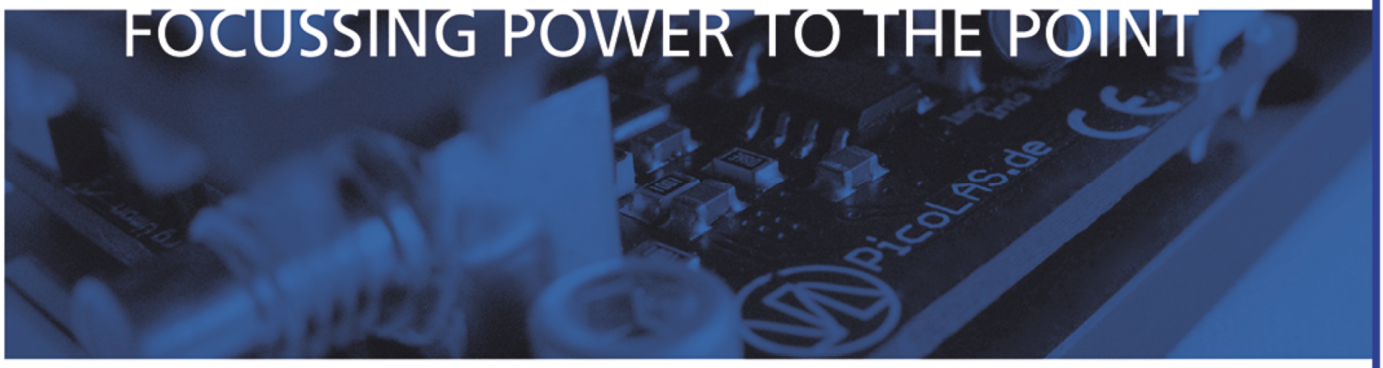
PicoLAS

FOCUSSING POWER TO THE POINT



User Manual

PLB-21

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PLB-21

Universal Platform for Interfacing with PicoLAS-Products

- Allows full control of all relevant device parameters
- Interfaces with many available PicoLAS-controllers
- No external power supply required
- Robust aluminum housing

Product Description:

The external operating unit provides an easy-to-use interface for the PicoLAS driver modules. The operating unit displays all vital information about the current status of the power supply on a LC-Display. All pulse parameters can be controlled via short, self-explanatory menu pages. The operating unit draws its energy directly from the power supply it manages, thus keeping the workbench free from extra cables.

Technical Data:*

Communication protocol	RS-232
Display	4 rows @ 20 characters each line
Supply voltage	no additional external power required (Phantom supply by power stage)
Dimensions in mm	172 x 115 x 43
Weight	700g
Operating temperature	0 to +45 °C

* Technical data is subject to change without further notice.

Compatible Products: *PLCS-21*
LDP-C 80-20
LDP-CW 80-20
LDP-C 120-20
LDP-CW 120-20
LDP-C 200-20
LDP-QCW 300-12

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Introduction

The PLB-21 is an easy to use operating unit for most PicoLAS products. It is fully compatible to its previous release, the PLB-20. No additional power supply is required as the PLB-21 draws its power directly from the device it is connected to.
Please note that with a connected PLB-21 the device draws 80 to 100mA additional power.

Compatible Products

The PLB-21 has the ability to download the required software to operate a connected device directly from it. Thus it is guaranteed that the PLB-21 is compatible to future PicoLAS products without any software update.
The actual list of compatible products includes:

- PLCS-20
- PLCS-21
- LDP-C 80-20
- LDP-CW 80-20
- LDP-C 120-20
- LDP-CW 120-20
- LDP-C 200-20
- LDP-QCW 300-12

How to get started

Step #	What to do	Check
1	Unpack the PLB-21	
2	Power off your device. The PLB-21 is not hot-plug ready. You may damage the PLB-21 or your device if you try otherwise.	
3	Connect the PLB-21 to your device. See the device specific manual for the location of the PLB-21 connector. Note that the PLB-21 draws 80 to 100mA additional current.	
4	Power on your device	
5	The PLB-21 tries to communicate with your device	
6	If the PLB-21 asks for the download of a new driver it is recommended to confirm the question with "yes".	
7	The download may take several minutes and needs to be confirmed when ready.	
8	Reset the PLB-21	
9	Wait for the initializing to be complete.	
10	The PLB-21 with the device is now ready to use.	

Key Assignments

The PLB-21 possesses 10 keys and one "rotary pulse encoder" which will be termed "jogdial" in this document. The Keys are named F_1, F_2, F_3, Menu, Enter, Laser and $R_{1...4}$ for the keys right to the display. The jogdial can be turned and pressed.
The functions of the keys are defined in the table below.

Name	Function	
F_1	Depends on software, explained in display when needed	
F_2	Depends on software, explained in display when needed	
F_3	Depends on software, explained in display when needed	
Menu	Go up one menu level	
Enter	Go down into current selection (Menu) / activates current selection	
Laser	Enables the output of the driver	
$R_{1...4}$	Menu: Modifiable Entry:	Selects the appropriate display line If available, selects the digit to change
Jogdial (turned)	Menu: Modifiable Entry:	Select previous / next entry. Increases / decreases the value
Jogdial (pressed)	Menu: Modifiable Entry:	Go down into current selection If available, selects the digit to change

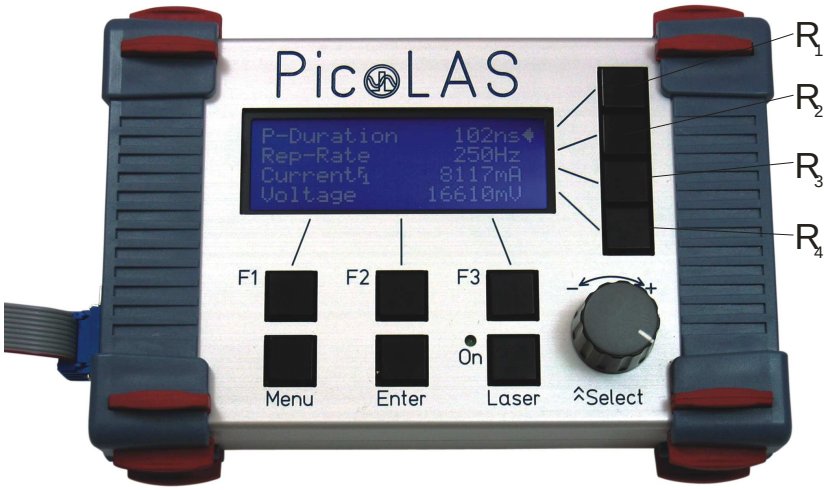

Figure 1: PLB-21 Keys

Menu Structure

The following description of the menu structure includes the entries which are fixed in the PLB-21. The actual configuration depends on the device and may include more menu entries. In the following only the fixed menu entries are described:

Menu root

- **Device Info**
  - Software Version
  - Hardware Version
  - Serial Number
  - Device Name

- **PLB-21 Info**
  - Hardware Version
  - Software Version
  - Serial Number
  - Checksum

- **PLB-21 Driver**
  - Version
  - Device ID
  - Checksum
  - Name

- **PLB-21 Config**
  - Contrast
  - Brightness
  - Reset
  - Remove Driver

Device Info

This submenu contains basic information about the device the PLB-21 is connected to. It is for informational purposes only and contains no modifiable values. In the case of a support request, this information can be necessary for the PicoLAS support.

Software Version

This is the actual used firmware version from the microcontroller on the connected device.

Hardware Version

This is the hardware version of the connected device.

Serial number

This is the PicoLAS serial number which is unique for each device.

Device Name

It is the name of the connected device.

PLB–21 Info

This submenu contains basic information about the PLB-21 itself. It is for information purposes only and contains no modifiable values. In the case of a support request, this information can be necessary for the PicoLAS support.

Hardware Version

This is the hardware version of the PLB-21.

Software Version

This is the actual firmware version of the PLB-21.

Serial number

This is the PicoLAS serial number which is unique for each PLB-21.

Checksum

A CRC-16 checksum of the firmware inside the PLCS-21 is given.

PLB–21 Driver

This submenu contains basic information about the downloaded driver. It is for informational purposes only and contains no modifiable values. In the case of a support request, this information can be necessary for the PicoLAS support.

Version

This is the software version of the driver.

Device ID

This is the PicoLAS device ID to which the driver corresponds.

Checksum

A CRC-16 checksum of the memory segment which holds the driver is given. This is used internally to determine a successful download.

Name

This is the internal name of the driver. It should normally correspond with the name of your device.

PLB–21 Config

This submenu contains some configuration parameters of the PLB-21. These are user modifiable.

Contrast

It allows the adjustment of the display contrast. Turn the jogdial clockwise to increase the contrast.

Brightness

Allows the adjustment of the brightness of the display background lightning. Turn the jogdial clockwise to increase the brightness.

Reset

Pressing the "Enter" key forces a software reset of the PLB-21. This does not affect the connected device, but reinitialises the PLB-21.

Remove driver

Pressing the "Enter" key forces the PLB-21 to remove the previously downloaded driver. The driver must be re- downloaded in order to resume normal operation.