

FCrail500 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

- Railway Applications
- 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

FCrail500 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.

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 FCrail500 is manufactured at our plant under strict quality control.

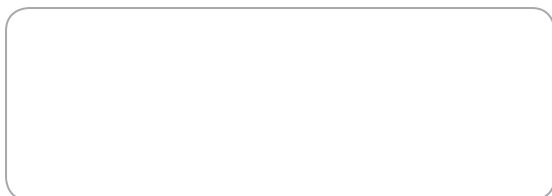
Features

- Extended Operating Temperature
- Input 230VAC / 16.7Hz
- 500VA of output power
- Compact size, light weight
- Sinusoidal wave shape
- Full electronic protection
- High reliability
- Telecom quality
- Field-proven design topology

Specifications (Specifications Subject to Change Without Notice)

Input Voltage	230VAC +/-15%
Frequency	16.7Hz
Input Protection	Inrush current limiting Varistors Internal safety fuse Lower voltage than the specified minimum input will not damage the unit
Isolation	2250 VDC input to chassis 2250 VDC input to output Output neutral is connected to the chassis internally
Standards	Designed to meet C22.2 No. 107.1 - 01, UL 458 and EN60950-1
EMI	EN 55022 Class A with margins
Output Voltage	230VAV / 50Hz / 2.1A rms continuous Output neutral is internally connected to chassis
Wave Form	Sinusoidal
Total Harmonic Distortion	Less than 5% at full load
Line/Load Regulation	Maximum \pm 6% from no load to full load
Load Crest Factor	Maximum 2.5 at 90% load
Output Noise	High frequency ripple is less than 500mVrms (20MHz BW)
Output Overload Protection	Current limiting with short circuit protection. At approximately 600VA, unit enters cycling (hiccup) mode. Thermal shutdown with automatic recovery in case of insufficient cooling
Output Overvoltage Protection	270Vac by internal supply voltage limiting
Efficiency	80% at full load
Operating Temperature Range	-25° to +50°C full specification without derating derating linearly 2.5% per °C rise above +50°C to +70°C max.
Temperature Drift (for output voltage level)	0.05% per °C over operating temperature range
Cooling	Built-in fans draw air into the unit
Environmental Protection	Basic ruggedizing Full ruggedizing and conformal coating as option
Shock/Vibration	IEC 61373 Cat 1 A&B
Humidity	5 - 95% non-condensing
MTBF	Min. 95,000 hours at 45°C Demonstrated MTBF Fans excluded
Indicators	None
Control Input	None
Alarm Output	None Option: output fail alarm (Form C)
Package/Dimensions (W x H x D)	3U3: 187 x 132 x 407mm
Weight	7 kg
Connections	Input: PHOENIX connector SMKDS 5/3-9.5 Output: 3-pole barrier-type terminal strip with 1/2" spacing Terminal block cover included
RoHS Compliance	Fully compliant
Warranty	2 years

Available from:



RIPEnergy®

The power conversion company



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