



## RISI1000-F INDUSTRIAL SINEWAVE INVERTER

### SERIES RISI1000-F

This rugged, industrial quality 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 input stage boosts the input voltage to a higher DC voltage, which feeds the

DC/AC inverter to generate the required AC output.

The use of high frequency conversion enables a compact construction, low weight and high efficiency.

The input and output are filtered for low noise.

Cooling is by conduction via baseplate, with additional cooling by high quality built-in fans. All heat generating components are installed on aluminum heat-sink blocks which are thermally connected to the base plate. This also ensures exceptional mechanical ruggedness.

Conformal coating provides protection against humidity and airborne contaminants.

Full electronic protection, low component count, large design headroom, and the exclusive use of components with established reliability contribute to a high MTBF.

All of our products are manufactured at our plant under strict quality control.

### APPLICATIONS

- Industrial Controls
- Mining
- Oil Rigs
- Steel Mills
- Marine & other rugged environments
- Automotive / RV
- Electric Utilities and Substations
- Base Station Power
- Telecom Power Plants
- Railway / Transportation
- Military Applications
- Manufacturing Location
- OEM Applications

### FEATURES

- Sine wave output voltage
- Up to 250Vdc input voltage
- Field-proven rugged design
- Cooling by internal fans
- Filtered input and output
- Full electronic protection
- Compact size
- Low profile
- 1000VA of output power



Pure Sinewave



High frequency technology



Light weight, compact size



Full electronic protection



Optional Remote shutdown



Optional Extended temperature range



Optional Output fail alarm (Form C)

# SPECIFICATIONS

Input Voltage	24Vdc 36Vdc 48Vdc 125Vdc 250Vdc ± 15% are standard 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	Corresponding to the voltage requirements
Output Voltage	230Vac @ 50Hz/4.3A rms continuous or 115Vac @ 60Hz or 400Hz/8.7A 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/Load Regulation	Maximum ± 6% from no load to full load. A ± 2% load regulation option is available.
Load Crest Factor	2.5 at 90% load
Output Ripple Noise	High frequency ripple is less than 500mVrms (20MHz BW)
Efficiency	Typically 80% at full load
Output Overload Protection	Current limiting with short circuit protection Thermal shutdown with automatic recovery in case of insufficient cooling
Output Overvoltage Protection	140Vac (for 115Vac output) or 280Vac (for 230Vac output) by internal supply voltage limiting

Standards	Designed to meet C22.2 No. 107.1 - 01, UL 458, EN 60950-1, EN 62368-1 and CE
EMI	EN 55032 Class A as a minimum
Operating Temperature	0 to +50°C for full specification without derating Derating linearly 2.5% per °C rise above +50°C to +70°C max. 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. Additional cooling by high-quality built-in fans that remove hot air from the unit
Environmental Protection	Ruggedizing Conformal coating
Shock/Vibration	IEC 61373 Cat 1 A&B
Dimensions	F31: 483 x 68 x 356 mm (W x H x L) including terminal blocks and flanges. Mounting holes are clear.
Weight	7 Kg
Connections	Input: Compression-type terminals or threaded studs Output: Compression-type terminals
MTBF	140,000 hours at 45°C Demonstrated MTBF is significantly higher
Indicators	None
Control Input	None Remote shutdown as option
Alarm output	None Optional output Fail Alarm (Form C)
RoHS Compliance	Fully compliant
Warranty	2 years

### Terminal Block Pin-out

