

## 100VA, IP66-Rated, Rugged, Industrial Quality DC-AC Sine Wave Inverter CSI 100-D1 Series (IP66)



- Sinusoidal output voltage
- Packaged in a waterproof IP66-rated enclosure
- Internal board ruggedized and conformal coated
- Rugged, field-proven design
- Filtered input/output
- Full electronic protection

This rugged DC-AC inverter utilizes field proven, microprocessor controlled high frequency PWM technology to generate the required output power with pure sine wave output. The units are packaged in rugged, waterproof, die cast aluminum IP66 enclosures. The input and output are via sealed cable glands or circular connectors. The internal boards are ruggedized and conformal coated for increased immunity to high levels of shock and vibration. Cooling is by internal conduction to the walls of the IP66 enclosure with additional convection via the outside surface. If installed on a heat-sinking surface, cooling is further enhanced and the converters achieve higher output power. 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 input and output are filtered for low noise. Full electronic protection, generous design headroom and the exclusive use of components with established reliability also contribute to high MTBF. The unit is 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><b>Input Voltage</b> 24V, 36V, 48V or 125Vdc ±15% are standard Other inputs are available on request.</p> <p><b>Input Protection</b> Inrush current limiting Varistor Reverse polarity protection Internal safety fuse Lower voltage than the specified minimum input will not damage the unit</p> <p><b>Isolation</b> According to input voltage Min. 700Vdc input to chassis Min. 1000Vdc input to output 700Vdc output to chassis Floating output</p> <p><b>Standards</b> Designed to meet C22.2 No. 107.1 - 01, UL 458 and EN 60950-1</p> <p><b>EMI</b> EN 55032 Class A with margins</p>	<p><b>Output Voltage</b> 115Vac/0.8Arms continuous at 60Hz or 400Hz; or 230Vac/0.4Arms continuous at 50Hz Isolated floating output Consult factory for other output requirements</p> <p><b>Output Wave Form</b> Sinusoidal</p> <p><b>Total Harmonic Distortion</b> Less than 6% at full load</p> <p><b>Line/Load Regulation</b> ±3% from no load to full load</p> <p><b>Load Crest Factor</b> 2 at 90% load</p> <p><b>Output Noise</b> High frequency ripple is better than 500mVrms (20MHz BW)</p> <p><b>Output Overload Protection</b> Current limiting with short circuit protection</p> <p><b>Output Overvoltage Protection</b> 30V 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> -25°C to 55°C for full specification Extended temperature ranges available on request</p> <p><b>Temperature Drift</b> 0.03% per °C over operating temperature range</p> <p><b>Cooling</b> Conduction to customer heat-sink or chassis. Additional natural convection via the surface of the IP66 enclosure</p> <p><b>Environmental Protection</b> IP66 enclosure Internal module: ruggedized and conformal coated Potting of the internal module is also available</p> <p><b>Shock/Vibration</b> IEC 61373 Cat 1 A&amp;B</p> <p><b>Humidity</b> 5-100% condensing</p> <p><b>MTBF</b> 150,000 hours at 45°C Demonstrated MTBF is significantly higher</p>	<p><b>Indicators</b> None</p> <p><b>Control Input</b> None</p> <p><b>Alarm Output</b> None Optional output fail alarm (Form C)</p> <p><b>Package/Dimensions (L x W x H)</b> D1: 220 x 120 x 80 mm 8.7" x 4.7" x 3.1" D1 with baseplate: 267 x 117 x 4 mm 10.5" x 4.6" x 0.6"</p> <p><b>Weight</b> Approx. 2.4 kg; 5.3 lb</p> <p><b>Connections</b> Internal barrier-type terminal block accessible via sealed cable glands. Optional connectors instead of cable glands</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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**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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