

# 1500VA, 3-Phase to 3-Phase Frequency Converter with Sine-wave Output

## Rugged, Industrial Quality

### FTT 1K5

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

**3U7  
Chassis-  
mount**



**3U7 Rack-  
mount**



This rugged, modular AC-AC frequency converter uses microprocessor controlled, high frequency PWM technology to deliver 3-Phase, 1500VA 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.

### 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  
500Vdc 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 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 ± 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. 95,000 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)**

3U7 rack-mount:  
132 x 483 x 407 mm  
(3U) 5.2" x 19" x 16" including connectors  
Mounting holes are clear  
Chassis-mount version is available at the same price

**Weight**

14 kg (30 lb)

**Connections**

Input/output: Terminal block

**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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