

# FCSS5000R Series AC/AC Frequency Converter



Pure sinewave



High frequency technology



Light weight, compact size



Full electronic protection



Optional extended temperature range



Optional output fail alarm (Form C)

## Applications

- Marine / Automotive / RV
- Electric Utilities and Substations
- Telecom Power Plants
- Manufacturing Locations
- Steel Mills
- Military Applications (COTS)
- Industrial Controls
- OEM Applications
- Solar / Alternative Power Systems
- Fuel Cells

## AC/AC Converters

### FCSS5000R Series

#### Description

This rugged, AC/AC frequency converter system 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 frequency converter is built with internal power modules. The AC/DC input stage boosts the input voltage to a higher DC voltage, which feeds the DC/AC inverter to generate the required AC output.

Long-life built-in fans provide sufficient airflow for operation without de-rating to the specified temperature.

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.

The use of components with established reliability results in high MTBF.

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

Customized versions are also available.

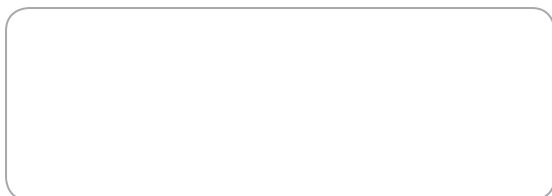
#### Features

- Input is filtered to EN 55022 Class A
- Modular design, light weight
- Sinusoidal wave shape
- 5000VA of output power
- Full electronic protection
- High reliability
- Telecom quality
- Field-proven design topology

# Specifications ( Specifications Subject to Change Without Notice)

<b>Input Voltage</b>	115 or 230Vac, +/-15% 47 ... 410Hz are standard Factory set for required input 95 – 264Vac universal input with PFC is also available
<b>Input Protection</b>	Inrush current limiting Varistors Internal safety fuse Lower voltage than specified input min. will not damage unit
<b>Isolation</b>	2250Vdc input to chassis/output Output neutral is connected to chassis internally Floating output as option
<b>Standards</b>	Designed to meet C22.2 No. 107.1 - 01, UL 458 and EN60950
<b>EMI</b>	EN 55022 Class A as a minimum
<b>Output Voltage</b>	115Vac @ 60Hz or 400Hz / 43.4A rms continuous; or 230Vac @ 50Hz / 21.7A rms continuous. Output neutral is connected to the chassis internally. Isolated floating output optional Consult factory for other outputs
<b>Wave Form</b>	Sinusoidal
<b>Total Harmonic Distortion</b>	Less than 5% at full load
<b>Line / Load Regulation</b>	Maximum $\pm$ 6% from no load to full load. $\pm$ 2% load regulation option is available
<b>Load Crest Factor</b>	Maximum 2.5 at 90% load
<b>Output Noise</b>	High frequency ripple is better than 500mVrms (20MHz BW)
<b>Output Overload Protection</b>	Current limiting with short circuit protection Thermal shutdown with automatic recovery in case of insufficient cooling
<b>Output Overvoltage Protection</b>	140Vac (for 115Vac output) or 280Vac (for 230Vac output) by internal supply voltage limiting
<b>Efficiency</b>	Depends on input and output voltage combination. Typically 78% at full load
<b>Operating Temperature Range</b>	0°C 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
<b>Temperature Drift</b>	0.05% per °C over operating temperature range
<b>Cooling</b>	Built-in fans draw air into the unit
<b>Environmental Protection</b>	Basic ruggedizing Full ruggedizing and conformal coating as option
<b>Shock/Vibration</b>	IEC 61373 Cat 1 A&B
<b>Humidity</b>	5 - 95% non-condensing
<b>MTBF</b>	Min. 95,000 hours at 45°C Demonstrated MTBF is significantly higher Fans excluded
<b>Indicators</b>	None
<b>Control Input</b>	None Remote shutdown as option
<b>Alarm Output</b>	None Option: output fail alarm (Form C)
<b>Package / Dimensions</b>	Package size varies from 4 x 3U3 (4 boxes) and modular configuration) to a 6U x 19" x 16" (one box) depending on input/output combination required. Chassis-mount and rack mount versions are available
<b>Weight</b>	28kg approx.
<b>Connections</b>	Input(s): terminal block or threaded studs Outputs: terminal block Interconnections: terminal blocks
<b>RoHS Compliance</b>	Fully compliant
<b>Warranty</b>	2 years

Available from:



## RIPEnergy®

The power conversion company

RIPEnergy AG  
Wägitalstrasse 24  
CH-8854 Siebnen  
Switzerland

Ph +41-(0)43-818 53 85  
Fax +41-(0)43-818 53 87  
www.ripenergy.ch