

# FCST3000R Series AC/AC Single-Phase to 3-Phase Frequency Converter



Pure sinewave



3 - Phase output



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

### FCST3000R Series

#### Description

The FCST3000 Series is a rugged modular AC/AC frequency converter system uses field-proven technology to deliver 3-Phase, 3000VA continuous output power. It is a mature design with a track record in numerous of applications.

The standard 3-phase outputs are 208Vrms, 380Vrms or 400Vrms (L-L). Phase-to-neutral voltages can also be used: 115Vrms, 220Vrms or 240Vrms.

All output neutrals are internally connected to chassis (GND) in "Y" configuration.

The number of modules depends on the input/output combination. (The unit in the photograph is a typical example of one configuration). The input modules perform the AC to DC voltage conversion. The output module performs the DC voltage to 3-phase AC voltage conversion. 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.

Cooling is by built-in fans, which draw air into the unit.

The FCST3000 is manufactured at our plant under strict quality control.

The system is customized for exact requirements.

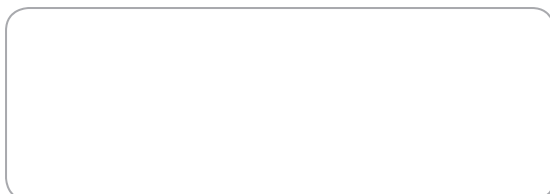
#### Features

- Input is filtered to EN 55022 Class A
- Sinusoidal wave shape
- Isolated, floating output
- 3000VA 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 95 – 264Vac universal input with PFC is available as option
<b>Input Protection</b>	Inrush current limiting Varistors Internal safety fuse Lower voltage than specified input min. will not damage unit
<b>Isolation</b>	Compliant to input and output voltages according to the corresponding standards
<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>	208Vrms (L-L)/ 3-phase continuous at 60 or 400Hz or 380Vrms or 400Vrms (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: 115Vrms, 220Vrms or 240Vrms) Consult factory for other voltages, frequencies and options
<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.
<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>	Output voltage is limited by internal supply voltage
<b>Efficiency</b>	Depends on input and output voltage combination. Typically 76% 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 fan draws 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 Fan 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>	19” rack-mount or chassis mount assembly. Size varies from 3U x 19” to 6U x 19” depending on input/output combination
<b>Weight</b>	For 6U x 19” chassis: 25 kg
<b>Connections</b>	Input: Terminal block or threaded studs depending on input voltage Output: 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