – list of areas and elements located in a given area, their adding and editing, turning on and off

[Inputs] – ability to turn on and off scenes and programs directly from the applications; it is active only when connected to the controller

[Edit zones] – creating areas of DMX channels and assigning selected devices to them

[Element list] – adding elements to the list of elements for the zones

[PWM Channels] – setting addresses for three PWM outputs

[Channels preview] – preview of values on DMX channel grid

[Current play] – displaying the currently running items

[Security] – option to change the administrator password and activate user accounts

[Configuration] – saving introduced settings in a file on the phone, uploading the existing configuration from the phone memory, return to factory settings

[About] – general software information, contact details of the manufacturer

13 Modbus protocol

The PX333 controller comes equipped with slave implementation of the Modbus TCP/IP protocol. The protocol allows the user to control the operation of the controller, by activating scenes / programs and to obtain information on the status of individual components.

Parameter reading:

- DMX channel values
- digital input status
- scene / program status

Control:

- triggering events
- operating areas
- scene / program actions
- operation of elements lists

A master device will connect with the controller through the standard Modbus / TCP port (port 502).

Table 1 is divided into two selections: READ-ONLY parameters and WRITE-ONLY parameters. The first column contains parameter names and the number of these parameters. Column 2 sets out the Modbus function that should be used. Column 3 shows the addresses of individual parameters to which a command should be sent. The addresses are expressed both in decimal and hexadecimal notation. The right-most column shows allowed

value ranges for individual parameters. In the case of the read functions, the allowed values are expected response values, while for the write functions (control functions) these are the values being transmitted.

Table 2 sets out interpretations and brief descriptions of values for each parameter.

Table 1. Description of Modbus functions

	Parameter	Modbus	Address		Value
			dec	hex	
R E A D O N L Y	DMX OUT	Read Holding Register	0	0000	0 – 255
			1	0001	
			...	...	
	64		63	003F	
	DIGITAL INPUT	Read Holding Registers	4096	1000	0 – 1
			4097	1001	
			...	...	
	8		4103	1007	
	SCENE STATUS	Read Holding Registers	8193	2000	0 – 3
			8193	2001	
			...	...	
	32		8223	201F	
	PROGRAM STATUS	Read Holding Registers	12288	3000	0 – 3
			12289	3001	
			...	...	
	8		12295	3007	

W **R** **I** **T** **E** **O** **N** **L** **Y**	EVENT 1	Write Single Register	16384	4000	0 – 8
	SCENE ACTION 32	Write Single Register	20480 20481 ... 20511	5000 5001 ... 501F	0 – 2
	PROGRAM ACTION 8	Write Single Register	20736 20737 ... 20743	5100 5101 ... 5107	0 – 7
	PROGRAM MASTER ACTION 8	Write Single Register	20992 20993 ... 20999	5200 5201 ... 5207	0 – 100
	PROGRAM X-FADE ACTION 8	Write Single Register	21248 21249 ... 21255	5300 5301 ... 5307	0 – 100
	PROGRAM SPEED ACTION 8	Write Single Register	21504 21505 ... 21511	5400 5401 ... 5407	0 – 255

W **R** **I** **T** **E** **O** **N** **L** **Y**	LIST ACTION	Write Single Register	21760	5500	0 – 2
			21761	5501	
	16		...	...	
			21775	550F	
	ZONE ACTION	Write Single Register	22016	5600	0 – 1
			22017	5601	
	16		...	...	
			22031	560F	
	ZONE MASTER ACTION	Write Single Register	22272	5700	0 – 100
			22273	5701	
	16		...	...	
			22287	570F	

Table 2. Description of parameters

Parameter	Range	Description
READ ONLY		
DMX OUT	0 – 255	Get DMX channel value
DIGITAL INPUT	0 – 1	Get digital input state
		0: OFF
		1: ACTIVE
SCENE STATUS	0 – 3	Get scene status
		0: OFF
		1: RISING
		2: ON
		3: FALLING
PROGRAM STATUS	0 – 3	Get program status
		0: OFF
		1: PLAYING
		2: PAUSED
		3: FALLING

W R I T E O N L Y	EVENT	0 – 8	Trigger event
			0 – 7: DIGITAL INPUT EVENT
			8: CONTROLLER POWER ON
	SCENE ACTION	0 – 2	Trigger scene action
			0: ON
			1: OFF
			2: TOGGLE
	PROGRAM ACTION	0 – 7	Trigger program action
			0: PLAY
			1: PAUSE
			2: STOP
			3: TOGGLE
			4: RESTART
			5: RESUME
	PROGRAM MASTER	0 – 100	Set program master
	PROGRAM X-FADE	0 – 100	Set program x-fade
	PROGRAM SPEED	0 – 255	Set program speed
	Speed formula: Step = Value * Nominal Step Time / 100		Step = 0.01s
			25: 0.25x Nominal Step Time
			50: 0.5x Nominal Step Time
			100: 1x Nominal Step Time
			150: 1.5x Nominal Step Time
			200: 2x Nominal Step Time
			255: 2.55x Nominal Step Time

W R I T E O N L Y	LIST ACTION	0 – 2	Trigger element list action
			0: NEXT
			1: PREV
			2: OFF
	ZONE ACTION	0 – 1	Trigger zone action
			0: ALL ON
			1: ALL OFF
	ZONE MASTER	0 – 100	Set zone master

14   Connection scheme

LEDs connected with common anode

power supply 12-24V DC

current stability circuit (e.g. resistor)

DMX effects e.g. PxArt lamps

monostable switches (e.g. motion detectors, dusk switches, etc.)
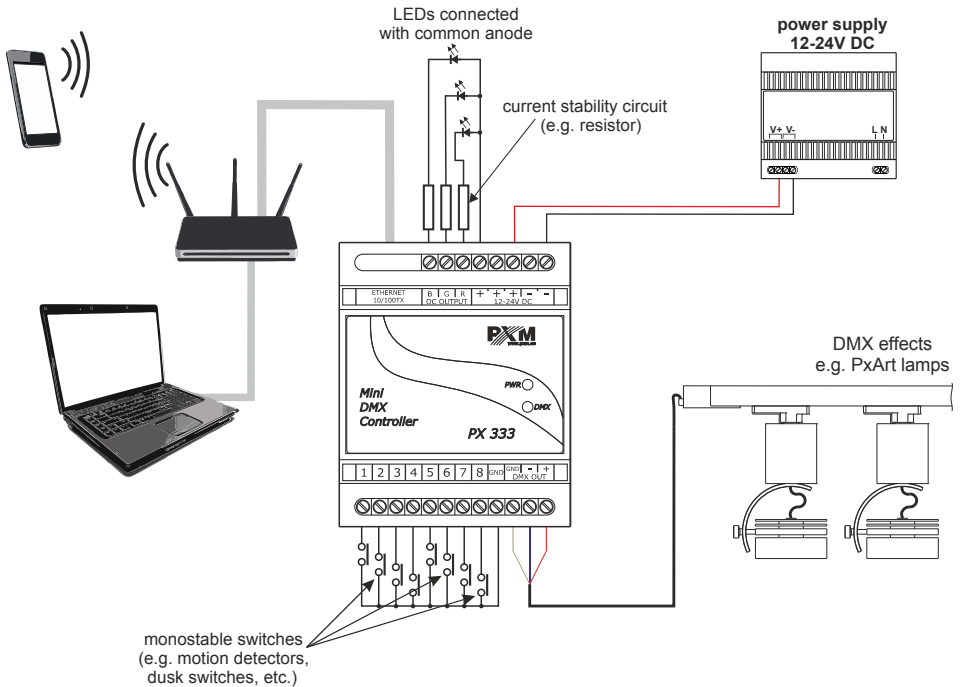
15   Dimensions
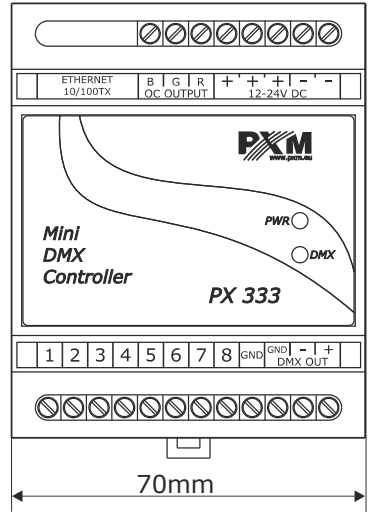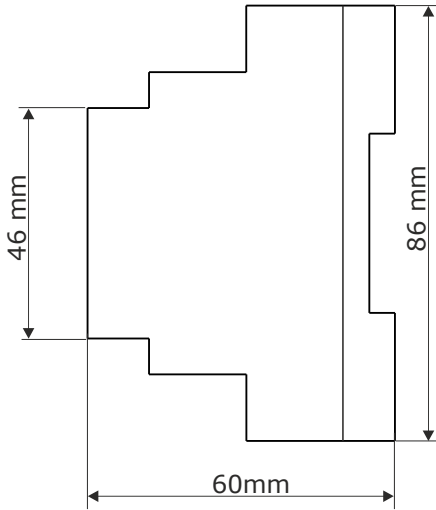
16 Technical data

type	PX333
power supply	12 – 24V DC
no-load current consumption	70mA for 12V DC 40mA for 24V DC
DMX output channels	64
control inputs On/Off	8
control outputs OC	3
OC outputs load capacity	1500mA / channel
communication	LAN
controller memory	scenes: 32 programs: 8 zones: 16 element lists: 16
range of scene / steps time	0,1s – 24h
weight	0.1kg
dimensions	width: 70mm (4 DIN rail modules) height: 86mm depth: 60mm

DECLARATION OF CONFORMITY

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

we declare that our product:

Product name: Mini DMX Controller

Product code: PX333

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

PN-EN IEC 63000:2019-01	EN IEC 63000:2018
PN-EN 55103-1:2012	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

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

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.

PXM
Marek Żupnik spółka komandytowa
32-003 Podłęże, Podłęże 654
NIP 677-002-54-53

mgr inż. Marek Żupnik.