

May 13, 2004

## **OPERATING MANUAL**

**LPS1000-P3153  
(0-100VDC @ 10A)**



***Designers and Manufacturers of Quality Power Supplies Since 1982.***

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### **ABSOPULSE ELECTRONICS LTD**

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## *Electrical Characteristics*

### **SPECIFICATIONS**

#### **INPUT:**

<b>Input Voltage</b>	120VAC, 47 - 63Hz (operating range 97-132VAC)
<b>Input Protection</b>	Thermal fuse -internal modules Inrush current limiting Input breaker
<b>Input Isolation</b>	2250VDC input to chassis, 4300VDC input to output (8mm spacing), 500VDC output to chassis. Full compliance to IEC950, CSA 22-2-950 and UL 1950
<b>RFI Suppression</b>	EN 55022 Class B conducted emissions

#### **OUTPUT:**

<b>Output Voltage</b>	0...100VDC/10A max Adjustment via front panel potentiometer
<b>Line/Load Regulation</b>	+/-1% combined
<b>Output Overvoltage Protection</b>	30 or 62V selectable, trips AC breaker
<b>Overload Protection</b>	Current limiting with short circuit protection Self-resetting thermostat for thermal protection
<b>Efficiency</b>	Min 80% at full load
<b>Output Ripple/Noise</b>	Better than 1% of output voltage peak to peak or 0.2% RMS of the output voltage (20HZ BW)
<b>Operating Temperature</b>	0 to +50°C
<b>Temperature Drift</b>	0.03% per °C over operating temperature range
<b>Monitoring:</b>	Analogue output voltmeter and ammeter

#### **MECHANICAL:**

<b>Dimensions</b>	4U (7") x 19" rackmount x 15" deep
<b>Connections:</b>	Input: IEC320 socket Output: banana sockets

## **INSTALLATIONS AND ADJUSTMENTS**

1. Inspect unit for visible transit damage. Should there be any cause for concern, please contact ABSOPULSE before returning unit. No returns will be accepted without a Return Authorization
2. Check that the power supply input matches to the applicable input source.
3. Connect input and output according to the connection diagram. (This information is labeled on most power supplies; excepting some plug-ins with DIN connectors)
4. Verify that the proper wire gauge is used to minimize the line loss.(Guidelines for wire size applications are included.)
5. The output voltages and current limits are factory set according to the specifications. Should it be necessary to re-adjust any of these parameters, please consult with ABSOPULSE Engineering
6. Unless otherwise specified, all mounting configurations are for convection cooling. Care must be taken to allow sufficient room around the unit to allow unimpeded air flow.  
**NOTE:** For all enclosed packages, unit should be mounted vertically to a heatsinking surface in such a manner that air can flow through the vented cover. Heatsink must be of sufficient size to maintain 70C temperature.

## **WARANTY AND SERVICE**

1. Standard warranty is for 1 year subject to application within good Engineering practice..
2. Should servicing be required please contact service manager for return authorization at PH: (613) 836-3511 or FAX: (613) 836-7488

## **SAFETY CONSIDERATIONS**

1. Depending on the input/output configuration and the applied topology, any part of the power supply circuitry may have hazardous voltages. Avoid touching any component or parts inside the unit.

Wait a minimum of 30 seconds after removing the input power before doing any operation on the power supply.

2. The input ground terminal must be connected to safety earth to minimize electric shock hazard and to ensure low EMI.
3. Use the proper screw/lug sizes for mounting when applicable.
4. For open frame units, please add thermal compound between the heatsink bar and the surface where the this unit will be mounted to.
5. Provide proper clearance above and below the unit to ensure unimpeded air flow when unit is convection cooled. (If forced air cooling is specified, a fan of sufficient CFM must be used).
6. **Warning:**  
This power supply is electronically protected. If the fuse opens, the power supply or its protective circuitry may have been damaged, we recommend that the operator not replace the fuse. Return the power supply to Absopulse for servicing.
7. Repairs should only be performed by qualified service personnel.

## **RECOMMENDED WIRE SIZES**

The following values are to be used for guidelines only. The actual application must be considered for selecting wire gauge, insulation, as well as EMI considerations for wire routing and shielding where necessary. For longer wire lengths, larger gauge may be needed to minimize line losses.

<b>CURRENT (AMPS)</b>	<b>WIRE SIZE (AWG)</b>
0 to 0.5 AMPS	22
0.5 to 2 AMPS	20
2 to 3 AMPS	18
3 to 6 AMPS	16
6 to 12 AMPS	12
12 to 20 AMPS	10
20 to 30 AMPS	8
30 to 40 AMPS	6

## **MAINTENANCE**

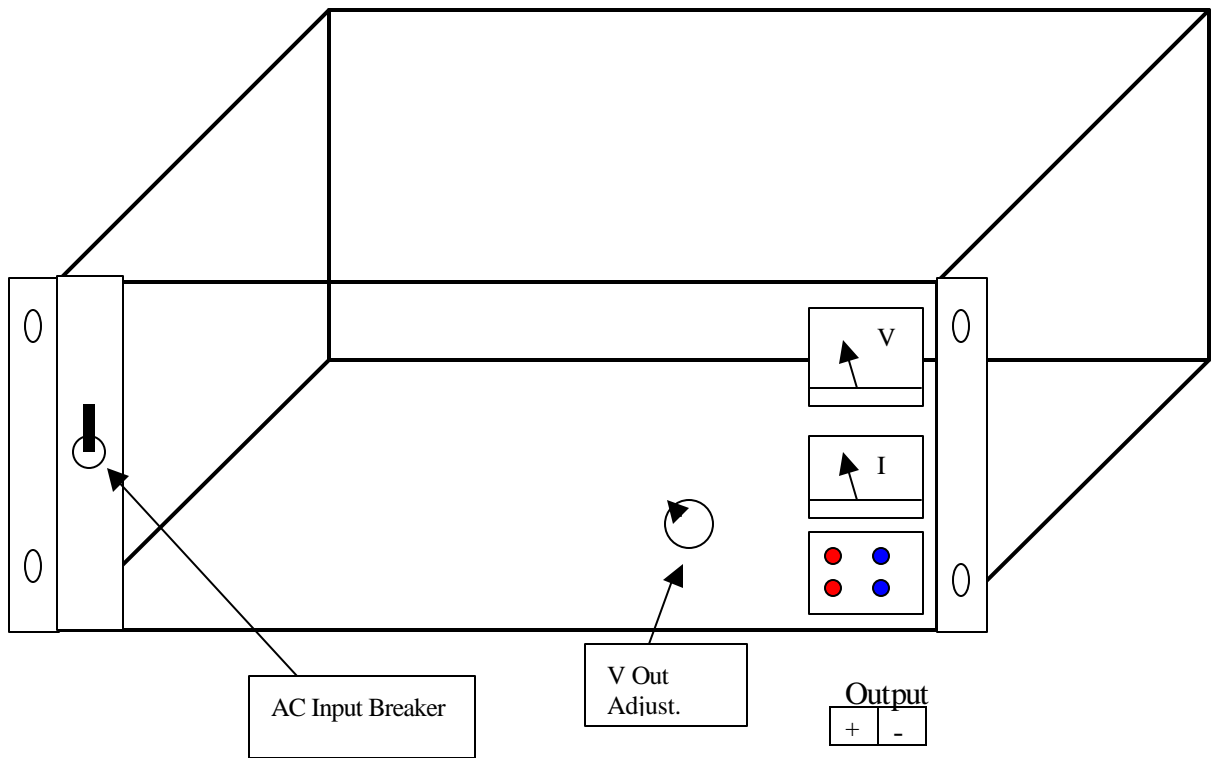
Preventative maintenance required on Absopulse products is minimal. Under normal circumstances, the only maintenance required is a regular visual inspection of the power supply to check for any signs of dust, dirt, corrosion or other damage.

Power supplies that are used in harsh environments, such as mining; should be inspected more frequently as well as cleaned if dusty or dirty. Accumulated dust may block airflow and impede cooling which can cause overheating of the unit. These units should also be checked thoroughly for any loose hardware or damaged wiring caused by excessive shock and vibration.

Power supplies that are not in use (ie. stock) should be powered up and run partially loaded for a few hours every 12 months. This will help keep the electrolytic capacitors from depolarizing. (Since the capacitors could depolarize if not in use, it is actually more harmful to the power supply to not use it at all). These units should be stored in a manner so that exposed contacts are subject to minimal oxidation.

## Connections

Front View: Output and Output Adjustment



Rear View: AC Input, #6 Screw Terminal

