RIPEENERGY
The Power Conversion Company

IVSrail500 RAILWAY SINE WAVE INVERTER

SERIES IVSrail500

This rugged DC/AC inverter uses field proven, microprocessor controlled high frequency PWM technology to generate the required output power with pure sine wave output voltage.

It is a mature design with a track record in numerous applications.
The DC/DC inputstage 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 unit has full electronic protection.

The input and output are filtered for low noise.

Cooling is via baseplate to a cold plate surface and by natural convection.
The use of components with established reliability results in high MTBF.

The unit meets the requirements of EN 50155 for electronic equipment used on railway rolling stock.

It is manufactured at our plant under strict quality control. Customized versions are available.

Pure Sinewave | High frequency technology | Light weight, compact size | Full electronic protection | Extended temperature range | Conduction convection cooled | Optional Output fail alarm (Form C)

APPLICATIONS

- Railway Applications
- Industrial Controls
- Telecom Power Plants
- Marine & other rugged environments
- Electric Utilities and Substations
- Base Station Power

FEATURES

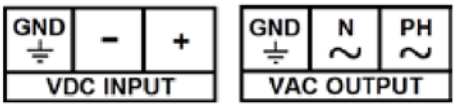
- Sine wave output voltage
- Field-proven rugged design
- Conduction / convection cooled, no fan
- Low profile
- Compact size
- Designed for rolling applications according to EN50155
- Full electronic protection

SPECIFICATIONS

Input Voltage	24Vdc (17-34V) 36Vdc (25-51V) 48Vdc (33-67V) 72Vdc (50-101V) 96Vdc (67-135V) 110Vdc (77-154V) Consult factory for other inputs
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 1500VDC Input to output
Output Voltage	230Vac @ 50Hz/2.2A rms continuous or 115Vac @ 60Hz or 400Hz/4.4A rms continuous Output neutral is connected to the chassis internally Isolated floating output optional Consult factory for other output requirements
Output Wave Form	Sinusoidal
Total Harmonic Distortion	Less than 5% at full load
Line Regulation	Maximum 0.5%
Load Regulation	Maximum ± 6% from no load to full load. A ± 2% load regulation option is available.
Load Crest Factor	Maximum 2.0 at 90% load
Output Ripple Noise	High frequency ripple is less than 500mVrms (20MHz BW)
Efficiency	Typically 80% at full load Dependent on input/output combination
Output Overload Protection	Current limiting with short circuit protection Thermal shutdown with automatic recovery in case of insufficient cooling
Output Overvoltage Protection	280Vac (for 230Vac output) or 140Vac (for 115Vac output) by internal supply voltage limiting

Standards	Designed to meet C22.2 No. 107.1 - 01, UL 458, EN60950, EN 62368-1, CE and EN50155
EMI	EN55032 Class A or B according to requirements 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)
Operating Temperature	-25 to +55°C cold-plate temperature for full specification Extended temperature range available on request
Humidity	5 - 95% non-condensing
Temperature Drift	0.05% per °C over operating temperature range
Cooling	Conduction to customer heat sink or chassis and natural convection
Environmental Protection	Ruggedizing, Conformal coating
Shock/Vibration	IEC 61373 Cat 1 A&B
Dimensions	F21: 254 x 66 x 361 mm (W x H x L) including terminal block and flanges Mounting holes are clear
Weight	4.2 Kg
Connections	Compression-type terminals for input and output
MTBF	130,000 hours at 45°C Demonstrated MTBF is significantly higher
Indicators	None
Control Input	None Optional remote shut down
Alarm output	None Optional output Fail Alarm (Form C)
RoHS Compliance	Fully compliant
Warranty	2 years

Terminal Block Pin-out



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Specifications Subject to Change Without Notice

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