

## 1500VA Rugged, Industrial Quality AC-AC Frequency Converter with Sine Wave Output FC 1K5-3U3 Series

- Rugged construction
- Sinusoidal output voltage
- Filtered input
- Cooling by high quality internal fans
- Full electronic protection
- Field-proven design topology



This rugged, industrial quality AC-AC frequency converter uses field proven, microprocessor controlled high frequency PWM technology to generate the required output power with pure sine wave output voltage. It is a mature design with a track record in numerous applications. The inverter is built with internal power modules. Two CAP 1000 DC-DC modules convert the input voltage to an internal DC voltage, which feeds the MSI 1500 output module. High frequency conversion enables a compact construction, low weight and high efficiency. The input and output are filtered for low noise. High quality built-in fans provide sufficient airflow for operation without derating within the specified temperature range. The fans draw air into the unit, and exhaust at the terminal side of the unit. All heat generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate. This also ensures exceptional mechanical ruggedness. Conformal coating provides protection against humidity and airborne contaminants. 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><b>Input Voltage</b> 115 or 230Vac, <math>\pm 15\%</math> 47 ... 410Hz are standard Factory set for required input 95 – 264Vac universal input with PFC is also available</p> <p><b>Input Protection</b> Inrush current limiting Varistors Internal safety fuse Lower voltage than the specified minimum input will not damage the unit</p> <p><b>Isolation</b> 2250Vdc input to chassis/output Output neutral is connected to the chassis internally Floating output as option</p> <p><b>Standards</b> Designed to meet C22.2 No. 107.1 - 01, UL 458 and EN60950</p> <p><b>EMI</b> EN 55032 Class A with margins</p>	<p><b>Output Voltage</b> 115Vac/13Arms, 60Hz or 400Hz continuous; or 230Vac/6.6Arms, 50Hz continuous. Output neutral is connected to the chassis internally. Isolated floating output optional Consult factory for other outputs</p> <p><b>Output Wave Form</b> Sinusoidal</p> <p><b>Total Harmonic Distortion</b> Less than 5% at full load</p> <p><b>Line/Load Regulation</b> <math>\pm 6\%</math> from no load to full load. <math>\pm 2\%</math> load regulation option is available</p> <p><b>Load Crest Factor</b> 2 at 90% load</p> <p><b>Output Noise</b> High frequency ripple is less than 500mVrms (20MHz BW)</p> <p><b>Output Overload Protection</b> Current limiting with short circuit protection Thermal shutdown with automatic recovery in case of insufficient cooling</p>	<p><b>Output Overvoltage Protection</b> 140Vac (for 115Vac output) or 280Vac (for 230Vac output) by internal supply voltage limiting</p> <p><b>Efficiency</b> Depends on input and output voltage combination. Typically 80% at full load</p> <p><b>Operating Temperature Range</b> 0° C to +50° C for full specification Extended temperature ranges available</p> <p><b>Temperature Drift</b> 0.05% per °C over operating temperature range</p> <p><b>Cooling</b> Forced air by high quality built-in fans which draw air into the unit</p> <p><b>Environmental Protection</b> Basic ruggedizing Conformal coating</p> <p><b>Shock/Vibration</b> IEC 61373 Cat 1 A&amp;B</p> <p><b>Humidity</b> 5 - 95% non-condensing</p> <p><b>MTBF</b> Min. 95,000 hours at 45°C Fans excluded Demonstrated MTBF is significantly higher</p>	<p><b>Indicators</b> None</p> <p><b>Control Input</b> None Remote shutdown as option</p> <p><b>Alarm Output</b> None Option: output fail alarm (Form C)</p> <p><b>Package/Dimensions (H x W x D)</b> 3U3: 132 x 187 x 407 mm 5.2 x 7.4 x 16" 19" rack-mount versions also available</p> <p><b>Weight</b> 6.5 kg, 14.3 lb</p> <p><b>Connections</b> <u>Input</u>: Terminal-block <u>Output</u>: Terminal block</p> <p><b>RoHS Compliance</b> Compliant</p> <p><b>Warranty</b> Two years subject to application within good engineering practice Contamination related failures and shipping costs excluded</p>
--	---	---	---

**Please note that ABSOPULSE power supplies are designed and built to customer specifications. The specifications on this data sheet are generic and will vary depending on input/output configuration and other customer requirements. Generic specifications are subject to change.**

*Designer and manufacturer of quality ac-dc power supplies and battery chargers, converters, inverters, dc-output UPS systems, complete rack mount systems and DC-input fluorescent lamp inverters 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](mailto:absopulse@absopulse.com) | <http://www.absopulse.com>