

GPS011 Galvo Scanner System Linear Power Supply



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Chapter 1 Safety



1.1 Safety Information

For the continuing safety of the operators of this equipment, and the protection of the equipment itself, the operator should take note of the **Warnings, Cautions** and **Notes** throughout this handbook and, where visible, on the product itself.

The following safety symbols may be used throughout the handbook and on the equipment itself.

	Shock Warning	
Given when there is a risk of injury from electrical shock.		
	Warning	
Given when there is a risk of injury to users.		
	Caution	
Given when there is a risk of damage to the product.		
Note		
Clarification of an instruction or additional information.		

General Warnings

	Warnings	
The safety of any system incorporating this equipment is the responsibility of the person performing the installation.		
The unit must be connected only to an earthed (grounded) mains power outlet.		
If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.		
No maintenance required. No user servicable parts. If the unit fails, contact technical support.		
Disconnect the power supply before cleaning the unit. Never allow water to get inside the case. Do not saturate the unit. Do not use any type of abrasive pad, scouring powder or solvent, e.g. alcohol or benzene		

Chapter 2 Installation and Operation

2.1 Introduction

This compact DC power supply unit (PSU) has been designed for use with our new GVS001 & GVS002 Galvo Scanning Systems. The supply allows two driver cards to be powered via the separate 2 m power cables supplied with the galvo units. An AC adapter with 1.6m cable enables convenient positioning in any application.

2.2 Environmental Conditions



Warnings



Operation outside the following environmental limits may adversely affect operator safety.

Location	Indoor use only
Maximum altitude	2000 m
Temperature range	5°C to 40°C
Maximum Humidity	Less than 80% RH (non-condensing) at 31°C

To ensure reliable operation the unit should not be exposed to corrosive agents or excessive moisture, heat or dust.

If the unit has been stored at a low temperature or in an environment of high humidity, it must be allowed to reach ambient conditions before being powered up.

The unit must not be used in an explosive environment.

When siting the unit, care must be taken not to restrict access to the power switch on the rear panel.

2.3 Connecting The PSU To The Driver Card



Caution



Always ensure the power supply unit is isolated from the mains before connecting to the driver cards. Do not connect the driver cards to a 'live' external power supply. Doing so carries the risk of PERMANENT damage to the cards. Always power up the driver cards by connecting the power supply when the mains power is switched off. Similarly, to power down the driver cards, disconnect the power supply from the mains before disconnecting from the cards.

Under some operating conditions (e.g. the maximum current is drawn for prolonged periods), the unit can become quite hot (around 45° C). Always ensure adequate ventilation to the unit. Do not cover the vent holes in the case. Do not place other items on top of or against the unit.

- 1) The circular 3-pin connector on the power output cable and the POWER socket on the PSU are fitted with alignment keyways to ensure connection in the correct orientation. Check for correct orientation of the alignment keyways, then make connections as shown in Fig. 2.1.
- 2) Screw the outer casing of the plug clockwise until the connector is fully fastened.



Fig. 2.1 Connecting the Power Cable to the PSU

- 3) Push the 3-way crimp housing on the other end of the cable into the driver card connector J10. Ensure the connector is properly locked in position.



Fig. 2.2 J10 Connector Identification

- 4) Repeat item (3) for the remaining driver card (if used).

2.4 Connecting the AC Power

The unit must be connected only to an earthed (grounded) mains power outlet

- 1) Connect the power cord to the socket on the rear panel of the unit - see Fig. 2.3.
- 2) Select the correct voltage range for your region.

Caution

Selecting the incorrect voltage range will damage the unit

- 3) Plug the power cord into the wall socket.

2.5 Using the Power Supply Unit

- 1) Make connections as detailed in Section 2.3. and 1.2.
- 2) Move the Power switch on the rear panel to the '—' position.
- 3) To disconnect the power, move the switch to the '0' position.



Fig. 2.3 Power Supply Unit Rear Panel

2.6 Power Connector Pin Out

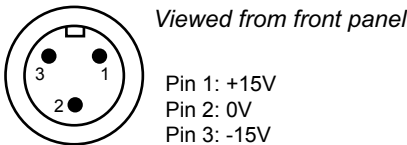


Fig. 2.4 Front Panel POWER OUT Connector Pin Out Details

2.7 Specifications

- Input Voltage Range:** Switchable: 115V AC -9% to +11%
or 230 V AC -10% to +15% 47 to 63Hz
- Output Voltage:** 15 V 3 A, -15 V 3 A DC
- Fuse Type:** T2A H250V Anti-Surge
- Dimensions:** 179 mm x 274 mm (max) x 122 mm
(7.05" x 10.79" (max) x 4.8")
- Weight:** 4.73 kg (10.4 lbs)

2.8 CE Certificate

THORLABS

EU Declaration of Conformity

In accordance with EN ISO 17050-1:2010

We Thorlabs Ltd
Of 1 Saint Thomas Place, Ely, Cambridgeshire, CB7 4EX

in accordance with the following Directive(s):

2006/95/EC	Low Voltage (LVD)
2004/108/EC	Electromagnetic Compatibility (EMC)
2011/65/EU	Restriction of use of certain hazardous substances (RoHS)

hereby declare that:

Equipment Galvo Linear Power Supply
Model Number GPS011

is in conformity with the applicable requirements of the following documents:

EN61010 -1	Safety requirements for electrical equipment for measurement, control and laboratory use.	2010
EN61326-1	Electrical Equipment for measurement, control and laboratory use - EMC requirements	2006

and which is in conformity with Directive 2011/65/EU of the European Parliament and of the Council of 8th June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment, for the reasons stated below:

A does not contain substances in excess of the maximum concentration values tolerated by weight in homogenous materials as listed in Annex II of the Directive

I hereby declare that the equipment named above has been designed to comply with the relevant sections of the above referenced specifications. The unit complies with all applicable Essential Requirements of the Directives.

Signed:



Name: Keith Dhese
Position: General Manager
On: 30 August 2013

CE 13

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Thorlabs Worldwide Contacts

For technical support or sales inquiries, please visit us at www.thorlabs.com/contact for our most up-to-date contact information.



USA, Canada, and South America

Thorlabs, Inc.
sales@thorlabs.com
techsupport@thorlabs.com

Europe

Thorlabs GmbH
europe@thorlabs.com

France

Thorlabs SAS
sales.fr@thorlabs.com

Japan

Thorlabs Japan, Inc.
sales@thorlabs.jp

UK and Ireland

Thorlabs Ltd.
sales.uk@thorlabs.com
techsupport.uk@thorlabs.com

Scandinavia

Thorlabs Sweden AB
scandinavia@thorlabs.com

Brazil

Thorlabs Vendas de Fotônicos Ltda.
brasil@thorlabs.com

China

Thorlabs China
chinasales@thorlabs.com



THORLABS
www.thorlabs.com