



## RISI100-W INDUSTRIAL SINEWAVE INVERTER

### SERIES RISI100-W

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

It is based on a mature design topology with a track record in numerous applications.

The wide operating range (20-60Vdc) allows operation from 24V, 36V and 48Vdc input sources.

Operator error is minimized. This also simplifies stock keeping - just one model covers three input ranges. The DC/DC input stage boosts the input voltage to an internal bus 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 via baseplate to a heat-sinking surface and by natural convection. 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 against airborne contaminants.

Full electronic protection, generous design headroom and the exclusive use of components with established reliability also contribute to high MTBF.

The unit is 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
- Wide input range
- Field-proven rugged design
- Conduction / convection cooled, no fan
- Filtered input and output
- Full electronic protection
- Low profile
- Compact size
- 100VA of output power



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)

# SPECIFICATIONS

Input Voltage	24Vdc 36Vdc 48Vdc 20-60Vdc operating range 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
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 and EN 60950-1
EMI	EN 55022 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 Full ruggedizing and conformal coating as option
Shock/Vibration	IEC 61373 Cat 1 A&B
Dimensions	F1: 114 x 51 x 201 mm (W x H x L) including terminal block and flanges Mounting holes are clear
Weight	0.8 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	Green output ON LED visible through cooling slots
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

