

**Model:** FCA500-115/60-115/400

**Summary description:** 500VA Frequency Converter  
115Vac/60Hz to 115Vac/400Hz



**Product description:**

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. The frequency converter is built with internal power modules. One CAC 500 modules converts the input voltage to an internal DC voltage, which feeds one MSI 1500 AC output module. The 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.

**Special Features:** Input/output via terminal blocks (with covers)

**SPECIFICATIONS**

**Input Voltage**

115Vac nominal, 47-63Hz  
97-132Vac operating range  
Input current: 9.5Arms max.

**Input Protection**

Inrush current limiting  
Varistor  
Internal safety fuse  
Lower voltage than specified  
input min. will not damage unit

**Isolation**

2250Vdc input to chassis  
2250Vdc output to chassis  
Output is isolated from chassis

**Standards**

Designed to meet  
C22.2 No. 107.1 – 01,  
UL 458 and EN 60950-1

**EMI**

EN55022 Class A with margins

**Output Voltage**

115Vac/400Hz/4.34Arms continuous  
Output is isolated from the chassis

**Output Wave Form**

Sinusoidal

**Total Harmonic Distortion**

Less than 5% at full load

**Line/Load Regulation**

± 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. At approximately 700VA, unit  
enters cycling (hiccup) mode.  
Thermal shutdown with automatic  
recovery in case of insufficient cooling

**Output Overvoltage Protection**

140Vac by internal supply voltage  
limiting

**Efficiency**

80% at full load

**Operating Temperature Range**

0°C to +50°C for full specification  
with proper installation

**Temperature Drift**

0.05% per °C over operating  
temperature range

**Cooling**

By built-in high quality fan

**Environmental Protection**

Basic ruggedizing  
Conformal coating

**Humidity**

5 – 95% non-condensing

**Shock/Vibration**

IEC 61373 Cat 1 A&B

**MTBF**

95,000 hours @ 45°C  
(Fans are not included)

**Indicators**

None

**Control Input**

Not installed

**Alarm Output**

Output fail alarm  
Form C contacts

**Package/Dimensions (WxHxL)**

3U2: 132 x 132 x 407mm  
(5.2" x 5.2" x 16")  
Chassis mount version

**Weight**

4.5kg (10 lbs)

**Connections**

Input: Terminal block, 3-pole 1/2" spacing  
Output: Terminal block, 3-pole  
1/2" spacing  
Snap-on covers included

**RoHS Compliance**

Not required, but accepted

**Warranty**

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



**ANALYTIC SYSTEMS**  
Power Conversion Solutions

**ANALYTIC SYSTEMS**

8128 River Way, Delta, BC V4G 1K5 CANADA

Tel: 604.946.9981 | Fax: 604.946.9983

E-mail: [info@analyticsystems.com](mailto:info@analyticsystems.com) | [www.analyticsystems.com](http://www.analyticsystems.com)