**Custom Product**

**CWA103**

AC-DC Power Supply

*(Document Rev A02, 12/10/14)*

**Market:** Military  
**Application:** VME power

**Features**

- 220Vac +/- 10%, Single Phase, 50/60 Hz +/- 5% input power. Designed to meet portions of MIL-STD-704 and of MIL-STD-1399 *
- Designed to meet portions of Mil-Std-810F environmental specs.*
- Designed to meet portions of Mil-Std-461F.*
- VME Power.

**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>198 to 242</td>
<td>Vac</td>
<td></td>
</tr>
<tr>
<td>Temperature range</td>
<td>+4.4 to +29.4</td>
<td>°C</td>
<td>Up to 15,000ft MSL</td>
</tr>
<tr>
<td>Output power</td>
<td>315.5</td>
<td>W</td>
<td></td>
</tr>
<tr>
<td>+5Vdc output</td>
<td>27.5</td>
<td>W</td>
<td>On when enabled</td>
</tr>
<tr>
<td>+12Vdc output</td>
<td>144</td>
<td>W</td>
<td>On when enabled</td>
</tr>
<tr>
<td>+12Vdc output</td>
<td>144</td>
<td>W</td>
<td>On when power applied</td>
</tr>
</tbody>
</table>

* Contact AEGIS Power Systems for specific details.

**Product Highlights**

This chassis mount open frame filtered ac-dc power converter has multiple outputs available with N+1 redundancy. This COTS solution works well for Mil-cots and is designed to meet portions of Mil-Std-704 input, of MIL-STD-1399, MIL-STD-810F vibration and shock, and MIL-STD-461E EMI requirements. When compared to VME power supplies using conventional technology, this chassis mount forced air cooled ac-dc power supply converter provides users with higher efficiency (80%), lower weight (10 lbs), and higher power (up to 315.5W, N+1 redundant).

**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.

CWA103 Spec Sheet  
1 of 4
SPECIFICATIONS

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

**Input voltage:** Single Phase, 192Vac - 242.5Vac, 57Hz - 63Hz.

**Input current:** 1.8A @ 220Vac, typical.

**Input power:** 394W @ 220Vac, typical.

**Power factor:** 0.99 typical 57Hz - 63Hz.

**Output power:** 315.5W Maximum. (N+1 redundant)

**Output voltages:** See table 2 for details.

**Efficiency:** 80% Typical, 75% Minimum.

**Output ripple:** See table 2 for details.

**Current Limit:** Short circuit protected with automatic recovery.

**Start up time:** 1 Sec. Maximum.

**Voltage set point:** ± 2.5%.

**Line regulation:** ± 2.5%.

**Load regulation:** ± 2.5%.

**Temperature regulation:** ± 0.02% / °C.

**Temperature:** 4.4°C to +29.4°C Operating. -40°C to +70°C Non-Operating.

**Cooling:** Internal fan, forced fan cooling across internal Heatsink.

**Package:** Chassis mounted open frame with FR4 covers over PWB.

**Dimensions:** 3 "H x 7.25"W x 11.75" L (see mechanical drawing).

**Weight:** 10 lbs. Typical.

**Connector:** (see mechanical drawing).

**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 (CE101,CE102 and CS101).

Specifications subject to change without notice.

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Table 2: Voltage Outputs
<table>
<thead>
<tr>
<th>CWA103</th>
<th>V1</th>
<th>V2</th>
<th>V3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>+5Vdc</td>
<td>+12Vdc</td>
<td>+12Vdc</td>
</tr>
<tr>
<td>Current</td>
<td>5.5A</td>
<td>12A</td>
<td>12A</td>
</tr>
<tr>
<td>Power</td>
<td>27.5W</td>
<td>144W</td>
<td>144W</td>
</tr>
<tr>
<td>Ripple</td>
<td>50mVpk-pk</td>
<td>50mVpk-pk</td>
<td>100mVpk-pk</td>
</tr>
</tbody>
</table>

Maximum total output power is 315.5W (all DC outputs combined).