PX071
PX071-OEM

DMX
Demux 16
Demux 16 OEM

INSTRUCTION MANUAL

PXM®

SPIS TREŚCI

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

1. GENERAL DESCRIPTION

PX071 serves for processing the DMX-512 signal into an analogue 0 - 10 V control.
The device is manufactured in 2 versions differing only with the assembly method:
1. PX071 version is designed for assembly in the electric switching stations on the DIN bus.
2. PX071-OEM version is designed e.g. for modernization of older dimmers which accepted 0 - 10 V control only and is composed of 2 boards without casing, connected with a flexible cable.
Apart from simple DMX signal decoding, PX071 allows to select control characteristics and to define the device's reaction to DMX signal interruption.

2. SAFETY CONDITIONS

PX071 is a device powered with safe voltage 12 V; however, during its installation and use the following rules must be strictly observed:
1. Device installation, in particular power connection, should be performed by a person holding appropriate qualifications, according to the description in the instruction manual.
2. The device can be connected to 12 V DC current (stabilized voltage) only, 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 and attestations.
5. Connection of DMX signal can only be made with shielded conductor.
6. The device can only be installed in closed casings only.
7. All repairs and connections of outputs or DMX signal can only be made with power off.
8. PX071 should be strictly protected against contact with water and other liquids.
9. All sudden shocks, particularly dropping, should be avoided.
10. The device cannot be turned on in places with humidity exceeding 90%.
11. The device cannot be used in places with temperature lower than $2^{\circ}C$ or higher than $40^{\circ}C$.

3. DMX SIGNAL CONNECTION

PX071 must be connected to the DMX line in series. This means that DMX connector of PX071 must be connected to the control cable, and then from this connector the control cable should run to other DMX receivers.
If LMS071 is the last device in the DMX line, then terminals "DMX+" and "DMX-" should be connected to a terminator - 110 Ohm resistor.

OK   WRONG   110 Ohm

DMX cable   DMX cable   GND   DMX-   DMX+
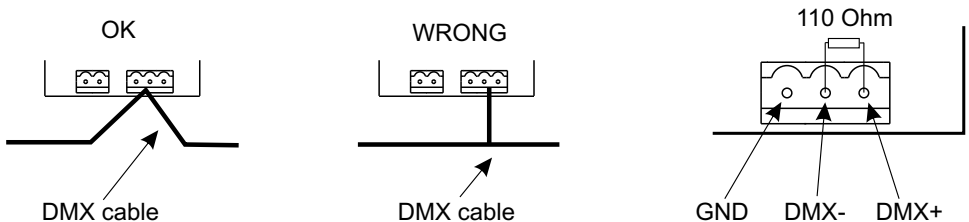
4. CONNECTORS AND CONTROL ELEMENTS DESCRIPTION

4.1 PX071 version
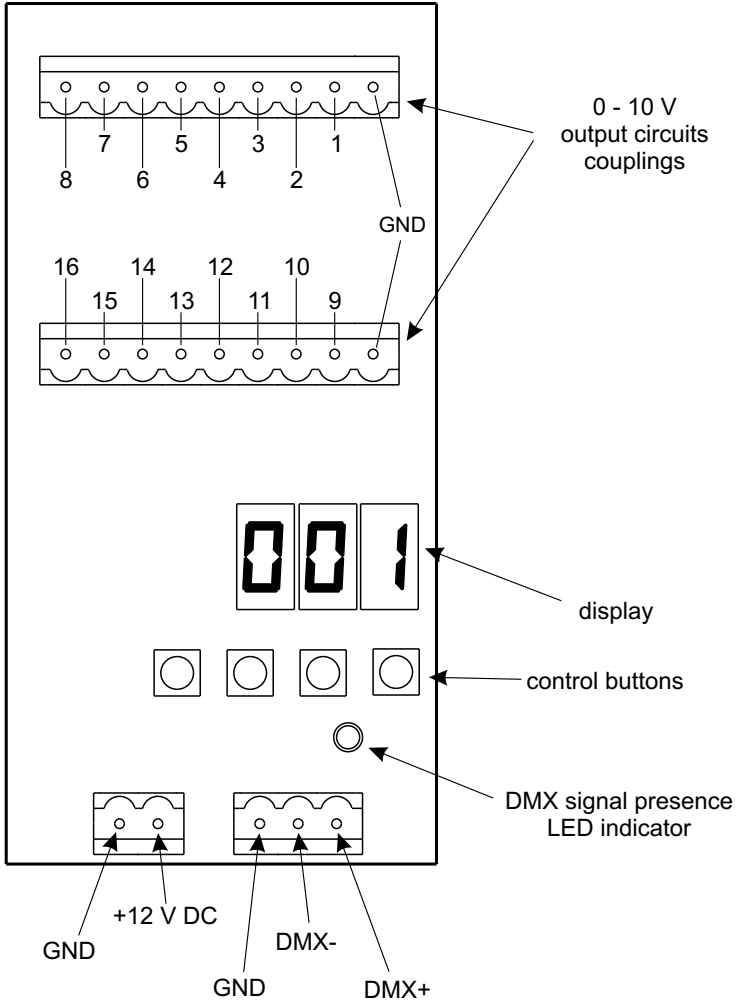
4.2. PX071-OEM version

spacing of anchoring openings with diameter 3.5 mm

49

0 - 10 V
output circuits
couplings

7   5   3   1
8   6   4   2

GND

16   14   12   10
15   13   11   9

106

boards connected
with a flexible cable.

40

DMX signal presence
LED indicator

001

display

control buttons

+12 V DC

GND

DMX-

GND   DMX+

3
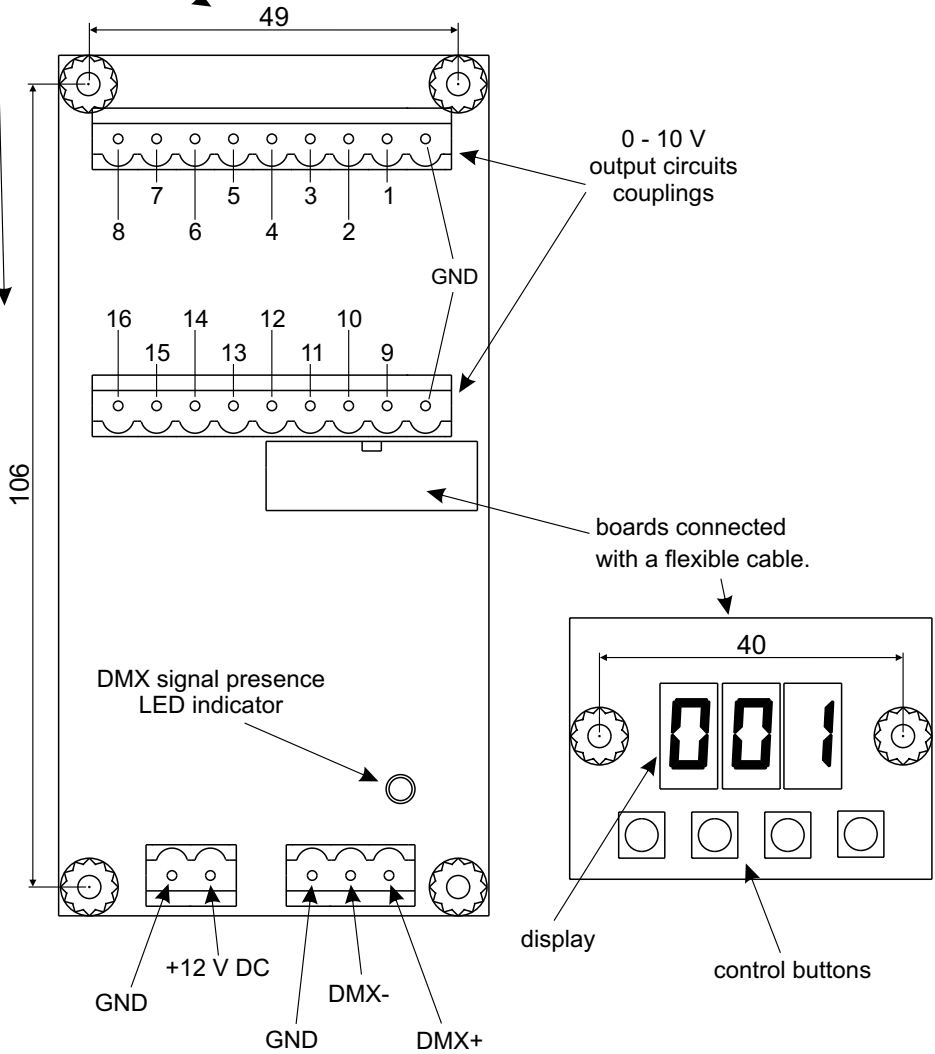
5. PROGRAMMING

After turning the device on, software version is displayed on the screen. During the demultiplexers normal operation the screen displays only one dot signalling operation of the device. Press ENTER to switch to the main menu, the display will show $\boxed{ALL}$. Press PREVIOUS or NEXT to select programming menu ($\boxed{ALL}$, $\boxed{Ind}$, $\boxed{dEF}$), and then press ENTER to confirm your selection.

5.1. MOVING AROUND THE MENU
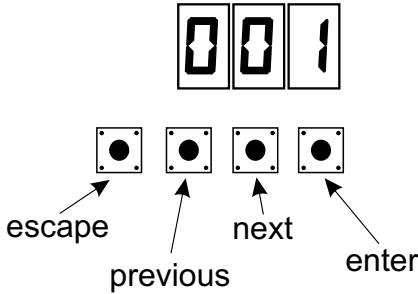
escape - causes leaving the currently programmed parameter without saving changes or returns to the previous level in the menu

previous - scrolls the menu backwards or decreases the values set

next - scrolls the menu forwards or increases the values set

enter - causes entering the next level in the menu or approves the values set

5.2. MENU DESCRPTION

5.2.1. ALL menu

5.2.2. Ind menu

4

5.2.3. dEF menu

```
dEF --ENTER--> Sc1 --ENTER--> C01 --ENTER--> 001
                 | NEXT         | NEXT         | NEXT
                Sc2           C02           002
                 | NEXT         | NEXT         | NEXT
                Sc3           .......       .......
                 | NEXT         | NEXT         | NEXT
                Sc4           C16           100
                 | NEXT
                Pr1 --ENTER--> F01 --ENTER--> C01 --ENTER--> 001
                 | NEXT         | NEXT         | NEXT         | NEXT
                Pr2           F02           C02           002
                               | NEXT         | NEXT         | NEXT
                              .......       .......       .......
                               | NEXT         | NEXT         | NEXT
                              F10           C16           100
                                             | NEXT
                                            SPd --ENTER--> 00.1
                                             |              | NEXT
                                             |             00.2
                                             |              | NEXT
                                             | NEXT        .......
                                             |              | NEXT
                                             |             25.0
                                             v
                                            FAd --ENTER--> 000
                                             |              | NEXT
                                             |             020
                                             |              | NEXT
                                             |             040
                                             |              | NEXT
                                             | NEXT        060
                                             |              | NEXT
                                             |             080
                                             |              | NEXT
                                             v             100
                                            End --ENTER--> On
                                                            | NEXT
                                                           OFF
```
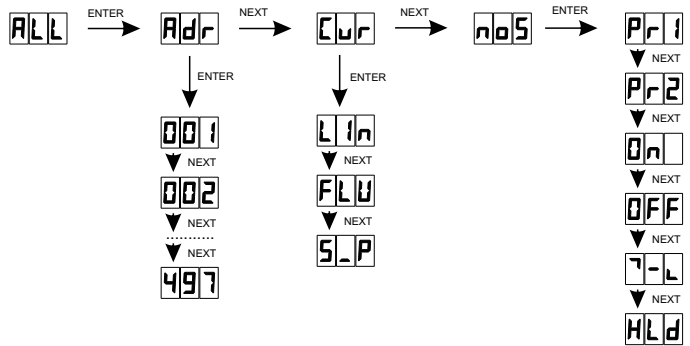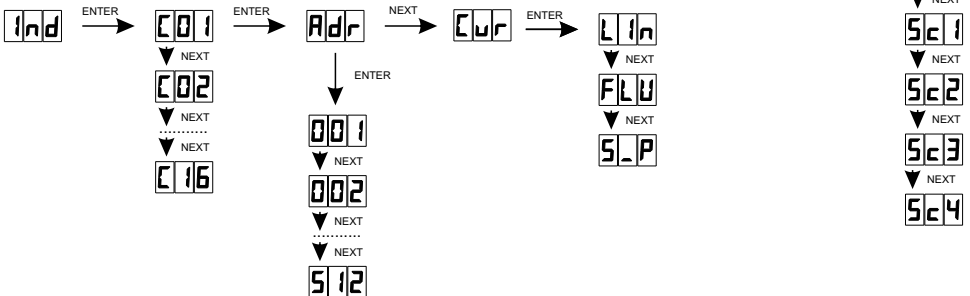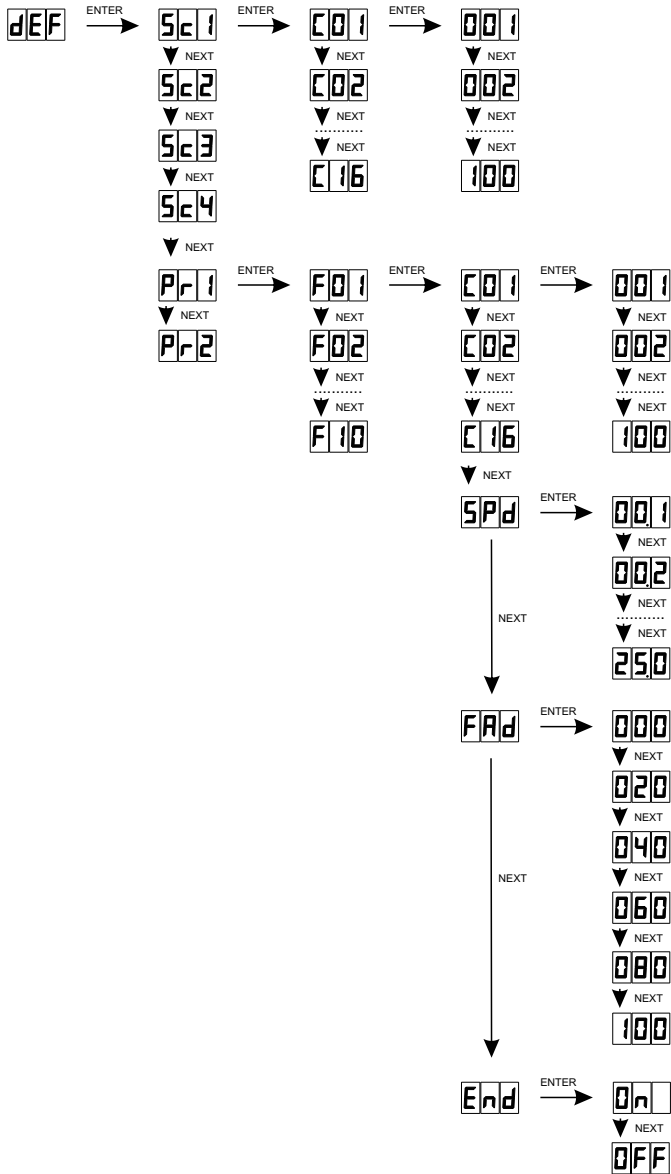
5.3. GROUP PARAMETERS PROGRAMMING (ALL MENU)

Programming in this menu is common for all channels. After selecting `ALL` in the main menu confirm your selection by pressing ENTER and then, using the keys NEXT or PREVIOUS, select the parameters to be set:

`Adr` - DMX address,

`Cur` - characteristics of channel dimming,

`noS` - device's response to fading of DMX signal

and confirm your selection by pressing ENTER.

Programming the address or the characteristics in this menu deletes previous settings for individual channels.

5.3.1. DMX address

After selecting `Adr` in `ALL` menu confirm your selection by pressing ENTER. Use the keys PREVIOUS or NEXT to set the required DMX address by selecting the value from 1 to 497 and press ENTER. The address set will be awarded to channel 1; other channels will be awarded subsequent DMX addresses. When setting address 1, channel 16 will have address 16. Select another parameter to set or press ESCAPE to return to the main menu.

5.3.2. Characteristics

After selecting `Cur` in `ALL` menu confirm your selection by pressing ENTER. Use the keys PREVIOUS or NEXT to select the required characteristics and press ENTER.

`LIn` - line characteristics 0...10 V

`FLU` - line characteristics 1...10 V

`S.P` - switched characteristics (on / off).

Select another parameter to set or press ESCAPE to return to the main menu.

5.3.3. Device reaction to DMX signal interruption

After selecting `noS` in `ALL` menu confirm your selection by pressing ENTER. Use the keys PREVIOUS or NEXT to select the required option and press ENTER.

`Pr1`, `Pr2` - programmes which can be defined in `dEF` menu

`Sc1`, `Sc2`, `Sc3`, `Sc4` - scenes which can be programmed in `dEF` menu

`On` - turning all outputs on at 100%

`OFF` - turning all outputs off

`?-c` - slow dimming of all outputs at the time of approx. 20 seconds

`HLd` - outputs remain with such control values as at the time of DMX signal fading.

Select another parameter to set or press ESCAPE to return to the main menu.

5.4. INDIVIDUAL PARAMETERS PROGRAMMING (Ind MENU)

This menu allows for setting parameters individually for all 16 channels. After selecting `Ind` in the main menu confirm your selection by pressing ENTER.
1. Use the keys PREVIOUS or NEXT to select the channel to be set (`C01` ... `C16`) and press ENTER.
2. The display will show `Adr`. Press ENTER to set the address of the channel edited. Using the keys PREVIOUS or NEXT select the value from 1 to 512 and press ENTER.
3. Press NEXT. The display will show `Cur`. Press ENTER to set the dimming characteristics of the channel edited. Use the keys PREVIOUS or NEXT to select the appropriate characteristics and press ENTER.
4. Press ESCAPE to return to `Ind` menu and set the other channels according to the procedure in sections 1, 2 and 3.
5. Press ESCAPE to return to the main menu.

5.5. SCENES AND PROGRAMS DEFINING (dEF MENU)

In this menu you can set programmes and scenes which can later be reproduced in the event of lack of DMX signal (see section 5.3.3.). After selecting `dEF` in the main menu confirm your selection by pressing ENTER. Then use the keys PREVIOUS or NEXT to select one of the programmes (`Pr1`, `Pr2`) or one of the scenes (`Sc1`, `Sc2`, `Sc3`, `Sc4`) and press ENTER. In the programmes, you can set the brightness of each channel for each step, step duration, smoothness of fading from one to the other, and, if necessary, the number of steps can be limited (maximum 10). In the scenes, you can set the brightness of each channel. All scenes and programmes are preset; however, they can be adjusted for your needs in line with the procedure described in sections 5.5.1 and 5.5.2.

5.5.1. Scenes

1. In `dEF` menu select the scene to be set and press ENTER. The display will show `C01` (channel one). Press ENTER to edit this channel.
2. Using the keys PREVIOUS or NEXT select the value, in percentage, of channel steering in the range between 0 and 100 and confirm your selection by pressing ENTER.
3. Using the keys PREVIOUS or NEXT select other channels to edit and repeat the procedure from section two.
4. Press ESCAPE to return to `dEF` menu and repeat the procedure from sections 1, 2 and 3 for other scenes.
5. Press ESCAPE to return to the main menu.

5.5.2. Programs

1. In `dEF` menu select the programme to be set and press ENTER.

2. The display will show `F01` - this is step 1 of the programme. Press ENTER to edit this step or use NEXT to pass to the next step and press ENTER.

3. The display shows `C01` - channel 1. Press ENTER to edit this channel or use NEXT to pass to the next channel. Set the value of channel steering with keys PREVIOUS or NEXT and confirm your selection by pressing ENTER.

4. Set the value of other channels steering by following the procedure in section 3.

5. By pressing NEXT select `SPd` and press ENTER to set the duration of the step edited. Using the keys PREVIOUS or NEXT select the value from 0.1 second (`001`) to 25 seconds (`250`) and confirm your selection by pressing ENTER.

6. Press NEXT. The display will show `FAd`. Press ENTER to set the smoothness of fading to another step. Using the keys PREVIOUS or NEXT select the value from 0 to 100 (0 - jump fading; 100 - completely smooth fading) and confirm your selection by pressing ENTER.

7. Press NEXT. The display will show `End`. Press ENTER, and then use the keys PREVIOUS or NEXT to select `0n` and press ENTER if you want the step edited to be the last in the programme. If not, select `OFF`.

8. Press ESCAPE to leave step editing.

9. Set the remaining steps by following the procedure in sections 2 to 8.

10. Press ESCAPE to leave programme editing.

11. Select another programme to edit and repeat the procedure from sections 2 to 10 or press ESCAPE to return to the main menu.

6. TECHNICAL SPECIFICATION

- DMX channels	512
- power supply	12 V DC
- current consumption	250 mA max.
- output channels number	16
- outputs load capacity	10 mA / channel max.
- output sockets	clamping screws

- dimensions:

- width	60 mm
- height	55 mm
- depth	118,5 mm

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DECLARATION OF CONFORMITY
according to guide lines 89/336/EWG

Name of producer: PXM s.c.

Address of producer: ul. Przemysłowa 12
30-701 Kraków

declares that the product:

Name of product: **DMX Demux 16**
DMX Demux 16 OEM

Type: **PX 071**
PX 071-OEM

answers the following product specifications:

EMC: **PN-EN 55103-1**
PN-EN 55103-2

Additional informations: 1. All DMX512 inputs and outputs must be shielded and
the shielding must be connected to the ground
responding to the DMX connectors.
2. The device must be installed in the closed electrical
switching stations.

Kraków, 01.09.2005

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