CWA401

AC-DC Power Supply

(Document Rev A01, 09/28/15)

Three Phase 60Hz/400Hz 115/208Vac Input
Multiple DC Outputs, 750W Max Total

Market: Military

Application: Electronic Equipment Rack

Table 1: Maximum Ratings

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Rating</th>
<th>Unit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vin max range</td>
<td>95 to 250</td>
<td>Vac</td>
<td>Line to Neutral</td>
</tr>
<tr>
<td>Temperature range</td>
<td>-40 to +75</td>
<td>°C</td>
<td>Base Plate Temperature</td>
</tr>
<tr>
<td>Output power</td>
<td>750</td>
<td>W</td>
<td></td>
</tr>
<tr>
<td>Input power</td>
<td>915</td>
<td>W</td>
<td></td>
</tr>
<tr>
<td>+5Vdc output</td>
<td>320</td>
<td>W</td>
<td></td>
</tr>
<tr>
<td>+12Vdc output</td>
<td>428</td>
<td>W</td>
<td></td>
</tr>
<tr>
<td>+3.3Vdc output</td>
<td>2</td>
<td>W</td>
<td></td>
</tr>
</tbody>
</table>

* Contact AEGIS Power Systems for specific details.

Product Highlights

This chassis pluggable slide-in filtered ac-dc power converter card has three DC outputs. The +5Vdc and +12Vdc outputs have external remote sense connections to allow regulation at the point of load. Each DC output has monitoring for voltage and current and there is an internal temperature sensor. All of that data can be accessed via an I2C communication bus. This COTS solution works well for Mil-cots and is designed to meet portions of Mil-Std-704A input, MIL-STD-810F vibration and shock, and MIL-STD-461E EMI requirements.

AEGIS Power Systems, Inc. specializes in the front end design, development, and manufacture of Rapid Response Custom Switching Power Supplies for defense, industry, telecomm, aircraft, shipboard, rack mount, electric powered vehicle, and Mil-Cots military power supply applications. Contact Aegis for specific details on what can be designed for your particular military power supply application and what portions of a particular military standard can be offered for that power supply.
**SPECIFICATIONS**

*(Typical at 25°C, nominal line and 100% load, unless otherwise specified.)*

**Input voltage:** Three Phase, 95Vac - 250Vac, 60/400Hz.  
Transient 70Vac - 270Vac, 100mSec.  
Designed to meet MIL-STD-704A Normal and Abnormal Range.

**Input current:** 2.65A @ 115Vac, per phase typical.

**Input power:** 915W @ 115Vac  
**Power factor:** 0.985 typical at 60Hz or 400Hz.  
**Output power:** 750W Maximum.  
**Holdup time:** 50mSec. Minimum.  
**Output voltages:** See table 2 for details.  
**Efficiency:** 82% Typical, 80% Minimum.  
**Output ripple:** See table 2 for details.  
**Current Limit:** Short circuit protected with automatic recovery.  
**Start up time:** 2000 mSec. Maximum.  
**Voltage set point:** ± 2.5%.  
**Line regulation:** ± 2.5%.  
**Load regulation:** ± 2.5%.  
**Temperature regulation:** ± 0.02% / °C.  
**Temperature:** –40°C to +75°C Operating. -40°C to +100°C Non-Operating.  
**Cooling:** Conduction cooled via side mounted wedgelocks or through baseplate  
**Package:** Chassis mounted enclosed metal case.  
**Dimensions:** 2.5”H x 9.181”W x 8” L (see mechanical drawing).  
**Weight:** 8.8 lbs. Typical.  
**Connector:** 1ea Positronics PLB06M4B0A1 (input), PCIM33W18M400A1 (output)  
(see mechanical drawing for pin assignments).  
**Vibration:** Designed to meet MIL-STD-810F, Method 514.5, Procedure I.  
**Shock:** Designed to meet MIL-STD-810F, Method 516.5, Procedure I.  
**Humidity:** 0 – 95% non-condensing.  
**EMI:** Designed to meet MIL-STD-461E (CE102 and CS101).

Specifications subject to change without notice.
Table 2: Voltage Outputs

<table>
<thead>
<tr>
<th>CWA401</th>
<th>V1</th>
<th>V2</th>
<th>V3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>+5Vdc</td>
<td>+12Vdc</td>
<td>+3.3Vdc</td>
</tr>
<tr>
<td>Current</td>
<td>64A</td>
<td>35.7A</td>
<td>.606A</td>
</tr>
<tr>
<td>Power</td>
<td>320W</td>
<td>428W</td>
<td>2W</td>
</tr>
<tr>
<td>Ripple</td>
<td>100mVpk-pk</td>
<td>150mVpk-pk</td>
<td>100mVpk-pk</td>
</tr>
</tbody>
</table>