PX152-8
PX152-16

8-/16-Channel Timer

INSTRUCTION MANUAL

PXM®

CONTENTS

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

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1. GENERAL DESCRIPTION

PX152 controller is intended for controlling the slow changes of lighting. It may operate as independent controller, executing sequence previously saved in memory or react according to chosen algorithm for incoming signals.The typical example of application is lecture room illumination. The prelector has 8 buttons at disposal, with these he may activate previously programmed levels of lightness for different areas of room.

The alternative way of use may be automatic lighting activated with movement detectors. In such a denouement the possibility of programming all three times (highlighting time, full power lighting time and dimming time) is essential.

9 inputs are meant to control the module. Inputs 1 - 8 are for starting programmed functions in corresponding channels or for launching scenes. Every single input may be set as "normally open" or "normally close". Input 9 has the highest priority, it turns the device on and off. May be connected to a dusk-activated switch or clock. Set as "normally open", "normally close" or inactive.

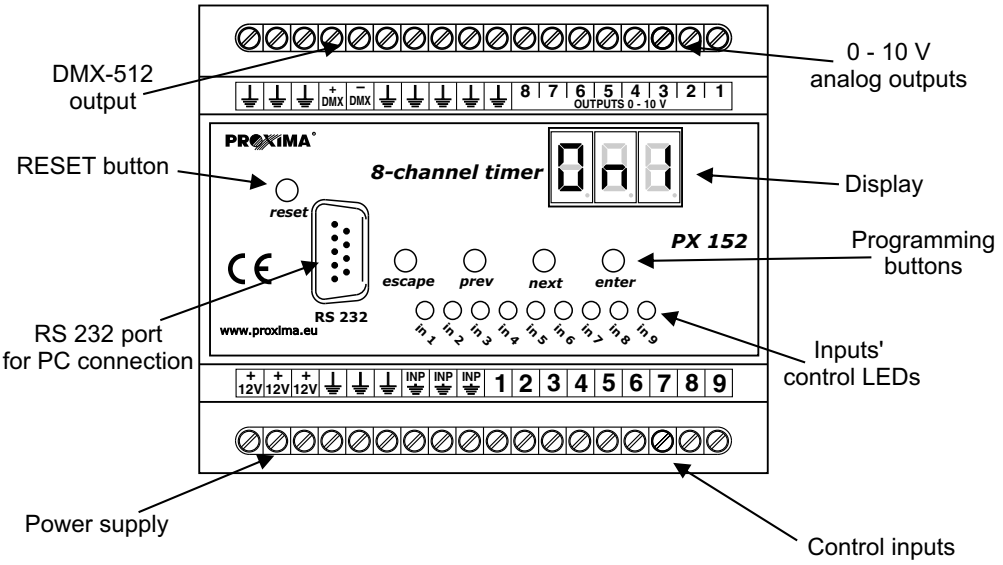
PX152 controller is manufactured in two versions: 8- and 16-channel.

2. SAFETY CONDITIONS

PX152 is a device powered with safe voltage 12 V; however, during its installation and use the following rules must be strictly observed:

1. The device may only be connected to 12 V DC current (stabilized voltage) with current-carrying capacity compatible with technical data.
2. All the conductors should be protected against mechanical and thermal damage.
3. In the event of damaging any conductor, it should be replaced with a conductor of the same technical data and attestations.
4. Connection of DMX signal can only be made with shielded conductor.
5. All repairs and connections of outputs or DMX signal can only be made with power off.
6. PX152 should be strictly protected against contact with water and other liquids.
7. All sudden shocks, particularly dropping, should be avoided.
8. The device cannot be turned on in places with humidity exceeding 90%.
9. The device cannot be used in places with temperature lower than 2°C or higher than 40°C.
10. Clean with damp duster only.

3. CONNECTIONS AND ELEMENTS DESCRIPTION



4. EXECUTED FEATURES (8-channel version)

0n8 - activation of the input induces lighting up of corresponding output with speed determined by **rAS** as long, as the input is on; another activation of the input induces dimming with speed determined by **FAL**.

0n2 - activation of the input no. 1 induces lighting up of output no. 1 and dimming of output no. 2 with speed determined by **rAS** as long, as long the input no. 1 is active; activation of input no. 2 induces dimming of output no. 1 and lighting up of output no. 2 with speed determined by **FAL** as long, as input no. 2 is active; same all remaining pairs of inputs and outputs.

AU8 - activation of the input induces corresponding output's lighting up with time determined by **rAS** ; flashing with **LAS** time and dimming with **FAL** time; another impulse during the lighting lenghtens the time with **LAS** time.

PUL - activation of the input induces lighting up of a corresponding output with time determined by **rAS**; another impulse induces dimming with time determined by **FAL**; another impulse during the lighting up induces immediate dimming and vice versa.

SC8 - activation of the input no. 1 induces ligting up of saved scene no. 1 with time determined by **UPd** and lightnes defined in **A1A** (in a range from 0 to 100); another impulse sent to that input induces dimming of scene no. 1; activation of input no. 2 induces dimming of scene no. 1 and lighting up of scene no. 2 simultaneously, with brightnes defined in **A2**, etc.

Pr0 - inputs 1 - 8 are inactive, controller executes program no. 1

Pr2 - inputs 1 - 8 are inactive, controller executes program no. 2

5. EXECUTED FEATURES (16-channel version)

After turning the 16-channel PX152 version the software number appears on the display. After ~1 second the module starts to work independently, the control value is consistent with parameters previously programmed in [LOL] menu. In running mode only three dots ([8.8.8.]) are visible on the display. In addition, by pressing the *escape* key you can cause the display test: [888].

The implemented software allows to set the control inputs characteristics (*normal open* or *normal close*), completely define two programs and set the initial control level, that means, the level that the control values for every single one of the 16 outputs achieves after turning the controller on.

5.1. CONTROL INPUTS CHARACTERISTICS

Impulse sent to each of the 8 control inputs causes different effect:

input no. 1 - launches program no. 1 and becomes inactive until the program finishes,

input no. 2 - restarts program no. 1,

input no. 3 - if active, program no. 1 runs in a loop,

input no. 5 - lauches program no. 2 and becomes inactive until the program finishes,

input no. 6 - restarts program no. 2,

input no. 7 - if active, program no. 2 runs in a loop,

inputs nos. 4 and 8 are unused.

5.2. InP MENU

By pressing the *enter* key during the running mode you can enter the controller's menu. The [InP] - inputs programming - will show on the display. With *next* and *previous* keys you can choose the other parameters in the main menu: [Pr.1] - first program defining, [Pr.2] - second program defining and [LOL] - the initial level setting. By pressing the *enter* key you get into the submenu, where you can set every input ([In.1] ... [In.8]) as *normal close* ([nOn]) or *normal open* ([nOF])

5.3. PROGRAMS DEFINING

The [Pr.1] option in the main menu allows to fully defined first of two programs, consisting of 15 steps maximum. To set the parameters for each step press the *enter* key, choose required step ([1.01] ... [1.15]) and press enter key again. You can define the control level for each of 16 outputs ([o.01]... [o.16]) in a range from 0 to 255 (full brightness), set the steps' lighting up time ([rIS]) to the defined level (1 to 999 seconds) and step's duration time ([tAS]), from 0 up to 999 seconds or infinite ([InF]). Moreover, independently from steps defining, you can set the steps number limitation ([LEn] parameter, adjusted in a range from 1 to 15) and last step dimming time - [FAL] (from 0 to 999 seconds or infinite - [InF]).

The second program ([Pr.2]) defining is almost identical, the only difference is maximal number of steps - here the number is 12 ([2.01] ... [2.12]). That causes, the range of steps in a steps limitation submenu ([LEn]) is reduced to 1 - 12.

5.4. LvL MENU

The last parameter in the main menu is [LOL] - the initial control level, that is the value of control signal, that appears on the outputs after the controller is turned on. By pressing the *enter* key you can choose required output ([o.01] ... [o.16]), for each one of these you can set the initial value in a range from 0 to 255.

6. DISPLAYED MESSAGES' MEANING

 smooth lighting up and dimming controlled with one input

 smooth lighting up with one input, dimming with second

 one-impulse activated automatic lighting up, constant lighting and dimming

 one-impulse activated lighting up or dimming start

 activating the saved scenes of number corresponding with number of the released input

 automatic execution of program no. 1

 automatic execution of program no. 2

 parameters programming for all outputs

 individual parameters programming for each output

 scenes and programs defining

 executed feature type choice ( ,  ,  ,  , etc.)

 whole module turning on time with input no. 9 (0 - 99 sec.)

 whole module turning off time with input no. 9 (0 - 99 sec.)

 output voltage minimal level (0 - 100%)

 output voltage maximal level (0 - 100%)

 lighting up time (0 - 999 sec.)

 time of flashing at maximal level (0 - 999 sec.) - refers to  only

 dimming time (0 - 999 sec.)

 input activity mode selection

 input normally open (close activates)

 input normally close (opening activates)

 inactive input (refers to output no. 9 only)

 settings for output no. 1 during individual programming

 scene no. 1 (8 scenes in total)

 scene no. 1 - output no. 1

 scene on / off time (0 - 999 sec.)

 step no. 1 in a program

 step no. 2 - output no. 1

 settings of "end of program" index on / off

 PC connection mode

 control input no. 1

 first step of the first program

 first step of the second program

 output no. 1

 step infinite duration / dimming time

 steps number limitation

 initial control level (after turning the controller on)

7. PC CONNECTION (8-channel version only)

To activate the service of the LMS004 module with PC computer one needs LMS004.exe application, that can be downloaded from our website: **www.pxm.pl** *(Dowloads / Programs / LMS004 / Software for PC connection)*.

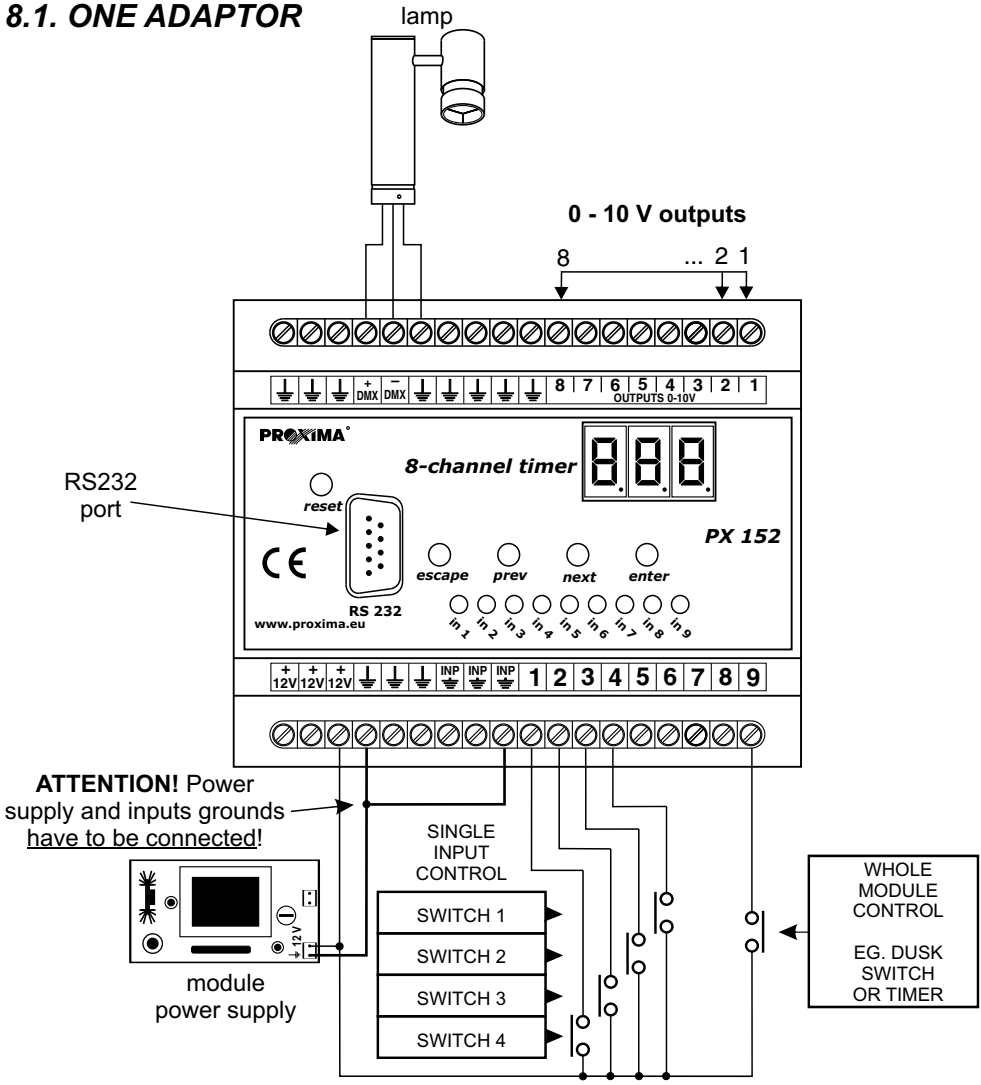
By dint of use of this application, one may easily prepare onscreen the settings of all parameters of LMS004 and send them to the module.

The described application must be innstalled on hard drive and afterwards one has to:

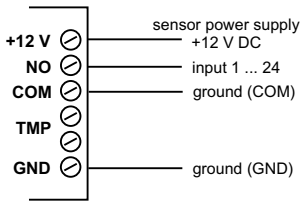
1. Connect both devices with RS232 cable (with interlace).
2. Press and hold PREV key.
3. Press RESET key for a brief time.
4. Release PREV button -  will show on a display.
5. Launch LMS004.exe application.

8. CONTROL INPUTS AND OUTPUTS CONNECTION

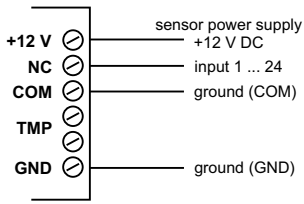
8.1. ONE ADAPTOR



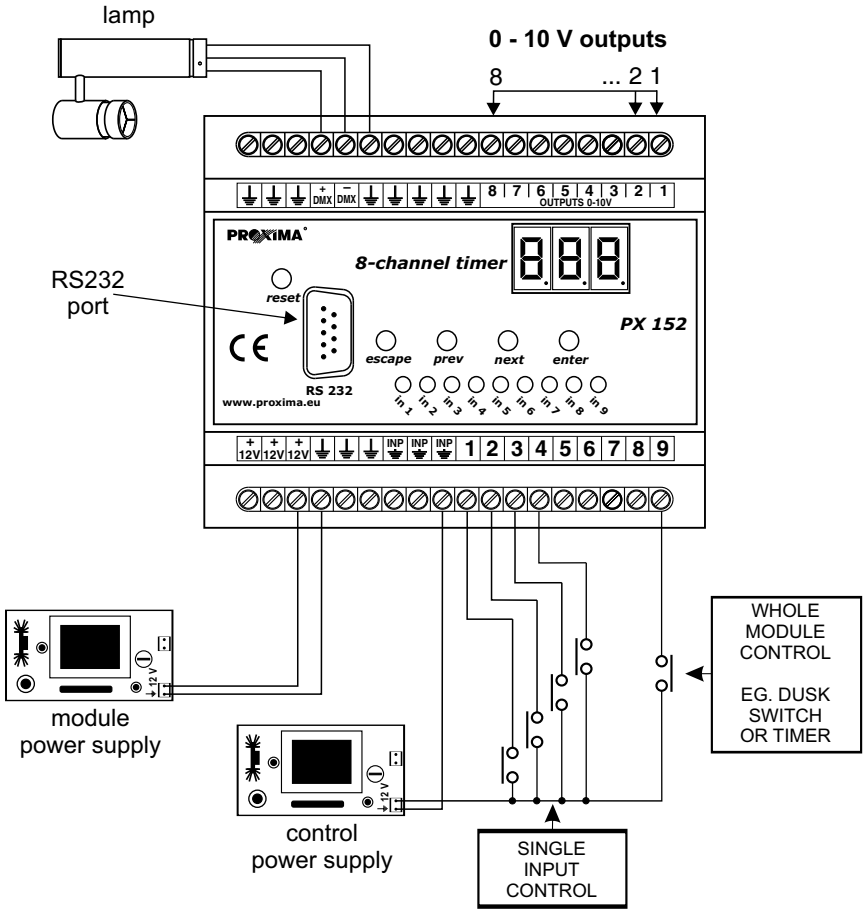
NO type sensor connection



NC type sensor connection



8.2. TWO ADAPTORS

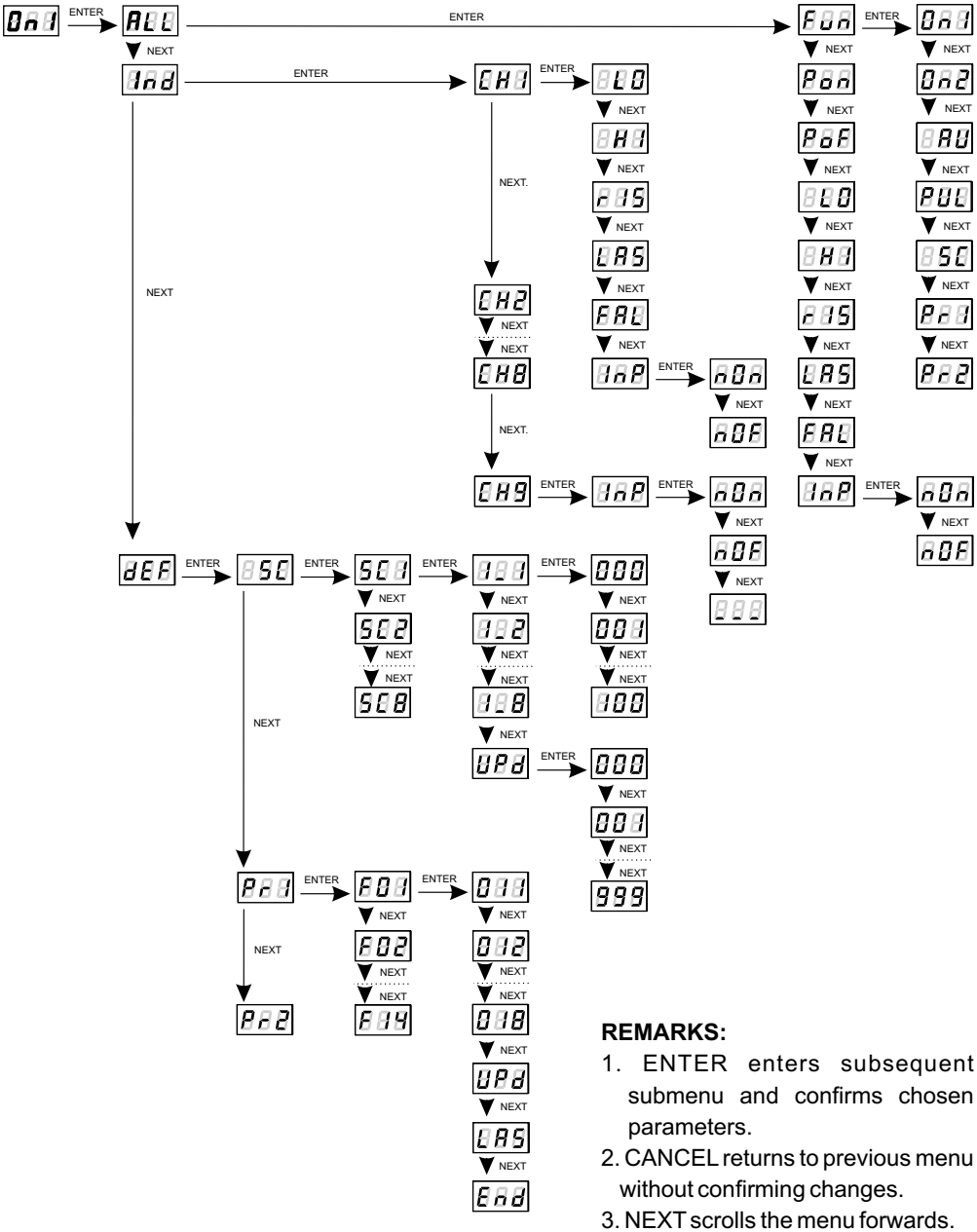


ATTENTION: Two methods of supply are possible:

1. Use of one adaptor (p. 8.1) - the module is subject to the interferences, control buttons should be installed less than 10 meters from the module.
2. Use of two adaptors (p. 8.2) - the module is entirely resistant to interferences; control buttons can be installed even several dozen meters from the module.

According to a description above, when planning an installation scheme to be highly distracted or in a highly industrial environment you should absolutely use two adaptors. For the environment free from interferences and short distances the one adaptor installation version can be applied. In questionable cases you should create one-adaptor installation and, when interferences occur, transform the scheme into two-adaptors installation.

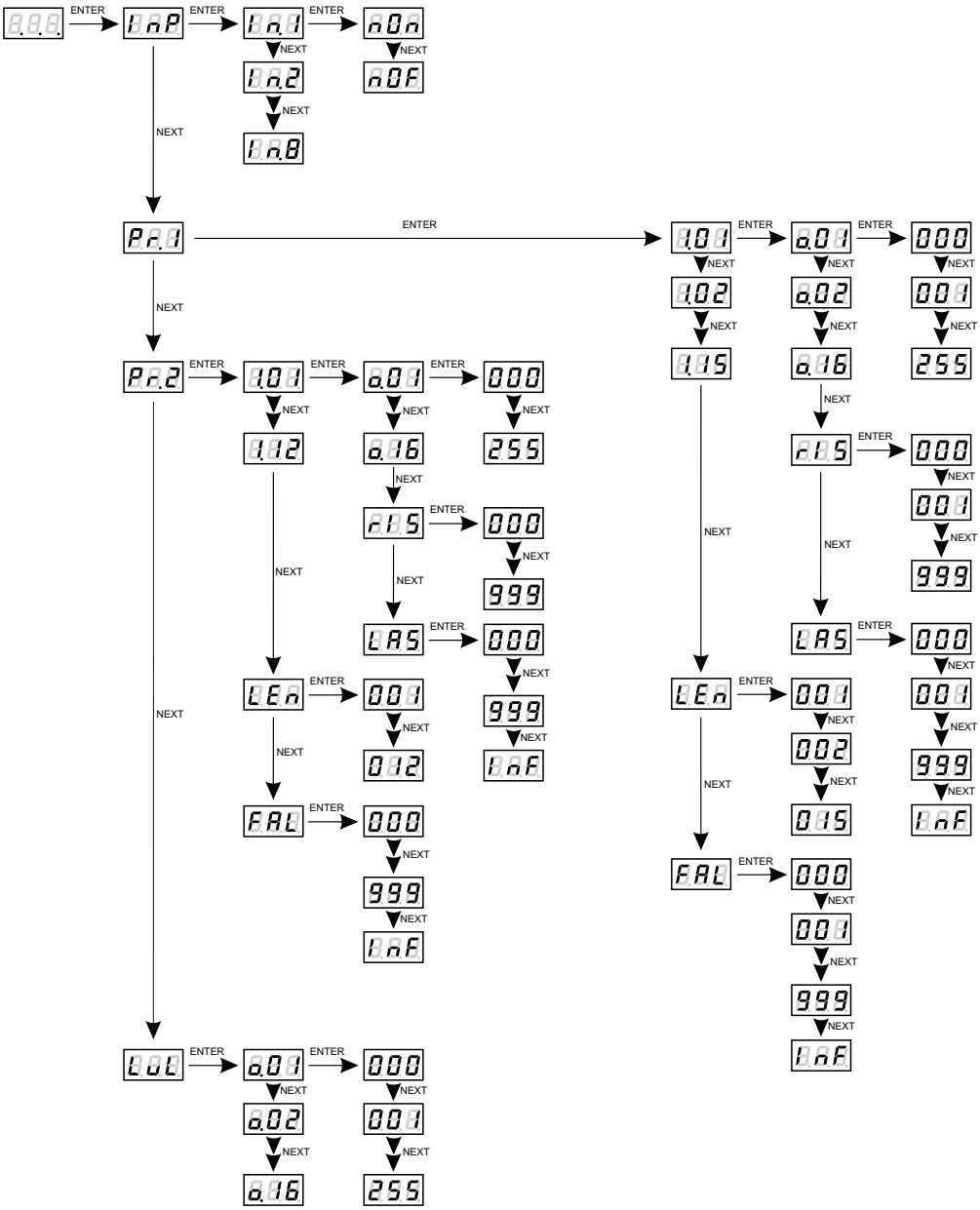
9. CONTROLLER PROGRAMMING (8-channel version)



REMARKS:

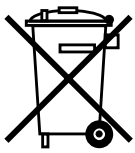
1. ENTER enters subsequent submenu and confirms chosen parameters.
2. CANCEL returns to previous menu without confirming changes.
3. NEXT scrolls the menu forwards.
4. PREV scrolls the menu backwards.

10. CONTROLLER PROGRAMMING (16-channel version)



11. TECHNICAL SPECIFICATION

- DMX channels	24 (8 or 16 active)
- power supply	12 V DC
- current consumption	200 mA max.
- output channels number	8 or 16 (depends on software version)
- outputs load capacity	10 mA / channel max.
- output sockets	clamping screws
- dimensions:	
- lenght	85 mm
- width	105 mm
- height	53 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: **8-/16-Channel Timer**

Type: **PX152-8**
PX152-16

answers the following product specifications:

EMC:

PN-EN 55103-1
PN-EN 55103-2

Additional informations: All DMX512 inputs and outputs must be shielded and the shielding must be connected to the ground responding to the DMX connectors.

PXM S.C.
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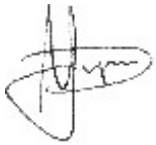

Kraków, 01.09.2005

Marek Żupnik M.Sc.