

FTT3K SERIES

Frequency Converters: 3Ph to 3Ph 3000VA



3U x 17"
chassis-mount



3U x 19"

Mechanical size depends on input/output configuration.

6U x 19"
(4 x 3U3
version.



Features

- 3-Phase sinewave output voltage
- Filtered input/output
- Cooling by internal fans
- Full electronic protection
- Field-proven design topology
- Customized versions are also available.

Description

The FTT 3K Series is a rugged, modular AC/AC frequency converter system that 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. The mechanical size of the system depends on the input/output combination. 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. Cooling is by built-in fans, which draw air into the unit. The FTT 3K is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

208Vac (L-L) +/-15% 3-phase
380V or 400Vac (L-L) +/-15%
3-phase
47 ... 410Hz are standard
Factory set for required input

Input Protection

Inrush current limiting
Varistors
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

Standards

Designed to meet
C22.2 No. 107.1 - 01,
UL 458 and EN60950

EMI

EN 55022 Class A
Class B filtering available

Output Voltage

208Vac (L-L)/3-phase continuous
60 or 400Hz or
380Vac or 400Vac (L-L)/3-phase
continuous 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

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.
Thermal shutdown with automatic
recovery in case of insufficient
cooling

Output Overvoltage Protection

Output voltage is limited by
internal supply voltage

Efficiency

Depends on input and output
voltage combination.
Typically 80% at full load

Operating Temperature Range

0° C to +50° C for full specification
without derating.
Extended temperature ranges
available

Temperature Drift

0.05% per °C over operating
temperature range

Cooling

Built-in fans drawing air into
the unit

Environmental Protection

Basic ruggedizing
Full ruggedizing and conformal
coating available as option

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

Min. 80,000 hours at 45°C
Demonstrated MTBF is
significantly higher
Fans excluded

Indicators

None

Control Input

None
Remote shutdown or enable as
option

Alarm Output

None
Option: output fail alarm (Form C)

Package/Dimensions (H x W x D)

Package varies from 3U x 19" to
6U x 19" depending on input/output
combination required.
The 6U x 19" version is typically
built with four 3U3 size modules
(as in photograph)
Chassis-mount versions are available
at the same price

Weight

3U x 19" version: 15kg (33 lb)
6U x 19" version: 28 kg (62 lb.)

Connections

Input: Terminal block
Output: Terminal block
Interconnections: Terminal blocks

RoHS Compliance

Fully compliant