User Manual

PEX Software

cue

User Manual PEX Software

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1. Introduction

1.1. Program description.....

The PEX program is designed for an easy configuration of the Power Express® system modules.

The program features:

- configuration of the dual channel analog outputs of the module PEA208
- configuration of the one channel dimmer module PED 108
- configuration of the dual channel dimmer module PED 202
- configuration of the module PEF 150 for control of the fluorescent tubes dimmable ballasts DALI
- configuration of the module PEF 200 for control of the fluorescent tubes dimmable ballasts DSI
- configuration of the 6 relays module PER 610
- configuration of the one channel transistor dimmer PET 102
- configuration of the one channel transistor dimmer PET 105
- channel addresses check
- direct control of the dimmable or switcher channels

1.2. System requirements .....

- Computer PC 386 or better, CD ROM drive
- OS Windows 98 - XP
- 500 kB free space on HDD
- free serial port

2. Installation and start of the PEX program

2.1. Program installation.....

The program is delivered on CUE Application CD. Insert the CD to your computer, run the file PEX_setup1605.exe and follow the installation wizard. This file is placed in folder \Software\PEX.

2.2. Start of the program .....

2.2.1. Program start with modules Power Express ® online

Link the Power Express® system through the module PEC25 into the serial port of your computer. All Power Express® modules must have power supply. Run the PEX program from the Windows Start menu.

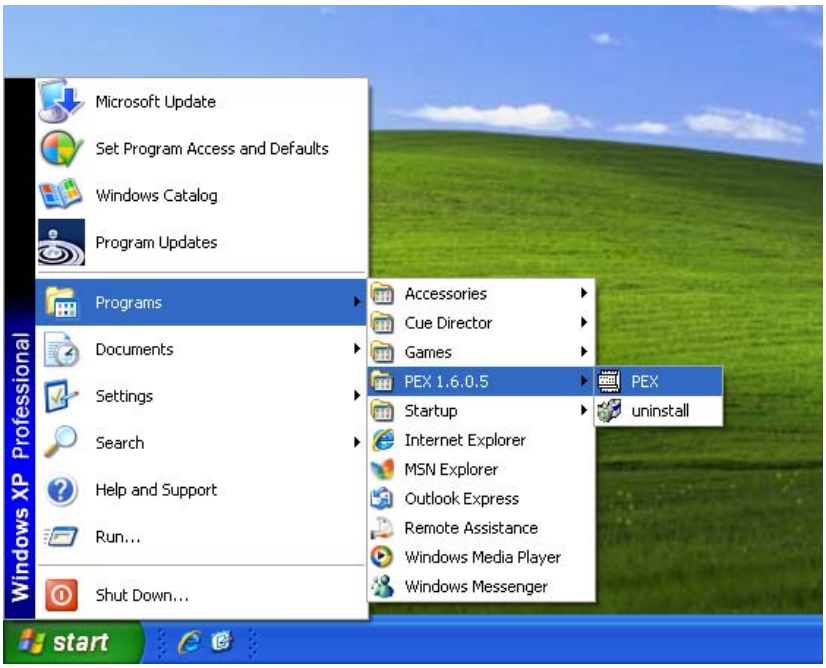


Fig. 1

Once you have loaded the program, the main program window will be displayed. There is a list of the connected modules with their serial numbers on the left side of the main window, and a space for their parameters on the right side of the window.

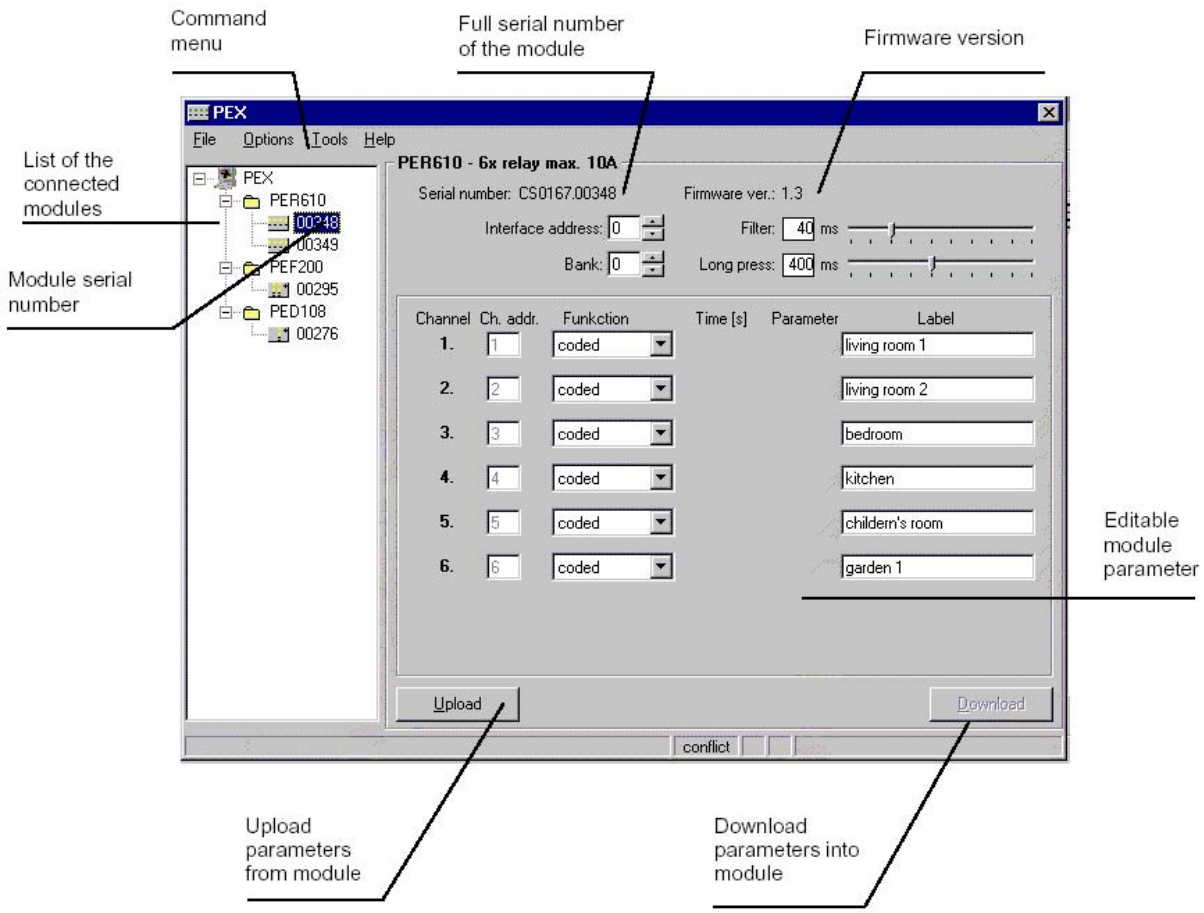


Fig. 2

2.2.2. Program start without modules Power Express ® connected

The PEX program can be run without modules Power Express® connected. There is a notice on the startup in such case:

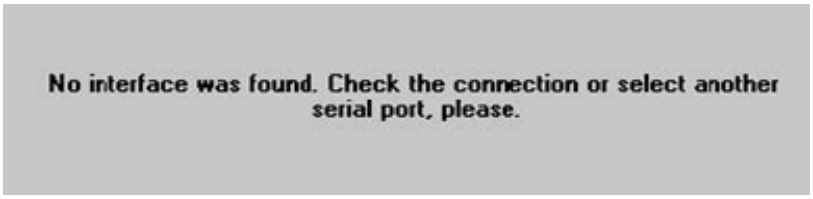


Fig. 3

3. Program operating

3.1. Command menu.....

Fig. 4

3.2. Selecting commands.....

You can select commands in the usual way from the menu, or you can use the keyboard shortcuts, for example: ALT + O to open the Option part of the menu.

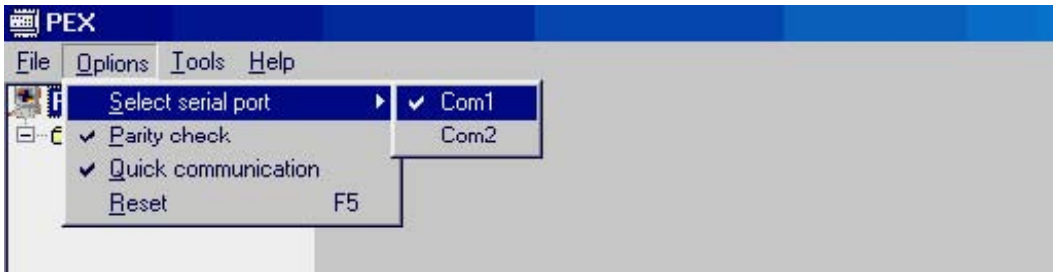


Fig. 5

3.3. File menu Alt+F.....

- OPEN Ctr+O to open the project with configuration of the modules of the Power Express® system from the file.
- SAVE Ctr+S to save the actual project into the file.
- SAVE AS to save the current project into the file with a new name.
- EXPORT to export the actual project as file for: Excel (*.csv), Internet Explorer (*.htm), Plain text (*.txt)
- EXIT to terminate the PEX program.

3.4. Options menu Alt+O.....

- SELECT SERIAL PORT shows the list of all free serial ports in computers. The marked port is selected for the communication with the modules of the Power Express® system. If you select any other serial port, the program performs RESET and loads data from new selected port.
- PARITY CHECK switches on/off communication parity check
- QUICK COMMUNICATIONS switches on/off quick
- RESET F5 The program carries out a new load of the connected modules of the Power Express® system. You can also do it by pressing the F5 keyboard shortcut.

3.5. Tools menu Alt+T.....

LOCATE F3 By this command you can seek a channel without knowing its address by pressing its button on the module.

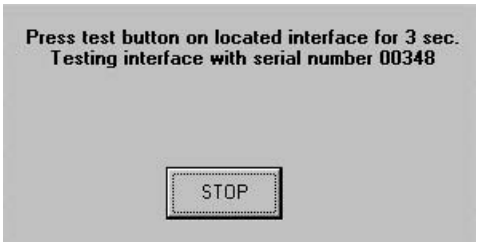


Fig. 6

You can STOP this function by pressing the STOP button. If there is more than one channel with the same address, the LOCATE command does not run and a warning message is shown:

Fig. 7

ADRESS CHECK F4 This command is used to check the addresses of all connected modules. A special window opens to display the results of this command. There is a list of all connected channels on the right side of the window.

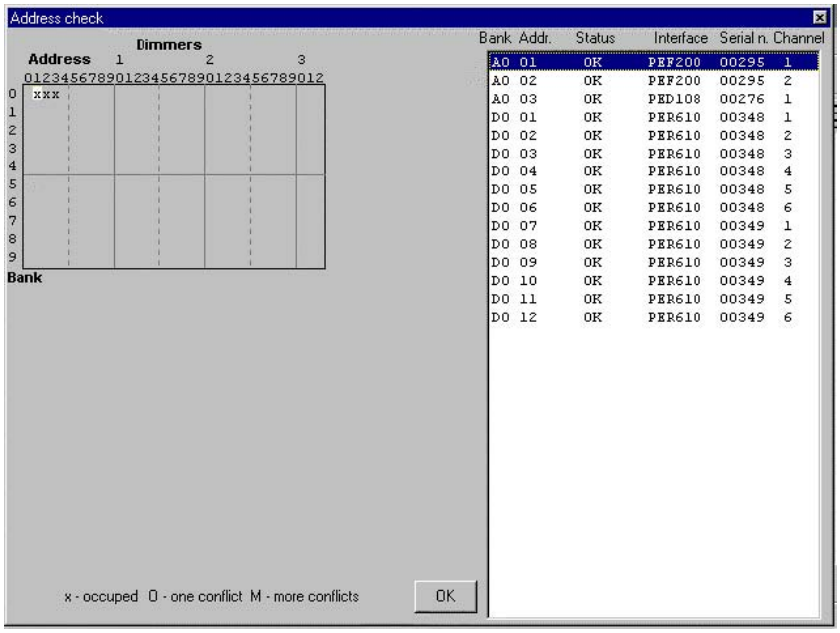


Fig. 8

In the left part of the screen there is a chart clearly showing the positioning of channel addresses of the given type. By selecting the type of output in the list (A or D in the Bank column) you choose the chart for analog or digital channels.

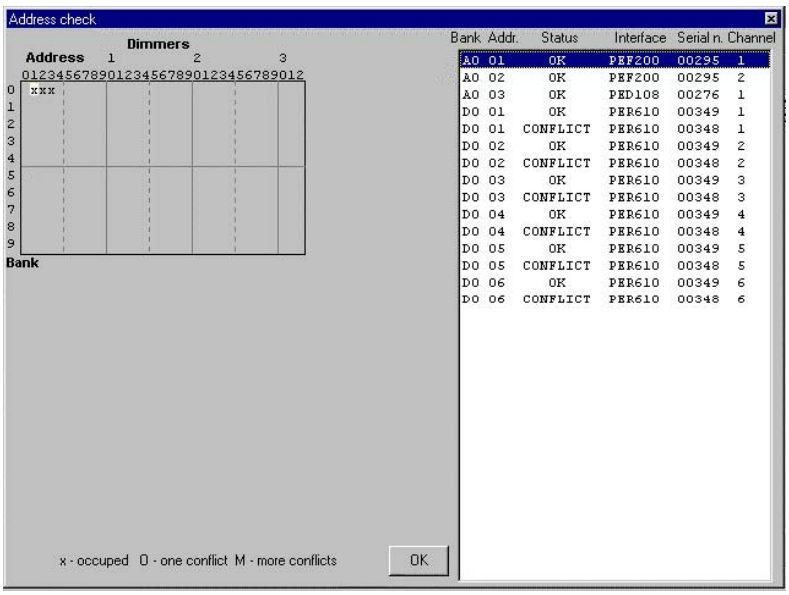


Fig. 9

If there is a conflict in addressing, the warning “CONFLICT“ is shown in the column “Status“ at conflict channels. Double click the right mouse button on the selected channels in the list open configuration window of the relevant module.

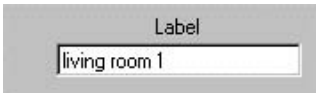
3.6. Help menu .....

About... Shows a window with the program version and contact addresses of producers.

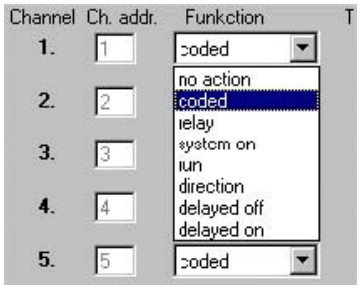
4. Configuration of the Power Express® modules

Double click the module list in the main window to show editable parameters of the module. You can change parameters by:

type writing,

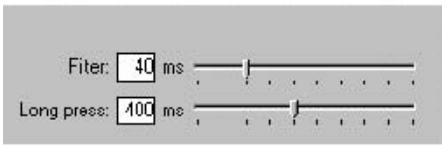


selecting from a list of options,



increasing or decreasing numerical values, or

dragging scroll bars.



If the value of any parameter is changed, its background flashes red to indicate change. If you move the mouse cursor to ten given parameter, its previous value is shown. Before the transmission of new parameters, the original values from the module can be recovered by pressing UPLOAD (or Alt+U). Pressing DOWNLOAD (or Alt+D) transfers the current parameters into the configured module.

4.1. Configuration of the PER 610 module

PER610 is a six-channel relay switching unit for loads up to 10 A per channel. There are all changeable parameters in the configuration window of the module. The parameters in the upper part of the window are shared by all channels of the module.

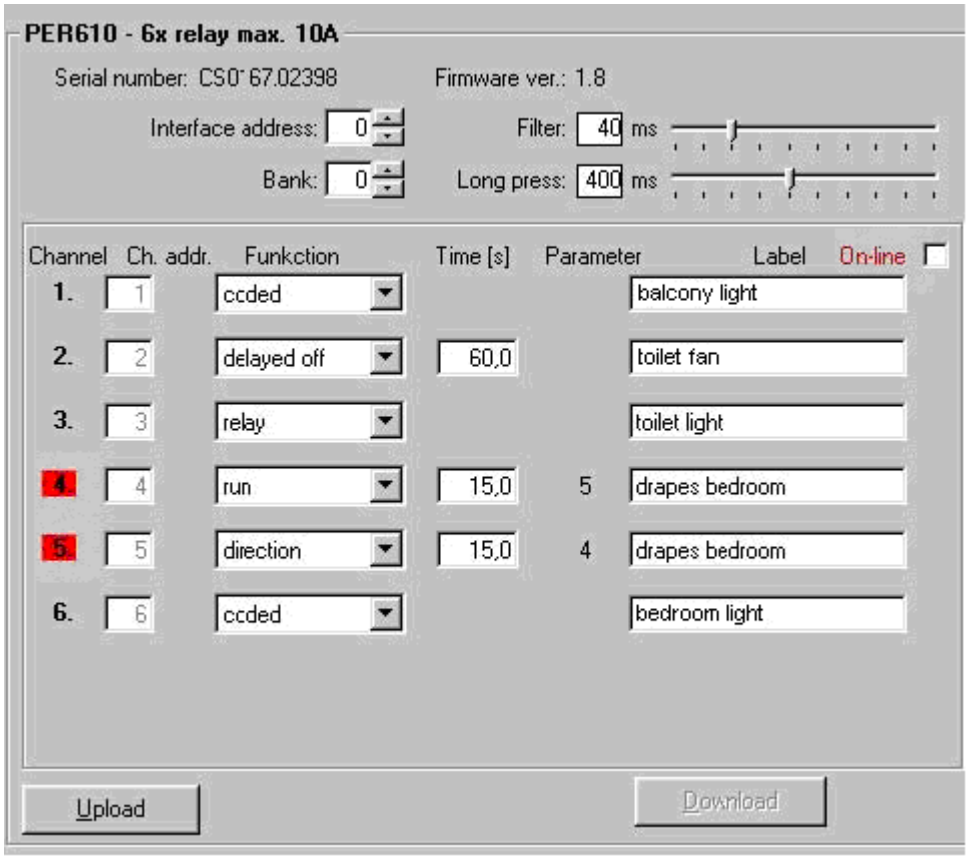


Fig. 10

4.1.1. PER 610 parameters description

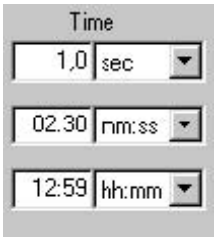
- **Interface address** 0-15 address of the module. The addresses of all channels of this module are based on this value.
- **Bank** 0-9 module group
- **Filter** 0-180 msec. minimum time of pressing the button for the press to be valid.
- **Long** press 0-900 msec. If the time of pressing the button is longer than this value, the press is interpreted as a long press.

The following parameters can be set for each channel independently:

- **Function mode** selection for control relay by its buttons
  - **no action** - buttons are disabled.
  - **coded** - Each press causes the negation of the relay state (switched on/off)
  - **relay** - When button is pressed, the output is on, otherwise it is off.
  - **system on** - When pressed, the relay switches on; it can be switched off only by a command through serial line.

- **run** – a short press switches the relay on for the period of time entered in its parameter. Long time press do the relay on only for button is holding. It is useful in couple with other channel with direction mode for controlling of AC motors.
- **direction** - it is useful for selecting direction of controlled AC motors. After 200 ms the couple relay with mode run is switched on too.
- **delayed off** - the relay is switched on at once, but it is switched off after delay time.
- **delayed on** - the relay is switched off at once but it is switched on after delay time.
- **run DC** (firmware 1.09 or higher) - short press switch relay on for parameter time. Long time press do the relay on only for button is holding. It is useful in couple with other channel with same mode for controlling DC motors.
- **pulse** (firmware 1.10 or later) – the relay is switched on for a short time impulse entered in the parameter.

- **Time** parameter in seconds for modes working with time. There are the following time formats available for units with firmware 1.11 or higher:
  - seconds 0,1 – 999,9 s
  - minutes - seconds: 00:01 – 59:59
  - hours - minutes: 00:01 – 12:59 (longest avilable time is 12 hours 59 minutes)



- **Label** - Channel legend which can consist of up to 22 characters.
-

4.1.2. Direct control of the channels

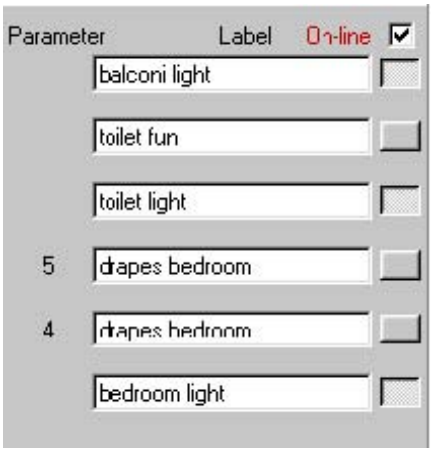


Fig. 11

If you check off the On-line box, the current state of the on- and off- outputs is shown next to the channel names, being constantly updated. An output that is off is indicated by an activated button. Clicking the button of the desired channel causes the negation of the output state.

4.2. Configuration of one channel dimming modules PED 108, PET 102 and PET 105

PED108 is a one-channel dimmer for resistive and inductive loads up to 8 A. PET102 is a one-channel dimmer for resistive and capacitive loads up to 2 A suitable for dimmable electronic transformers. PET105 is a one-channel dimmer for resistive and capacitive loads up to 5 A suitable for dimmable electronic transformers.

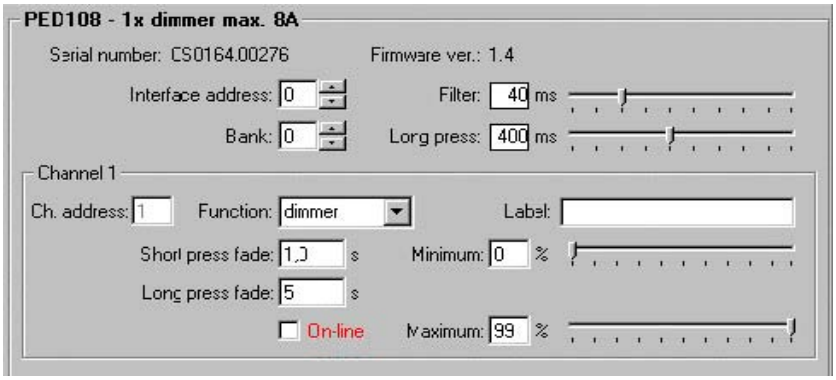


Fig. 12

4.2.1. PED 108, PET 102, PET 105 parameters description

- **Interface address** 0-31 address of the module. The addresses of both channels of this module are based on this value.
- **Bank** 0-9 module group
- **Filter** 0-180 msec. minimum time of pressing the button for the press to be valid.
- **Long** press 0-900 msec. If time of pressing the button is longer than this value, the press is interpreted as a long press.

The following parameters can be set for each channel independently:

- **Function mode** selection for control dimmer by it's buttons
  - **no action** - buttons are disabled.
  - **toggle** - switch outputs between maximum and minimum values.
  - **solid state** - if no button is pressed, the output value has the minimum value. If one button is pressed, the output has the value entered in the parameter **Intermediate**. If both buttons are pressed, the output has the maximum value.
  - **dimmer** – a short press of the UP/DOWN button changes the output value to maximum/minimum at the speed set in the parameter **Short press fade**. A long press makes the output dim up/down at the speed set in the parameter **Long press fade**. A release of the button makes it stop at the currently reached value.
  - **Short press fade** - speed of dimming in case of normal button press, 0-99.9 sec.
  - **Long press fade** - speed of dimming in case of long time button press, 0-99.9 sec.
  - **Minimum** - minimum output value, 0-99 %.
  - **Maximum** - maximum output value, 0-99 %.
  - **Intermediate -** intermediate output value, 0-99 % for solid state mode.

- **Label** - Channel legend which can consist of up to 22 characters.

4.2.2. Direct control of dimmable channels

If the On-line box is checked, any changes made to the parameters Minimum, Intermediate and Maximum are immediately transferred to the output of the module, which makes it possible to control the real brightness of the light source. If the On-line switch is not activated, the output of the module remains unchanged during setting. The current value of the output is shown next to the On-line, being constantly updated.

4.3. Configuration of the PED 202 module

PED202 is a two-channel dimmer for resistive and inductive loads up to 2.7 A per channel (max. 4 A total).

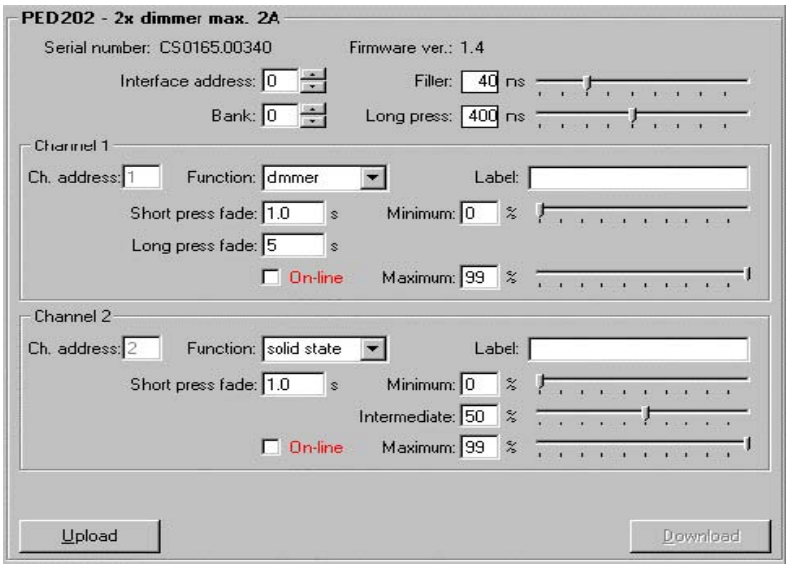


Fig. 13

4.3.1. PED 202 parameters description

- **Interface address** 0-15 address of the module. The addresses of both channels of this module are based on this value.
- **Bank** 0-9 module group
- **Filter** 0-180 msec. Minimum time of pressing the button for the press to be valid.
- **Long** press 0-900 msec. If time of pressing the button is longer than this value, the press is interpreted as a long press.

The following parameters can be set for every channel independently:

- **Function mode** selection for control dimmers by it's buttons
  - **no action** - buttons are disabled.
  - **toggle** - switch outputs between maximum and minimum values.
  - **solid state** - if no button is pressed, the output has the minimum value. If one button is pressed, the output has the value entered in the parameter **Intermediate**. If both buttons are pressed, the output has the maximum value.
  - **dimmer** – a short press of the UP/DOWN button changes the output value to maximum/minimum at the speed set in the parameter **Short press fade**. A long press makes the output dim up/down at the speed set in the parameter **Long press fade**. A release of the button makes it stop at the currently reached value.
  - **Short press fade** - speed of dimming in case of normal button press, 0-99.9 sec.
  - **Long press fade** - speed of dimming in case of long time button press, 0-99.9 sec.
  - **Minimum** - minimum output value, 0-99 %.
  - **Maximum** - maximum output value, 0-99 %.
  - **Intermediate -** intermediate output value, 0-99 % for solid state mode.

- **Label** - Channel legend which can consist of up to 22 characters.

4.3.2. Direct control of dimmable channels

If the On-line box is checked, any changes made to the parameters Minimum, Intermediate and Maximum are immediately transferred to the output of the module, which makes it possible to control the real brightness of the light source. If the On-line switch is not activated, the output of the module remains unchanged during setting. The current value of the output is shown next to the On-line, being constantly updated.

4.4. Configuration of the PEA 208 module

PEA208 is a two-channel analog output 0 - 10V interface for devices with analog control 0 - 10V (dimmable ballast for fluorescent lamps – Osram, Siemens, Helvar, Philips, dimmers, frequency converters ...).

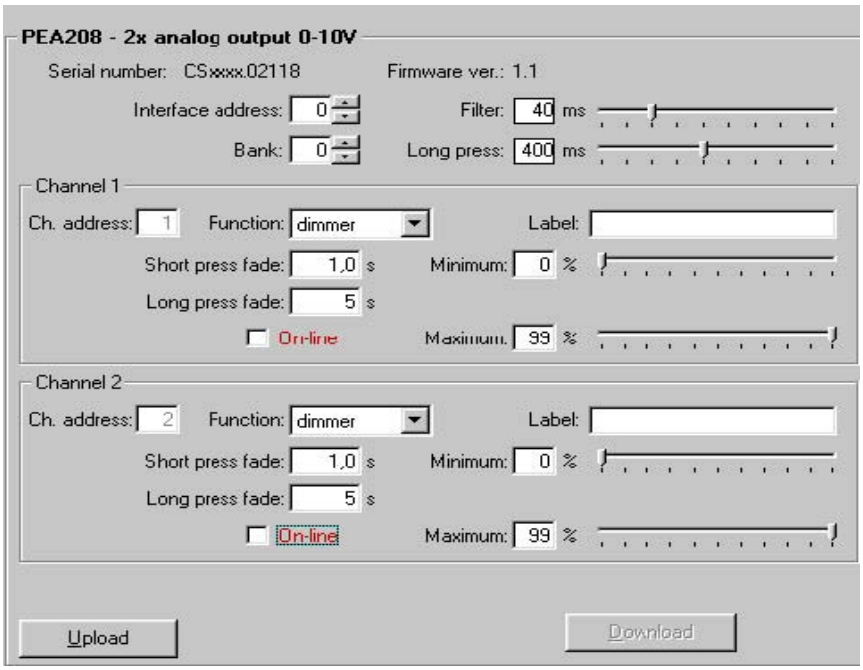


Fig. 14

4.4.1. PEA 208 parameters description

- **Interface address** 0-15 address of the module. The addresses of both channels of this module are based on this value.
- **Bank** 0-9 module group
- **Filter** 0-180 msec. Minimum time of pressing the button for the press to be valid.
- **Long** press 0-900 msec. If the time of pressing the button is longer than this value, the press is interpreted as a long press.

The following parameters can be set for each channel independently:

- **Function mode** selection for control dimmers by it's buttons
  - **no action** - buttons are disabled.
  - **toggle** - switch outputs between maximum and minimum values.
  - **solid state** - if no button is pressed, the output has the minimum value. If one button is pressed, the output has the value entered in the parameter **Intermediate**. If both buttons are pressed, the output has the maximum value.
  - **dimmer** – a short press of the UP/DOWN button changes the output value to maximum/minimum at the speed set in the parameter **Short press fade**. A long press makes the output dim up/down at the speed set in the parameter **Long press fade**. A release of the button makes it stop at the currently reached value.
  - **fluorescent** – a short press of the UP/DOWN button changes the output value to maximum/minimum at the speed set in the parameter **Short press fade**. A long press makes the output dim up/down at the speed set in the parameter **Long press fade**. A release of the

button makes it stop at the currently reached value. If button down is held, the value does not go all the way to 0%, but stops at 5 %. For a total switch-off use repeated quick press.

- **Short press fade** - speed of dimming in case of normal button press, 0-99.9 sec.
- **Long press fade** - speed of dimming in case of long time button press, 0-99.9 sec.
- **Minimum** - minimum output value, 0-99 %.
- **Maximum** - maximum output value, 0-99 %.
- **Intermediate -** intermediate output value, 0-99 % for solid state mode.

- **Label** - Channel legend which can consist of up to 22 characters.

4.4.2. Direct control of dimmable channels

If the On-line box is checked, any changes made to the parameters Minimum, Intermediate and Maximum are immediately transferred to the output of the module, which makes it possible to control the real brightness of the light source. If the On-line switch is not activated, the output of the module remains unchanged during setting. The current value of the output is shown next to the On-line, being constantly updated.

4.5. Configuration of the PEF 200 module

PEF200 is a two-channel interface for fluorescent lamp dimming ballasts with DSI control signal (TRIDONIC, ZUMTOBEL).

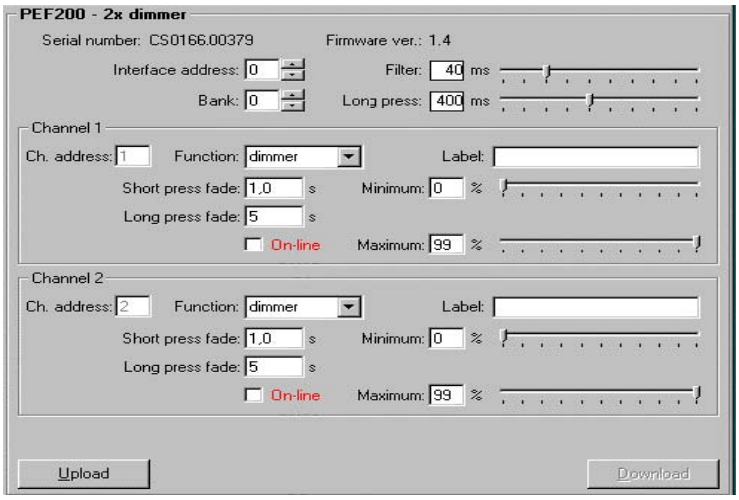


Fig. 15

4.5.1. PEF 200 parameters description

- **Interface address** 0-15 address of the module. The addresses of both channels of this module are based on this value.
- **Bank** 0-9 module group
- **Filter** 0-180 msec. Minimum time of pressing the button for the press to be valid.
- **Long** press 0-900 msec. If the time of pressing the button is longer than this value, the press is interpreted as a long press.

The following parameters can be set for each channel independently:

- **Function mode** selection for control dimmers by it's buttons
  - **no action** - buttons are disabled.
  - **toggle** - switch outputs between maximum and minimum values.
  - **solid state** - if no button is pressed, the output has the minimum value. If one button is pressed, the output has the value entered in the parameter **Intermediate**. If both buttons are pressed, the output has the maximum value.
  - **dimmer** – a short press of the UP/DOWN button changes the output value to maximum/minimum at the speed set in the parameter **Short press fade**. A long press makes the output dim up/down at the speed set in the parameter **Long press fade**. A release of the button makes it stop at the currently reached value. If button down is held, the value does not go all the way to 0%, but stops at 1 %. For a total switch-off use repeated quick press.
  - **Short press fade** - speed of dimming in case of normal button press, 0-99.9 sec.
  - **Long press fade** - speed of dimming in case of long time button press, 0-99.9 sec.
  - **Minimum** - minimum output value, 0-99 %.
  - **Maximum** - maximum output value, 0-99 %.
  - **Intermediate -** intermediate output value, 0-99 % for solid state mode.

- **Label** - Channel legend which can consist of up to 22 characters.

4.5.2. Direct control of dimmable channels

If the On-line box is checked, any changes made to the parameters Minimum, Intermediate and Maximum are immediately transferred to the output of the module, which makes it possible to control the real brightness of the light source. If the On-line switch is not activated, the output of the module remains unchanged during setting. The current value of the output is shown next to the On-line, being constantly updated.

4.6. Configuration of the PEF 150 module

PEF150 is interface for control up to 64 dimmable ballasts for fluorescent lamps on one bus divided up to 15 independent groups.

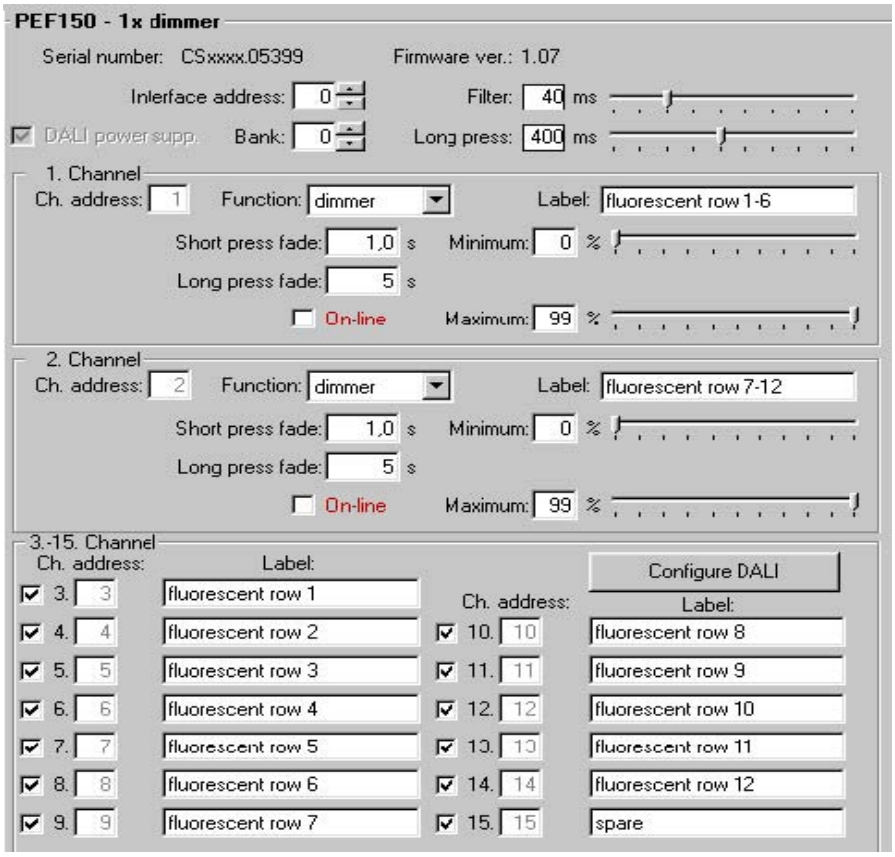


Fig. 16

4.6.1. PEF 150 parameters description

- **Interface address** address of the module. The addresses of both channels of this module are based on this value.
- **Bank** 0-9 module group
- **Filter** 0-180 msec. Minimum time of pressing the button for the press to be valid.
- **Long** press 0-900 msec. If the time of pressing the button is longer than this value, the press is interpreted as a long press.

The followingparameters can be set for the first and second channel independently. These channels can be controlled by buttons. The number of channels equals the number of controlled DALI groups.

- **Function mode** selection for control dimmers by its buttons
  - **no action** - buttons are disabled.
  - **toggle** - switch outputs between maximum and minimum values.
  - **solid state** - if no button is pressed, the output has the minimum value. If one button is pressed, the output has the value entered in the parameter **Intermediate**. If both buttons are pressed, the output has the maximum value.
  - **dimmer** – a short press of the UP/DOWN button changes the output value to maximum/minimum at the speed set in the parameter **Short press fade**. A long press makes the output dim up/down at the speed set in the parameter **Long press fade**. A release of the

button makes it stop at the currently reached value. If button down is held, the value does not go all the way to 0%, but stops at 1 %. For a total switch-off use repeated quick press.

- **Short press fade** - speed of dimming in case of normal button press, 0-99.9 sec.
- **Long press fade** - speed of dimming in case of long time button press, 0-99.9 sec.
- **Minimum** - minimum output value, 0-99 %.
- **Maximum** - maximum output value, 0-99 %.
- **Intermediate -** intermediate output value, 0-99 % for solid state mode.

- **Label** - Channel legend which can consist of up to 22 characters.

4.6.2. Direct control of dimmable channels

If the On-line box is checked, any changes made to the parameters Minimum, Intermediate and Maximum are immediately transferred to the output of the module, which makes it possible to control the real brightness of the light source. If the On-line switch is not activated, the output of the module remains unchanged during setting. The current value of the output is shown next to the On-line, being constantly updated.

4.6.3. DALI ballasts configuration by PEF 150 module

After connecting PEF150 to the DALI bus, which is connected to max. 63 ballasts, it is necessary to set the addresses in DALI ballasts and assign them into groups. These can be controlled from the PEF 150 control module. You can start this configuration by pressing the **Configure DALI** button. That starts an initialization and a test of the ballast's addresses.

If the addresses of ballasts do not come in a continuous sequence (configuration has not yet been carried out), the following message is shown:

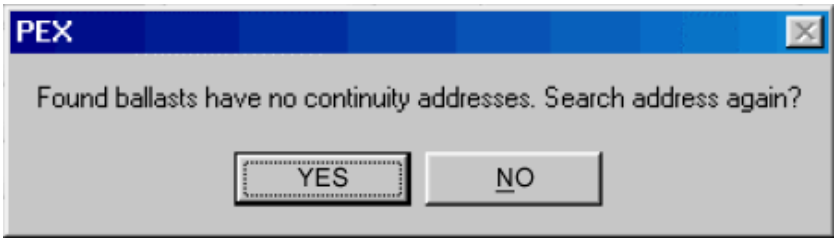


Fig. 17

If you select Yes, the control of addresses runs again. Otherwise the program asks you when you want to start setting addresses.

Fig. 18

Once you have confirmed by pressing Yes, ally adresses of ballasts are deleted (information about groups remain saved) and a new assigning of addresses for a given set of ballasts is carried out. Once everyvery founded ballast has its short address, a form for assigning ballasts into channels (groups) is shown.

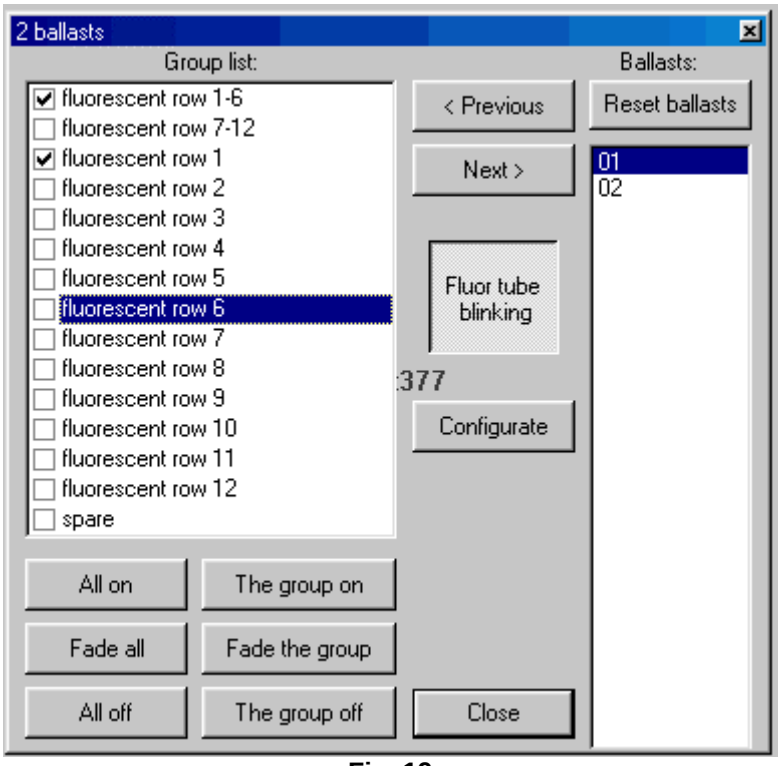


Fig. 19

There is a list of all found ballasts on the right side of the screen. The tube of the sellected ballast is blinking for easy identification of the chosen light in the room. After you have locallised the light, you can assign it into one ore more channels (groups) listed in the left part of the screen.. The blinking of the tube can be stoped by pressing the “Fluor tube blinking” button. There are some other options such as switching on all ballasts to the maximum by pressing the All on button, fading them to the minimum by pressing Fade all or switching them off by pressing All off. to the m in a chosen group. The same commands can be carried out for a whole group by pressing Group on, Fade group or Group off. Reset ballasts resets all ballasts, while all ballast addresses as well as all grouping into channels ale deleted. The Configurate button starts configuration of ballasts all over again. The Close button ends the configuration and closes the configuration window.

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