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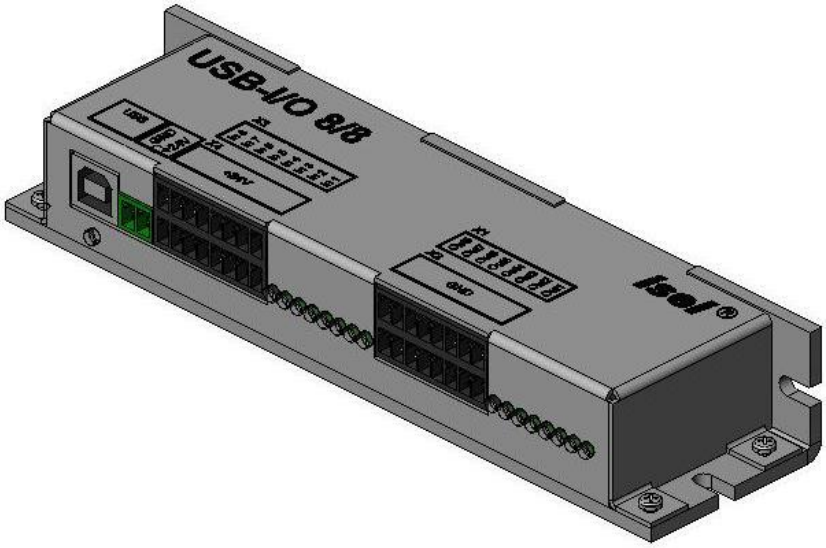

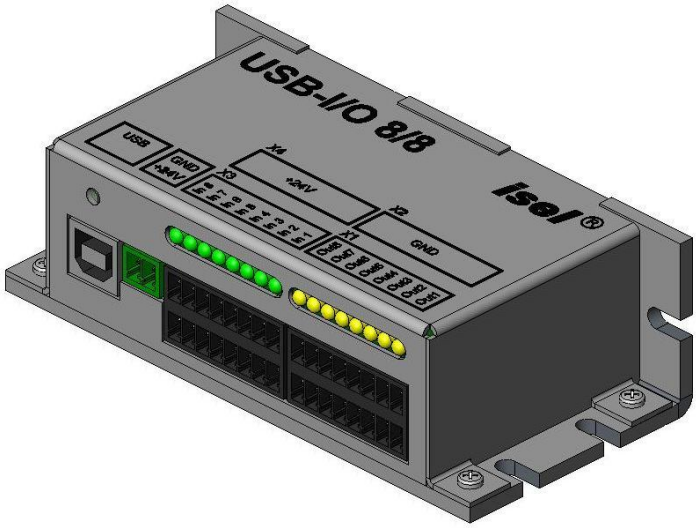

isel - USB - I/O - Modul

User Manual
for USB In-/Output-Module 8/8

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About this manual:

The information, technical data and dimensions contained in this print have been up-to-date when published. Any eventually existing misprints and mistakes cannot be excluded however. We are thankful for any suggestion for improvement and indication of mistakes.

Please note that the used software- and hardware descriptions of each individual company are generally subject to protection of trademarks and patent law.

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1 General

The USB-I/O-Modul is used as an add-on for the In- and Outputs from isel-machines and equipment. It has eight digital In- and Outputs, whitch are updated over the USB- Bus. For the connection of the I/O-Module to the control-PC a standard USB-cable is used. Additional the power supply (+24V) for the In- and Outputs must be added.

The installation will be made by the top hat rail or the bearer plate at CNC cabinet. The robust tin housing and the cranks witch get out on front side permit an easy connection with sensors or actors.

Configure the I/O-Moduls into the Software (ProNC, Remote) using the isel-Standard-Software-Interface (Modul-DLL).

2 Technical Data

- Data communication via USB-Bus without special Software-Driver
- power supply +5V, circa 120mA by USB
- 8 galvanic separated Outputs (max. power 0,7A, 24V per output)
- 8 galvanic separated Inputs (10mA, 24V)
- status of the active In- and Outputs will be shown by LED

3 Setup the USB IO Moduls in ProNC/Remote

3.1 Modul-Administration

At first the Interface-DLL witch opens the connection between ProNC/Remote and USB-IO-Device must be set-up.

Copy the files

IoUsb.DLL

and

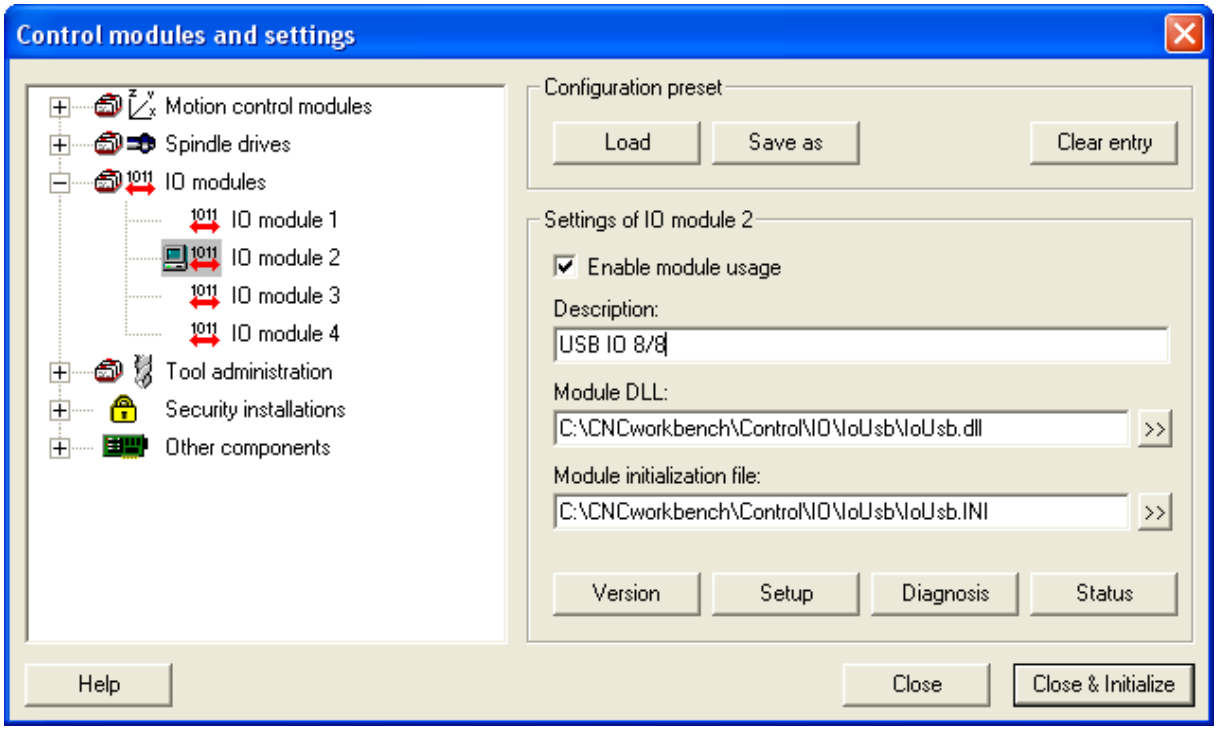
IoUsb.INI

in case the files are nonexistent, into a new directory in the CNCworkbench - directory.

Our suggestion for the new directory:

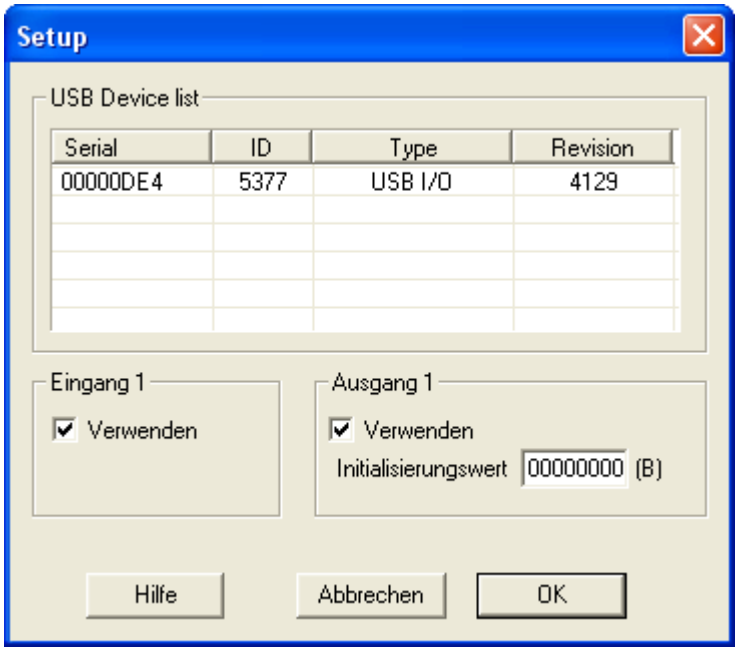
{ProgramPath}\CNCWorkbench\Control\IO\IoUsb

After the files are copied the application must get to know the new IO-device. Therefore start ProNC/Remote and open the Setup-dialog for the control with the aid of the command "Setup – Control…". The following dialog will be opened:



Follow the commands to get the USB-IO device into the modul management:

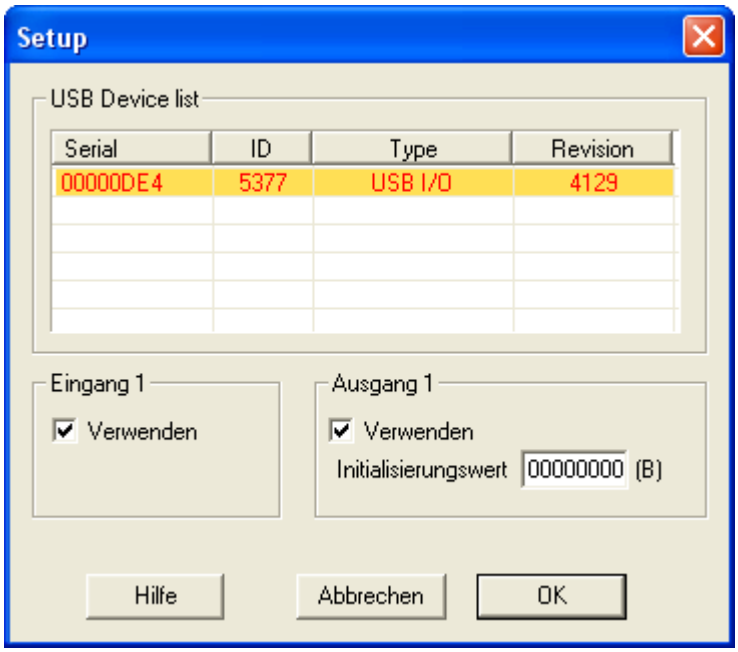
- Choose in the tree view the IO-Modul which is not in use and name it e.g. "IO USB 8/8" or "USB IO".
- Click on ">>" next to the Edit field "Modul DLL". Choose the "IoUsb.DLL" in the "\CNCWorkbench\Control\IO\IoUsb" directory. The Edit field "Modul initialisation file" shows automatically the “CNCWorkbench\Control\IO\IoUsb\IoUsb.INI" file. You needn’t to rename the file name.
- Click on "Setup" (in case nothing will happen, choose another IO-Modul from the tree view and after that choose the IO-Modul for the IO-USB). Click on "Setup" to open the Setup dialog.



If USB devices where found, they will be shown in the list fileld with information to serial number, product ID, type.
If no USB device was found the list field is empty.

Hint:
Please note, that only the devices are shown which were connected to the USB-bus before starting the software (ProNC/Remote).

Now you must only assign the USB-IO-Device to the Modul-DLL. Choose the device in the list field. Click on “OK“ to save the settings and close the dialog. To check the settings for this Modul-DLL click on “Setup“. The Setup-Dialog will be shown again:

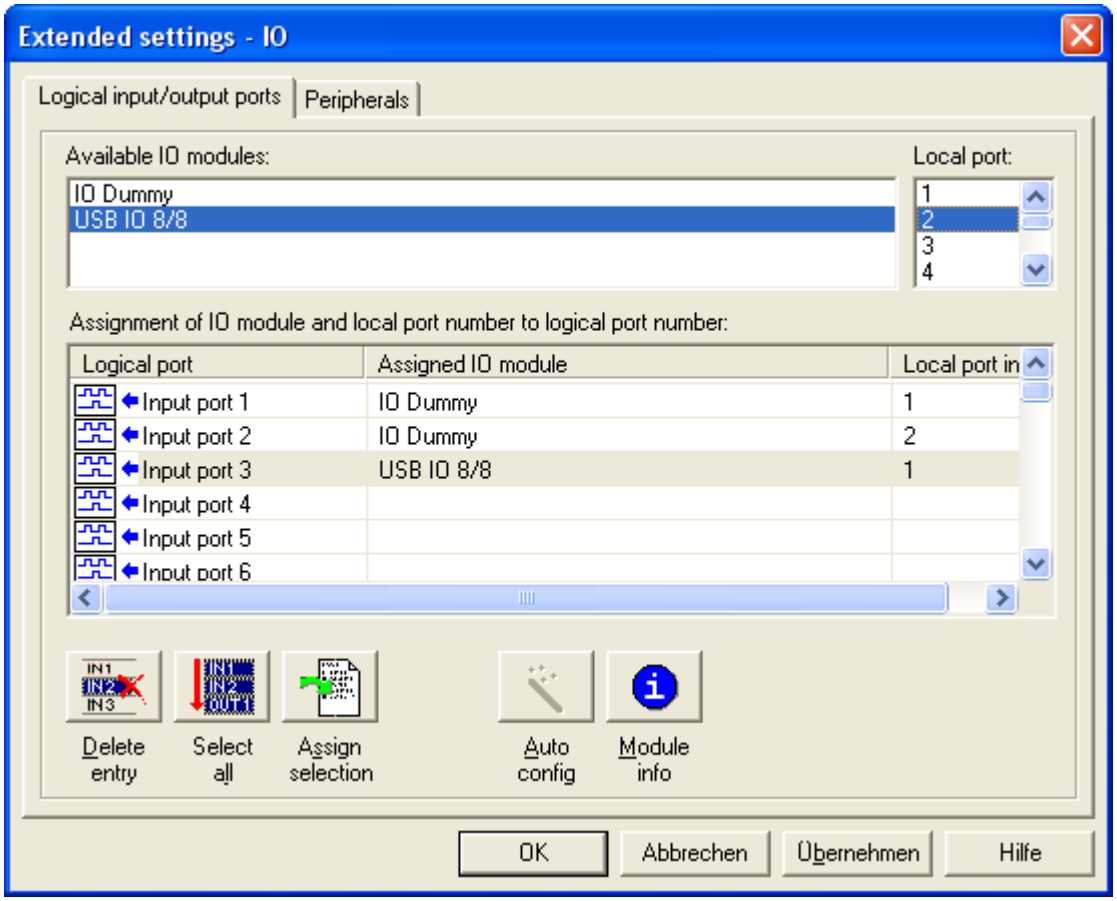


The USB device you have selected has a yellow background colour. That means that the Modul-DLL with the device was correctly initialized.

Keep in mind that assignment from more than one module DLL to one USB-Device can be result an undefined state.

Setting inside the Control-Administration

To get access to the IO-Modul inside the Control-Administration one setting in the top level must be changed. Open the "Extended settings-IO" - Dialog as follows. Highlight in the tree structure "IO modules". Click on "Extended settings" on the right side. You can see following dialog:



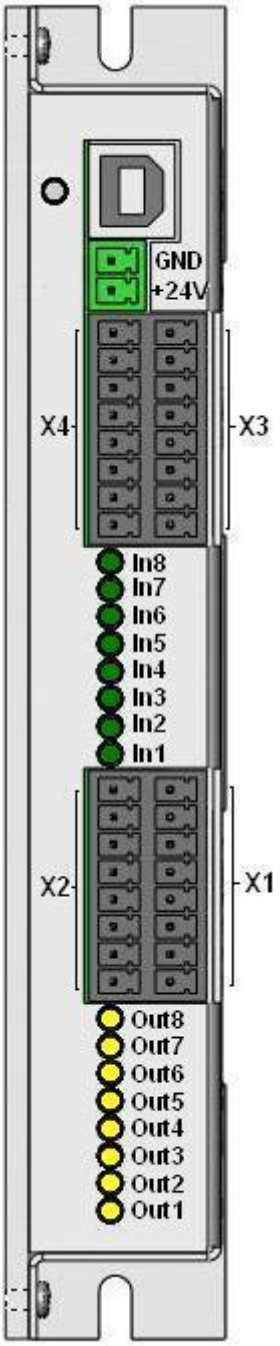
The IO-Modul "IoUsb.DLL" needs a logical Input/Output port number to access the In-/Output-functions. Mind the following notes:

- Highlight a free logical port, for example: input 3
- Choose in "Available IO modules" the "IO USB 8/8".
- Choose in the list "Logical port" the 1.
- Click on "Assign selection“
- Click on “OK” to close the dialog

After that the “Assigned IO modul“ and the ”Logical port in module“ in the highlighted row should be as shown in the picture. Now you must do the described steps for one free logical Output. You find the free Outputs by scrolling down in the list field.

Close the dialog “Control modules and settings” over the button “Close & Initialize” to reinitialize the new modules.

4 Connectors on the USB-I/O-Modul



USB- B- connector

Access	**GND**
Access	**+24VDC**

Input

X4	*1...8*	*+24VDC*
X3	In8	Digital Input 8
	In7	Digital Input 7
	In6	Digital Input 6
	In5	Digital Input 5
	In4	Digital Input 4
	In3	Digital Input 3
	In2	Digital Input 2
	In1	Digital Input 1

Output

X2	*1...8*	*GND*
X1	Out8	Digital Output 8
	Out 7	Digital Output 7
	Out 6	Digital Output 6
	Out 5	Digital Output 5
	Out 4	Digital Output 4
	Out 3	Digital Output 3
	Out 2	Digital Output 2
	Out 1	Digital Output 1

The connectors are already printed on the Modul.

Important Information

Driving inductive loads on digital outputs (for example relays) put parallel to every load a free wheel rectifier (Anode to GND).