

3000VA, 3-Phase to 3-Phase Frequency Converter with Sine-wave Output

Rugged, Industrial Quality

FTT 3K

- 3-Phase sinewave output voltage
- Filtered input/output
- Cooling by internal fans
- Full electronic protection
- Field-proven design topology



3U7 x 19"
version.



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

Mechanical size depends on input/output configuration.
Chassis mount versions are also available.

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. The mechanical size of the system depends on the input/output combination. Each interconnection between modules is made with a single pair of wires. 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.

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 EN60950-1

EMI

EN 55032 Class A with margins
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

Compliant

Warranty

Two years subject to application
within good engineering practice

Enhancements to these general specifications can be accommodated upon request. Specifications are subject to change

Designer and manufacturer of quality ac-dc power supplies and battery chargers, converters, inverters, dc-output UPS systems, complete rack mount systems and DC-input fluorescent lamp inverters since 1982. Custom or standard. ABSOPULSE is a BABT-approved Facility.



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