

# 1500VA, Single Phase to 3-Phase AC-AC Frequency Converter Industrial Quality FTP 1K5-3U7 Series

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

Photo:  
Chassis-mount



Photo:  
Rackmount



This rugged, 3-phase output AC-AC frequency converter uses field-proven microprocessor controlled high frequency PWM technology to generate the required output power with pure sine wave output voltage. The frequency converter is built with internal power modules. 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 input modules perform the AC to DC voltage conversion. The output module performs the DC voltage to 3-phase AC voltage conversion. High frequency conversion enables compact construction, low weight and high efficiency. The input and output are filtered for low noise. 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. This also ensures exceptional mechanical ruggedness. Conformal coating provides protection against humidity and airborne contaminants. Full electronic protection, low component count, large design headroom, and the exclusive use of components with established reliability contribute to a high MTBF. The unit is manufactured at our plant under strict quality control.

## SPECIFICATIONS

### Input Voltage

115 or 230Vac  $\pm 15\%$   
47 ... 410Hz are standard  
Factory set for required input  
95 – 264Vac universal input with  
PFC is also available

### Input Protection

Inrush current limiting  
Varistors  
Reverse polarity protection  
Internal safety fuse  
Lower voltage than the specified  
minimum input will not damage  
the unit

### Isolation

2250Vdc Input to chassis  
3000Vdc Input to output  
Output neutral is connected to  
the chassis internally

### Standards

Designed to meet  
C22.2 No. 107.1 - 01,  
UL 458 and EN 62368-1

### EMI

EN 55032 Class A with wide  
margins

### Output Voltage

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

### Output Wave Form

Sinusoidal

### Total Harmonic Distortion

Less than 5% at full load

### Line/Load Regulation

$\pm 6\%$  from no load to full load

### Load Crest Factor

2 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

High quality built-in fans draw air  
into the unit

### Environmental Protection

Basic ruggedizing  
Conformal coating

### 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 as option

### Alarm Output

None  
Option: output fail alarm (Form C)

### Package/Dimensions (H x W x D)

#### 3U7 chassis mount:

132 x 432 x 382 mm  
5.2" x 17" x 15"

Excludes connectors, mounting  
brackets, fans

#### 3U7/19" rack mount:

132 x 483 x 382 mm  
(3U) 5.2" x 19" x 15"

Excludes connectors, mounting  
brackets, fans.

### Weight

14 kg (30 lb.)

### Connections

Input: Terminal block  
Output: Terminal block

### RoHS Compliance

Compliant

### Warranty

Two years subject to application  
within good engineering practice  
Contamination related failures  
and shipping cost excluded

ABSOPULSE power supplies are designed and built to customer requirements. The specifications on this data sheet are generic guidelines only and are subject to change

OEM of industrial and railway quality DC-DC converters, AC-DC power supplies and battery chargers, DC-AC sine-wave inverters, phase and frequency converters, DC-output UPS systems and complete power systems in 19" and 23" racks since 1982. Custom or standard. ABSOPULSE is a BABT-approved Facility.



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