

IVSrail500 Series DC/AC Pure-Sinewave Inverter



Benefits

- Ultra-Quiet
- Power sensitive electronics without interference
- Rugged & Reliable
- Ensure years of safe and trouble free operation

Applications

- Railway / Transportation
- Mining
- Oil Rigs
- Military Applications
- Marine / Automotive / RV
- Electric Utilities and Substations
- Telecom Power Plants
- Manufacturing Locations
- Steel Mills
- Industrial Controls
- OEM Applications

DC/AC Inverters

IVSrail500 Series Pure-Sinewave

Description

The IVSrail500 Series rugged, sine wave inverter utilizes microprocessor controlled high frequency PWM technology to deliver 500VA sine wave power.

The output inverter stage is an open loop design to eliminate feedback components and ensure very high reliability. The $\pm 6\%$ regulation does not exceed the tolerances of a normal utility line.

Closed loop versions with tight regulation are also available.

The series is rated for operation over a -25 to $+70^{\circ}\text{C}$ temperature range without derating. It is cooled by conduction via baseplate to a heatsinking surface and by natural convection.

These models are fully ruggedized and conformal coated for immunity to shock, vibration, humidity, moisture, dust and insects.

Options include remote shutdown and output Fail Alarm (Form C).

This chassis-mount design is optimized for low component count and high efficiency. The use of components with established reliability results in a high MTBF.

The unit is manufactured at our plant under strict quality control.

Customized versions are also available.

Features

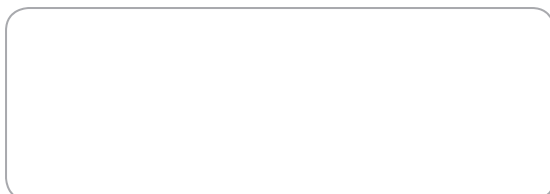
- Filtered input
- Very low input ripple current
- Conduction/convection cooling - no fan
- Compact size, light weight
- Sinusoidal wave shape
- Multiple input and output voltages available
- 500VA of output power
- Full electronic protection
- Field-proven rugged design

Specifications (Specifications Subject to Change Without Notice)

Specifications

Input Voltage	110VDC (77-137VDC) Other inputs available, please consult factory
Input Protection	Inrush current limiting Varistor Reverse polarity protection Internal safety fuse Lower voltage than the specified minimum input will not damage the unit
Isolation	1500VDC Input to chassis 3000VDC Input to output Output neutral is connected to the chassis internally on standard version
Output Voltage	115VAC / 60Hz or 400Hz / 4.4A or 230VAC / 50Hz / 2.2A Output neutral is connected to the chassis internally. Isolated floating output optional (Consult factory for other output requirements)
Wave Form	Sinusoidal
Total Harmonic Distortion	Less than 5% at full load
Efficiency	Typically 80% at full load Dependent on input/output combination
Line Regulation	Maximum $\pm 0.5\%$
Load Regulation	Maximum $\pm 6\%$ from no load to full load ($\pm 2\%$ option available)
Output Overload Protection	Current limiting with short circuit protection, thermal shutdown with automatic recovery in case of insufficient cooling
Output Overvoltage Protection	140/280VAC by internal supply voltage limiting
EMI	EN55022 Class B and EN50121-3-2 conducted and radiated
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)
Load Crest Factor	Maximum 3.0 at 90% load
Output Noise	High frequency ripple is better than 500mVrms (20MHz BW)
Operating Temperature Range	-25 to +70°C cold-plate temperature
Humidity	5 - 95% non-condensing
Temperature Drift	0.05% per °C over operating temperature range
Cooling	Conduction to customer heatsink or chassis and natural convection
Environmental Protection	Ruggedizing, Conformal coating
Shock/Vibration	Designed to meet IEC 61373 Cat 1 A&B and Cat 2
Dimensions	6.6 x 25.4 x 35.1 cm (H x W x L) including mounting flanges
Connections	Compression-type terminals for input and output
Weight	4.2 Kg
Safety	Designed to meet C22.2 No. 107.1 - 01, UL 458, EN60950 and EN50155
MTBF	150,000 hours at 45°C, Demonstrated MTBF is significantly higher
Indicators	None
Control Input	None, Optional remote shutdown
Alarm output	None, Optional output fail alarm (Form C)
RoHS Compliance	Fully compliant
Warranty	2 years

Available from:



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The power conversion company

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