

## 400W, Rugged AC/DC Conduction Cooled Power Supply for Heavy Duty Applications POL 400 Series



- Rugged, field-proven design
- Full encapsulation
- Full electronic protection
- High reliability
- Conduction cooling

This fully encapsulated, industrial quality AC/DC power supply uses field-proven technology to generate 400W output power. It is a mature design with an excellent track record in numerous heavy-duty applications. The unit is entirely potted with a thermally conductive MIL-grade silicon rubber compound to ensure resistance to shock, vibration and humidity. Cooling is via base plate by conduction. The unit is designed for continuous operation at 70°C with installation on an appropriate size heat-sinking surface. It has full electronic protection. Low component count, large design headroom, and the use of components with established reliability result in high MTBF. The unit is suitable for transportation, mining, oil-rigs, military and other heavy duty applications. It is manufactured at our plant under strict quality control.

### SPECIFICATIONS

<p><b>Input Voltage</b> 115 or 230Vac, 47-440Hz Input setting can be changed by removing the top cover and resolder a jumper. The unit also accepts 250Vdc to 370Vdc range if selector is in 230Vac position. Consult factory for other voltages</p> <p><b>Input Protection</b> Inrush current limiting Varistor Internal safety fuse Lower voltage than the specified minimum input will not damage the unit</p> <p><b>Input Isolation</b> 2250VDC input to chassis 4300VDC input to output, 8mm spacing 500VDC output to chassis</p> <p><b>Standards</b> Designed to meet EN60950 and related corresponding UL and CSA standards</p> <p><b>EMI</b> EN 55022 Class B</p> <p><b>Switching Frequency</b> 55KHz +/- 3KHz</p> <p><b>Hold Up Time</b> Min 5ms at nominal input for 5% drop of output voltage</p>	<p><b>Output Voltages</b> 12Vdc/33A, 24Vdc/17A, 36Vdc/12A or 48Vdc/9A Consult factory for other voltages</p> <p><b>Redundancy diode</b> None</p> <p><b>Line/Load Regulation</b> */-1% combined from zero load to full load</p> <p><b>Dynamic Response</b> Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time</p> <p><b>Output Ripple/Noise</b> Better than 1% peak to peak or 0.2%Vrms of the output voltage (20MHz BW)</p> <p><b>Output Overload Protection</b> Rectangular current limiting with short circuit protection (no hiccup) Thermal shutdown with automatic reset in case of insufficient cooling Current limit: typically set for 110% of nominal output current</p> <p><b>Output Overvoltage Protection</b> Double regulator loop completely stable and independent of main regulator loop. OVP setting: typically set at 120% of nominal output voltage</p>	<p><b>Efficiency</b> Min 80% at full load</p> <p><b>Operating Temperature</b> -40 to +70°C cold-plate temperature for full specification</p> <p><b>Temperature Drift</b> 0.03% per °C over operating temperature range</p> <p><b>Cooling</b> Conduction via base plate to customer heatsink or chassis</p> <p><b>Environmental Protection</b> Full encapsulation</p> <p><b>Shock/Vibration</b> IEC 61373 Cat 1 A&amp;B</p> <p><b>MTBF</b> 180,000 hours at 45 °C Demonstrated MTBF is significantly higher</p>	<p><b>Indicators</b> None</p> <p><b>Control Input</b> None</p> <p><b>Alarm Output</b> None on standard version</p> <p><b>Package/Dimensions</b> P 400: 131 x 76 x 232 mm 5.2" x 3" x 9.2" including terminal block and flanges. Mounting holes are clear</p> <p><b>Weight</b> 2.2 kg (4.85 lbs)</p> <p><b>Connections:</b> 9-pole barrier type terminal block, 3/8" spacing.</p> <p><b>RoHS Compliance</b> Fully compliant</p> <p><b>Warranty</b> Two years subject to application within good engineering practice</p>
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**Enhancements to these general specifications can be accommodated upon request. Specifications subject to change.**

*Designer and manufacturer of quality converters, inverters, UPS systems, complete rack mount systems and DC-input fluorescent lamp inverters since 1982. Custom or standard. Absopulse is a BABT-approved Facility*



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