

## 500VA Sine Wave Variable AC Power Source

### Rugged, Industrial Quality

### VFC 500 Series



- Variable output voltage and frequency
- Electronic power factor correction (PFC)
- Compact size, light weight
- Sinusoidal output voltage
- Digital meters for output voltage and frequency
- Isolated, floating output
- 500VA output power
- Full electronic protection
- Field-proven design topology

The VFC 500 Series is a variable AC power source designed to deliver power at a selectable frequency between 40Hz to 440Hz. The unit uses PWM technology and generates a sine-wave output with typical distortion of less than 5%. The output voltage is continuously adjustable from 0 to full scale. The input is power factor corrected.

The VFC 500 Series AC power source can be used as a compact AC/AC frequency converter, suitable for a wide range of applications. It features full electronic protection, high efficiency and low output noise. The unit is fan cooled. The use of components with established reliability results in a high demonstrated MTBF. The VFC 500 is manufactured at our plant under strict quality control. Customized versions are also available.

### SPECIFICATIONS

#### Input Voltage

Universal 95 ... 264Vac  
47 - 410Hz  
Input current 6.6A rms max.

#### Power Factor

Min. 0.97 at full load for the entire input range. Meets EN61000-3-2

#### Input Protection

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

#### Input Isolation

2250VDC input to chassis  
2250 VDC input to output  
8mm spacing  
2250VDC output to chassis

#### Standards

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

#### EMI

EN 55022 Class A  
as a minimum

#### Output Voltage

0...264Vrms range; max. current  
4Arms; max power 500VA

#### Output frequency

40 ...440Hz in one band  
1Hz step  
50, 100, 200, 400Hz 'hot'  
push buttons

#### Frequency Stability

±0.1%

#### Output Wave Form

Sinusoidal

#### Total Harmonic Distortion

Less than 5% at full load

#### Line/Load Regulation

Maximum ± 5% of Vout max  
from no load to full load

#### Load Crest Factor

Maximum 3.0 at 90% load

#### Output Ripple/Noise

High frequency ripple is less  
than 500mVrms (20 MHz BW)

#### Output Overload Protection

Current limiting with short circuit  
protection.  
Thermal shutdown with automatic  
recovery in case of insufficient  
airflow  
Hiccup at 4.8Arms

#### Output Overvoltage Protection

280Vac by internal supply voltage  
limiting

#### Efficiency

Typically 80% at full load

#### Operating Temperature Range

0°C to +50°C for full specification  
without derating.

#### Temperature Drift

(for output voltage level)  
0.05% per °C over operating  
temperature range

#### Cooling

Built-in fan

#### Environmental Protection

Basic ruggedizing  
Full ruggedizing and conformal  
coating as option

#### Humidity

5 - 95% non-condensing

#### MTBF

Min. 120,000 hours at 45°C  
Demonstrated MTBF is  
significantly higher  
Fan excluded

#### Indicators

Digital meters for output voltage  
and frequency

#### Control Input

Switch ON/OFF

#### Alarm Output

None

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

185 x 141 x 356 mm  
7.3" x 5.54" x 14" enclosed case

#### Weight

4.kg (9 lb)

#### Connections

Input: IEC inlet connector  
Output: banana sockets on front-  
panel

#### 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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