



FCTT3000 INDUSTRIAL FREQUENCY CONVERTER

SERIES FCTT3000

This rugged, modular AC-AC frequency converter uses microprocessor controlled, high frequency PWM technology to deliver 3-Phase, 3000VA continuous sine-wave output power from a 3-phase input. It is a mature design with a track record in numerous applications.

The standard 3-phase outputs are 208V, 380V or 400V (L-L). The output neutrals are internally connected to the chassis in "Y" configuration, therefore the phase-to-neutral voltages (115V, 220V or 230V) are also available.

High quality built-in fans provide sufficient airflow for operation within the specified temperature range without de-rating.

The fans draw air into the unit, and exhaust at the terminal side of the unit. All heat generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate.

Conformal coating provides protection against humidity and airborne contaminants.

Full electronic protection eliminates the possibility of failure due to abnormal operating conditions, including application errors.

Low component count and 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.

APPLICATIONS

- Aviation
- Industrial Controls
- Telecom Power Plants
- Railway / Transportation
- Military Applications
- Marine
- Mining
- Oil Rigs
- Steel Mills
- Automotive / RV
- Electric Utilities and Substations
- Base Station Power
- Manufacturing Location
- OEM Applications

FEATURES

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



Pure Sinewave



3-Phase output



High frequency technology



Light weight, compact size



Full electronic protection



Optional Remote enable or shutdown



Optional Extended temperature range



Optional Output fail alarm (Form C)

SPECIFICATIONS

Input Voltage	208Vac (L-L) $\pm 15\%$ 3-phase 380V or 400Vac (L-L) $\pm 15\%$ 3-phase 47 ... 410Hz are standard Factory set for required input
Input Protection	Inrush current limiting Varistor Internal safety fuse Lower voltage than the specified minimum input will not damage the unit
Isolation	According to the corresponding input/output combination, as minimum: 2250Vdc input to chassis, 4300Vdc input to output, 8mm spacing 1500Vdc output to chassis
Output Voltage	208Vac (L-L)/3-phase continuous at 60 or 400Hz or 380Vac or 400Vac (L-L)/3-phase continuous at 50 or 60Hz. All neutrals are internally connected to chassis (GND) in "Y" configuration (Phase-to-neutral voltages can also be used: 115Vac, 220Vac or 230Vac) Consult factory for other voltages, frequencies and options
Output 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	2.5 at 90% load
Output Ripple Noise	High frequency ripple is less than 500mVrms (20MHz BW)
Efficiency	Depends on input and output voltage combination. Typically 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	Output voltage is limited by internal supply voltage

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 Class B filtering available
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 Full ruggedizing and conformal coating as option
Shock/Vibration	IEC 61373 Cat 1 A&B
Dimensions	4x3U3: 6U x 19" rack-mount or chassis mount assembly 432 x 266x 407 mm (W x H x L) including connectors
Weight	28 Kg
Connections	Input: Terminal block Output: Terminal block Interconnections: Terminal blocks
MTBF	80,000 hours at 45°C Demonstrated MTBF is significantly higher Fans excluded
Indicators	None
Control Input	None Remote shutdown as option
Alarm output	None Optional output Fail Alarm (Form C)
RoHS Compliance	Fully compliant
Warranty	2 years

