PX804-T

PxArt+ Frame Track

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

PxArt+ Frame Track is a professional cropping LED illuminator for the lighting of museums exhibitions or trade fair displays.

The precision cropping system allows you to control the luminous flux and adjust the illumination range to the size and position of the displayed object.

Thanks to the application of the latest semiconductor COB type SSL LED light source and advanced control electronics, a high performance illuminator was made, which fulfills very high demands concerning museum exhibition and trade display lighting applications. Its most important advantages include the possibility of precise cropping of the displayed objects, total lack of ultraviolet radiation emission, traces of infrared radiation, very high color rendering index (CRI), and very large brightness at low energy consumption.

The device features a holder allowing for its quick assembly on GLOBAL Trac® Pulse Control tracks. An individual address assigned to each illuminator allows for adjustment of brightness regardless of the settings of other illuminators.

Thanks to the press buttons located on a lamp housing, it is also possible to control the illuminators manually (e.g. in case of connecting a lamp to a frame without the control lines).

A high output LED was used in the lamp with an effective control system. Thanks to this, the lamp features small heat emission.

By using an additional PX277 device (PxArt+ Settings Controller), you can set all parameters of the device and read the information on the time and temperature of the lamp. The PX804-T illuminator supports the RDM protocol.

2 Safety conditions

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 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.

The PX804-T device is powered directly from 230V power grid. Failure to comply with the safety rules may result in electric shock and may endanger the user's life. Therefore it is necessary to observe the following:

1. Installation should be performed by a person holding the appropriate qualifications, according to the instruction manual.
2. The electrical installation to which the lamp is to be connected must meet the safety requirements (the installation must be 3-wire and equipped with a residual current device).
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, should 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. The device cannot be used in places with temperature lower than +2°C or higher than +40°C.
9. Clear with damp cloth only.

Above the temperature of +70°C the brightness of the lamp is reduced, which prevents overheating of the device. If the device reaches a temperature of +90°C, the lamp power will be completely reduced. The lighting is turned on again when the temperature drops below the maximum temperature (+90°C). The higher the temperature of the device, the greater the limitation of lighting brightness.

3 Information on version

The PX804-T lamp is available in several versions that differ, for example, in the angle of the lenses used.

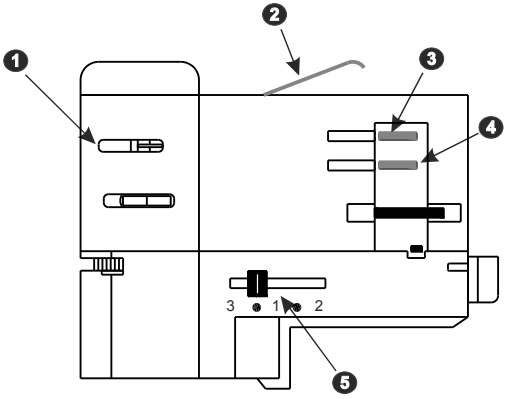
Below is a description of the PX804-T markings and their explanation:

PX804-T – BB – YYY – Z

BB – version	YYY – CRI and color temperature:	Z – housing colors:
XL – large COB	X30 – CRI 95, temp. 3000K	1 – gray
	930 – CRI 90, temp. 3000K	2 – black
	950 – CRI 90, temp. 5000K	3 – white
	830 – CRI 85, temp. 3000K	
	850 – CRI 85, temp. 5000K	

4 DMX connection

4.1 GLOBAL Trac® GAC 600 adapter



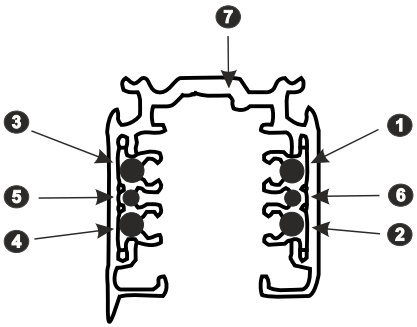
DMX contacts

1. DMX - (on the opposite side DMX +)

MAINS POWER SUPPLY

2. protective ⏚
3. phase 1 (on the opposite side phase 2)
4. neutral (on the opposite side phase 3)
5. phase selection switch

4.2 The cross-section of the DMX GLOBAL Trac® Pulse Control



POWER SUPPLY

1. phase 2
2. phase 3
3. phase 1
4. neutral

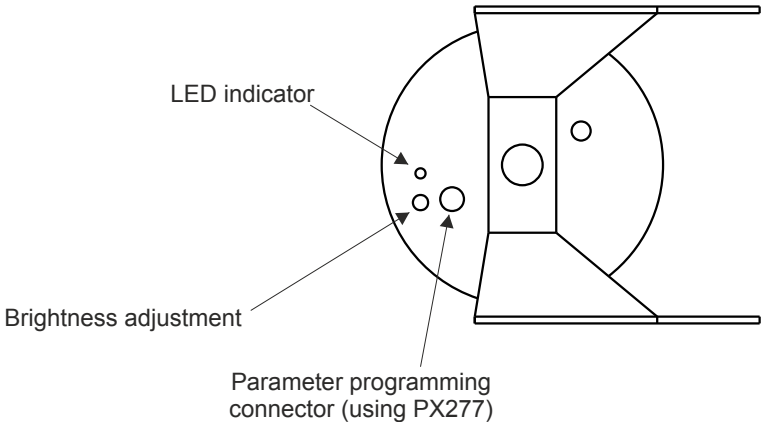
DMX

5. DMX -
6. DMX +
7. mass (GND)

5 Manual change of lamps settings

The lamp has been equipped with a button which allows for changing the brightness level. The button has been placed at the bottom part of the junction box, above the lamp reflector.

The layout of the button and connectors for connecting the PX277 programmer has been shown in the figure below:



Over the illuminator, there is a LED informing about the lamp condition.

Depending on the situation, the LED signals the following messages:

- lamp starting – rapid blinking of the LED for 2 seconds
- DMX signal receipt – lighting of the brightness adjustment press button for the first minute after the receipt of the DMX signal
- after starting up of the lamp with the lack of the DMX signal – the LED not lights
- damage of a temperature sensor module – the LED does not go off after one minute

In order to reduce brightness, a relevant adjustment key must be held pressed for a while. If the LED starts blinking during the adjustment, it means that the marginal level has been reached (minimal or maximal), then the adjustment direction is reversed.

It is possible to reverse the adjustment direction without reaching the marginal levels, e.g. while increasing the lamp lighting brightness release the key, the LED will signal reversing of the adjustment direction with a single blink, the pressing of the adjustment key again will result in dimming (diminishing of brightness) of the lamp.

During the operation of the lamp, the LED remains off (except the situations described above).

6 Cooperating with the PX277 configurator

The PX804-T settings can be changed by connecting to the PX277 (PxArt+ Settings Controller) configurator. It allows in connection with PX804-T to define the following parameters: DMX address for brightness (in the range of 1 – 512) and device behavior in the absence of DMX signal (programmable scene).

When the lamp is connected to the configurator, the PX804-T will restart.

6.1 Available parameters

DMX Addr. – changing the DMX address of the brightness channel in the range 1 – 512,

No Signal – behavior of the device when the DMX signal disappears:

- *Scene* – setting the scene displayed when the DMX signal disappears,
- *On* – switching the lamp on at 100%,
- *Off* – complete shutdown of the lamp,
- *Hold* – maintaining the last value of DMX signal,

No Signal Time – device reaction time after the disappearance of the DMX signal (0.0 – 10s),

Smooth – smooth changes in DMX signal value (*OFF / Level 1 – 4*),

Control mode – operating mode selection:

- *1ch MONO* – 1 DMX channel for brightness control,

Driver temp. – a list of the lowest, highest and current operating temperature of the power supply,

Module temp. – a list of the lowest, highest and current operating temperature of the module with LEDs,

PWR time / ACT time – total lamp operation time / total lamp lighting time,

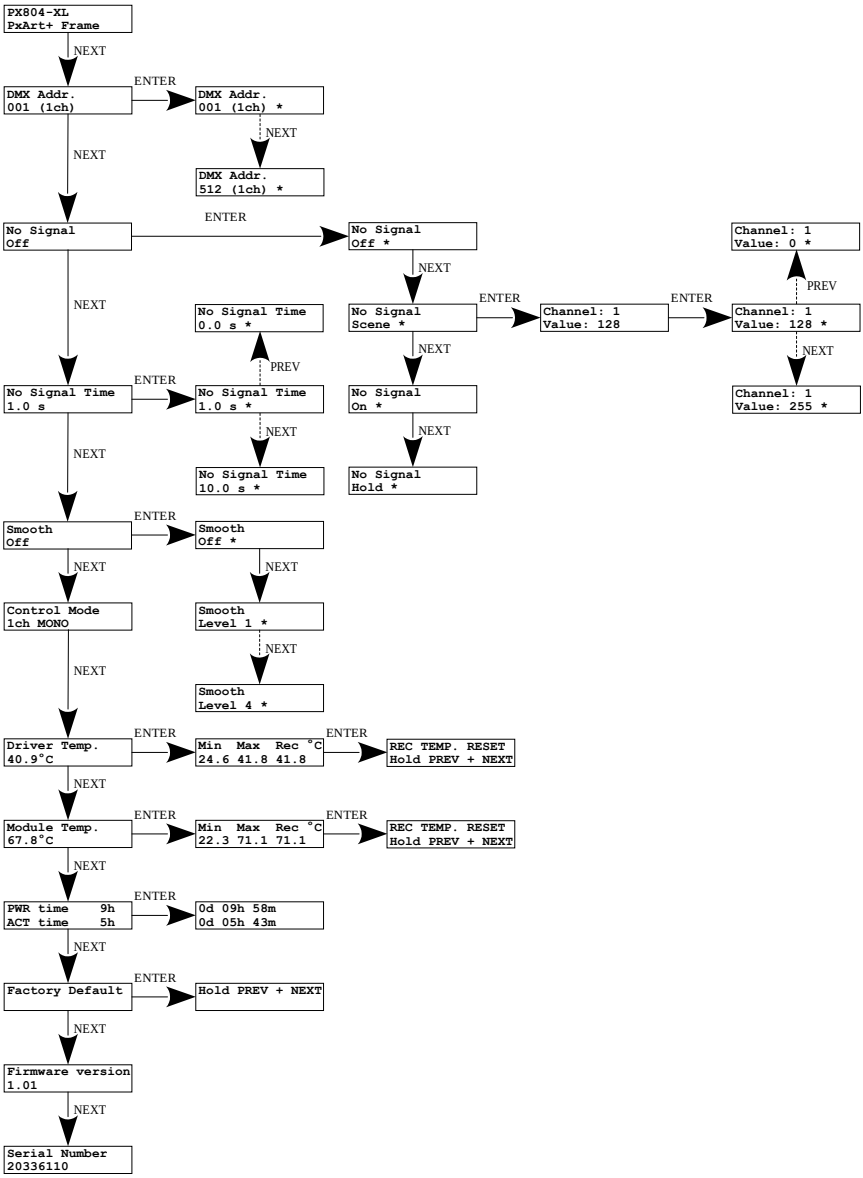
Factory Default – factory reset in PX804-T:

- DMX Addr: 001
- No Signal: Scene
  - Scene: 128
- No Signal Time: 1.0 s
- Smooth: Level 3
- Control Mode: 1ch MONO

Firmware version – software version,

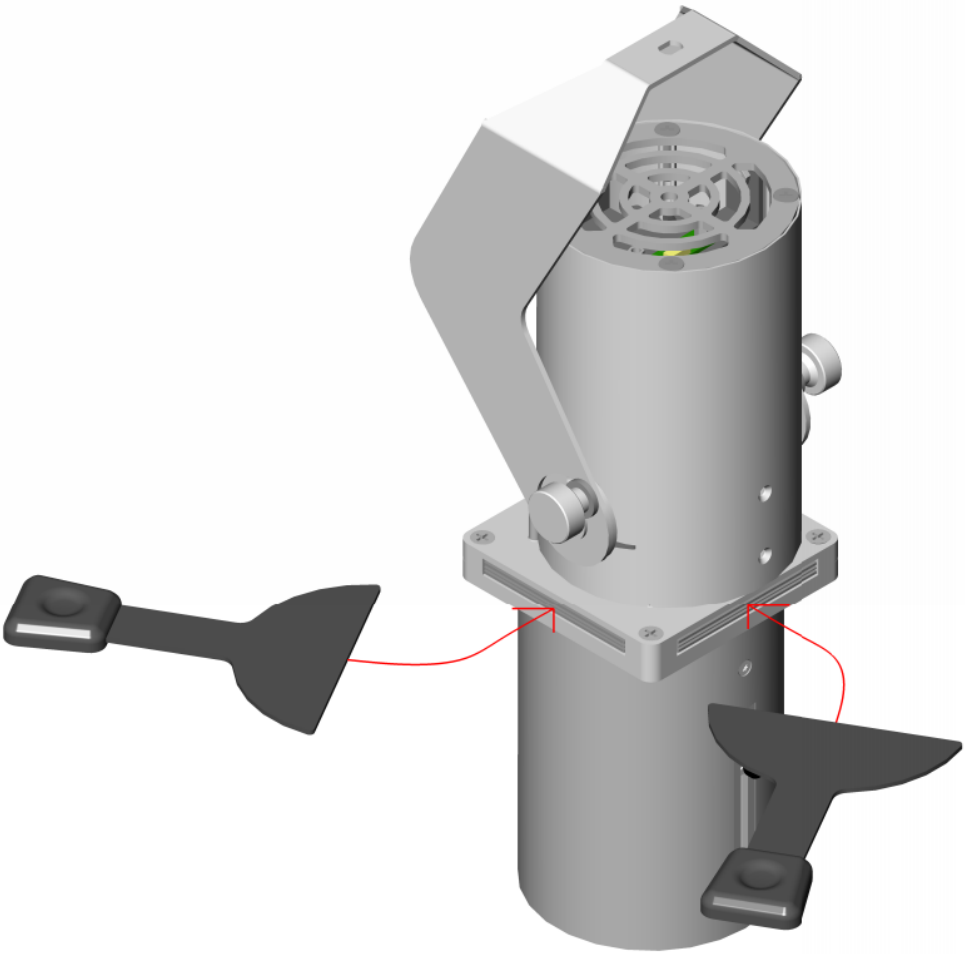
Serial Number – serial number.

6.2 The PX804-T menu diagram in PX277

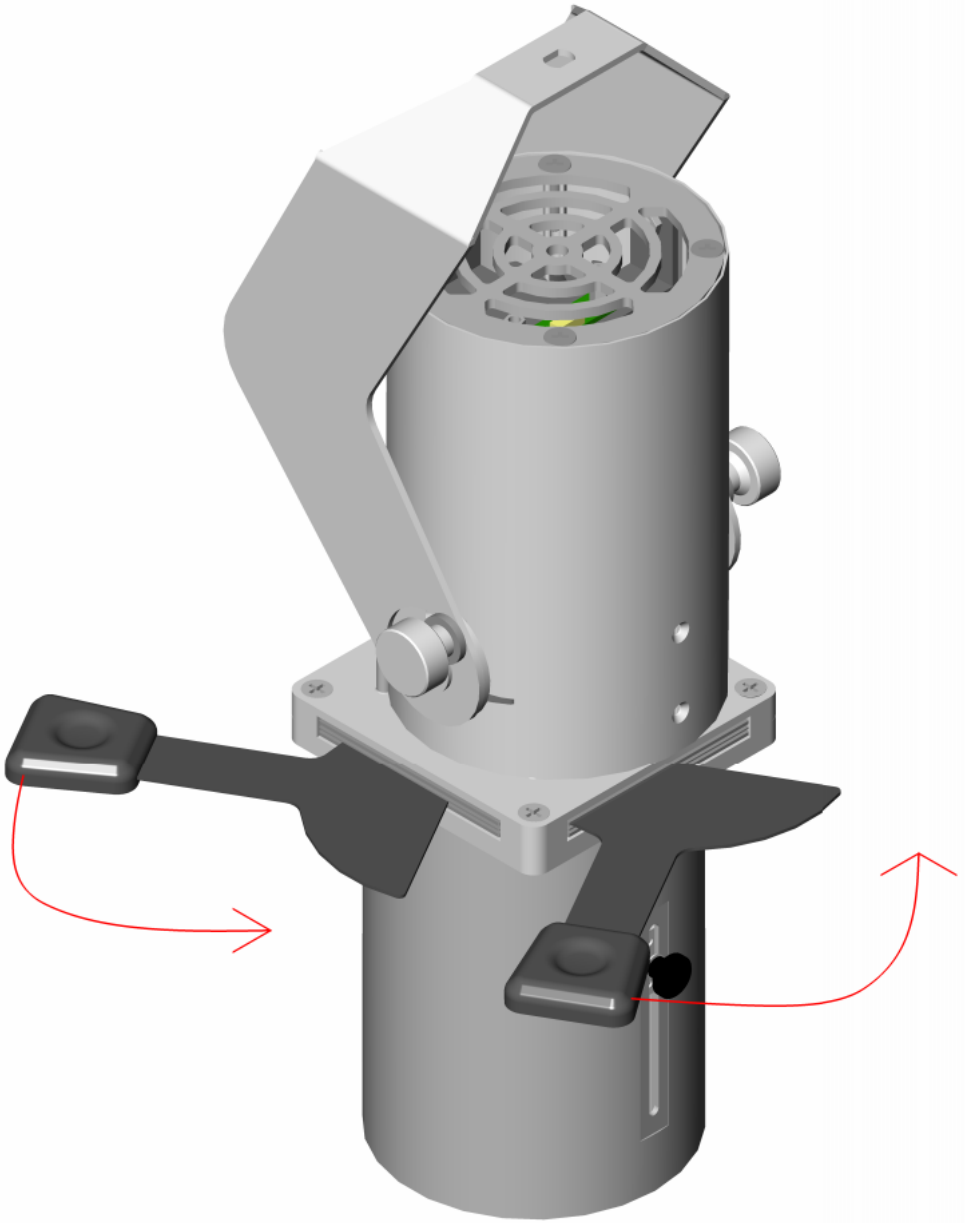


7 Installation of shutters

First, insert the movable shutters at an angle into the appropriate pockets – visualization below.

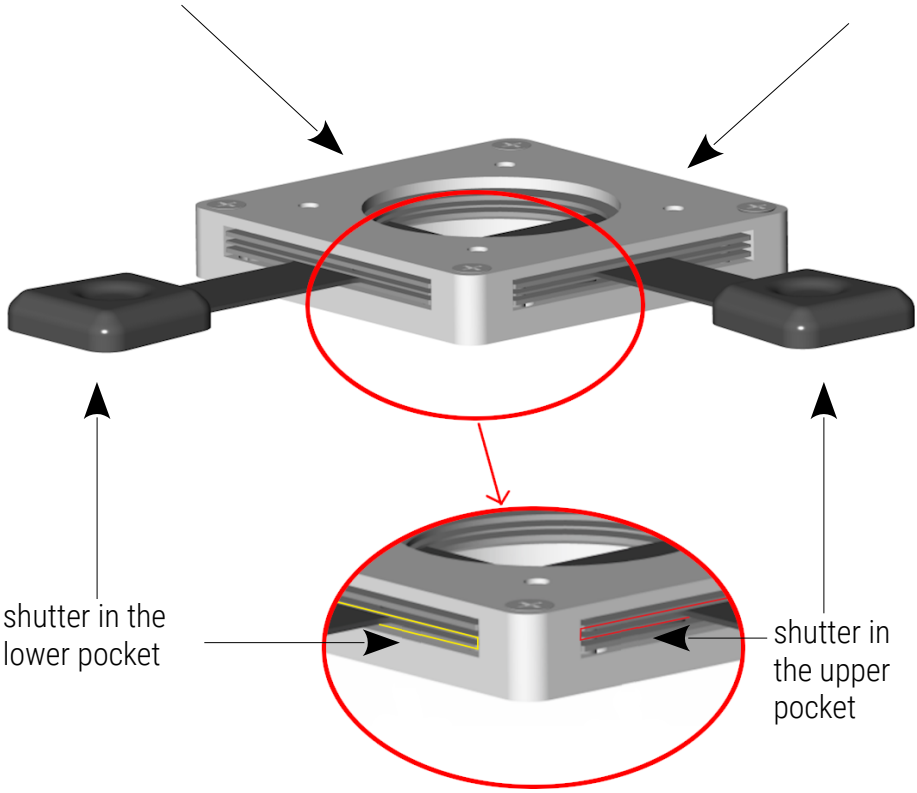


After inserting the diaphragms at an angle, it should be straightened according to the diagram below.



Particular attention should be paid to which pockets are inserted.

Opposite diaphragms must be put in pocket on the same level (upper or lower pocket).



8 RDM – available parameters

The PX804-T supports the DMX-RDM protocol. DMX protocol allows only of a one-way data transmission, while extension the RDM protocol can transmit information in two directions. This makes possibility of monitoring activities of the compatible devices. Thanks to RDM some available settings of compatible devices may be programmed using this protocol.

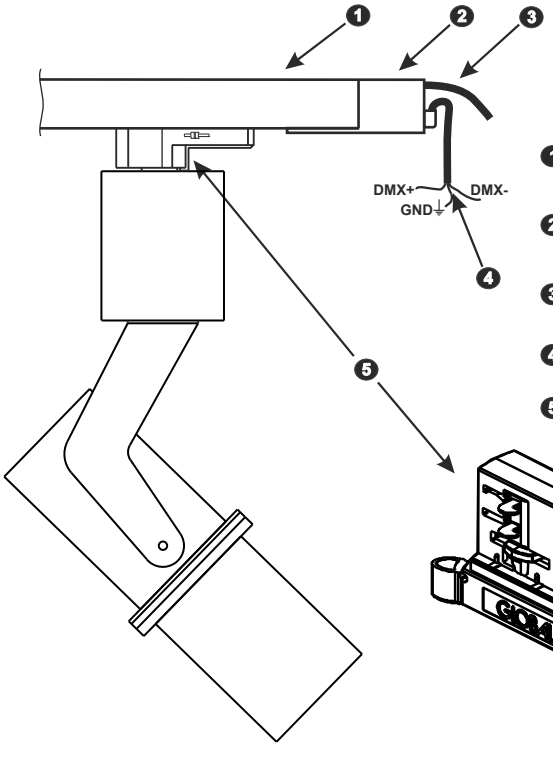
List of RDM parameters supported by the PX804-T:

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_ADDRESS *	0x00F0	DMX starting address of the device
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
DEVICE_LABEL *	0x0082	additional device description; It is possible to enter an additional device description using up to 32 ASCII characters

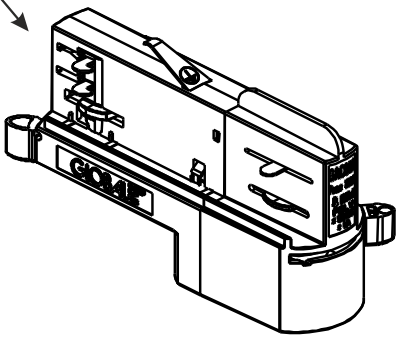
Parameter name	PiD	Description
FACTORY_DEFAULTS	0x0090	device default settings
PERSONALITY *	0x00E0	DMX operational mode
PERSONALITY_ DESCRIPTION	0x00E1	description of individual operational modes
SENSOR_DEFINITION	0x0200	information on the selected temperature sensor
SENSOR_VALUE	0x0201	information about sensors
SMOOTH_OFF/1/2/3/4 *	0x801A	selection of smoothing options
NO_SIGNAL_OFF/ON/HLD/S *	0x801C	behavior of the device when the DMX signal disappears
NOS_TIME *	0x804D	device reaction time when DMX signal disappears (0 – 10s)
NOS_SCENE_1 *	0x8021	setting channel 1 in the scene
SERIAL_NUMBER	0x8030	device serial number

* - editable parameter

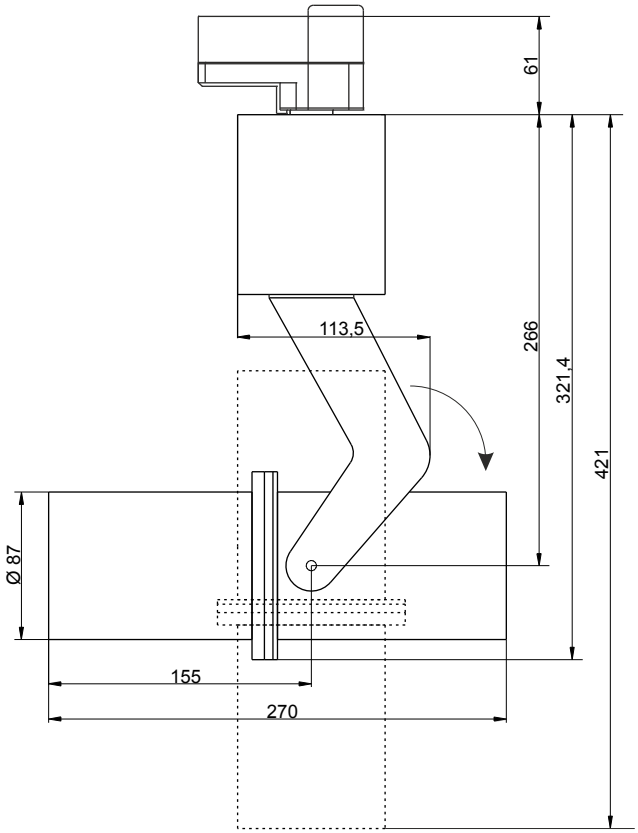
9 Connection scheme



1. a three-phase track for control systems GLOBAL Trac Pulse Control
2. end feed
3. power cable
4. DMX cable (shielded cable, two-core cable)
5. adapter GLOBAL Trac GAC 600



10 Dimensions



11 Technical data

type	PX804-T
power supply	230V AC
number of LEDs	1 (COB)
power	27W
PF (power factor)	0.94
total luminous flux	PX804-T_XL_930: 610lm (maximum crop area – square)
max. increase of the housing temperature	+50°C
CRI index	min. 80
lifetime of diode	50 000h
cropping area	max. 1.35 x 1.35m (at distance 3m)
brightness regulation extension	0 – 100%
control protocol	DMX-512 / RDM
available housing colors	gray, black, white
smoothing function (smooth)	yes
number of control channels	1 (brightness)
mounting	GLOBAL Trac® Pulse Control bus bar
manual control	yes
DMX-512 signal indicator	yes
weight	2.3kg
dimensions	width: 113.5mm (270mm for the horizontal headlight) height: 421mm diameter of the reflector: 87mm

Podłęże, 10.06.2021

DECLARATION OF CONFORMITY

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

we declare that our product:

Product name:	PxArt+ Frame Track
Product code:	PX804-T

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

PN-EN 60598-1:2015-04	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.

2014/35/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 the making available on the market of electrical equipment designed for use within certain voltage limits

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