

1kVA, IP66-Rated, Rugged, Industrial Quality DC-AC Sine Wave Inverter CSI 1K-125/230-2XD3 (IP66)



- Packaged in two waterproof IP66 enclosures
- Internal modules ruggedized and conformal coated
- Rugged, field-proven design
- Conduction/convection cooling
- Filtered input/output
- Full electronic protection

This industrial quality DC-AC inverter utilizes field proven, microprocessor controlled high frequency PWM technology to generate the required output, with pure sine wave output voltage. It is packaged in two rugged, waterproof, die cast aluminum IP66 enclosures, mounted on a base plate. The input and output are via sealed circular connectors, cable glands or custom connections. Cooling is by internal conduction to the walls of the IP66 enclosure and by baseplate to an external chassis or cabinet wall, with additional convection via the outside surface. This enables operation within a wide temperature range for full specification. The internal boards are fully ruggedized and conformal coated to provide additional immunity to shock, vibration and humidity. The DC/DC input stage boosts the input voltage to a higher DC bus voltage, which feeds the DC/AC inverter to generate the required AC output. The high frequency conversion enables a compact construction, low weight and high efficiency. The input and output are filtered for low noise. Full electronic protection, low component count, large design headroom, and the use of components with established reliability contribute to a high MTBF. The units are manufactured at our plant under strict quality control. Customized versions are available. This design is suitable for transportation, mining, marine, oilrig, military and other severe environments.

SPECIFICATIONS

<p>Input Voltage 125Vdc nominal 105-145Vdc operating range Input Current: 12A max Consult factory for other input voltages and ranges</p>	<p>Output Voltage 230Vac/4.4Arms /50Hz 1000VA continuous Isolated floating output Consult factory for other output requirements</p>	<p>Efficiency 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 the specified minimum input will not damage the unit</p>	<p>Output Wave Form Sinusoidal</p>	<p>Operating Temperature -25 to +50°C temperature for full specification Extended temperature range available on request.</p>	<p>Control Input None</p>
<p>Isolation 1000Vdc input to chassis 2250Vdc input to output 1500Vdc output to chassis Isolated floating output</p>	<p>Total Harmonic Distortion Less than 5% at full load</p>	<p>Temperature Drift 0.05% per °C over operating temperature range</p>	<p>Alarm Output Not installed Optional output Fail Alarm</p>
<p>Standards Designed to meet UL 458, EN60950-1 and corresponding international standards</p>	<p>Line/Load Regulation ± 5% from 10% load to full load</p>	<p>Cooling Conduction to customer heat-sink or chassis and natural convection</p>	<p>Dimensions (L x W x H) Two D3 chassis side by side on baseplate: 406 x 320 x 94mm (16 x 13.44 x 3.7") Baseplate: 16" x 14" Mounting holes are clear</p>
<p>EMI EN 55022 Class A with margins</p>	<p>Load Crest Factor 2 at 90% load</p>	<p>Environmental Protection IP66 enclosure Internal module: Ruggedized and conformal coated Potting of the internal module is also available</p>	<p>Weight 10kg (22 lbs)</p>
<p>Output Noise High frequency ripple is less than 800mVrms (20MHz BW)</p>	<p>Output Overload Protection Current limiting with short circuit protection Thermal shutdown with automatic recovery in case of insufficient cooling</p>	<p>Shock/Vibration IEC 61373 Cat 1 A&B</p>	<p>Connections A possible configuration: Input: 4 pin, male pins, MS3112E14AAP or MS3470W14-4P Output: 3 pin, female sockets, MS3112E12-3S</p>
<p>Output Overvoltage Protection 140Vac (for 115Vac output) or 280Vac (for 230Vac output) by internal supply voltage limiting</p>	<p>Humidity 5-100% condensing</p>	<p>MTBF 130,000 hours at 45 °C Demonstrated MTBF is significantly higher</p>	<p>RoHS Compliance Fully compliant</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.



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