

300VA, IP66-Rated, Rugged, Railway Quality DC-AC Sine Wave Inverter RSI 300-D3 Series (IP66)



- Packaged in waterproof IP66 enclosure
- EN50155 input ranges
- For train and mobile applications
- Internal module ruggedized and conformal coated
- Rugged, field-proven design
- Full electronic protection

This railway quality DC-AC inverter utilizes field proven, microprocessor controlled high frequency PWM technology to generate the required output power, with pure sine wave output voltage. The units are packaged in waterproof, robust die cast aluminum IP66 enclosures. The input and output are via sealed cable glands, circular connectors or custom connections. 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 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 unit meets the requirements of EN50155 for electronic equipment used on railway rolling stock. It is manufactured at our plant under strict quality control. Customized versions are available. An industrial version of this design which is suitable for other transportation, mining, marine, oilrigs, military and other harsh environments is also available.

SPECIFICATIONS

<p>Input Voltage 24Vdc (17-34V) 48Vdc (33 – 67V) 72Vdc (50 – 101V) 96Vdc (67 – 135V) 110Vdc (77 – 154V) Consult factory for other input voltages and ranges</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>Isolation 1500Vdc input to chassis 3000Vdc input to output 1500 output to chassis</p> <p>Standards Designed to meet C22.2 No. 107.1 - 01, UL 458, EN60950-1 and EN50155</p> <p>Immunity Meets criteria of EN50155 and EN50121-3-2 including EN 61000-4-2 (ESD) EN61000-4-3 (RF Immunity) EN61000-4-4 (Fast transients) EN50155 (Surge) EN61000-4-6 (Conducted Imm.) EN50155 (Voltage Variations)</p> <p>EMI EN50121-3-2</p>	<p>Output Voltage 115Vac @60Hz or 400Hz/2.6Arms continuous; or 230Vac @ 50Hz/1.3Arms continuous Isolated floating output Consult factory for other output requirements</p> <p>Output Wave Form Sinusoidal</p> <p>Total Harmonic Distortion Less than 5% at full load</p> <p>Line/Load Regulation ± 3% from no load to full load.</p> <p>Load Crest Factor 2 at 90% load</p> <p>Output Noise High frequency ripple is less than 500mVrms (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>Output Overvoltage Protection 140Vac (for 115Vac output) or 280Vac (for 230Vac output) by internal supply voltage limiting</p>	<p>Efficiency Typically 80% at full load Dependent on input/output combination</p> <p>Operating Temperature -25 to +55°C temperature for full specification Contact factory for extended temperature range</p> <p>Temperature Drift 0.05% per °C over operating temperature range</p> <p>Cooling Conduction to customer heat-sink or chassis and by additional natural convection via the surface of the IP66 enclosure</p> <p>Environmental Protection IP66 enclosure Internal module: Ruggedized and conformal coated Potting of the internal module is also available</p> <p>Shock/Vibration IEC 61373 Cat 1 A&B</p> <p>Humidity 5-100% condensing</p> <p>MTBF 140,000 hours at 45 °C Demonstrated MTBF is significantly higher</p>	<p>Indicators None</p> <p>Control Input None</p> <p>Alarm Output Not installed Optional output Fail Alarm</p> <p>Package/Dimensions (L x W x H) D3 with baseplate: 406 x 160 x 90 mm (16.1" x 6.3" x 3.5") Without baseplate: 360 x 160 x 90 mm 14.1" x 6.3" x 3.5"</p> <p>Weight 4.6 kg (10 lb)</p> <p>Connections Internal barrier-type terminal block accessible via sealed cable glands. Optional connectors instead of cable glands</p> <p>RoHS Compliance Compliant</p> <p>Warranty 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.

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