

## 1000VA Rugged, Industrial Quality Frequency Converter with Sine Wave Output FC 1K Series



- Rugged, field proven design
- Sinusoidal output voltage
- Filtered input
- Cooling by internal fans
- Full electronic protection

This rugged, AC/AC frequency converter system uses field proven, microprocessor controlled high frequency PWM technology to generate the required output power with pure sine wave output voltage. It is a mature design with a track record in numerous applications. The frequency converter is built with internal power modules. The AC/DC input stage boosts the input voltage to a higher DC voltage, which feeds the DC/AC inverter to generate the required AC output. Built-in fans provide sufficient airflow for operation without de-rating to the specified temperature. 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. The FC 1K is manufactured at our plant under strict quality control.

### SPECIFICATIONS

#### Input Voltage

115 or 230Vac, +/-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  
Internal safety fuse  
Lower voltage than the specified  
minimum input will not damage  
the unit

#### Isolation

2250Vdc input to chassis/output  
Output neutral is connected to  
chassis internally  
Floating output as option

#### Standards

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

#### EMI

EN 55022 Class A  
as a minimum

#### Output Voltage

115Vac @ 60Hz or  
400Hz/8.7A rms continuous;  
or 230Vac @ 50Hz/ 4.35A rms  
continuous.  
Output neutral is connected to the  
chassis internally.  
Isolated floating output optional  
Consult factory for other outputs

#### 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.  
 $\pm 2\%$  load regulation option is  
available

#### 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

140Vac (for 115Vac output) or  
280Vac (for 230Vac output) by  
internal supply voltage limiting

#### Efficiency

Depends on input and output  
voltage combination.  
Typically 78% 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 draw air into  
the unit

#### Environmental Protection

Basic ruggedizing  
Full ruggedizing and conformal  
coating as option

#### Shock/Vibration

IEC 61373 Cat 1 A&B

#### Humidity

5 - 95% non-condensing

#### MTBF

Min. 90,000 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 (W x H x D)

3U3: 187 x 132 x 407 mm  
(7.4" x 5.2" x 16") including connectors  
Mounting holes are clear  
19" rack-mount version as option

#### Weight

6 kg (14 lb) approx

#### Connections

Input: compression-type terminal-block  
Output: standard AC receptacle  
Option: output compression type terminal  
block

#### RoHS Compliance

Fully 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-proved Facility.*



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