

# 1000VA Low-profile, Industrial Quality DC-AC Sine Wave Inverter with Convection Cooling by Heatsink Assembly Fins CSI 1K F31-HSA Series



- Sinusoidal wave shape
- Field-proven rugged design
- Convection cooling via heatsink assembly
- Low profile, compact size
- Full electronic protection

This rugged, industrial quality DC-AC inverter uses field proven, microprocessor-controlled high frequency PWM technology to generate the required output power with pure sine wave output voltage. The inverter is based on a mature design topology with a track record in numerous applications. The DC-DC input stage boosts the input voltage to a higher DC voltage, which feeds the DC-AC inverter to generate the required AC output. The use of high frequency conversion enables compact construction, low weight and high efficiency. The input and output are filtered for low noise. Convection cooling is via a heatsink assembly (HSA) block with fins attached to the under-surface of the inverter chassis. Additional cooling is provided by natural convection through the cooling slots. The heatsink assembly also allows for mounting on uneven and thermally non-conductive surfaces. 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. All of our products are manufactured at our plant under strict quality control.

## SPECIFICATIONS

<p><b>Input Voltage</b> 36V, 48V, 125V, 250Vdc 24Vdc with derating to 750VA Other inputs available on request</p> <p><b>Input Protection</b> Inrush current limiting Varistors Reverse polarity protection Internal safety fuse Lower voltage than the specified minimum input will not damage the unit</p> <p><b>Isolation</b> 1000Vdc 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 EN 62368-1</p> <p><b>EMI</b> EN 55032 Class A with wide margins</p>	<p><b>Output Voltage</b> 115Vac/8.7Arms continuous at 60Hz or 400Hz; or 230Vac/4.3Arms continuous at 50Hz Output neutral is connected to the chassis internally. Isolated floating output available on request</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> ±6% from no load to full load ±2% load regulation option is available</p> <p><b>Load Crest Factor</b> 2.5 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> Input voltage dependent Typically 80% at full load</p> <p><b>Operating Temperature Range</b> -20° C to +50° C ambient temperature for full specification without derating. Consult factory for extended temperature range</p> <p><b>Temperature Drift</b> 0.05% per °C over operating temperature range</p> <p><b>Cooling</b> Natural air convection</p> <p><b>Environmental Protection</b> 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. 140,000 hours at 45°C Demonstrated MTBF is significantly higher</p>	<p><b>Indicators</b> None</p> <p><b>Control Input</b> None Optional remote shutdown</p> <p><b>Alarm Output</b> None installed Optional output Fail Alarm (Form C)</p> <p><b>Package/Dimensions (W x H x L)</b> F31 enclosure installed on HSA F31 heatsink assembly: 572 x 150 x 356 mm 22.5" x 5.9" x 14" Mounting holes are clear.</p> <p><b>Weight</b> 9 kg (19.8 lb)</p> <p><b>Connections</b> Input: Threaded studs M6 or compression-type terminals Output: 2 pole terminal block Phoenix FRONT type or Compression-type terminals</p> <p><b>RoHS Compliance</b> Compliant</p> <p><b>Warranty</b> Two years subject to application within good engineering practice</p>
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ABSOPULSE power supplies are designed and built to customer requirements. The specifications on this data sheet are generic guidelines only and are subject to change

OEM of industrial and railway quality DC-DC converters, AC-DC power supplies and battery chargers, 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



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