

PX361

PxGround

24ASF

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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PxGround 24ASF is a LED drive-over light fixture designed for dynamic architectural feature lighting applications.

PX361 fixture comprises 24 high-performance Oslon LEDs from OSRAM. The diode module is divided into 4 segments with 6 diodes each. The light features a "honeycomb" louvre to reduce glare. Such louvres reduce beam angle slightly, but they allow you to use the fixture in applications where light quality as well as all related aspects and effects need to be at highest level.

An additional advantage of the light fixture is the option to adjust the tilt angle of the LED module inside the fixture without having to move the housing. Thus, it is possible to change light beam direction (within a range of  $\pm 10^\circ$ ) despite the housing buried in the ground.

PX361 light fixture uses high-performance LEDs offering multiple colour options and brightness levels.

PX361 is available in an RGBN version. In addition, its universal design makes the fixture suitable for lighting both historical buildings and contemporary architecture. Maximum total wattage is 52W. The light fixture is equipped with optics designed for beam angles of  $10^\circ$ ,  $20^\circ$  or  $35^\circ$ .

PX361 requires a 24V DC power supply; it is directly controlled using protocol DMX512 and DMX-RDM. What is more, the light fixture is fitted with a temperature dependent current control circuit designed to limit LED power. This feature contributes to long and trouble-free service life. Once a  $70^\circ\text{C}$

threshold is reached, current being supplied to the LEDs is limited. At 90°C, the light fixture fades out.

In addition, the PX361 has a function Auto Power Regulation: When the total power of the channels starts to exceed 33W, the lamp automatically limits channel control while keeping proportions. Using the PxArt Settings Controller (PX277) it is possible to set the DMX address for each color separately and to define the lamp behavior in the absence of a DMX signal.

## 2 Safety conditions

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**Caution! Before installing, connecting and using the lamp you have to absolutely read this document.**

The following symbols are used to underline important information on security conditions on the product and in this manual.



**Danger!**  
Risk of loss of life  
and health.



**Warning!**  
Fire hazard.



**Warning!**  
LED light  
emission.  
The risk of eye  
damage.



**Warning!**  
The risk of burns.



**Warning!**  
Read the  
instruction  
manual.

## Caution!

Do not look at the LEDs, LEDs can cause damage or eye irritation. Do not look at the light source with any optical devices that focus the light rays.



Light is harmful to unprotected eyes, can cause irritation, eye damage or even loss of eyesight.



While working outdoors in normal conditions, the housing unit can heat up to +65°C. Make sure that accidental contact with the device during use is impossible.



In case of improper usage of the product it may cause a risk of serious injury or death because of the threat of fire.

During its installation and use PX361 the following rules must be strictly observed:

1. Installation should be performed by a person holding the appropriate qualifications, according to the instruction manual.
2. Lamp may only be connected to stabilized voltage with current-carrying capacity compatible with technical data.
3. All the conductors should be protected against mechanical and thermal damage.
4. In the event of damaging any conductor, it should be replaced with a conductor of the same technical data.
5. All repairs and connections of outputs can only be made with cut off power supply.
6. Do not connect to the power supply to device with visible damage.
7. All sudden shocks, particularly dropping, should be avoided.
8. Do not switch on the appliance if the housing is leaking.

### 3 Information on version

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The PX361 lamp is available in several versions that differ from each other in angles of the lenses used.

Below there is a description of designation of the PX361 models and their explanation:

**PX361 – XX – RGBN**

**XX** – lens angle:

10 – 10°

20 – 20°

35 – 35°

**RGBN** – colour LEDs:

N – white neutral

R – red

G – green

B – blue

Example of marking for a 35° lamp:

**PX361-35-RGBN**

## 4 Cooperation with the PX277 configurator

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The PxArt Audio settings can be changed by connecting to the PX277 (PxArt Settings Controller) configurator. It allows in connection with PX361 to define the following parameters: DMX address for each color separately (in the range of 1 – 512), device behavior in the absence of DMX signal, automatic limitation of total power and other parameters described in chapter 4.1 Available parameters.

### 4.1 Available parameters

**DXM Address** – changing the DMX address for each channel separately (R, G, B, W colors) in the range 1 – 512

**Scene edit** – user-created scene that can be implemented if no DMX signal is found ([No signal] → [custom scene]). The minimum value set on all four channels is 0, the maximum is 125, default value is 128.

**Flicker free** – the function avoids the unpleasant flickering effect caused by the lack of proper synchronization of the LED control signal

**Auto power reg.** – activating the **Auto Power Regulation** function limits the total lamp power (the sum of the power of the R, G, B and W channels). When the total power of the channels starts to exceed 33W, the lamp automatically limits channel control while keeping proportions.



For example, if the function is enabled and all channels (R, G, B, W) have been set to 100% (DMX 255), then the lamp will not reach full power of 47W. Each channel will be proportionally limited so that the total power of the lamp does not exceed 33W. In this case, theoretically all channels will be set to ~ 70% instead of 100%.

**No signal** – it defines the device to behave in the absence of DMX signal, possible options to choose from:

- **off** – turning off the lamp completely
- **on** – control of all channels (R, G, B, W) at 100%
- **hold** – holding the last DMX value
- **custom scene** – scene created by the user in the [Scene edit]
- **scene 1** – switching on the red (R) channel to 100%, others are switched off
- **scene 2** – switching on the green (G) channel to 100%, others are switched off
- **scene 3** – switching on the blue (B) channel to 100%, others are switched off
- **scene 4** – switching on the white (W) channel to 100%, others are switched off
- **program** – the built-in demonstration program will be implemented (steps and individual values on the channels in the table on the next page)

Description of the program steps built into the device in **No signal** mode

Step	Channel	Value	Step	Channel	Value
Step 1	R	255	Step 9	R	255
	G	0		G	0
	B	0		B	0
	W	0		W	255
Step 2	R	255	Step 10	R	255
	G	255		G	255
	B	0		B	0
	W	0		W	255
Step 3	R	0	Step 11	R	0
	G	255		G	255
	B	0		B	0
	W	0		W	255
Step 4	R	0	Step 12	R	0
	G	255		G	255
	B	255		B	255
	W	0		W	255
Step 5	R	0	Step 13	R	0
	G	0		G	0
	B	255		B	255
	W	0		W	255
Step 6	R	255	Step 14	R	255
	G	0		G	0
	B	255		B	255
	W	0		W	255
Step 7	R	255	Step 15	R	255
	G	255		G	255
	B	255		B	255
	W	0		W	255
Step 8	R	0			
	G	0			
	B	0			
	W	255			

**Smooth DMX** – the rate of response to changes in control where 10 represents an immediate change without any delay, and 2000 is a very slow change. This parameter can be used to improve fluidity of control. The minimum value of the parameter is 10, and the maximum is 2000, default value is 11.

**Smooth NOS** – the rate of response to the disappearance of the DMX signal and transition to selected No signal settings. The minimum value of the parameter is 10, the maximum is 2000, default value is 100.

**Default sett.** – restore factory settings in PX361

**Lighting time** – the time the lamp is on (years [y] days [d] hours [h] minutes [m])

**Working time** – total working time of the device (years [y] days [d] hours [h] minutes [m])

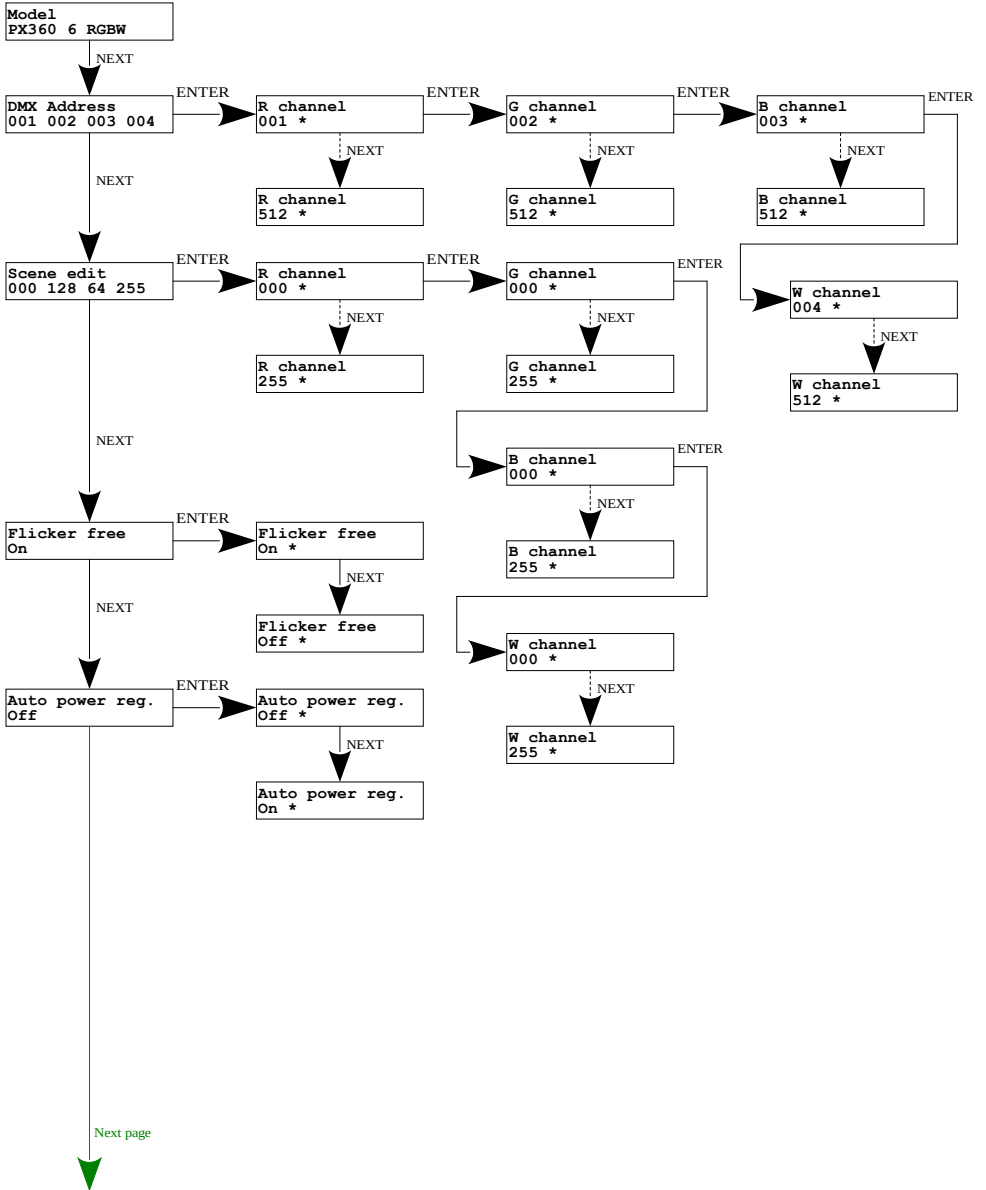
**Temp. min max** – the minimum and maximum temperature recorded by the device

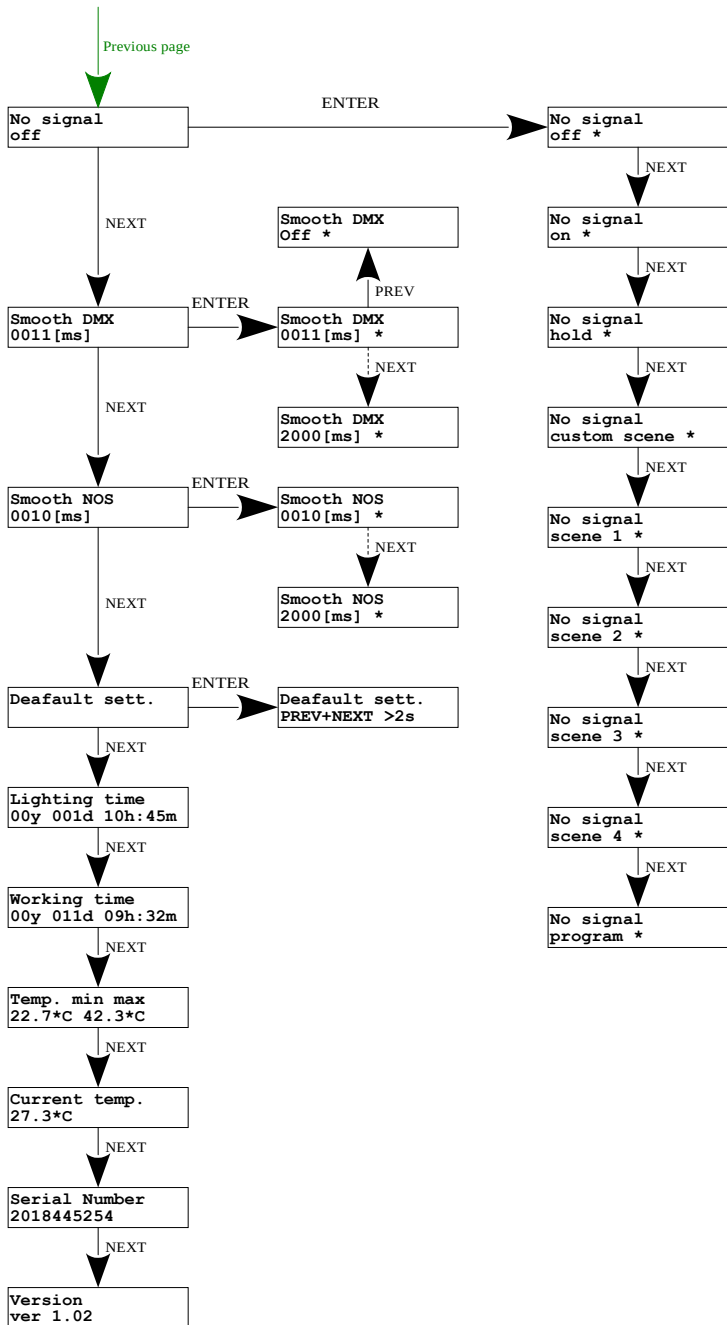
**Current temp.** – current lamp temperature

**Serial number** – serial number of the devices

**Version** – PX361 software version

## 4.2 The PxGround 24ASF menu diagram in PX277





## 5 Illumination installation

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To install the illumination, proceed as described below, trying to arrange the components so that the order of re-assembly does not cause any problems. The correct arrangement of the sealing elements of the reflector is particularly important – the gaskets should properly adhere to their designated places. Never use mechanically damaged gaskets.

The installation of the illumination is divided into two stages: powering up and connecting the DMX signal (5.1 Stage I: powering up), and installation of the lamp (5.2 Stage II: Lamp assembly).

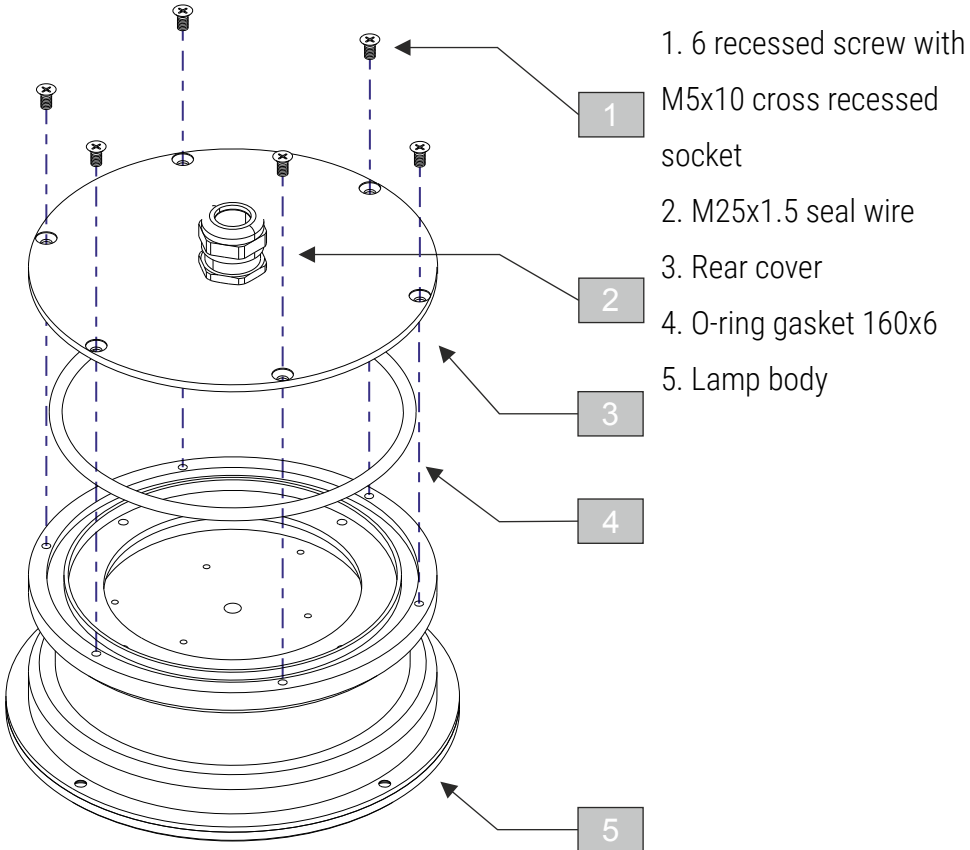
### 5.1 Stage I: powering up

1. Unscrew 6 screws [1] on the back of the lamp.
2. Remove the rear cover [3] and the cable penetration [2], as well as the O-ring gasket [4].
3. Connect the power supply and DMX(refer to chapter 7 Connection scheme).
4. Pass the wires (power supply and DMX) through the cable penetration [2].
5. Place the O-ring gasket [4] and the rear cover [3] along with the cable penetration [2] in the correct position (5.3 Components of the rear part of the lamp).
6. Tighten all the screws [1] by tightening them gradually and evenly.

## 5.2 Stage II: Lamp assembly

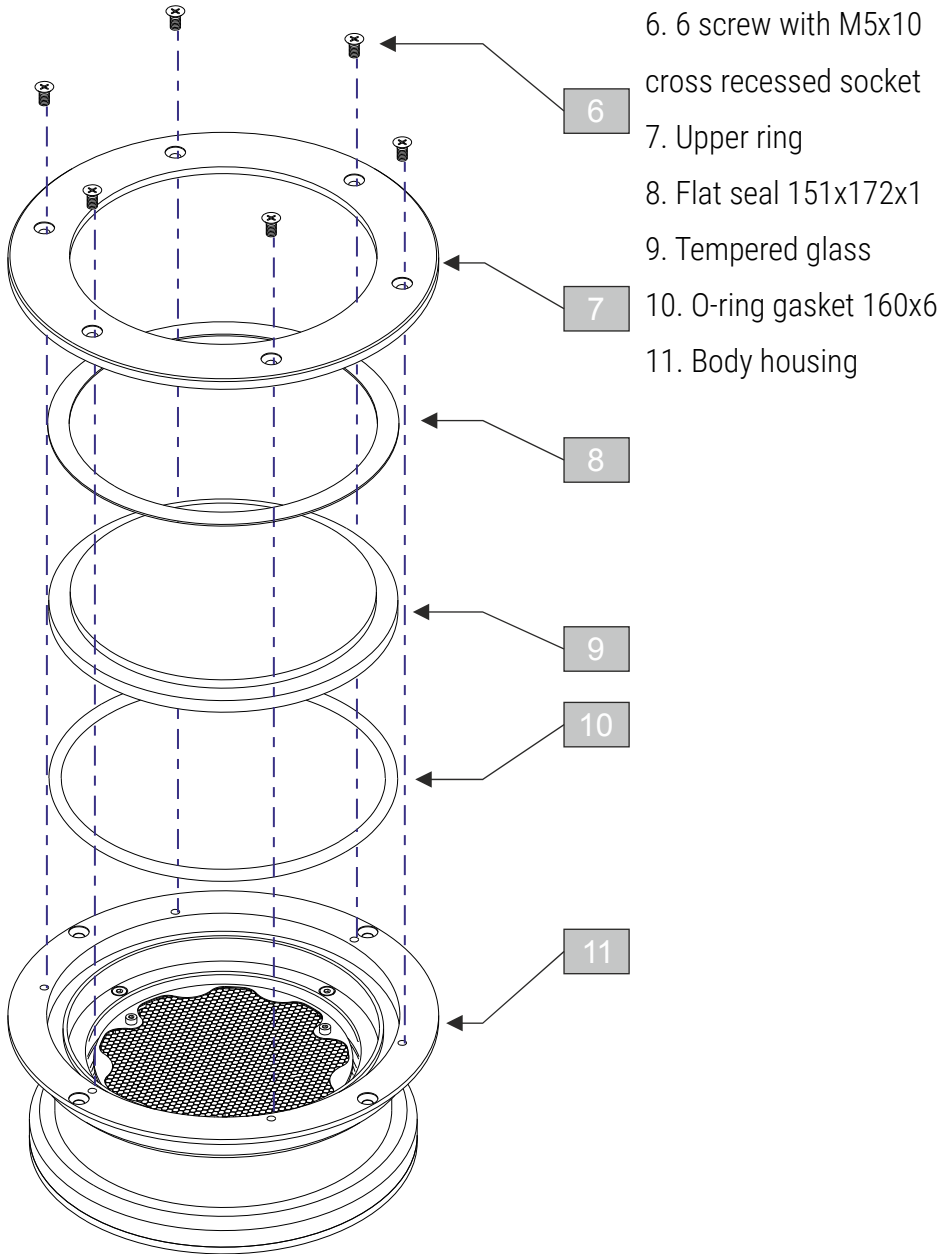
1. Unscrew 6 screws [6] on the front of the lamp.
2. Remove the upper ring [7] with the gasket [8].
3. Carefully remove the glass [9].
4. Remove the O-ring gasket [10].
5. Install the lamp in a per-prepared position (5.5 Mounting the lamp in the ground)
6. Place the O-ring gasket [10], the glass [9] and then the upper ring [7] with the gasket [8] in appropriate places (5.4 Components of the front part of the lamp).
7. Tighten all screws [6] by tightening them gradually and evenly.

### 5.3 Components of the rear part of the lamp

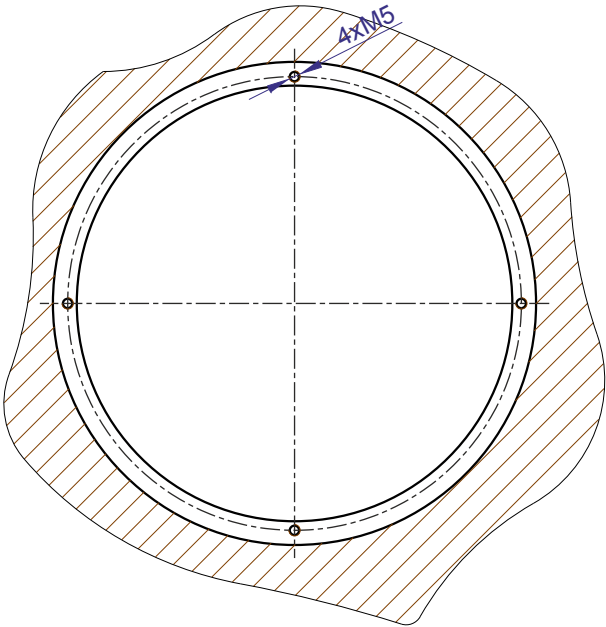
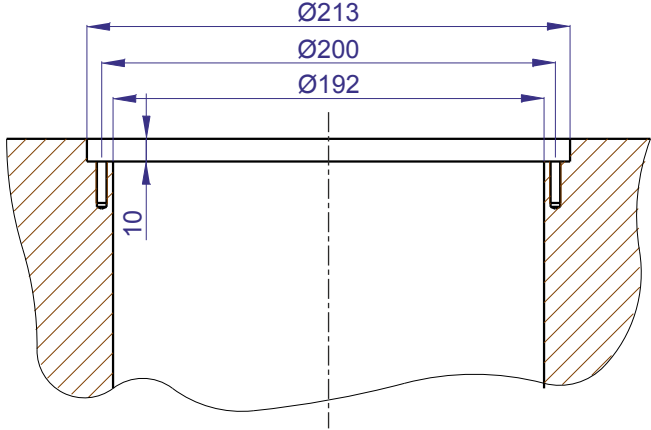




## 5.4 Components of the front part of the lamp



# 5.5 Mounting the lamp in the ground



## 6 RDM – available parameters

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PX361 supports the DMX-RDM protocol. DMX protocol in its assumption enables one-way data flow while its extension, the RDM protocol, can transmit information in two ways. This makes the simultaneous receiving and sending of information possible and allows for monitoring the operation of devices compatible with the RDM protocol as well as gives the possibility of changing the configuration of their parameters.

### List of RDM parameters supported by PX361:

Parameter name	PiD	Description
SUPPORTED_PARAMETERS	0x0050	all supported parameters
PARAMETER_DESCRIPTION	0x0051	description of additional parameters
DEVICE_INFO	0x0060	information concerning the device
SOFTWARE_VERSION_LABEL	0x00C0	firmware version of the device
DMX_START_ADDRESS *	0x00F0	DMX starting address of the device, range 1 – 512
IDENTIFY_DEVICE *	0x1000	device identification, Two states are possible: identification is off (0x00 value) and identification is on (0x01 value).
DEVICE_MODEL_DESCRIPTION	0x0080	device description, e.g. name
MANUFACTURER_LABEL	0x0081	manufacturer description, e.g. name

Parameter name	PiD	Description
DEVICE_LABEL *	0x0082	additional device description, It is possible to enter an additional device description using up to 32 ASCII characters.
FACTORY_DEFAULTS	0x0090	device default settings
DMX_PERSONALITY	0x00E0	DMX operational mode
DMX_PERSONALITY_DESCRIPTION	0x00E1	description of individual operational modes
SENSOR_DEFINITION	0x0200	information concerning the selected temperature sensor
SENSOR_VALUE	0x0201	information concerning sensors
DEVICE_HOURS	0x0400	information concerning the working time of the device counted in hours
LAMP_HOURS	0x0401	information concerning lamp lighting time
TEMPERATURE_THRESHOLD_LOW	0x800F	lower temperature value for which the temperature limitation is being activated (70°)
TEMPERATURE_THRESHOLD_HIGH	0x8010	upper temperature value for which the temperature limitation is active (90°)
CUSTOM_SCENE *	0x8022	user-created scene that can be implemented if no DMX signal is found; The minimum value set on all four channels is 0, the maximum is 125. The default value is 128.

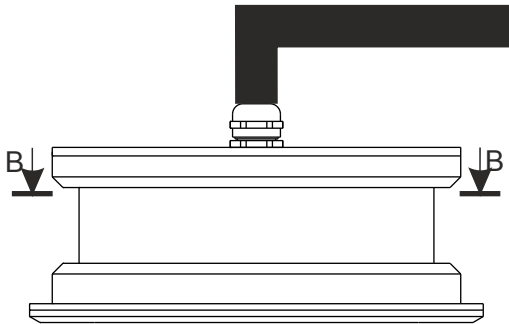
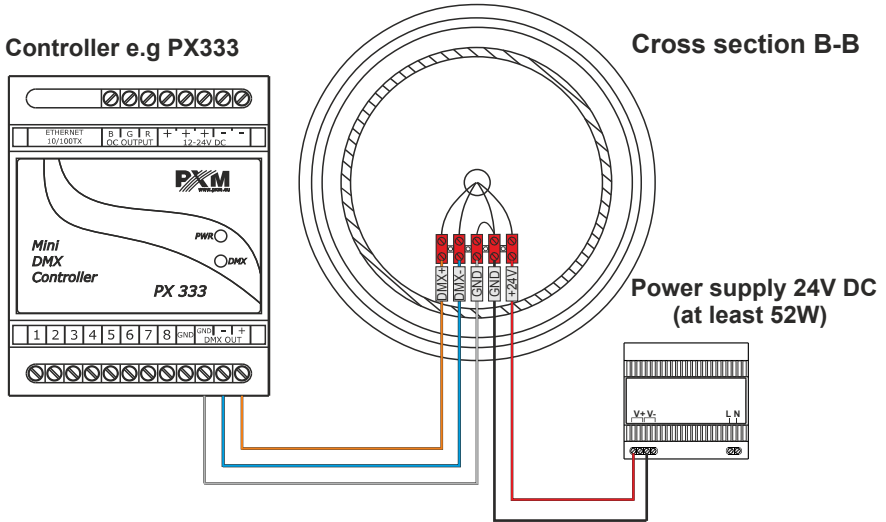
Parameter name	PiD	Description
NO_SIGNAL: 0 1 H C R G B W P *	0x801C	for value <b>0</b> , the No signal mode is disabled, for <b>1</b> it is enabled. <b>H</b> – last DMX value hold, <b>C</b> – user created scene is implemented, <b>R</b> – red channel 100%, <b>G</b> – green channel 100%, <b>B</b> – blue channel 100%, <b>W</b> – white channel 100%, <b>P</b> – built-in demonstration programme is implemented.
FLICKER_FREE_ON/OFF *	0x8023	remove image flickering; For value 0, the flickering removal function is disabled and for value 1 it is enabled. The default value is 1.
SERIAL_NUMBER	0x8030	device serial number
SMOOTH_TIME_DMX *	0x8043	this is the rate of response to changes in control where 10 represents an immediate change without any delay, and 2000 is a very slow change. This parameter can be used to improve fluidity of control; The minimum value of the parameter is 10, and the maximum is 2000. The default value is 11.

Parameter name	PiD	Description
SMOOTH_TIME_NOS *	0x8044	this is the rate of response to the disappearance of the DMX signal and transition to selected NoSignal settings; The minimum value of the parameter is 10, the maximum is 2000. The default value is 100.
AUTO_POWER_REGULATION *	0x8045	the function that limits the total power of the lamp (total power of channels R, G, B and W). When the total power of the channels starts to exceed 33W, the lamp automatically limits channel control while keeping proportions.

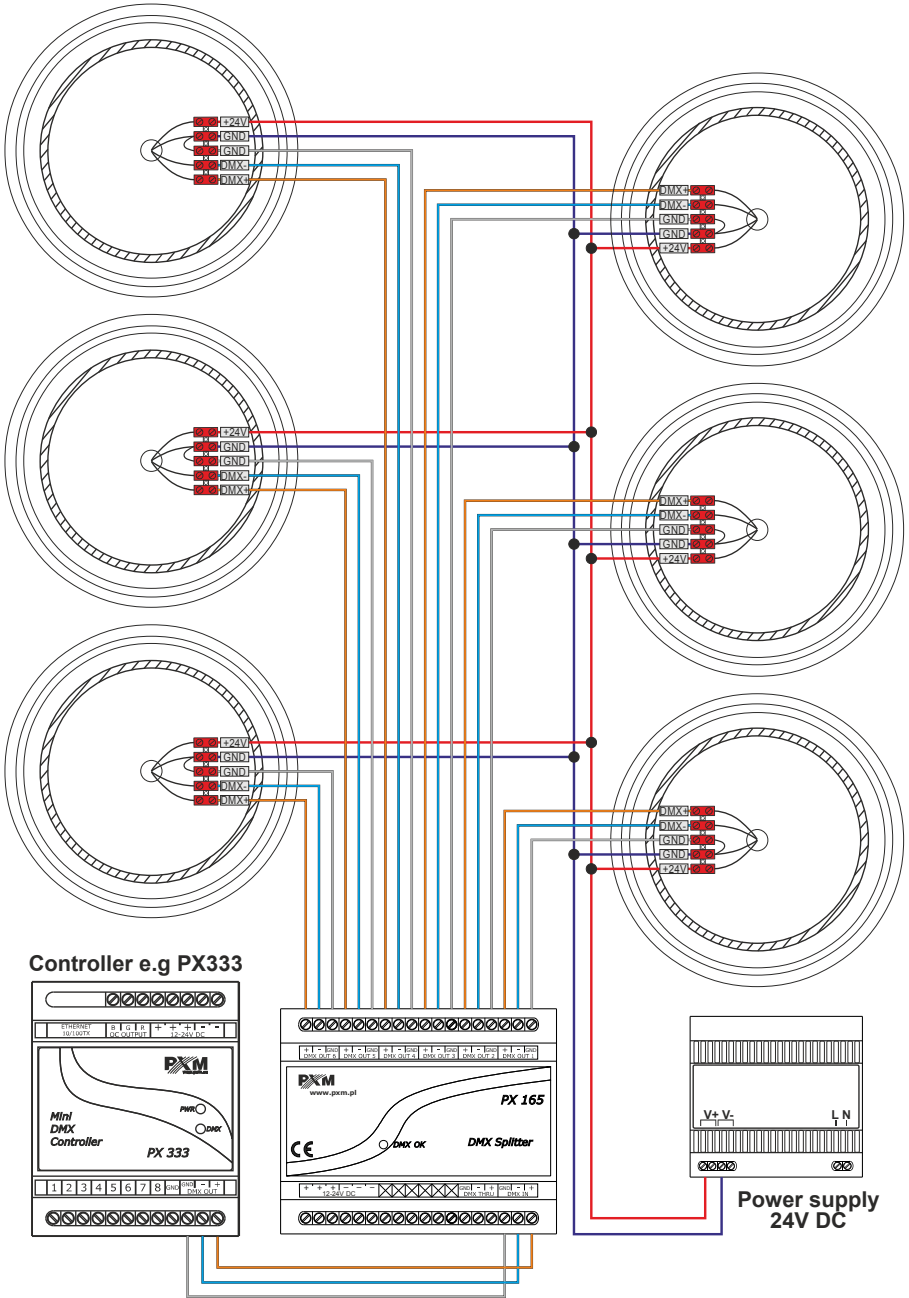
\* - parameter editable

# 7 Connection scheme

## Single lamp



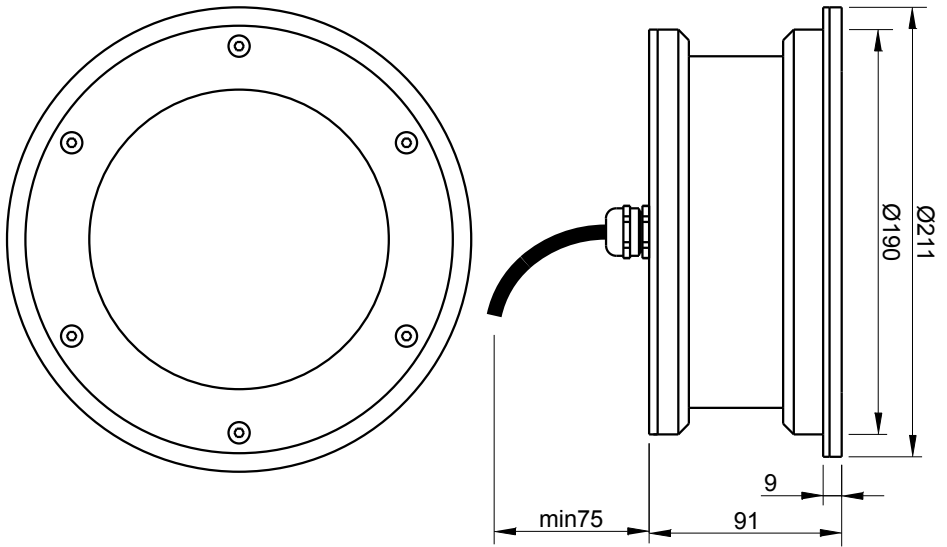
# Connection of six PX361 lamps using the PX165 Splitter





# 8 Dimensions

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## 9 Technical data

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type	PX361
number of LEDs	24
light beam angle	10°, 20°, 35°
LEDs colors	RGBN
number of DMX channels	512
RDM protocol support	yes
device programming	yes (using PX277)
power supply	24V DC
max. power consumption	33W (47W*)
IP rating	IP67
casing material	stainless steel (316L)
weight	7.2kg
dimensions	diameter: 211mm height: 91mm

\* - with power limiter disabled

## DECLARATION OF CONFORMITY

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

we declare that our product:

*Product name:* PxGround 24ASF

*Product code:* PX361

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

PN-EN IEC 63000:2019-01

EN IEC 63000:2018

PN-EN 60598-1:2015

EN 60598-1:2015

PN-EN 62471:2010

EN 62471:2008

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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