LDS12B Linear ±12 V Supply

LDS12B

Description

The LDS12B is a ±12 Volt Regulated Linear Power Supply. The power supply is specifically for use with our PDA and PDB lines of amplified photodetectors, our APD series of avalanche photodetectors, our PMM series of photomultiplier modules, and FSAC autocorrelator for femtosecond lasers. The LDS12B features include a current limit for short circuit and overload protection, an On/Off switch with LED Indicator, and a switchable AC input voltage (100 VAC, 120 VAC or 230 VAC). This power supply ships with a location-specific power cord.

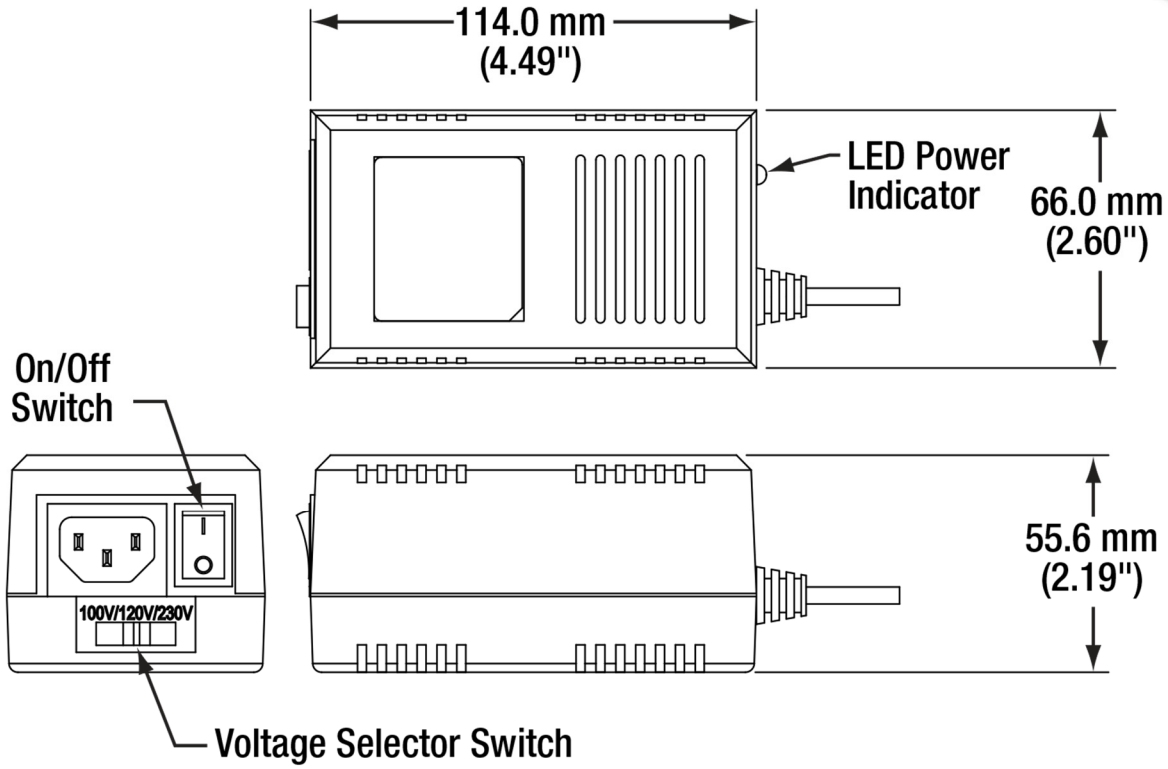
Specifications

Electrical Specifications	
DC Output	±12 VDC
Output Current	250 mA
Input Voltage	100 VAC/120 VAC/230 VAC (Switch Selectable)
Output Regulation	±5% Measured at Output Connector
Output Power (Rated)	6 W (Max)
Input Current	0.25 A / 0.5 A (Max)
Input Frequency	50 or 60 Hz

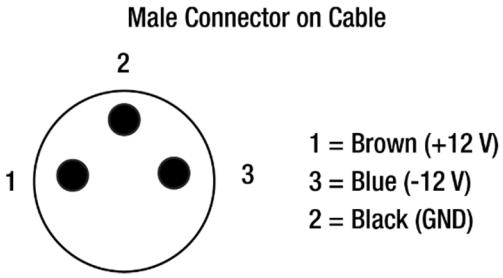
Safety Specifications	
Fuse	Input Line Fuse
Indicator	LED with On/Off Switch
Operating Temperature	-10° to +40°C

Other Specifications	
Dimensions (L x W x H)	4.49" x 2.60" x 2.19" (114.0 mm x 66.0 mm x 55.6 mm)
Output Connector	LUMBERG RSMV3 Male Connector
Input Configuration	IEC 320
Cord Length	2 m (6.6 ft)

Drawing



Output Cable Pin Diagram



LDS12B Safety Information

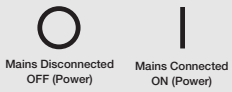
Before Applying Power or Changing Line Voltage: Before connecting the power supply to the mains make sure that the line voltage range marked on the power supply agrees with your local supply. The unit must be powered off, unplugged from the AC input power source, and disconnected from all external devices before changing the line voltage. Failure to do so may cause serious injury to the user or to the device attached due to high voltages within the unit. To help prevent electric shock, plug the DUT and LDS12B power cable into properly grounded electrical outlets. These cables are equipped with 3-prong plugs to help ensure proper grounding. Do not remove the grounding prong from the cable. If you must use an extension cable, use a 3-wire cable with properly grounded plugs.
Covers and Service: Do not remove covers! Do not cover the device in order to prevent overheating of the instrument. Refer servicing to qualified personnel.
Explosive Environments: Do NOT operate this device in explosive environments.
Connectors: Make sure to connect the output connector to the DUT before turning on the unit to avoid shorting issue and possibly damaging the LDS12B and DUT.

Setting the LDS12B AC Line Voltage

Your LDS12B, ±12 VDC Regulated Power Supply has been shipped from Thorlabs configured for 120 VAC operation. If you plan to operate this unit at 100 VAC or 230 VAC, please refer to steps below and heed the safety warnings mentioned above.

WARNING

The unit must be powered off, unplugged from the AC input power source, and disconnected from all external devices before changing the line voltage.



Failure to do so may cause serious injury to the user due to high voltages within the unit.

Line Voltage Selection

To change the line voltage, locate the line select switch below the power input connector. Select the appropriate line voltage by adjusting the switch to either 100, 120, or 230.

1. Remove the AC line cord from the LDS12B.
2. Using a flat head screwdriver, slide the voltage selector switch to the left for 100 VAC or to the right for 230 VAC.
3. Verify the correct voltage is shown on the switch. If not, please repeat above steps.
4. To set switch back to 120 VAC, slide the switch back with a flat head screwdriver.

Common Causes of Fuse Failure

This particular unit does not give access to change fuses. Listed below are common causes of fuse failure:

- Output Short Circuit
- Output Overload

There are two elements utilized to provide safety protection:

- Short-Circuit Current Limit: Uses Low Dropout Regulator with internal current limit circuit to protect against high-load current faults or shorting events.
- Thermal Fuse: Uses a thermally sensitive element, which melts and opens the circuit when high temperature is present.

WARNING

The power switch must be in the off position while making connections to the output. If you have any questions, please call your local tech support office and a Thorlabs engineer will be happy to assist you.

Precautions

Thorlabs' Life Support and Military Use Application Policy is stated below:

THORLABS' PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS OR IN ANY MILITARY APPLICATION WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF THORLABS, INC. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.

2. A critical component is any component in a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system or to affect its safety or effectiveness.

3. The Thorlabs products described in this document are not intended nor warranted for usage in Military Applications.