
OPTICAL

SYSTEMS

DESIGN

OPERATOR MANUAL

OSD921

SINGLE VOLTAGE

POWER SUPPLY

OPTICAL SYSTEMS DESIGN

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1 TECHNICAL SUMMARY

1.1 PRODUCT DESCRIPTION

1.1.1 OVERVIEW

The OSD921 is a 3RU high (133mm) power supply unit designed to fit into the OSD standard card chassis such as the OSD370 (single supply version) and OSD350 (dual supply version)

The OSD921 provides power to the OSD370/350 chassis back plane on which are mounted fourteen/twelve 9-pin female D connectors through which +12V regulated DC voltage is fed to plug-in cards.

The OSD921 power supply unit is normally used as a power source. One OSD921 is capable of providing power for most combinations of plug-in cards. Check the current rating at 12V_{DC} of all cards to be used within the chassis to confirm that the rating is not exceeded. Individual product datasheets provide the Chassis Current Consumption (CCC) for each plugin card: the total of these in the chassis must be less than the rating of the OSD921 Power Supply Unit, ie 6 Amps total.

The OSD921 supply has a built in cooling fan. The cooling fan operates only when high temperatures are experienced on the power supply whilst under heavy load and/or high ambient temperatures. There is a Temperature Alarm LED on the front panel of the OSD921 that is green during normal operation and will be red when the operating temperature exceeds the normal operating limits of the supply.

1.1.2 APPLICATIONS

- ▲ Power supply for OSD370/350

1.1.3 FEATURES AND BENEFITS

- ▲ Compact 3RU high card unit
- ▲ OSD921 power supply can support most combinations of OSD cards
- ▲ Built-in cooling fan
- ▲ Temperature alarm indicator

1.2 TECHNICAL SPECIFICATIONS

TABLE 1: TECHNICAL SPECIFICATIONS

Specification	Performance
Input	110 - 240V _{AC} 50/60Hz
Output	+12V _{DC} ±0.1V at 6 Amps
Output Ripple	Typical peak to peak ripple at full load is less than 50mV
Regulation	Regulated to ± 0.1V at full load
Indicators	+12V on LED Temperature Alarm
Test Points	Positive voltage terminal on front panel Ground voltage terminal on front panel
Operating Temperature	-20 to 75°C
Relative Humidity	0-95% non-condensing
Weight	465g

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2 INSTALLATION AND OPERATION

2.1 INTRODUCTION

This section outlines the methods required to install and operate the OSD921 successfully. It should be studied carefully if damage to the equipment or poor results are to be avoided.

This equipment has been fully tested prior to dispatch and is ready for immediate operation. However it is advisable to check for external transportation damage before operation. If damage is evident, return the unit with the packaging to your supplier immediately.

2.2 INSTALLATION

2.2.1 IMPORTANT INSTALLATION REQUIREMENTS

It is important to provide a cool operating environment as well as to provide adequate ventilation.

The OSD370/350 chassis must be separated by at least a 1RU (about 44mm) gap above and below the unit to provide ventilation.

The ventilation holes of the chassis must never be covered by any objects.

2.2.2 OPERATION

The OSD370 uses an OSD921 power supply unit.

A front panel mounted LED indicator on the OSD921 illuminates when the power supply unit is switched on. Front panel test points are available on the OSD921 for monitoring the 12VDC output of the supply. Note that the test point outputs are current limited and cannot be used as a power source.

The OSD921 supply has a built-in cooling fan.

The cooling fan operates only when high temperatures are experienced on the power supply whilst under heavy load and/or high ambient temperatures.

The fan may not continuously operate and under low load or low ambient temperatures it may not operate at all.

The **Temperature Alarm** LED on the front panel of the OSD921 is green during normal operation and will be red when the operating temperature exceeds the normal operating limits of the supply.

Do not continue to operate the power supply when the Temperature Alarm LED is red and take steps to rectify the cause of the excessive high temperature indication.

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2.2.3 DRAWING AND DIMENSIONS

The OSD921 is designed to be inserted into the chassis and secured by means of captive screws. Dimensions are in mm.

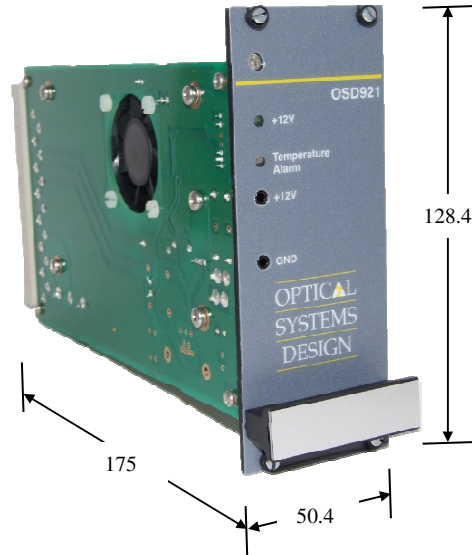
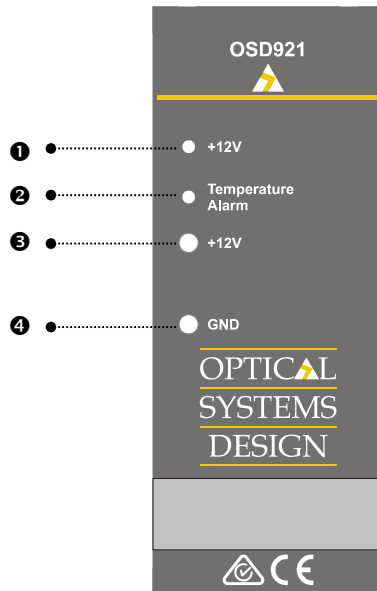


FIGURE 1: DRAWING AND DIMENSIONS

2.2.4 LED INDICATORS AND TEST POINTS



	No	Function	Status	Description
LED	❶	+12V	Off	No Power
			Green	Unit On
	❷	Temperature Alarm	Green	Normal Operation
Red			Over Temp warning	
Test Point	❸	+12V		-
	❹	Ground		-

FIGURE 2: LED INDICATORS AND TEST POINTS

3 MAINTENANCE

The following section outlines the fault-finding procedure for the OSD921 power supply card. Please take note of the following:

- ▲ Personnel without appropriate training should not attempt any maintenance except that outlined below.
- ▲ If further maintenance is attempted you are warned that every care should be taken to ensure that internal measurements made while the equipment is operational are taken carefully as some components within the unit are expensive and may be damaged by failure of any portion of their support circuitry.
- ▲ Some components within the unit are Electrostatic (ES) sensitive and Electrostatic Discharge (ESD) precautions should be taken when performing maintenance upon the unit.

ROUTINE MAINTENANCE - The fan should be cleaned of built up dust periodically to ensure optimum operation.

4 WARRANTY

Thank you for purchasing equipment designed, manufactured and serviced by Optical Systems Design (OSD). OSD warrants that at the time of shipment, its products are free from defects in material and workmanship and conforms to specifications. Our Warranty conditions are outlined below:

WARRANTY PERIOD - For warranty period, please call your local OSD distributor.

REPAIRS - Optical Systems Design reserves the right to repair or replace faulty modules/units. Please obtain a "Return Material Authorisation" (RMA) form and number before returning goods. Goods must be returned in adequate packing material to Optical Systems Design, Warriewood or its nominated authorised representative, for all repairs.

WARRANTY REPAIRS - Return shipments to OSD shall be at customer's expense and freight back to the customer will be at OSD expense.

OUT-OF-WARRANTY REPAIRS - OSD reserves the right to repair or replace any faulty goods. Freight costs and insurance for both journeys are met by the user. All equipment repaired by OSD will have a 3-Month Warranty from the date of dispatch.

SITE REPAIRS - By agreement site repairs may be undertaken for which out of pocket, hotel and travel expenses will be charged.

EXCLUSIONS - This warranty does not apply to defects caused by unauthorized modifications, misuse, abuse or transport damage to the equipment. All modifications to OSD's standard product will need written authorization and will be charged at normal repair rates. All modifications are to be carried out by OSD Technicians. Warranty is void if unauthorized removal and/or tampering with serial number and/or labels is evident.

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