

PX385

PX385-L0

DMX/0-10

Interface 1ch

User manual



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

PXM Marek Źupnik sp.k.  
Podłęże 654  
32-003 Podłęże  
BDO register number 000005972

tel. +48 12 385 83 06  
mail: info@pxm.pl  
www.pxm.pl

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# 1 Description

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The PX385 module is used to process DMX-512 signal to analogue control 1 – 10V or 1 – 10V with a relay (Relay Mode). The DMX/0-10 Interface 1ch has a DMX connector and 1 output voltage channel.

PX385 can be controlled using a DMX signal (the device has a built-in DMX-512 signal receiver), and it can operate independently. The DMX address for the device is set manually using the DIP switch located on the housing with the RDM protocol or using the PX277 configurator. Whats is more, the user can set the output value is a DMX signal is lost. In addition, the device supports the RDM protocol.

The device is manufactured in an aluminum housing. DMX/0-10 Interface 1ch is powered by 230V AC.

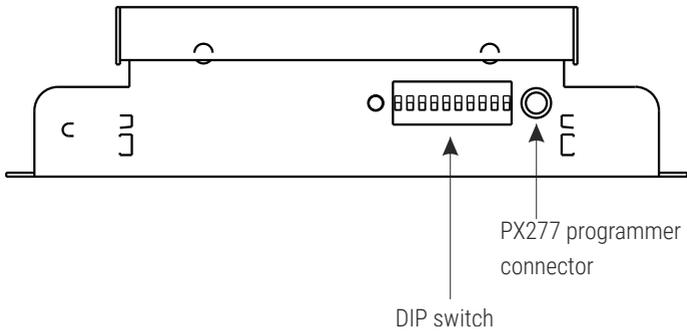
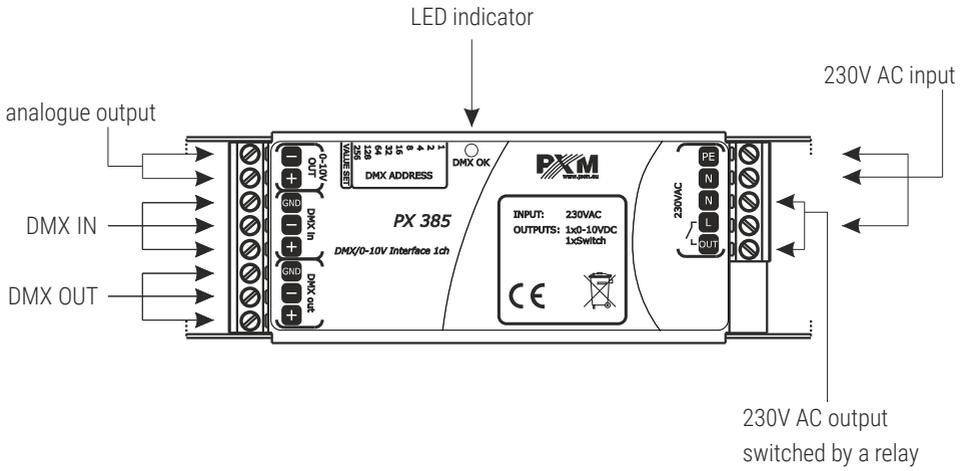
## 2 Safety conditions

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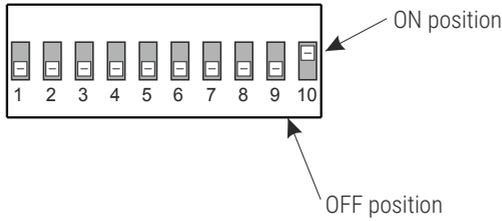
The PX385 is a device powered directly from power grid 230V, what may result in electric shock in case of not following safety rules. During its installation and use the following rules must be strictly observed:

1. The device should be installed as described in the manual.
2. The installation to which the switch is connected have to be linked to a working protective installation (3-wire installation).
3. Protect the power cord from mechanical and thermal damage.
4. In case of damage the power cord, replace it with the same technical data.
5. For connecting devices to the Relay Module use only 3-wire cables with cross-section of not less than 1,5mm<sup>2</sup>.
6. All repairs and connections of outputs or DMX signal can only be made with cut off power supply.
7. PX385 should be strictly protected against contact with water and other liquids.
8. All sudden shocks, particularly dropping, should be avoided.
9. Do not connect to a power supply with a damaged case.
10. The device cannot be used in places with temperature lower than +2°C on higher than +40°C.
11. The device cannot be turned on in places with humidity exceeding 90%.
12. Use only a slightly damp cloth for cleaning – the device must be completely disconnected from the power supply at this time.

# 3 Connectors and control elements



## DIP switch – principle of operation:

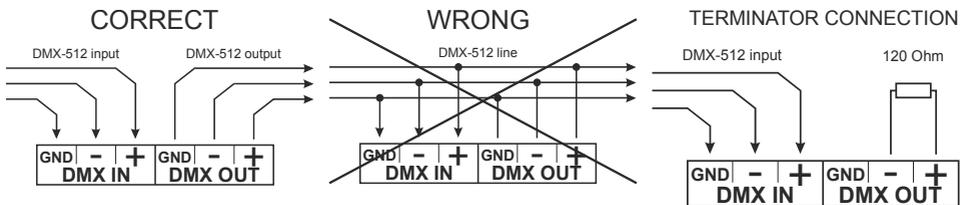


**NOTE!** When the device receives a DMX signal, the diode blinks every ~1s, if there is no DMX signal, it blinks every ~3s.

## 4 DMX signal connecting

PX385 have to be connected to DMX line in serial mode, with no branches on DMX control cable. That mean that DMX line, from the signal source, must be connected to **DMX in** pins of PX385 and later, directly from **DMX out** pins to next device in DMX chain.

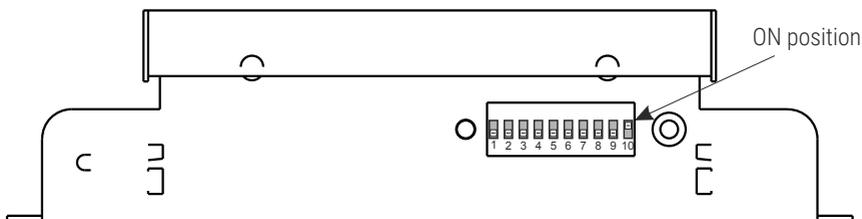
If the PX385 is the last DMX chain receiver there should be terminator (resistor 120 Ohm) mounted between “+” and “-” pins of **DMX out** section.



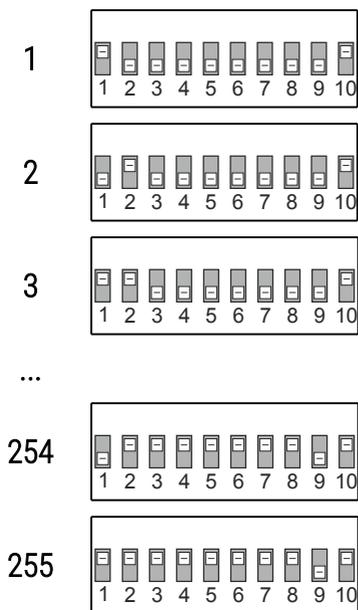
# 5 Device configuration

## 5.1 Configuration using a DIP switch

1. Set the *tenth* DIP switch up (to the *ON* position) to enter the operating mode setup and *no signal*.



2. Using switches from *one* to *eight* set the brightness values for the operation of the driver in the *no signal* mode, i.e. when DMX signal is not received. Brightness value is set in a binary code between 0 – 255.



3. Set the *ninth* DIP switch to *OFF* when you want the driver to work in the 0 – 10V mode or *ON* for the 1 – 10V (Relay).
4. Save your settings by switching the *tenth* DIP switch to *OFF* which will take you to the addressing mode.
5. Set switches DMX address of the device with 1 – 9 (switch 10 must be *OFF* then).

**NOTE!** If the user intends to configure the device using PxArt+ Settings Controller or using the RDM protocol, all DIP switches should be set to *OFF*.

## 5.2 Configuration using PX277

Converter settings can be changed by plugging in the PxArt+ Settings Controller.

When connecting the cable to PX385, the device restarts. The main menu of the configurator allows for viewing PX385 parameters and changing the following options: brightness address, scene brightness, output mode and restoration of default parameters.

Moreover, it is possible to check the lighting time (control time) and working time (triggered voltage). PxArt+ Settings Controller also allows for checking the software version number, serial number and device model.

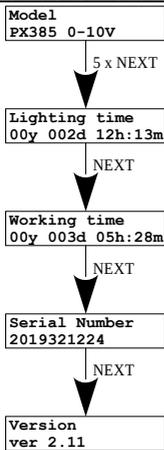
Navigating through the menu is possible with programmer buttons located below the display. The *escape* button allows an exit to the upper level in the device menu, *next* and *previous* buttons make it possible to go forward and backward (alternatively value decreasing or increasing). However, the *enter* button allows to enter the edition of the selected menu.

**NOTE!** To change PX385 setting using the PxArt+ Settings Controller, set all DIP switches to *OFF*.

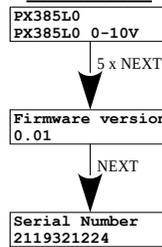
### 5.2.1 Description of information parameters

Px277 controller allows to read important information concerning lamp to which it has been connected. They are: model, control time, total device operation time, serial number and version of the installed software.

#### Standard version



#### L0 version

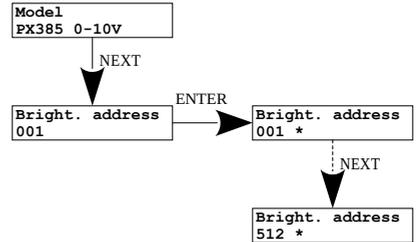


**NOTE!** In the *L0* version, the operating time and lighting parameters are not present.

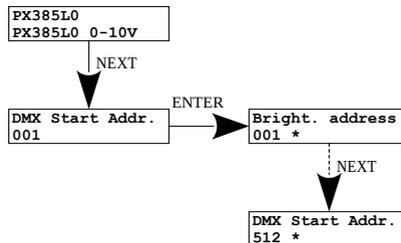
## 5.2.2 Brightness address

PX277 allows for changing the DMX address which controls the output of the converter. DMX channel can be set between 1 to 512.

To change the DMX channel (responsible for output control), select the **[Bright. address]** in the PX277 menu, confirm the selection by pressing *enter*, and then use the *previous* and *next* buttons to set the appropriate value. After changing the DMX channel you must confirm the operation by pressing *enter* or *escape*.



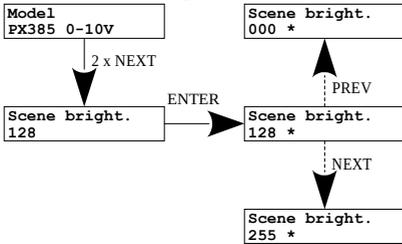
**NOTE!** In the *L0* version, the initial DMX address of the device is set **[DMX Start Addr.]**



### 5.2.3 Scene brightness

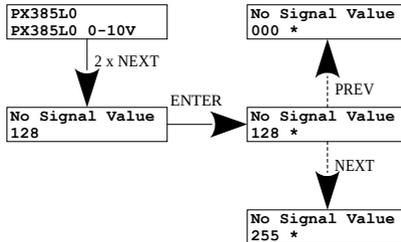
The device can work without DMX control. In such case, the PxArt+ Settings Controller enables the value of the scene brightness. This value can be set in the range from 0 up to 255.

**[Scene bright.]** set to value 0 turns off the stage and turns the value 255 to



100%. Value 128 means the stage brightness is 50%. After changing the value of the stage brightness, the operation has to be confirmed by pressing *enter* or *escape*.

**NOTE!** In the *L0* version, the parameter of the device reaction to the disappearance of the DMX signal is **[No Signal Value]**.

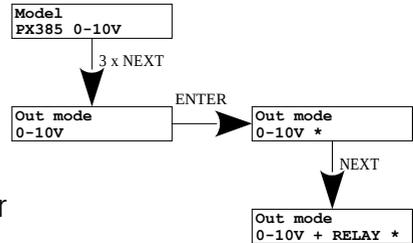


## 5.2.4 Output modes

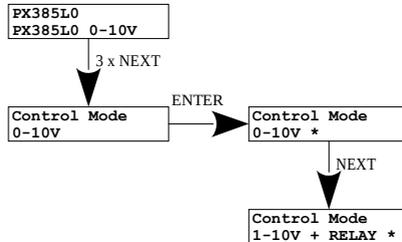
The PX385 device can operate in two output modes:

- 0 – 10V
- 1 – 10V – Relay mode

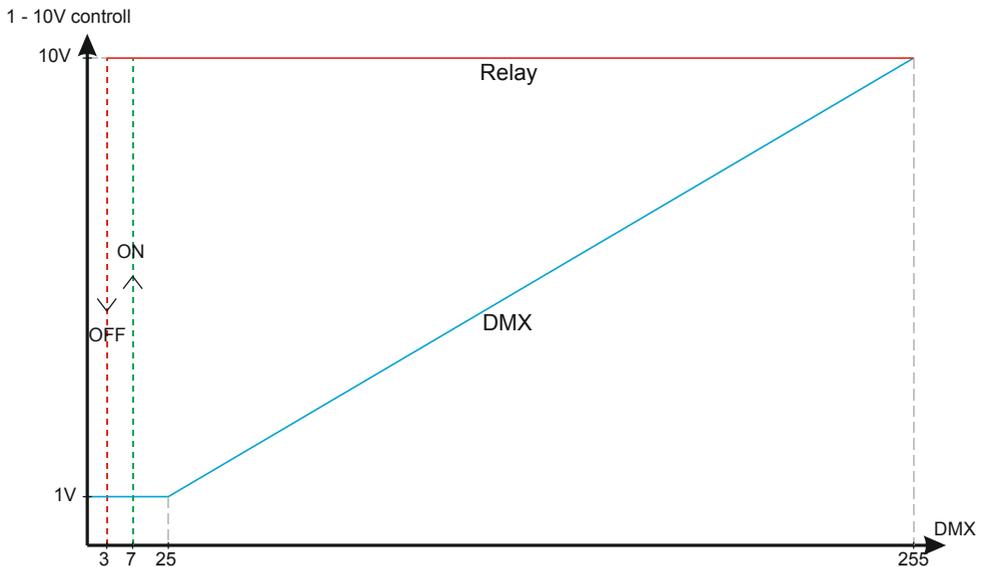
Using the PX277 configurator enter the submenu **[Out mode]** and using the *next* and *previous* buttons select the output mode according to the wiring diagram. After changing the mode confirm the operation by pressing *enter* or *escape*.



**NOTE!** In version L0, the **[Control Mode]** parameter is set.



Below is a graph describing the operation of the 1 – 10V + Relay mode.



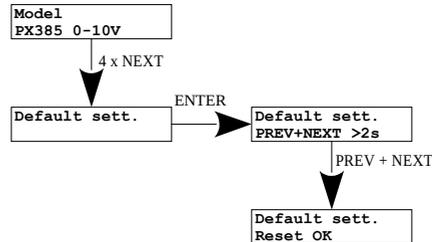
A DMX value of 0 corresponds to a voltage of 1V, with a DMX value of 25 starting to increase linearly to a value of 255. Relay switch is turned on by hysteresis, with DMX value 7 (and more), while DMX 3 value (or less) turns Relay off.

## 5.2.5 Restore default settings

The device comes with the option to restore default settings. To use this option, select the **[Default sett.]** menu and press *enter*.

A window informing about the need to press *previous* and *next* buttons will appear for 2 seconds simultaneously. Next, the device will display **[Reset OK]**, displaying this message means that the factory settings have been restored.

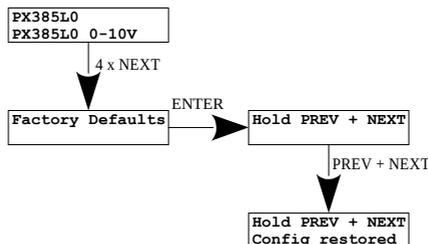
There is also a possibility to exit the level of this menu without returning to default settings. In such case, the escape button will be selected.



### PX385 default settings:

- Bright. address / *DMX Start Addr.*: 001
- Scene bright. / *No Signal Value*: 128 / 255
- Out mode / *Control Mode*: 0-10V

**NOTE!** In version *L0*, the factory defaults are set in **[Factory Defaults]**.



## 5.3 RDM – description of available parameters

PX385 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 simultaneously receiving and sending of information possible and allows for monitoring the operation of devices compatible with the RDM protocol as well as possibly changing the configuration of their parameters.

### List of RDM parameters supported by PX385:

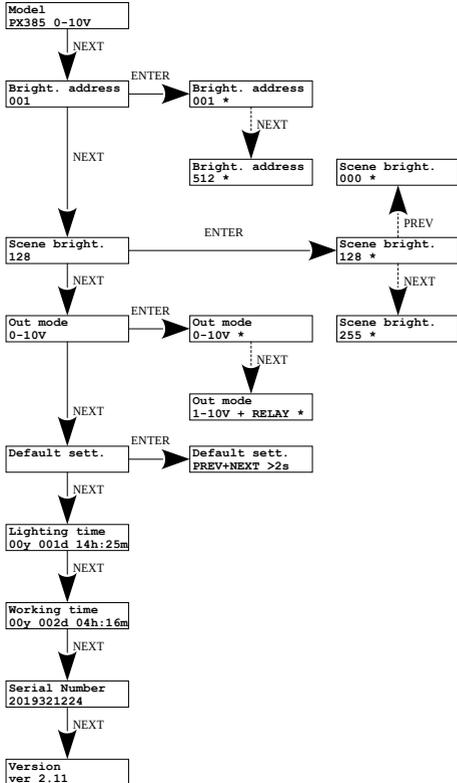
Parameter name	PiD	Description
SUPPORTED_PARAMETERS	0x0050	all supported parameters
PARAMETER_DESCRIPTION	0x0051	description of additional parameters
DEVICE_INFO	0x0060	information concerning the device
SOFTWARE_VERSION_LABEL	0x00C0	firmware version of the device
DMX_START_ADDRESS *	0x00F0	DMX starting address of the device; Range 1 – 512
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
FACTORY_DEFAULTS	0x0090	device default settings
DMX_PERSONALITY	0x00E0	DMX operation mode

Parameter name	PiD	Description
DMX_PERSONALITY_DESCRIPTION	0x00E1	description of individual operation modes
DEVICE_HOURS	0x00E0	information concerning the working time of the device counted in hours
LAMP_HOURS	0x00E1	information concerning lamp lighting time
IDENTIFY_DEVICE *	0x1000	device identification; two states are possible: identification is off (value 0x00) and identification is on (value 0x01)
SCENE_BRIGHTNESS *	0x8022	brightness settings; Minimum value: 0, maximum value: 255. Default value is 128.

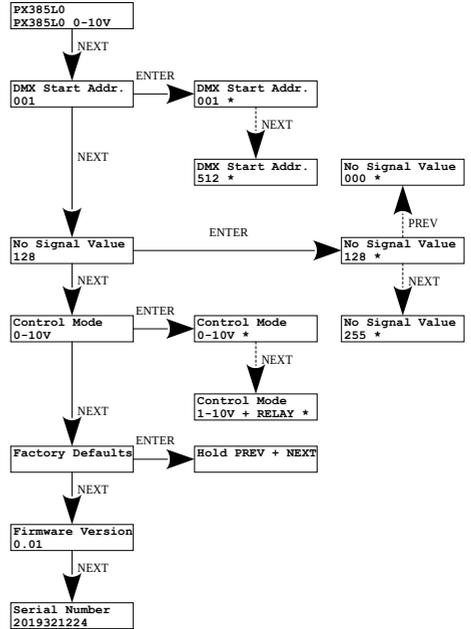
\* - editable parameter

# 6 Menu scheme in PX277

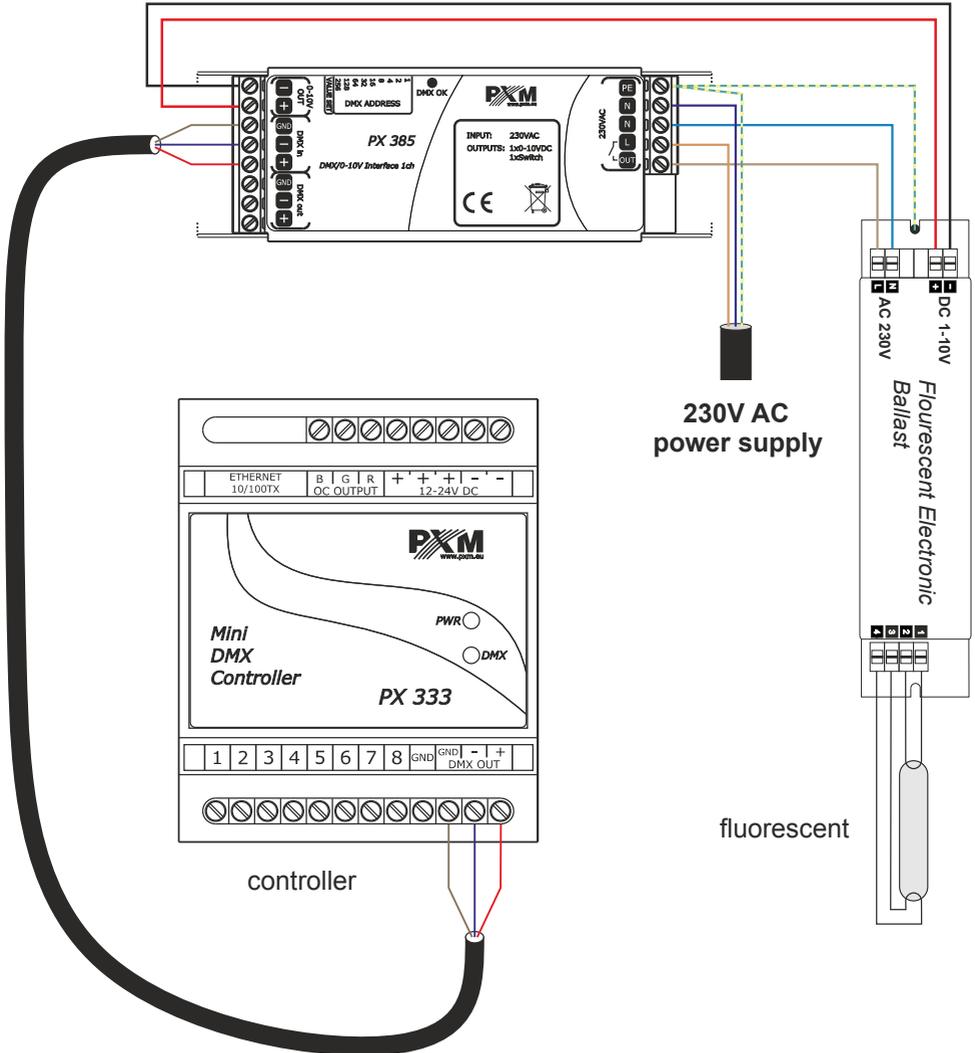
## Standard version



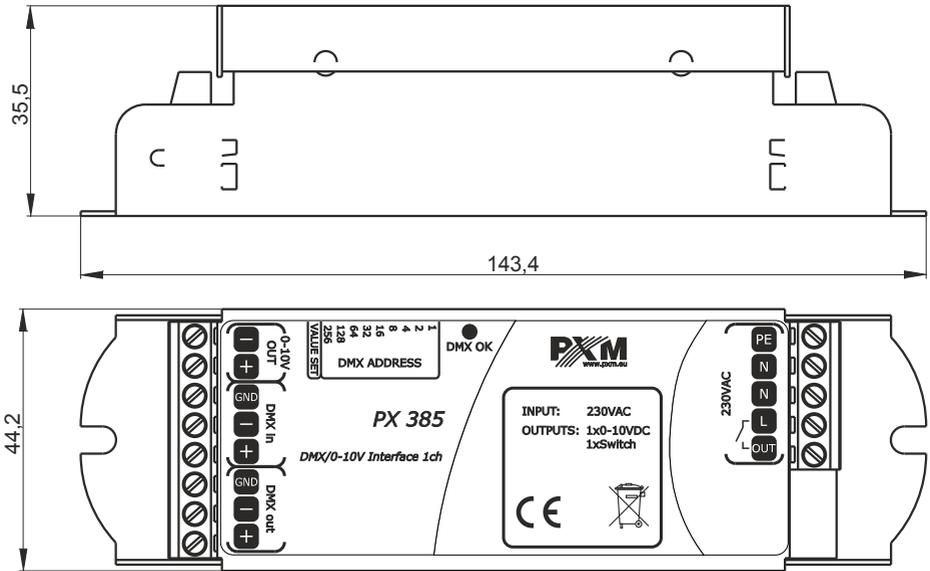
## L0 version



# 7 Connection scheme



# 8 Dimensions



## 9 Technical data

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type	PX385 PX385-L0
power supply	230V AC
number of output channels	1
0 – 10V output load capacity	max. 10mA
relay output load capacity	resistive load max. 2A, 250V AC inductive load max 0.5A, 250V AC
output sockets	screw terminals
weight	0.2kg
dimensions	width: 143,4mm height: 44,2mm depth: 35,5mm

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## DECLARATION OF CONFORMITY

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

we declare that our product:

*Product name:* DMX/0-10 Interface 1ch

*Product code:* PX385  
PX385-L0

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

PN-EN IEC 63000:2019-01	EN IEC 63000:2018
PN-EN IEC 62368-1:2020-11	EN IEC 62368-1:2020
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.

**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

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



mgr inż. Marek Żupnik.