

2000W Rugged Liquid Cooled, Industrial Quality DC-DC Converter LQC 2K-3U2LC



- Liquid cooled
- Rugged industrial quality
- High input voltage
- Wide DC-input voltage range
- Full electronic protection

This rugged, liquid cooled, industrial quality DC-DC converter utilizes field-proven technology to generate the required output power. It is based on a mature design topology with a track record in numerous applications. The liquid coolant is provided by the customer's cooling system. All heat generating components inside the unit are installed on aluminum heatsink blocks which are thermally connected to the cooling plate. This also provides exceptional mechanical ruggedness. The unit is built with internal modules: two KHI1300 and one FIS2000. A built-in output separation diode allows parallel connection of several units for higher output power. The internal modules are fully or partially potted for improved thermal transfer and for immunity to shock and vibration. Conformal coating provides protection against humidity. Full electronic protection, low component count, large design headroom and the exclusive use of components with established reliability contribute to a high MTBF. The unit is manufactured at our plant under strict quality control.

SPECIFICATIONS

<p>Input Voltage (nominal/range) 600Vdc nominal 400-800Vdc range Other inputs upon request</p> <p>Input Protection Inrush current limiting. Reverse polarity protection Varistor Internal safety fuse Lower voltage than specified minimum input will not damage unit</p> <p>Input Isolation 3000Vdc input to chassis 4300Vdc input to output 5600Vdc type test 500Vdc output to chassis</p> <p>Standards Designed to meet EN60950-1, IEC61010, and corresponding standards</p> <p>EMI EN55032 Class A with margins</p> <p>Switching Frequency 55kHz \pm5kHz</p>	<p>Output Voltage 24V/80A Output is floating; either terminal can be grounded Other outputs upon request</p> <p>Output Separation Diode Installed internally</p> <p>Line/Load Regulation \pm1.5% combined from zero load to full load including separation diodes</p> <p>Dynamic Response Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time</p> <p>Output Ripple/Noise Better than 60mVrms and 300mVpp (@ 20MHz BW)</p> <p>Overload Protection Rectangular current limiting with short-circuit protection (no hiccup) Thermal shutdown with automatic reset in case of insufficient cooling (self-resetting) Current limit: 85VA \pm4A</p> <p>Output Overvoltage Protection Second regulator loop completely stable and independent of main regulator loop OVP limit: 28V \pm 2V</p>	<p>Efficiency 85% at full load</p> <p>Operating Temperature -25 °C to +50 °C coolant temperature for full specification</p> <p>Temperature Drift 0.03% per °C over operating temperature range</p> <p>Cooling By liquid coolant provided by customer. Max coolant temperature 50°C, at 4 liter/min flow rate. Inside diameter of the cooling pipe 8mm at pipe length of 1.5m</p> <p>Environmental Protection Conformal coating Partial potting</p> <p>Shock/Vibration IEC61371 Cat 1 A&B</p> <p>Humidity 5 - 95% non-condensing</p> <p>MTBF 110,000 hours @ 45 °C Demonstrated MTBF is significantly higher.</p>	<p>Indicators None</p> <p>Control Input None Available as option</p> <p>Alarm Outputs Output Fail alarm Form C contacts available on request</p> <p>Package/Dimensions (H x W x D) 3U2LC: 132 x 147 x 379 mm (5.2" x 5.8" x 15") excluding mounting flanges, water inlets, connectors and terminals Mounting holes are clear.</p> <p>Weight Approx. 9.6 kg (21 lb)</p> <p>Connections Input: 2-pole Phoenix FRONT 2.5-V/SA10 Output: M6 screws with stud boots Alarm/Enable: 5-pole Phoenix FRONT 2.5-V/SA10 (option)</p> <p>RoHS Compliance Compliant</p> <p>Warranty Two years subject to application within good engineering practice. Contamination related failures and shipping costs excluded</p>
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Enhancements to these general specifications and customizing can be accommodated upon request. Specifications are subject to change.

Designer and manufacturer of quality ac-dc power supplies and battery chargers, converters, inverters, dc-output UPS systems, and complete rack mount systems in 19" or 23" racks. Custom or standard. ABSOPULSE is a BABT-approved Facility.



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