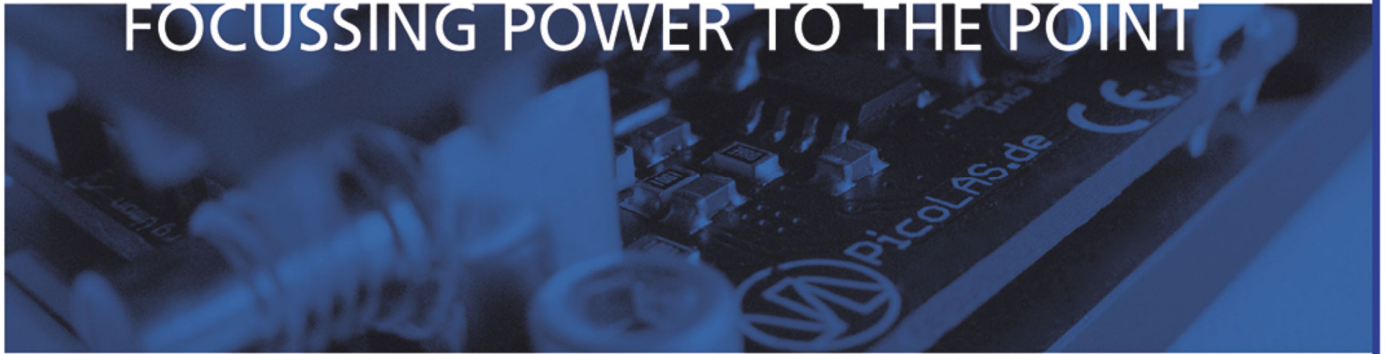


PicoLAS

FOCUSSING POWER TO THE POINT



User Manual

Rev. 1902

PLB-21

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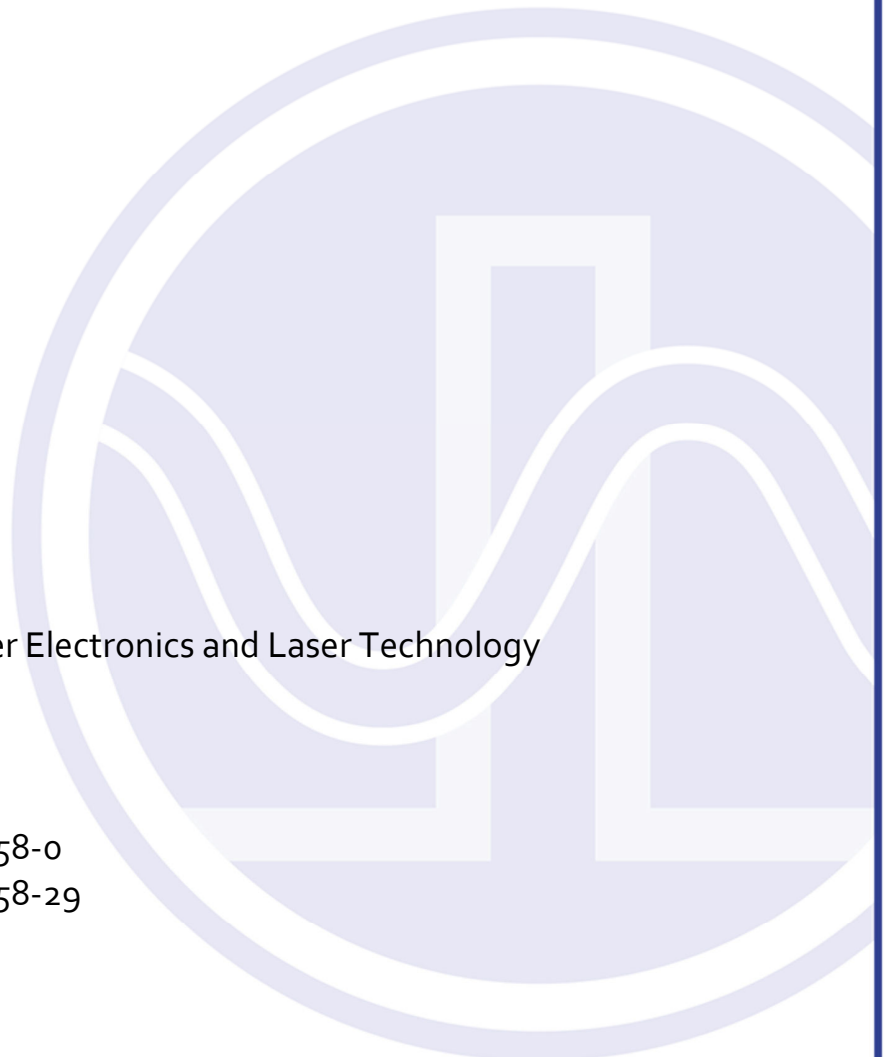


Table of Contents

Product Overview 3
Introduction 4
Compatible Products 4
How to get started 4
Key Assignments 5
Menu Structure 6

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 PLB-21 provides an easy-to-use interface for the PicoLAS driver modules.

This operating unit displays all essential information about the current status of the connected PicoLAS device on its LC-Display. All pulse parameters can be controlled via short and self-explanatory menu pages.

The operating unit draws its energy directly from the connected PicoLAS device. Thus, it keeps 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 | 700 g |
| Operating temperature | 0 to +45 °C |

* Technical data is subject to change without further notice.

Compatible Products: LDP-CW 20-50
 LDP-CW 90-10
 LDP-CWI-C 80-20
 LDP-CWI-C 80-40
 LDP-CWI-C 120-20
 LDP-CWI-C 120-40
 LDP-QCW 300-12
 LDP-QCW 400-12
 PLCS-40
 PLCS-21



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 100 mA 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:

- LDP-CW 20-50
- LDP-CW 90-10
- LDP-CW/-C 80-20
- LDP-CW/-C 80-40
- LDP-CW/-C 120-20
- LDP-CW/-C 120-40
- LDP-QCW 300-12
- LDP-QCW 400-12
- PLCS-40
- PLCS-21

How to get started

| Step # | What to do | Check |
|--------|---|---|
| 1 | Unpack the PLB-21. | |
| 2 | The PLB-21 is not hot-plug ready. Thus, you have to power off your device. You may damage the PLB-21 or your device if you try otherwise. | The connected device must be off (no supply voltage). |
| 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 100 mA additional current. | Check manual of the connected device. |
| 4 | Power on your device. | Supply voltage as specified in the manual. |
| 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 F₁, F₂, F₃, 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: Selects the appropriate display line Modifiable Entry: If available, selects the digit to change |
| Jogdial (turned) | Menu: Select previous / next entry Modifiable Entry: Increases / decreases the value |
| Jogdial (pressed) | Menu: Go down into current selection Modifiable Entry: If available, selects the digit to change |

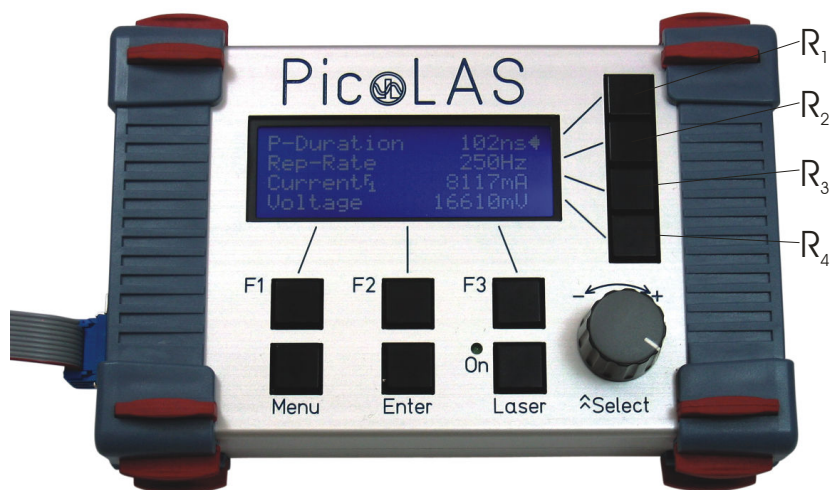


Figure 1: PLB-21 Keys

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

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

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

- **PLB-21 Config**
 - o Contrast
 - o Brightness
 - o Reset
 - o 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

This 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.