

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

- Sinusoidal output voltage
- Packaged in a waterproof IP66-rated enclosure
- Cooling by conduction and natural convection
- Internal module ruggedized
- Rugged, field-proven design
- 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 power with pure sine wave output voltage. It is packaged in a rugged, waterproof, die cast aluminum IP66 enclosure, 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 via baseplate to an external chassis, cabinet wall, or heatsink. Additional cooling is achieved by convection via the outside surface of the IP66 enclosure. This enables operation within the specified temperature range for full specification. The internal boards are fully ruggedized to provide additional immunity to shock and vibration. 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 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

Input Voltage 24Vdc, 48Vdc, 110Vdc or 125Vdc Consult factory for other input voltages and ranges	Output Voltage 115Vac /2.6Arms/60Hz or 400Hz; or 230Vac/1.3Arms/50Hz 300VA continuous output Isolated floating output Consult factory for other output requirements	Efficiency Typically 80% at full load Dependent on input/output combination	Indicators None
Input Protection Inrush current limiting Varistor Reverse polarity protection Internal safety fuse Lower voltage than the specified minimum input will not damage the unit	Output Wave Form Sinusoidal	Operating Temperature -25 to +55°C temperature for full specification Contact factory for extended temperature range	Control Input None
Isolation 1700Vdc input to chassis/output or corresponding to the voltage requirements Isolated floating output	Total Harmonic Distortion Less than 5% at full load	Temperature Drift 0.05% per °C over operating temperature range	Alarm Output Not installed Optional output Fail Alarm
Standards Designed to meet C22.2 No. 107.1 - 01, UL 458 and EN62368-1	Line/Load Regulation ±3% from no load to full load.	Cooling Conduction to customer heat-sink or chassis and natural convection	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"
EMI EN55032 Class A with margins	Load Crest Factor 2 at 90% load	Environmental Protection IP66 enclosure Internal module is ruggedized	Weight 4.6 kg (10 lb.)
	Output Noise High frequency ripple is less than 500mVrms (20MHz BW)	Shock/Vibration IEC61373 Cat 1 A&B	Connections Internal barrier-type terminal block accessible via sealed cable glands. Optional connectors instead of cable glands
	Output Overload Protection Overload and short circuit protection Thermal shutdown with automatic recovery in case of insufficient cooling	Humidity 5-100% condensing	RoHS Compliance Compliant
	Output Overvoltage Protection 140Vac (for 115Vac output) or 280Vac (for 230Vac output) by internal supply voltage limiting	MTBF 140,000 hours at 45 °C Demonstrated MTBF is significantly higher	Warranty Two years subject to application within good engineering practice

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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