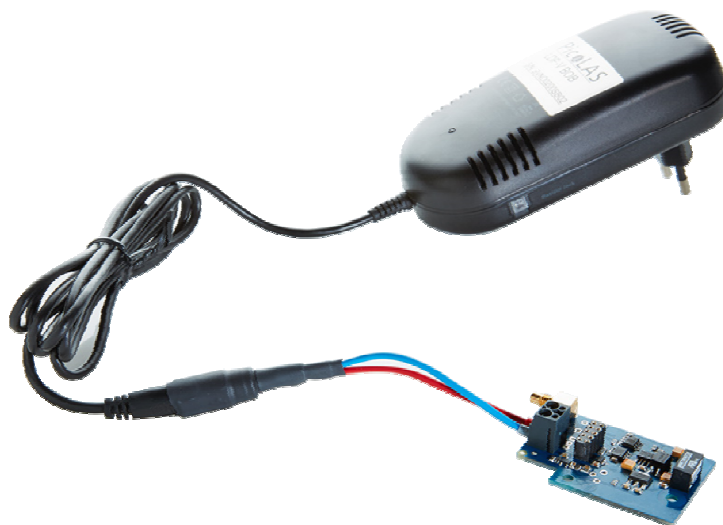




# User Manual

LDP-V BOB



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## LDP-V BOB

Breakout Board for LDP-V & LDP-AV Series (except LDP-V/-AV 10-/40-70)



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

### Product Description

The LDP-V BOB can be directly attached on top of the drivers of the LDP-V and LDP-AV series (except LDP-V/-AV 10-/40-70). For easy handling, all important inputs and 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 driver. The complete supply voltage for the LDP-V BOB and the driver can be connected with a screw connector.

### Technical Data\*

Supply voltage	+15 V supply voltage BOB and driver 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

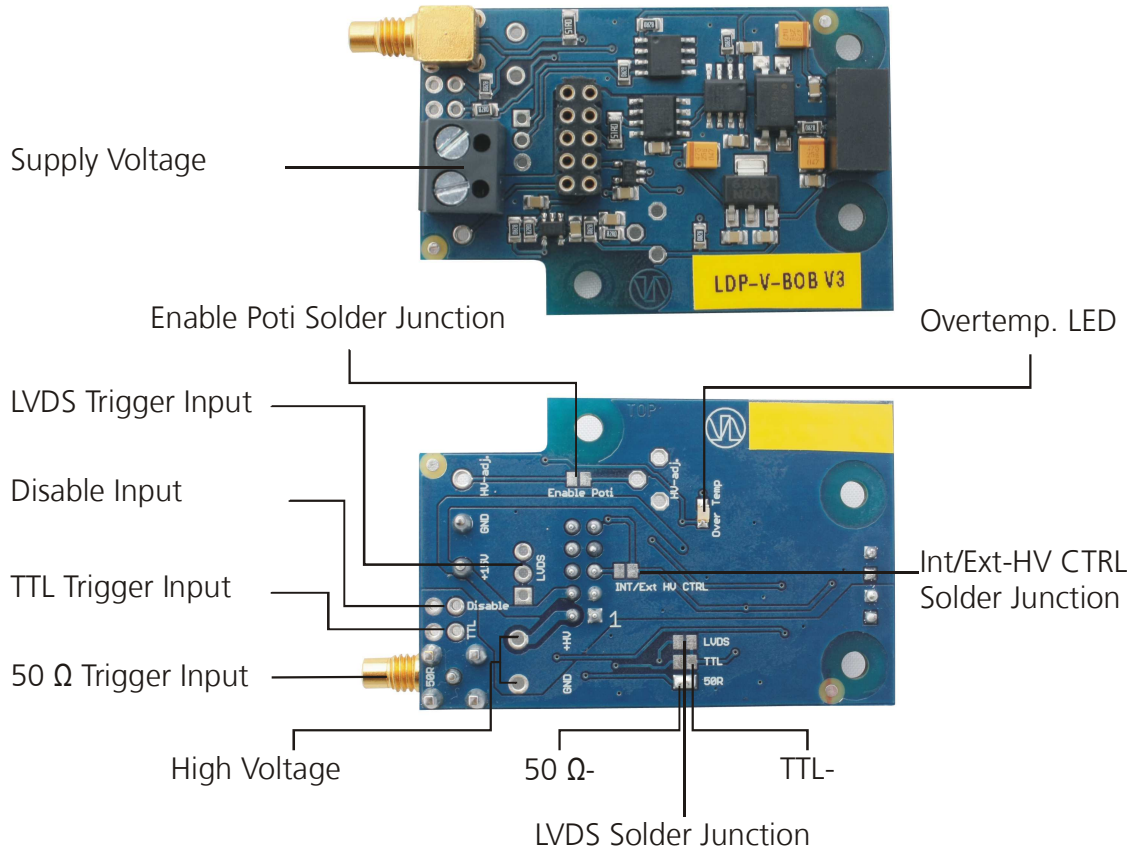
\* Technical data is subject to change without further notice.

\*\* See user manual for details.

Compatible Products: LDP-V 03-100  
LDP-V 50-100  
LDP-V 80-100  
LDP-V 240-100  
LDP-AV D06-N20  
LDP-AV D06-N10

## Elements of the Breakout Board (BOB)

The LDP-V BOB is a slip-on board for most of the LDP-V and LDP-AV drivers to provide easy access to control signals and add an overtemperature 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 driver.



## Description of BOB Elements

### Connectors

#### Supply Voltage:

Connect the power supply for the BOB and the driver 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 driver to the two pin screw terminal. Pay attention to the correct polarity! Disable the integrated HV supply on the driver!

**Security Advice:** Do not touch any leads of the HV input connector and the driver 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 driver to prevent ground loops. On the driver side, it is ORed with the overtemperature shutdown and then lead to the driver's disable input.

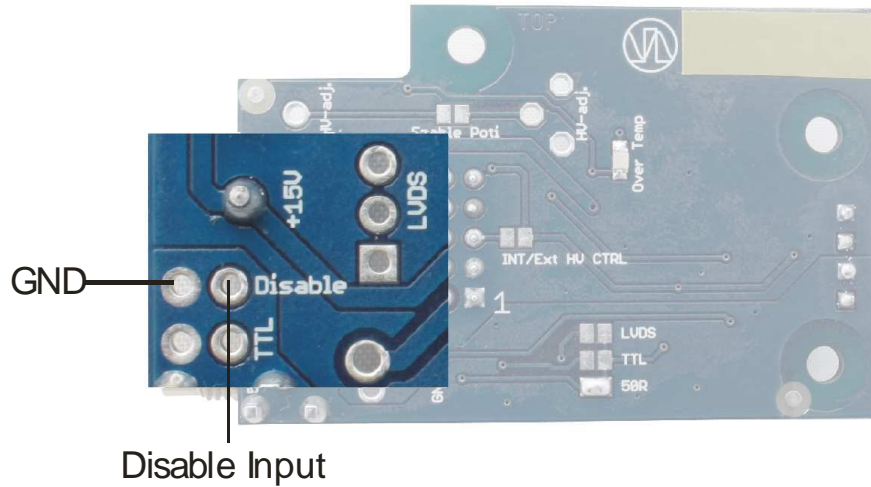


Figure 1: Disable Input Description

**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.

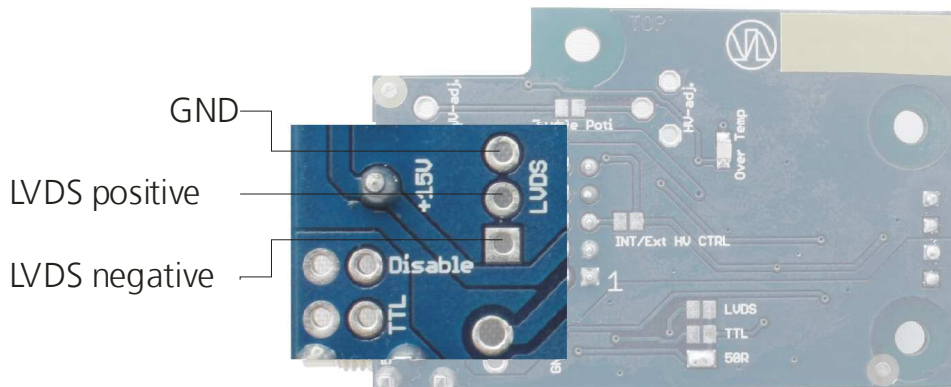


Figure 2: LVDS Input Description



### **TTL Trigger Input:**

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

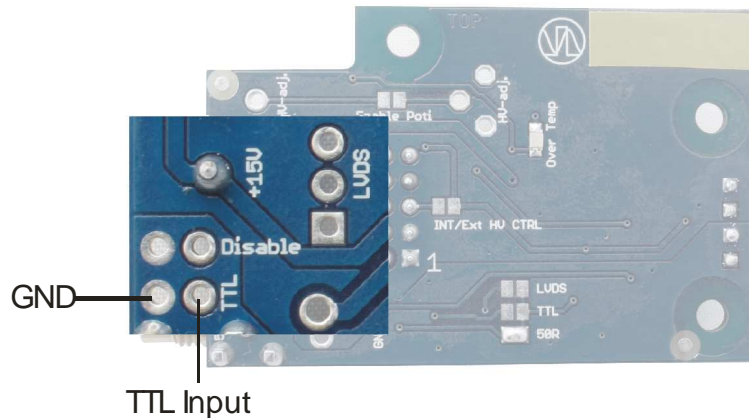


Figure 3: TTL Input Description

### **Solder Junctions and LEDs**

#### **Overtemp. LED:**

The BOB has an integrated overtemperature shutdown. When the driver temperature exceeds approx. 70 °C, the driver 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 driver. The 10 pin female connector on the BOB must fit onto the connector of the driver. The three mounting holes on the BOB must fit on the corresponding thread bolts of the driver.

### **Absolute maximum Ratings**

HV input 0 .. 125 V\*

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 driver's limits have to be obeyed. See datasheet and user manual of the driver for exact specification.