

500VA Rugged, Industrial Quality AC-AC Frequency Converter with Sine Wave Output FC 500-3U2 Series



- Sinusoidal output voltage
- Rugged, field proven design
- Filtered on input and output
- Cooling by internal fan
- 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. A built-in fan provides 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 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 on request

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
the chassis internally
Floating output as option

Standards

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

EMI

EN 55032 Class A
as a minimum

Output Voltage

115Vac/4.34A rms continuous,
60Hz or 400Hz;
or 230Vac/2.2A rms continuous
50Hz.
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

$\pm 6\%$ from no load to full load.
 $\pm 2\%$ load regulation option is
available

Load Crest Factor

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

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 fan draws 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
Fan 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)

3U2: 132 x 132 x 381 mm
(5.2"x5.2"x15") excludes
connectors and flanges

Weight

Approx. 5.2 kg (11.5 lbs)

Connections

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

RoHS Compliance

Compliant

Warranty

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