OPTICAL
SYSTEMS
DESIGN

OPERATOR MANUAL

OSD9221

2RU POWER SUPPLY

FOR OSD3700 CARD CHASSIS

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1 TECHNICAL SUMMARY

1.1 BRIEF DESCRIPTION

1.1.1 OVERVIEW

The OSD9221 is a 2RU high (88mm) power supply unit designed to plug into the OSD3700 2RU high chassis.

The OSD9221 provides power to the OSD3700 chassis backplane on which are mounted eighteen 4-pin female connectors through which +12V regulated DC voltage is fed to plug-in cards.

One OSD9221 is capable of providing power for most combinations of plug-in cards. Check the current rating at 12VDC 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 OSD9221 Power Supply Unit, ie 6 Amps total.

The OSD9221 supply has a built-in cooling fan which operates only when high internal temperatures are experienced whilst under heavy load and/or high ambient temperatures. There is a Temperature Alarm LED on the front panel of the OSD9221 that is green during normal operation changing to red when the internal operating temperature exceeds the normal operating limits of the supply

1.1.2 APPLICATIONS

- ▲ Power supply for OSD3700 2RU card chassis

1.1.3 FEATURES AND BENEFITS

- ▲ Compact 2RU high card unit
- ▲ Self contained with mains power inlet module, fuse, filter and On/Off switch built into the unit
- ▲ OSD921 power supply can support most combinations of OSD's 2RU cards
- ▲ Built-in cooling fan
- ▲ Temperature alarm indicator
- ▲ Front panel +12V monitoring points

1.2 TECHNICAL SPECIFICATIONS

Table 1 below provides Technical Specifications for the OSD9221.

TABLE 1: TECHNICAL SPECIFICATIONS

Specification	Performance
Electrical	
Input	90 - 264VAC 47-63Hz via a fused and filtered IEC socket
Mains Fuse Rating	1 Amp slow blow
Mains Power Switch	Front panel mounted rocker switch
Bicolour Front Panel Indicator	+12V OK (Green) Temperature Alarm (red)
Front Panel Test Points	Positive voltage terminal Ground terminal
Output Regulation	+12VDC ±0.3V from no load to 6 Amps
Output Ripple	<50mVpp at full load
Physical	
Operating Temperature	-20 to 75ºC
Relative Humidity	0-95% non-condensing
Dimensions of Card (mm)	50W x 216D x 70H
Weight	600g

2 INSTALLATION AND OPERATION

2.1 INTRODUCTION

This section outlines the methods required to install and operate the OSD9221 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 OSD3700 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.

2.3 OPERATION

The OSD3700 uses an OSD9221 power supply unit.

A front panel mounted LED indicator on the OSD9221 illuminates green when the power supply unit is switched on. Front panel test points are available on the OSD9221 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 OSD9221 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. Note that the front panel consists of fan vent holes and must not ever be covered or obstructed.

The Power LED on the front panel of the OSD9221 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.

2.3.1 OSD9221 DRAWINGS AND DIMENSIONS

The OSD9221 is designed to be inserted into an OSD3700 2RU chassis and secured by means of captivated screws.

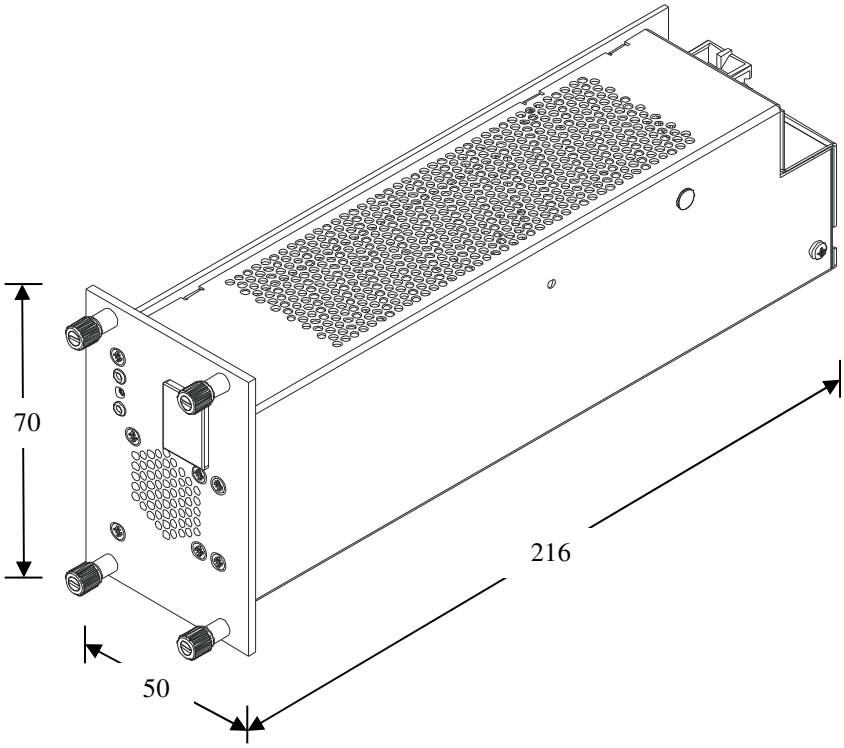

FIGURE 1: OSD9221 DIMENSIONS

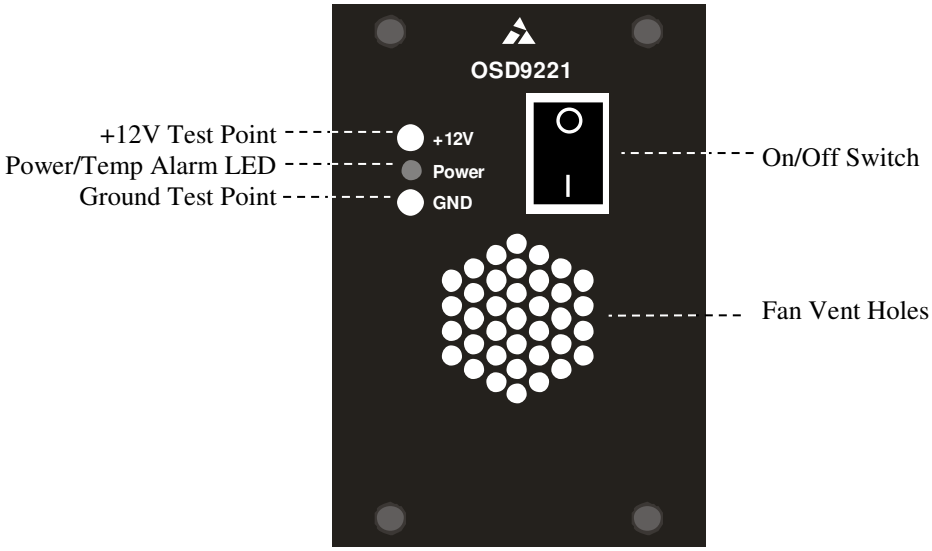

FIGURE 2: OSD9221 FRONT PANEL

3 MAINTENANCE

3.1 INTRODUCTION

The following section outlines the fault-finding procedure for the OSD9221 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.

3.2 EXTERNAL INSPECTION

Visually check for the following:

- Check that the correct power source is connected to the power socket.

3.3 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:

4.1 WARRANTY PERIOD

For warranty period, please call your local OSD distributor.

4.2 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.

4.2.1 WARRANTY REPAIRS

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

4.2.2 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.

4.2.3 SITE REPAIRS

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

4.2.4 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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