VME275L

AC-DC VME
Power Supply Card

(Document Rev A08 11/03/2015)

28Vdc Input
3 Output, 275W Max Output
50ms Holdup Time Minimum

Features

- 28Vdc per MIL-STD-704A/E/F * and MIL-STD-1275D *
  continuous operation.
- 3 Output Voltages, 275W max.
- MIL-STD-810F Environmental *
- MIL-STD-461E/F EMI *
- Single Slot VME Power Card

* Designed to meet portions of the standard. Contact Aegis Power for details.

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>18 to 36</td>
<td>Vdc</td>
<td></td>
</tr>
<tr>
<td>Temperature –40 to +75</td>
<td>°C</td>
<td></td>
<td>275W @ Wedgelocks</td>
</tr>
<tr>
<td>Temperature –40 to +85</td>
<td>°C</td>
<td></td>
<td>225W @ Wedgelocks</td>
</tr>
<tr>
<td>Combined Output Power</td>
<td>275</td>
<td>W</td>
<td>Total all outputs combined</td>
</tr>
<tr>
<td>Input power</td>
<td>372</td>
<td>W</td>
<td></td>
</tr>
<tr>
<td>Max +5Vdc power</td>
<td>112</td>
<td>W</td>
<td>22.4A</td>
</tr>
<tr>
<td>Max +3.3Vdc power</td>
<td>112</td>
<td>W</td>
<td>33.9A</td>
</tr>
<tr>
<td>Max +12Vdc power</td>
<td>51</td>
<td>W</td>
<td>4.25A</td>
</tr>
</tbody>
</table>

Product Highlights

This single slot 4HP wide 6U high filtered dc-dc power supply converter card is configured for three outputs (+5Vdc, +3.3Vdc, and +12Vdc) with a maximum of 275W output power. The VME275A has a holdup time of 50ms minimum. This Military Mil-COTS power supply solution is designed to meet portions of Mil-Std-704A/E/F input requirements, Mil-Std-1275D input requirements, MIL-STD-810F vibration and shock requirements, and MIL-STD-461E/F EMI requirements. When compared to VME power supplies using conventional technology, this single slot conduction cooled dc-dc power supply converter provides users with higher efficiency (74%), lower weight (2.5 lbs), and higher power (up to 275W).

AEGIS Power Systems, Inc. specializes in the front end design, development, and manufacture of Rapid Response Custom Switching Power Supplies for Mil-COTS, defense, industrial, telecomm, aircraft, shipboard, rack mount, and electric powered vehicle applications. Contact Aegis Power Systems for details on Mil-Specs that this product is designed to meet.
SPECIFICATIONS
(Typical at 25°C, nominal line and 100% load, unless otherwise specified.)

DC Input Voltage: 18VDC to 36VDC operating Range.
Designed to Meet Mil-Std-704A/E/F and Mil-Std-1275D continuous operation.
22VDC to 36VDC, 28VDC nominal.
100VDC 50msec transient See attached transient Immunity Curve.

DC Input Line Current: 13.2A Typical @ 28VDC input, 75°C at the wedgelocks.

Input Power: 372W Typical.

Output Power: 275W Maximum, all outputs combined, 75°C at wedgelocks.
225W Maximum, all outputs combined, 85°C at wedgelocks.

Output Voltages: +5VDC 22.4A 112W.
+3.3VDC 33.9A 112W.
+12VDC 4.25A 51W.

Efficiency: 74% Typical.

Startup Time: 500 millisecond maximum.

Holdup Time: 50 milliseconds minimum.

Voltage Setpoint, Line, Load Regulation: +/- 2% Vout nominal (for any combination).

Temperature Regulation: +/-0.01% per °C.

Output Ripple: 100mV pk-pk typical (20MHz BW).

Overvoltage Protection: Recycle input power to reset (1minute off).

Current Limit: Short Circuit protected, automatic recovery.

Temperature: -40°C to +75°C Operating Wedgelocks, 275W.
-40°C to +85°C Operating Wedgelocks, 225W.
-55°C to +100°C Non-operating.

Dimension: 6U high x 4HP (0.8") wide x 160mm deep.

Weight: 2.5 lb estimate.

Connector: 47 pin Positronics.


Humidity: 0-95% non-condensing.

EMI: Designed to meet MIL-STD-461E/F (CE102 and CS101).

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

<table>
<thead>
<tr>
<th>VME275L</th>
<th>V1</th>
<th>V2</th>
<th>V3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum individual DC outputs</td>
<td>+5Vdc</td>
<td>+3.3Vdc</td>
<td>+12Vdc</td>
</tr>
<tr>
<td></td>
<td>22.4A</td>
<td>33.9A</td>
<td>4.25A</td>
</tr>
<tr>
<td></td>
<td>112W</td>
<td>112W</td>
<td>51W</td>
</tr>
</tbody>
</table>

Maximum total output power is 275W (all DC outputs combined).

### Figure 1: VME275L Transient Immunity

Unit ride through 15V, 500ms @ 275W max. output power
Unit shut down below 15V input, automatic restart