

1kW, Rugged, Encapsulated DC-DC Converter for Heavy-duty Applications PDC 65-P600 Series

- Rugged, field-proven design
- Full encapsulation
- Conduction cooling
- Full electronic protection
- Wide temperature range
- Wide input range



This fully encapsulated, rugged, industrial quality, single output DC/DC converter uses field-proven technology to generate 1000W output power. It is a mature product with a track-record in numerous applications. The converter is entirely potted with a thermally conductive MIL-grade silicon rubber compound to ensure immunity to shock, vibration and humidity. Cooling is via baseplate by conduction. The unit was designed for continuous operation at 60°C with installation on appropriate size of heat-sinking surface. Full electronic protection, low component count, large design headroom, and the use of components with established reliability result in a high MTBF. The unit is suitable for transportation, mining, oilrigs, military and other harsh environments. Versions to meet EN 50155 railway specifications are also available. Optional alarms and a redundancy diode are available on custom versions. The converter is manufactured at our plant under strict quality control.

SPECIFICATIONS

<p>Input Voltage 48Vdc (42V – 60V) 125Vdc (90V – 145V) Consult factory for other voltages and ranges, including for railway</p>	<p>Output Voltages 24Vdc, 48Vdc or 110Vdc Output is floating; either terminal can be grounded. Consult factory for other voltages</p>	<p>Efficiency Output voltage dependent Typically 80% at full load</p>	<p>Indicators None</p>
<p>Input Protection Inrush current limiting Varistor Reverse polarity protection Internal safety fuse Lower voltage than specified minimum input will not damage unit</p>	<p>Redundancy Diode Not installed. Available on custom versions</p>	<p>Operating Temperature Range -40 to +60°C cold-plate temperature for full specification Extended temperature range available</p>	<p>Control Input None</p>
<p>Isolation 1500Vdc input to chassis 2250Vdc input to output, 500VDC output to chassis</p>	<p>Line/Load Regulation ±1% combined from zero load to full load</p>	<p>Temperature Drift 0.03% per °C over operating temperature range</p>	<p>Alarm Output None Available on custom versions</p>
<p>Standards Designed to meet EN 60950-1 and related standards.</p>	<p>Dynamic Response Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time</p>	<p>Cooling Conduction cooling via base plate to customer chassis or heat-sink</p>	<p>Package/Dimensions (W x H x L) P600: 155 x 72 x 269mm (6.1" x 2.8" x 10.6") including terminal block and flanges Mounting holes are clear</p>
<p>EMI EN 55032 Class A with margins</p>	<p>Output Ripple / Noise Better than 0.2%Vrms or 1%Vpp of the output voltage (20MHz BW)</p>	<p>Environmental Protection Full encapsulation with thermally conductive silicon potting compound with UL94V-0 flammability rating. Meets environmental criteria as requested in MIL-810 C, D</p>	<p>Weight 3.4 kg (7.5 lb)</p>
<p>Switching Frequency 55kHz ±3kHz</p>	<p>Output Overload Protection Rectangular current limiting with short circuit protection (no hiccup) Thermal shutdown with automatic reset in case of insufficient cooling</p>	<p>Shock/Vibration IEC 61373 Cat 1 A&B</p>	<p>Connections 12-pole barrier type terminal block with 3/8" spacing</p>
	<p>Output Overvoltage Protection Double regulator loop</p>	<p>Humidity 5 - 95% non-condensing</p>	<p>RoHS Compliance Compliant</p>
		<p>MTBF 130,000 hours at 45 °C Demonstrated MTBF is significantly higher.</p>	<p>Warranty Two years subject to application within good engineering practice.</p>

The specifications on this data sheet are generic and are subject to change. Enhancements to these specifications can be provided upon request.

OEM of professional quality AC/DC power supplies and battery chargers, DC/DC converters, DC-AC sine-wave inverters, phase and frequency converters, DC-output UPS systems and complete power systems in 19" and 23" racks since 1982. Custom or standard. ABSOPULSE is a BABT-approved Facility



ABSOPULSE ELECTRONICS LTD

110 Walgreen Road, Ottawa, Ontario. K0A 1L0. CANADA

Tel: +1-613-836-3511 | Fax: +1-613-836-7488

E-mail: absopulse@absopulse.com | <http://www.absopulse.com>