RIPEENERGY
The Power Conversion Company

FCrail2000 RAILWAY FREQUENCY CONVERTER

SERIES FCrail2000

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.

The frequency converter is built with internal power modules. Three input module and a capacitor board convert the input voltage to an internal DC voltage, which feeds one AC output module.

The 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.

Pure Sinewave

High frequency technology

Light weight, compact size

Full electronic protection

Optional Output fail alarm (Form C)

APPLICATIONS

- Railway Applications
- Industrial Controls
- Telecom Power Plants
- Marine & other rugged environments
- Electric Utilities and Substations
- Base Station Power

FEATURES

- 230Vac/16.7Hz input voltage
- Field-proven rugged design
- Cooling by internal fans
- Filtered input and output
- Full electronic protection
- Compact size
- 2000VA of output power

SPECIFICATIONS

Input Voltage	230Vac nominal, 16.7Hz 196-264Vac operating range Input current: 14A rms max
Input Protection	Inrush current limiting Varistor Internal safety fuse Lower voltage than the specified minimum input will not damage the unit
Isolation	2250Vdc input to chassis 2250Vdc output to chassis
Output Voltage	230Vac/50Hz/8.7Arms continuous Output neutral is internally connected to chassis
Output Wave Form	Sinusoidal
Total Harmonic Distortion	Less than 5% at full load
Line/Load Regulation	Maximum ± 6% from no load to full load
Load Crest Factor	2.5 at 90% load
Output Ripple Noise	High frequency ripple is less than 500mVrms (20MHz BW)
Efficiency	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	270Vac 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 with margins
Operating Temperature	-25°C to +50°C for full specification without derating Derating linearly 2.5% per °C rise above +50°C to +70°C max.
Humidity	5 - 95% non-condensing
Temperature Drift	0.05% per °C over operating temperature range
Cooling	By built-in high quality fans
Environmental Protection	Basic ruggedizing Conformal coating
Shock/Vibration	IEC 61373 Cat 1 A&B
Dimensions	3U5: 132 x 305 x 407mm Chassis mount version
Weight	10 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
MTBF	95,000 hours at 45°C Fans excluded
Indicators	None
Control Input	None
Alarm output	None Optional output Fail Alarm (Form C)
RoHS Compliance	Fully compliant
Warranty	2 years

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