PicoLAS

FOCUSSING POWER TO THE POINT

User Manual

Rev. 09.01 valid from June 2009

LDP-V-BOB

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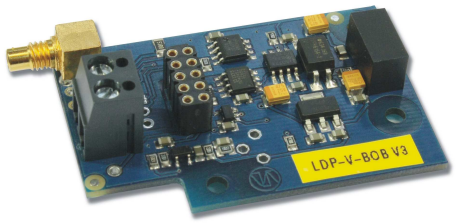
LDP-V BOB

Break out Board for LDP-V series



- Compatible with all LDP-V and LDP-AV pulsers
- Galvanically isolated trigger input
- Three different signal types for trigger input
- Overtemperature shutdown
- External high voltage input
- External disable connection
- Directly attachable on the pulser

Product Description:

The LDP-V-BOB is a directly attachable board for an easy handling of LDP-V and LDP-AV pulsers. All important input signals (i.e. supply voltage, pulse input trigger) can be applied with it.

The trigger input pulse can be connected as 50 Ω input signal, 5 V TTL signal or with a low voltage differential signal (LVDS).
On a soldering junction a disable signal can be connected.
All input signals (trigger pulse and disable) are galvanically isolated.

An external HV-DC supply can be connected straightly to the LDP-V-BOB.

A LED indicates an overtemperature of the connected pulser.

The complete supply voltage for the LDP-V-BOB an the pulser can be connected up with a screw connector.

*Technical Data:**

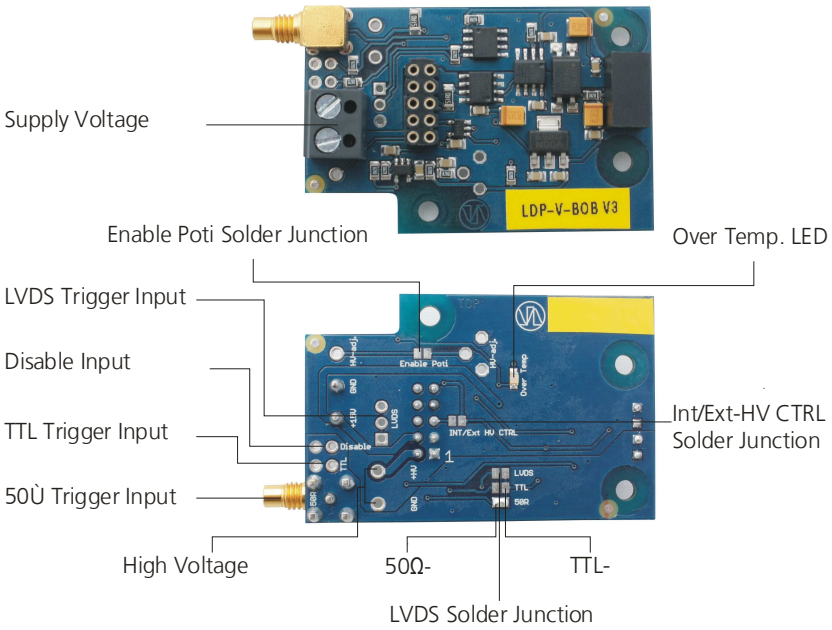
Supply voltage	+15 V supply voltage BOB and pulser via screw terminal
Pulse trigger input	LVDS, 5 V TTL into 4700 Ω or 50 Ω via SMC-connector**
Disable input	5 V TTL (20 mA)
External HV power supply	0 .. 120 V
Min. pulse width	7 ns
Trigger delay	57 ns
Dimensions in mm	63 x 36 x 17
Weight	14 g
Operating temperature	-20 to +55°C

* Technical data is subject to change without further notice.
** See User Manual for Details.

Compatible Products: ***LDP-V 03-100 V3***
LDP-V 50-100 V3
LDP-V 240-100 V3
LDP-AV D06-N20

Elements of the Break out Board (BOB)

The LDP-V BOB is slip-on board for LDP-V and LDP-AV pulser to provide easy access to control signals and add an over temperature shutdown feature. To prevent ground loops, the disable and trigger inputs are galvanically isolated. The supply voltage is fed through from the BOB to the pulser.



Description of BOB Elements

Connectors

Supply Voltage:
Connect the power supply for the BOB and the pulser to the two pin screw terminal. Pay attention to the correct polarity!

High Voltage Input (optional):
Connect the external high voltage power supply for the pulser to the two pin screw terminal. Pay attention to the correct polarity! Disable the integrated HV Supply on the Pulser!

> Security Advise: Do not touch any leads of the HV Input connector and the pulser connector as they are connected to a high voltage of up to 125 V, even if no external high voltage is applied!

Disable Input:
The BOB disable input is galvanically isolated to the pulser to prevent ground loops. On the pulser side, it is ORed with the over temperature shutdown and then lead to the pulser's disable input.

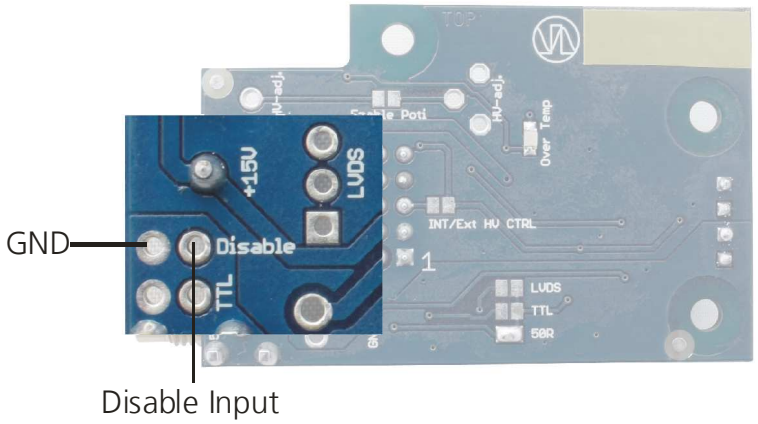


Figure 1: Disable Input Description

50 Ω Trigger Input:
Provides a galvanically isolated trigger input to prevent ground loops. As it is terminated with 50 Ω, the source must be able to provide a 5 V signal level into a 50 Ω load. Activate the corresponding solder junction before using the input.

LVDS Trigger Input:
Provides a galvanically isolated trigger input to prevent ground loops. It is terminated with 100 Ω and the source must provide a signal corresponding to the LVDS standard. Activate the corresponding solder junction before using the input.

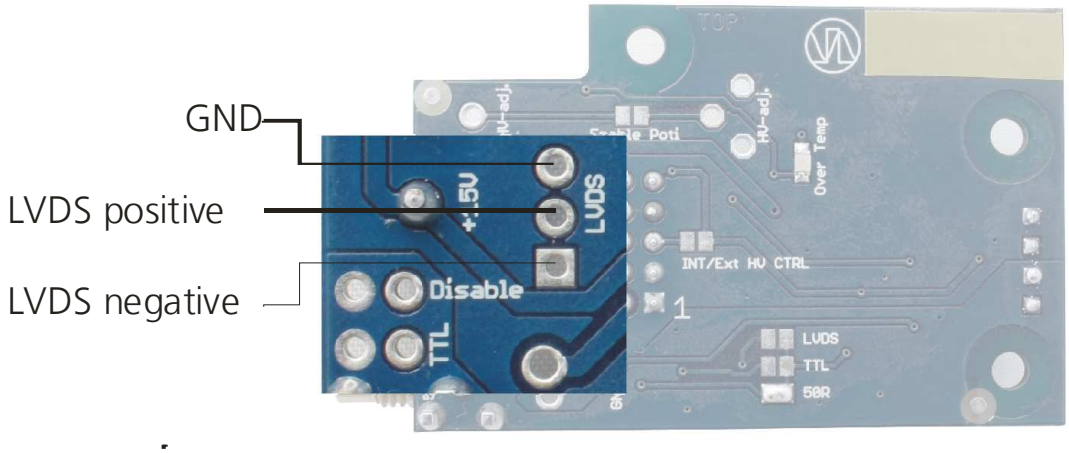


Figure 2: LVDS Input Description

TTL Trigger Input:
Provides a galvanically isolated trigger input to prevent ground loops. It is terminated with 4700 Ω and the source must provide a 5 V TTL signal. Activate the corresponding solder junction before using the input.

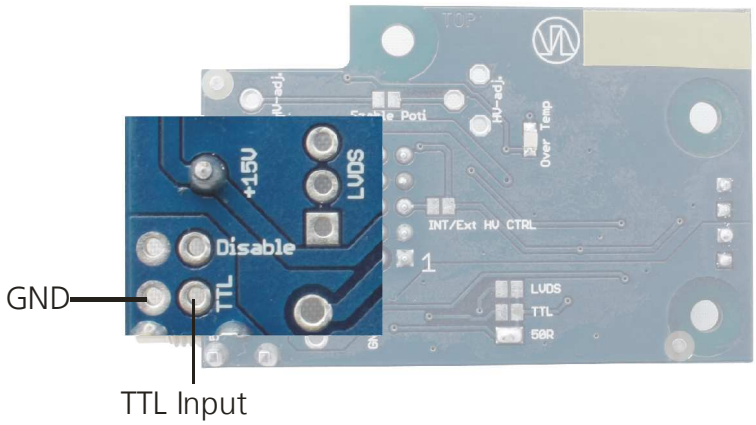


Figure 3: TTL Input Description

Solder Junctions and LEDs

Over Temp LED:
The BOB has an integrated over temperature shutdown. When the pulser temperature exceeds approx. 70°C, the pulser is disabled and the LED is on (red). If the LED is off, the temperature is below the shutdown temperature.

LVDS / TTL / 50R Solder Junctions:
Selects the pulse trigger input source. Only one of the three junctions may be connected at a time.

Int/Ext HV CTRL Solder Junction:
For future use. Do not connect.

Enable Poti Solder Junction:
For future use. Do not connect.

Mounting of the BOB

The LDP-V BOB is mounted directly on top of the pulser. The 10-pin female connector on the BOB must fit onto the connector of the pulser. The three mounting holes on the BOB must fit on the corresponding thread bolts of the pulser.

Absolute Maximum Ratings

HV-Input 0 .. 125V*
Disable Input: 0 .. 5 V
50R Input: 0 .. 5 V
TTL Input: 0 .. 5 V
LVDS Input: +/-1 V around 1.2 V
Supply Voltage 0 .. 15 V*

*The connected pulser's limits have to be obeyed. See pulser datasheet and User Manual for exact Specification.