



FCSTrail3000 RAILWAY FREQUENCY CONVERTER

SERIES FCSTrail3000

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

The unit is built with internal power modules; three input filters, three modules convert the input voltage to an internal DC bus voltage, which feeds the three output modules.

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 use of components with established reliability results in high MTBF.

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

Customized versions are also available.



Pure
Sinewave



3-Phase
output



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

- 3-Phase sine wave output voltage
- 230Vac/16.7Hz input voltage
- Field-proven rugged design
- Cooling by internal fans
- Filtered input and output
- Full electronic protection
- Compact size
- 3000VA of output power

SPECIFICATIONS

Input Voltage	230Vac nominal, 16.7Hz 195-264Vac operating range Input current: 30A rms max total (~10A rms per input module)
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	3-phase 400Vrms (L-L), 50Hz 2.5Arms per phase continuous, All neutrals are internally connected to chassis in "Y" configuration
Output Wave Form	Sinusoidal
Total Harmonic Distortion	Less than 5% at full load
Line/Load Regulation	Maximum $\pm 6\%$ from 10% load to full load.
Load Crest Factor	2 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	440Vac by internal supply voltage limiting

Standards	Designed to meet EN60950-1, EN 62368-1, CE and related standards
EMI	EN 55032 Class A
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	Built-in fans draw air into the unit
Environmental Protection	Basic ruggedizing and conformal coating
Shock/Vibration	IEC 61373 Cat 1 A&B
Dimensions	Three 3U3: 3U x 19" rack-mount 432 x 132 x 407 mm (W x H x L) including connectors
Weight	25 Kg
Connections	Input: Terminal block Output: Terminal block Interconnections: Terminal blocks
MTBF	70,000 hours at 45°C Demonstrated MTBF is significantly higher Fans excluded
Indicators	None
Control Input	None
Alarm output	None Optional output Fail Alarm (Form C)
RoHS Compliance	Fully compliant
Warranty	2 years

