

PX 252

*PiXiMo* 6350

Driver LED

6x350 mA

MANUAL



# CONTENTS

1. General description.....	3
2. Safety conditons.....	3
3. Description of the connectors and control elements.....	4
4. Menu navigation.....	4
5. Device operation.....	5
6. Programming device functions.....	5
6.1. DMX address.....	6
6.2. Driver operation mode.....	6
6.3. Channel balance.....	10
6.4. No DMX signal.....	10
6.5. Program editing.....	11
6.6. Scene editing.....	11
6.7. Temperature limits.....	12
6.8. Date and clock.....	12
6.9. Screen saving.....	13
6.10. Local settings.....	13
6.11. PWM frequency.....	14
6.12. Output DMX.....	15
6.13. Input DMX.....	19
6.14. Smooth.....	19
6.15. Language.....	19
6.16. Connection test.....	20
6.17. Firmware version.....	20
7. Connection scheme.....	21
8. Dmx signal connection.....	22
9. Dimensions.....	23
10. Technical data.....	23
11. Declaration of conformity.....	24

*The manufacturer reserves the right to change the operation and handling of the controller in order to improve the product.*

**PXM Marek Żupnik sp.k.**  
ul. Przemysłowa 12  
30-701 Kraków, Poland

tel.: +48 12 626 46 92  
fax: +48 12 626 46 94  
E-mail: [info@pxm.pl](mailto:info@pxm.pl)  
Internet: [www.pxm.pl](http://www.pxm.pl)

# 1. GENERAL DESCRIPTION

The PX252 driver is designed to control LEDs. This is the most advanced device of this type available in the offer of the PXM company. The PX252 is placed in a housing equipped with a color LCD screen. This allows for programming and controlling the operation of the device so that it would run intuitively. The DMX receiver enables controlling up to 6 channels (e.g. 2 x RGB) directly using the DMX protocol. A wide power supply voltage range makes it possible to control large quantities of LEDs. In addition, the device uses overcurrent protection, temperature protection to prevent overheating of the driver and the DMX line surge protection.

The PX252 can be either controlled from DMX protocol or act independently. In second case, the user is offered 8 fully programmable scenes and 8 programs. Both of them can also be abundantly changed, where such setting like: the playback speed or fluidity changes in steps can be modified. Thanks to 16-bit resolution control of parameters of each channel is completely smooth.

The driver has a built-in real time clock. It allows to set a time of switching on/off LED lamps what is particularly useful for advertising systems. Additionally, embedded astronomical clock option enables a configuration of daily start time and stop points of the driver work time in accordance with the astronomical sunrise and sunset.

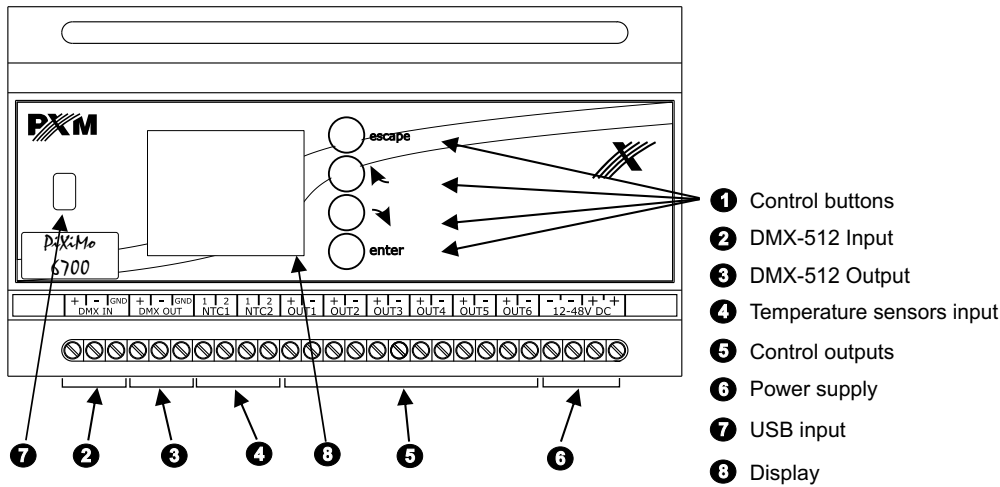
The device has the option to change the signal tuning frequency ("flicker free" technology), which makes it particularly useful in applications for the television industry. In addition, a USB input allows you to communicate with the computer. The PXM company has prepared software to set the parameters of the programs and driver scenes from a computer running under Microsoft Windows system.

# 2. SAFETY CONDITIONS

The PX 252 is a device powered with extra-low voltage of 12 - 48 V; however, during its installation and application the following must be strictly observed:





1. The device may be connected only to a power supply value of 12 - 48 V DC (regulated voltage) with current-carrying capacity in accordance with the technical data.
2. All cables must be protected against mechanical and thermal damage.
3. If any of the cables is damaged, it must be replaced by a cable of the same technical parameters.
4. Use only shielded cables to connect the DMX signal.
5. All repairs, output or DMX signal connections must be made with the power disconnected.
6. The PX252 must be protected against water or other liquids.
7. Avoid sudden shocks, especially falls.
8. Do not operate the device in areas where the level of humidity is above 90%.
9. Do not use the device in areas with temperatures below 2°C or higher than +40°C.
10. Use only a damp cloth to clean the device.



3. DESCRIPTION OF THE CONNECTORS AND CONTROL ELEMENTS




4. MENU NAVIGATION

Menu navigation is facilitated by programming keys. Each one is described on the right side and their use is as follows:

-  **escape** - exits the currently programmed parameter without saving changes or moves us to a higher page in the menu (if we exit the context menu, the pressing of the **escape** button takes us to the *Summary screen*)
-  - scrolls the menu to the top or to the left (in the horizontal menu)
-  - scrolls the menu to the bottom or to the right (in the horizontal menu)
-  **enter** - allows for entering a selected device option and confirms set values.

To change the value of a given parameter, select the "+" or "-" buttons on the screen by using the  or  keys and then change the value using the enter key.

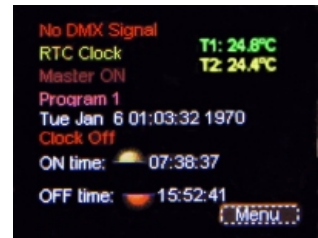
Then, save the settings before exiting one page up to save the input value. To do this, after selecting the  key, confirm it by pressing enter on the device screen.

## 5. DEVICE OPERATION

After turning on the device, the main window of the *Menu* appears on the screen. It describes the current status and selected active settings working at a given moment. The settings include, among other things, driver input signals and temperatures of operating sensors.

If no DMX signal in the input is detected, the screen displays the *No DMX Signal* message. Under this message the running device operation mode option is displayed when it is not receiving a DMX signal, e.g. *last value* and information regarding the master mode (its activation or deactivation).

If the device receives a DMX signal, a green *DMX Signal OK* message will appear. Below, there is the starting DMX address of channels that is occupied by the signal sent by the PX252. Then, the driver operation mode is presented, e.g. *2x RGB*. The operating mode options can be changed in the *Driver operation mode* menu.



Screen layout depending on enabled options and connected devices

Description of other messages displayed in the *Menu* screen:

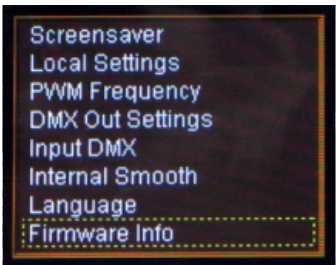
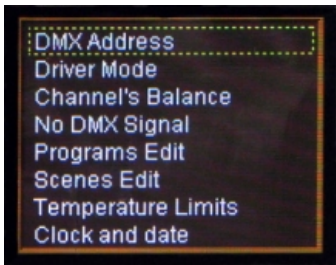
- *Scene 1, Program 1, (...), last value* - currently set function in the sub-menu of the *Menu* → *No DMX signal*).
- *Master ON/OFF* - information on the master mode status. If turned on, *Master ON* is displayed; if turned off, *Master OFF* is displayed.
- *T1: N/A (23,4°C), T2: N/A (25,2°C)* - temperature value read from the sensors connected to the NTC1 and NTC2 inputs. If no sensors are connected, the following message appears: *N/A*.





If the cables are incorrectly connected to the driver joints, an appropriate message will appear on the screen. To restore the device to work, follow the instructions on the screen. After disconnecting the power supply and connecting the cables to the following joints correctly: OUT1, ..., OUT6, the device can be turned on again.

# 6. PROGRAMMING DEVICE FUNCTIONS

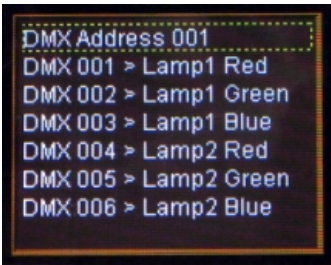
After confirming the *Menu* option using the *enter* button, the sub-menu appears on the screen. It allows for selecting available options. To program any of them, after selecting one of them confirm the selection using the *enter* button. The user will be taken to a sub-menu screen, where all the available options can be set.




To program an option, select it with the yellow frame visible in the pictures above using the  and  keys, and confirm your selection by pressing enter.

## 6.1. DMX address

The *DMX address* submenu displays currently set values of the DMX address for six available channels. By default, the device is set to the values shown below (controlling two RGB lamps on subsequent channels).



To change the choosen value, select and confirm a given parameter using the *enter* button. A menu will appear in which a value of the available functions can be changed in accordance with your needs. To do this, select the "+" or "-" keys located on the screen and set an appropriate DMX address value confirming it using the *enter* button.

After changing the value, save your settings by pressing the  button on the screen and confirm them by pressing *enter*.

## 6.2. Driver operation mode

The *driver operation mode* allows for setting the number of channels and their properties available during driver operation.

Below is presented the arrangement of the *driver operation mode* menu visible after selecting this option in the main menu and confirming it by pressing *enter*.



The device can operate in the following modes:

- RGB - red, green and blue on 3 consecutive DMX-512 channels;
- RGBW - red, green, blue and white on 4 consecutive channels;
- RGBWA - red, green, blue, white and amber on 5 consecutive channels;
- RGBWAX - red, green, blue, white, amber, and a different colour (X) on 6 channels;
- RGBD - red, green, blue on 3 channels and the dimming function on the fourth channel;
- RGBWD - red, green, blue and white on 4 DMX channels with the dimming function on the fifth channel;
- RGBWAD - red, green, blue, white and amber with the dimming function on the sixth channel;
- RGBWAXD - red, green, blue, white, amber on the following DMX-512 channels and an additional colour with the dimming function on the last channel;
- HSV - Hue Saturation Value (white light power), the first channel is the hue, the second is saturation and the last is the white light power;
- 2xHSV - 2 x 3 channels as in the above option;
- 2xRGB - 6 channels, RGB twice, allows for controlling two lamps at the same time;
- 2xRGBD - 6 channels, RGB twice, with the dimming function on the fourth and the eighth channel;
- 6 Channels - any 6 channels;
- 16-bit 6 Channels - 16-bit control of 6 channels;
- CW Dyn - a lamp with cold and warm white LEDs (colour adjustment on the first channel) with the dimming function on the second channel; in this mode, the driver can control up to 3 lamps;

- WC Dyn - as the option above with one difference - colour temperature adjustment is from warm (for a value of DMX = 1) to cold (for a value of DMX = 255);
- CCW Dyn - a mode for lamps equipped with 2 x cold and 1 x warm white LEDs with the dimming function on the second channel;
- WWC Dyn - similarly to the above but only for colours 2 x warm white and cold white.

### 6.3. Channel balance


This option allows for setting the modulation value of each of the six channels operated by the driver. It enables changing the maximum brightness of LEDs obtained on a given channel and thus determining the range of colours lit by the operated lamps.

To enable this option, check the *Channel balance off* and confirm it by pressing *enter*. The backlight of the texts will turn green and the channel modulation values can be set now. To disable this function, select the *Channel balance on* and confirm it by pressing *enter*.



To set the channel balance value of a given channel confirm the selected channel by pressing *enter* (the screen shown below will appear), then press "+" or "-" on the screen to set a value. After selecting an appropriate button confirm the selection by pressing *enter*.



Remember to save your settings by selecting  and confirming by pressing *enter*.

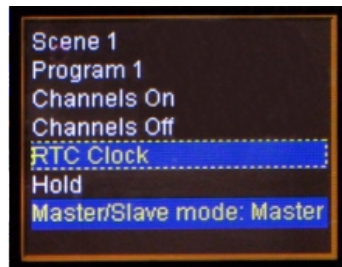


## 6.4. No DMX signal

In this menu, it is possible to set the device's response to no DMX signal which controls LEDs. An interesting option is the possibility to activate the astronomical clock. It allows for turning on and off the lights in accordance with the sunrise and the sunset - setting the sunrise and sunset hours is parameterized by the user - the position of the device on the globe (latitude and longitude) needs to be set. The following is a detailed description of all available options.

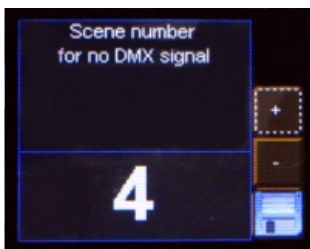
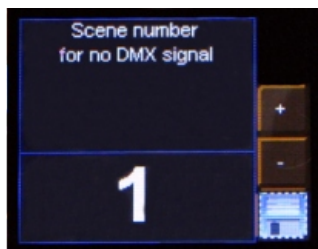



To set any of the options available in the menu, select and confirm it by pressing *enter*.



Below, there is a list of all options available in this menu:

- **Scene 1** - sets one of 8 scenes available (programmable in the *Scene editing* menu) if the driver does not detect the DMX signal in the device input. To set the scene, double-tap the *enter* button after selecting *Scene 1* in the menu - the scene number selection screen appears; use the "+" or "-" keys to select an appropriate scene.



Remember to save your settings by selecting  and confirming by pressing *enter*.

- **Program 1** - sets one of the 18 available programs (programmable in the *Program Editing* menu) if the driver does not detect the DMX signal in the device input. To change the number of the displayed program, follow the instructions shown in the preceding point.
- **Channels on** - after the DMX signal reaching the device disappears, the output DMX is enabled with the maximum value of the DMX signal (as a result the lamps are lit with full brightness)
- **Channels off** - after the DMX signal reaching the device disappears, the output DMX signal is turned off, which turns off the lamps.

- **RTC Clock** - the astronomical clock allows for enabling and disabling the lamps, a specific program or a scene, depending on the time of the sunrise and the sunset. The user can also set the hours according to which the PX252 will turn on and off the available options. To program this menu, select the *RTC Clock* option and confirm the selection twice with the *enter* button. The screen shown below will appear.



The first option under the *Astronomical Clock* text allows for selecting which event will be switched on or off according to the clock pre-set. It can be a selected program and scene, lights or full brightness. Below, there is an astronomical clock calculated according to the data input in the *Local Settings* menu and the date and time stored by the PX252 driver.

The last two lines on the screen are the manually set time at which the options described above can be enabled and disabled.

The green and red backgrounds include boxes responsible for turning on or off a given time at a height at which the given boxes are located.

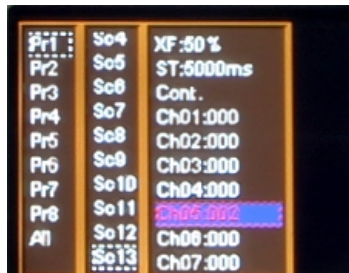
Keys are used to navigate in the menu. Values are changed after confirming a selection with *enter*.



- **Last DMX value** - after selecting this option, if the DMX signal in the input disappears, the driver continues to send its last values to the DMX signal receivers.
- **Master/Slave mode: Master(Slave)** - in this mode, it is possible to determine whether the device works as a driver after the controlling DMX signal entering the driver disappears. This is the so-called Master mode. The Slave mode allows for operation only as a DMX signal transmitter.

## 6.5. Program editing

*Program editing* is a menu where parameters of programs and scenes, which individual programs are composed of, are custom set by the User. This option allows for setting the course of a particular program which will be used later if the driver operates in the no DMX signal mode.

The menu consists of three columns. The first one enables a program that we want to edit. The next one allows for selecting a scene we want to edit. The last one is responsible for the parameters of an edited scene.



To select individual parameters, select the specified parameter with a dotted frame using the  and  keys, then confirm the selection by pressing *enter*.

The following are the meanings of the messages in this menu:

- **Pr1,..., Pr8** - programs from 1 up to 8 - selection of one of them allows for introducing changes to the settings of the program;
- **Sc1,..., Sc20** - scenes from 1 up to 20, selection of one of them determines the parameters to be edited;;
- **All** - by selecting this option, it is possible to make changes to the settings of all parameters of a given column in which this function is located;
- **XF (xfade)** - fade time - the time of dimming LEDs;
- **ST (scene time)** - the length of scene entry in milliseconds;
- **Cont/End** - continuous program or scene playback or their end;
- **Ch01:000,..., Ch36:255** - subsequent channels from 000 up to 255.

To assign a different input parameter to the output DMX channel, select the one in which you want to make changes, then press the *enter* key. Then, use the *next* or *previous* buttons to set a new value and confirm it by pressing *enter*.

## 6.6. Scene editing

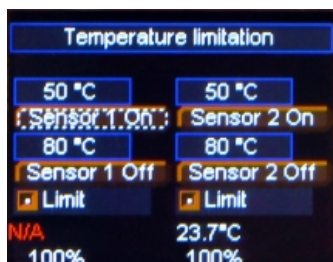
In the *Scene editing* menu, it is possible to change parameter settings for a given scene. As for the *program editing* sub-menu, after selecting the scene display option by a lamp or a group of lamps, in the simultaneous absence of an input DMX signal to the PX252 driver, the programmed scene is played continuously. The meaning of particular messages is described in the previous item (6.5).




## 6.7. Temperature limits

This option allows for setting a temperature value which, if reached, limits power consumption or turns off the device powered by the driver. This can be applied to LEDs which are located in areas with high temperatures.

There are two PX252 inputs to which one temperature sensor can be connected (2 in total). To set a limit, select an appropriate button on the screen, set the light power limitation temperature (*Sensor on*) and the total light power limitation temperature (lamps off) (*Sensor off*) for an appropriate sensor.



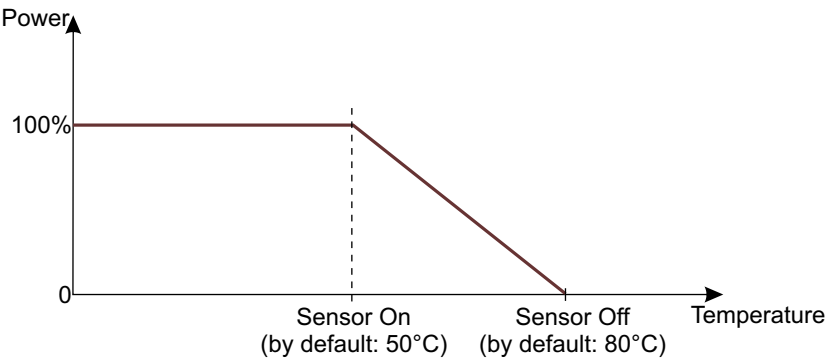
Remember to save your settings by selecting  and confirming by pressing *enter*.



To change the values of the limitation temperatures for a given sensor, select an appropriate button on the screen and confirm it by pressing *enter*. A new screen with the temperature limitation value field will appear. To change the temperature, follow the steps of the method described in the previous items of the instructions.

The *Limit* option allows for disabling the LED light power limitation function based on a temperature sensor in spite of the set temperature limitation values. By default, both sensors are enabled. To disable this function, uncheck the field next to the word *Limit* on the screen by pressing the enter *enter* button. Then, despite exceeding the pre-set temperature threshold, power will not be limited and the lamps will not be turned off.

The chart below shows the operation of this function:  
(after reaching the *Sensors On*. temperature, the power limitation process is carried out linearly until the value set in the *Sensor Off* is entirely turned off).




### 6.8. Date and clock

This menu allows for changing the date and time stored by the device. To do this, select an appropriate button "+" or "-" on the device screen below a corresponding value of time or date, and change it by pressing the *enter* button.

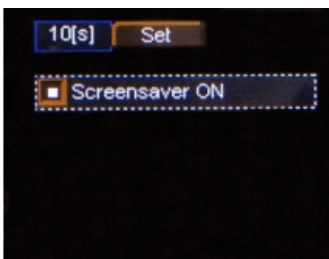
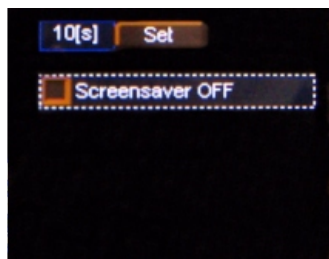
In the upper part of the display there is the time expressed, respectively, in hours, minutes and seconds, and below there is the date expressed, respectively, in years, months and days. After making changes save the settings.




Remember to save your settings by selecting  and confirming by pressing *enter*.

## 6.9. Screen saving

In this menu, it is possible to activate the screen saving mode after a specified period of inactivity (programming keys on the driver are not used). To set the screen saving mode, press the *enter* key after selecting the *Screen saving off*, and then set the time after which the backlight is switched off. To do this, select the *set* button and confirm it by pressing *enter*. A new screen will appear. Select the screen saving parameters.




Remember to save your settings by selecting  and confirming by pressing *enter*.

## 6.10. Local settings

Local settings are used to set the position of the device according to geographical coordinates (longitude and latitude) and the time zone in which the device operates.

To set appropriate parameters, use the "+" or "-" buttons located next to a respective value being set and press the *enter* button to set the expected value.



Remember to save your settings by selecting  and confirming by pressing *enter*.

## 6.11. PWM frequency

The PWM frequency is a menu that allows for changing the LED refresh frequency from 287Hz to 1082Hz. Changing to a higher frequency activates the "flicker free" mode, which makes it possible to avoid an unpleasant flicker effect caused by improper synchronization of the LEDs control signal. This option is useful if TV cameras are present.



## 6.12. DMX wyjściowy

After selecting the *DMX output* submenu, the current set values of the DMX signal parameters will appear on the screen. By default, the device is set to the values shown below.



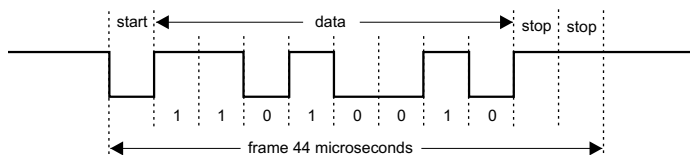
At the bottom of the screen there is the total *Package length* and *Refresh rate* for configured parameters.

## DMX512 protocol - Useful Information

The DMX512 protocol describes the exact way to send data.

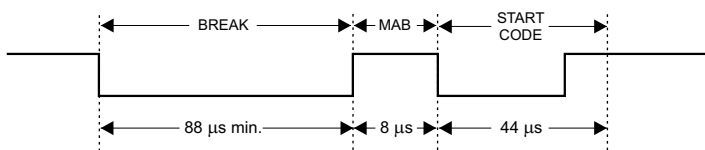
A basic element of each data transfer protocol is a low or high voltage level on a line called a bit. Its duration in the DMX512 is exactly 4 microseconds. A set of several dozen bits determines the transmission code. In our case, the code length is 8 bits, i.e. one byte. This allows for obtaining 256 different combinations - e.g. brightness levels.

One data byte includes several control bits which determine when a byte begins and when it ends. In the DMX 512, there is one start bit and two stop bits. In this way a string of 11 bits (called a frame) is made.



One frame contains full information about one DMX channel. All 512 frames are needed to send 512 channels. However, the receiver must "know" when the entire transmission process starts (i.e. which channel is the first). The transmission starts with a signal called BREAK. It must last at least 88 microseconds. Another important signal is MARK AFTER BREAK (MAB). In the original specification, its length was said to be 4 microseconds. However, it soon became known that many of the devices manufactured at that time "have trouble" coping with such a short impulse. Therefore, in 1990 MAB was extended to 8 microseconds. After sending MAB, the driver must send the so-called START CODE (start byte).

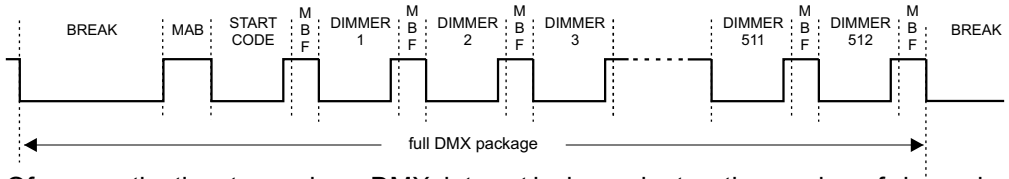
Designers of the DMX protocol stored this byte for "future use." Its task was to determine whether the 512 bytes sent after it are to control the dimmers or other receivers. However, at the beginning it was not exactly clear what those "other" devices will be; therefore, it was assumed that for that given moment its value was zero - and it has not changed ever since. Thus, the start byte must be zero. If not, the receiver should ignore all subsequent bytes.



After sending the zero byte the driver starts sending data bytes, starting with the contents of the first channel. The minimum number of channels in accordance with the standard is 24 and the maximum is 512.



This means that if there is a simple 6-channel driver, the DMX transmitter must send 24 channels. The interval between individual data frames is marked as MARK BETWEEN FRAME (MBF) and it can range from zero up to one second. Thus, one complete DMX "package" is as follows:



Of course, the time to send one DMX data set is dependent on the number of channels. For a minimum number of 24 channels, it is 1196 microseconds and for the maximum number of 512 channels it is 22,668 microseconds. What follows, in the first case, is that the maximum transmission change frequency is 836 Hz and in the second only 44 Hz. It is a serious limitation and its effects can be seen at fast movements of mirrors of a large number of scanners.

There is yet another important parameter - the minimum frequency of sending DMX packages. According to the standard, it amounts to 1Hz. This means that an interval longer than one second is treated as no DMX signal. Unfortunately, the designers of this protocol did not define the receiver's task in this example. There are a few possibilities:

- maintaining a recently received value
- immediate device shutdown (BLACKOUT)
- smooth device shutdown
- control of the pre-set value for the duration of the "no DMX" period.


In practice, the most commonly used solutions are the two first options.

**As many devices available on the market have no compliance with the DMX512 standard, the following options allow for selecting appropriate parameters of the output signal to a given device. If there are any problems, it is recommended to use longer Break Length, MAB, Channel break and package.**


**1. Break Length Time** is an option that enables changing the length of the interval between successive DMX packages.

At the top of the screen next to the name of a given option there is important information that helps set an appropriate value.




Remember to save your settings by selecting  and confirming by pressing *enter*.

**2. Mark after break** – is an option that enables changing the length of the interval between successive DMX packages.

Remember to save your settings by selecting  and confirming by pressing *enter*.




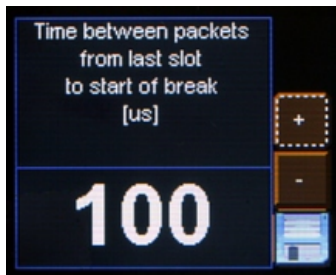
**3. Mark Between Frame (MBF)** - The distance between DMX512 frames (channels) - Mark Between Frames (MBF). Its length may be from 0 up to 1 second; the shorter the better. MBF separates stop bits of one channel from start bits of the next one.

Remember to save your settings by selecting  and confirming by pressing *enter*.



**4. Packets break** - The distance between packages from the last slot to the beginning of a Break (Mark after last channel). The PX252 driver allows for setting from 16 up to 5000 ms.

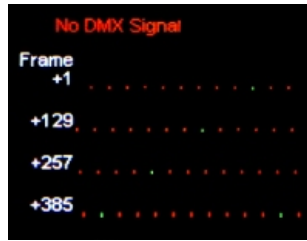
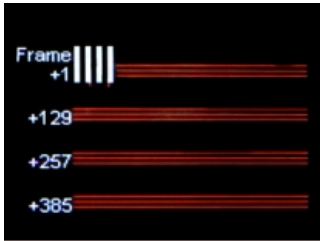
Remember to save your settings by selecting  and confirming by pressing *enter*.



**5. Number of Channels** – With this function, it is possible to limit the number of channels sent by PX252. The minimum value is 24 channels and the maximum is 512 (by default).

## 6.13. Output DMX

This menu allows for a graphical view of the DMX-512 signal which is sent by the PX252.



### DMX signal presentation method:

The DMX signal value on a given DMX channel is represented as a white bar the height of which varies proportionally, according to the following dependence:

- the greatest height = DMX signal value is 255,
- no bar = DMX signal value is 0.

DMX channels are described on the left side of the screen, respectively: **+1, +129, +257, +385** for subsequent lines. Moreover, each line is divided by dots where red dots mark another ten channels and green dots each additional 100 channels.

## 6.14. Smooth

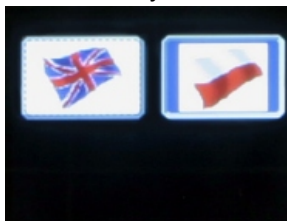
The smooth option makes transitions between successive control signals smoother, i.e. colour in connected lamps.

The menu enables setting the smoothing option in two versions:

- **Package to package smoothing** - the smoothing function proceeds in a linear manner between successive DMX signal packages received by the driver.
- **Time smoothing** - this function allows for making a time criterion for smoothing the DMX signal received by a lamp. After confirming the message by pressing the **enter** button, the User can select the time range from 10 up to 300 ms. This time determines the distance between the linearly smoothed DMX values.
- **Disable Smooth** - after activating this option, the smoothing function is disabled.

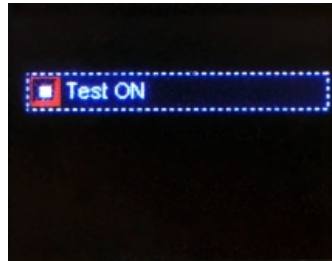
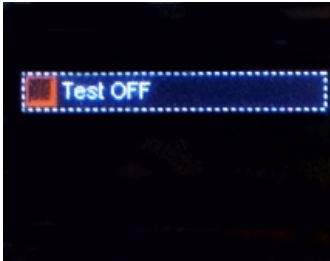
## 6.15. Language

The Language menu allows for changing the language of the menu. To do this, select a specific language icon and confirm your selection by pressing **enter**.

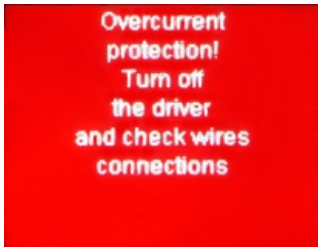


## 6.16. Connection test

The *Connection test* menu makes it possible to disable the correctness of connection of outputs of the device during start of PX252. This function has been designed to protect the device against damage as a result of miswiring. By default it is enabled.



If miswiring is detected, an appropriate message will appear on-screen. Before switching on the unit again, check and correct wiring connections.



If the *Connection test* function is disabled, PX252 will not check the connection correctness and thus protect against damage as a result of miswiring.

## 6.17. Firmware version

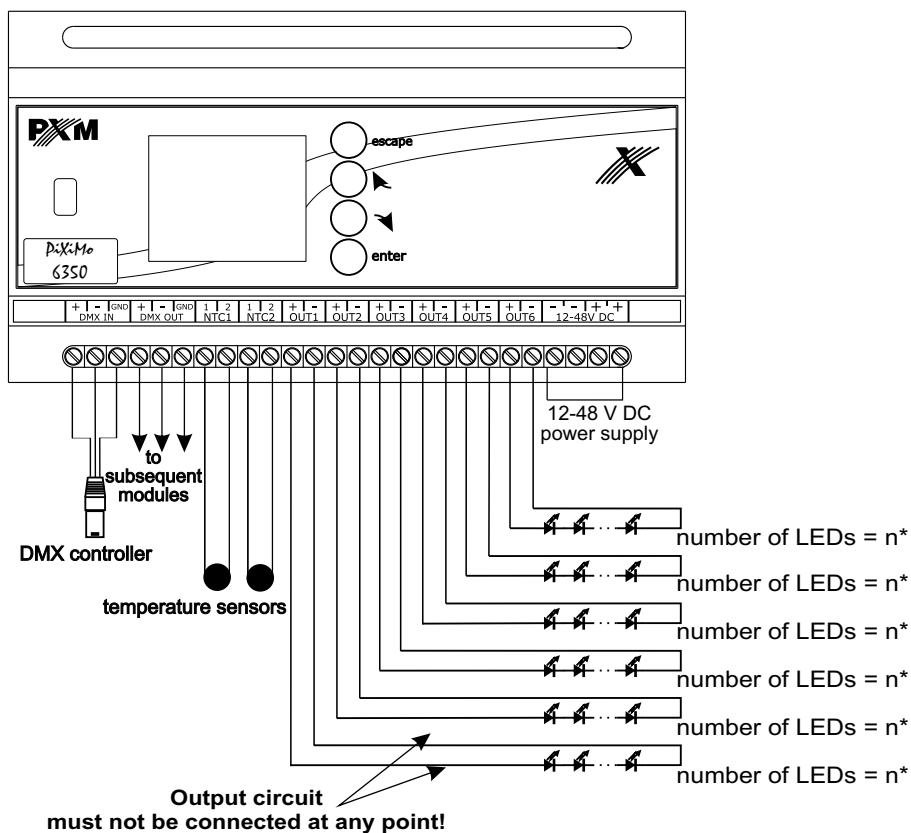
In this submenu, it is possible to check the firmware and bootloader versions installed on the device. Default settings implemented in the device can be also restored.



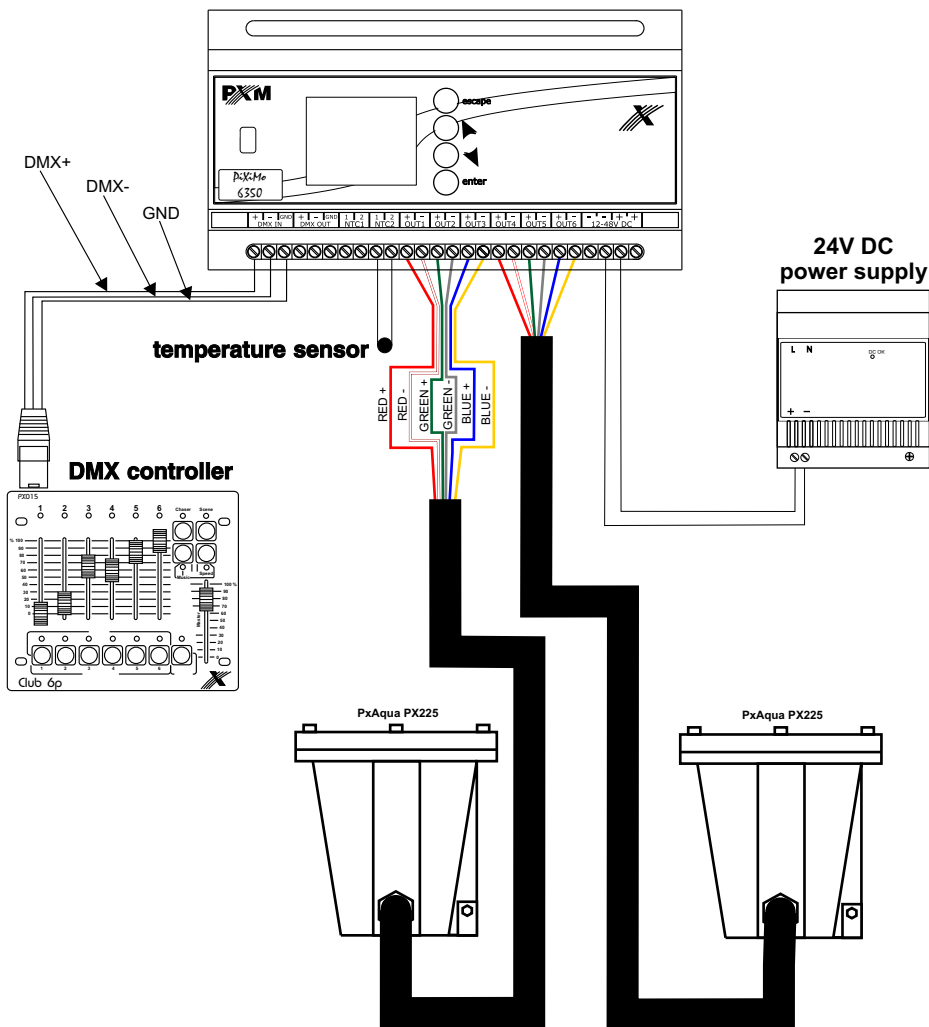
To do this, confirm the *default settings* by pressing *enter*, then select the *Yes* button and then confirm by pressing *enter* again.

If this option is selected by mistake, exit the menu by selecting the *No* button or directly by pressing the *escape* button.

## 7. CONNECTION SCHEME

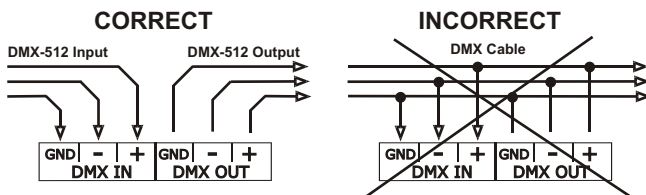


*number of LEDs	power supply
1-3	12V
4-6	24V
7-12	48V

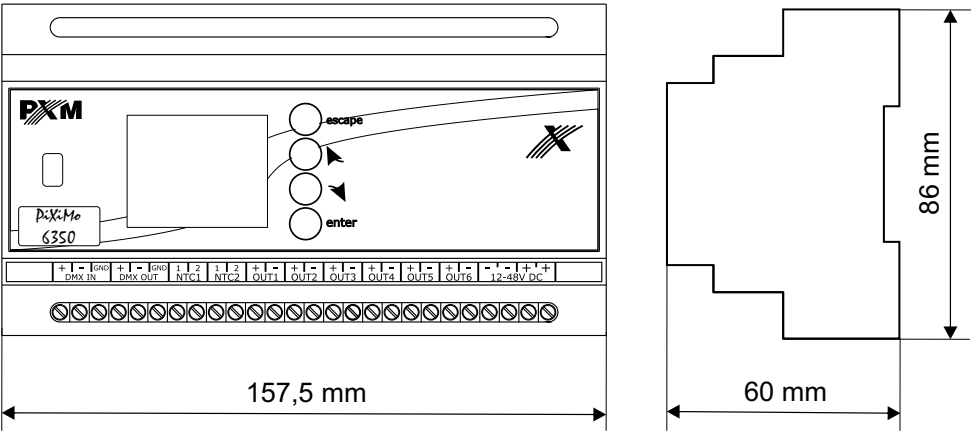


## 8. DMX SIGNAL CONNECTION

The PX252 must be connected to the DMX line in a series, without branching on the control cable. This means that the DMX IN pins in PX252 must be connected with the control cable. From the DMX OUT pins it must be led to the next DMX receivers.



# 9. DIMENSIONS



# 10. TECHNICAL SPECIFICATION

- Power supply	12V DC for 1, 2 or 3 LEDs / channel 24V DC for 4, 5 or 6 LEDs / channel 48V DC for 7, 8, 9, 10, 11 or 12 LEDs / channel
- DMX input	1 (512 channels)
- DMX output	1 (512 channels)
- Number of output channels	6
- Programmable scenes	8
- Number of programs	8
- Control accuracy	16 bit
- Output load-carrying capacity	350 mA
- Master/Slave mode	YES
- Output sockets	Screw joints, USB
- Weight	0.36 kg
- Dimensions:	Width: 157.5 mm (9-modules) Height: 86 mm Depth: 60 mm





ul. Przemysłowa 12  
30-701 Kraków, Poland

tel: +48 12 626 46 92  
fax: +48 12 626 46 94

e-mail: [info@pxm.pl](mailto:info@pxm.pl)  
<http://www.pxm.pl>

## DECLARATION OF CONFORMITY according to the 89/336/EEC Directive

Name of manufacturer: PXM Marek Żupnik sp.k.

Manufacturer's address: ul. Przemysłowa 12  
30-701 Kraków, Poland

*We declare that our product:*

Product name: **LED Driver 6x350 mA**

Product code: **PX252**

*complies with the following standards:*

**PN-EN 61347-2-13:2008**

**PN-EN 61000-6-1:2008**

**PN-EN 61000-6-3:2008**

*Additional information:*

Connection of the DMX signal must be made with the use of shielded cable connected with the GND pin.

Kraków, 11.02.2014

  
Marek Żupnik spółka komandytowa  
30-701 Kraków, ul. Przemysłowa 12  
NIP 677-002-54-53

mgr inż. Marek Żupnik.