RIPEENERGY
The Power Conversion Company

RISI100 INDUSTRIAL SINEWAVE INVERTER

SERIES RISI100

This rugged, industrial quality DC-AC sine wave inverter uses microprocessor controlled high frequency PWM technology to generate the required output power.
The DC-DC input stage converts the input voltage to a DC bus voltage, which feeds DC-AC output stage to generate the required AC output.

The input and output are filtered for low noise.
The use of high frequency conversion enables a compact construction, low weight and high efficiency. Cooling is via baseplate to a heat-sinking surface and by natural convection.

Most heat generating components are installed on aluminum heatsink 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.

It is manufactured at our plant under strict quality control.

Pure Sinewave

High frequency technology

Light weight, compact size

Full electronic protection

Conduction convection cooled

Optional Extended temperature range

Optional Output fail alarm (Form C)

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 300Vdc input voltage
- Field-proven rugged design
- Conduction / convection cooled, no fan
- Filtered input and output
- Full electronic protection
- Low profile
- Compact size
- 100VA of output power

SPECIFICATIONS

Input Voltage	24Vdc (21-30Vdc) 48Vdc (42-60Vdc) 110Vdc (95-130V) 125Vdc (105-145V) 250Vdc (210-280V) 300Vdc (250-350V) 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	Compliant to input and output voltages according to the corresponding standards Typically: 2250Vdc input to chassis 3000Vdc input to output 1500dc output to chassis
Output Voltage	230Vac @ 50Hz/0.4A rms continuous or 115Vac @ 60Hz or 400Hz/0.8A rms continuous Isolated floating output Consult factory for other output requirements
Output Wave Form	Sinusoidal
Total Harmonic Distortion	Less than 5% at full load
Load/Line Regulation	± 3% from no load to full load
Load Crest Factor	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
Output Overvoltage Protection	Output voltage is limited by internal supply voltage

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 with margins
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 and natural convection
Environmental Protection	Basic ruggedizing Conformal coating
Shock/Vibration	IEC 61373 Cat 1 A&B
Dimensions	F2: 114 x 58 x 256 mm (W x H x L) including terminal block and flanges Mounting holes are clear
Weight	1.2 Kg
Connections	9-pole Barrier type terminal block with 3/8" spacing
MTBF	120,000 hours at 45°C Demonstrated MTBF is significantly higher
Indicators	None
Control Input	None
Alarm output	None Optional output Fail Alarm (Form C)
RoHS Compliance	Fully compliant
Warranty	2 years

Terminal Block Pin-out

AC OUTPUT			ALARM (OPTION)			DC INPUT		
NOT USED	L1 ~	L2 ~	FAIL OPEN	COM	FAIL CLOSED	GND ⏚	+	–
1	2	3	4	5	6	7	8	9

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Specifications Subject to Change Without Notice

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