SS2703

AC-DC / DC-DC Power Supply Unit

(Document Rev A01, 6/14/18)

Single Phase 115/220Vac Input
+25VDC+-28VDC Input

Single Output, 375W Max

Features

• 115/220Vac per MIL-STD-704E
• 25-28VDC per MIL-STD-704E
• MIL-STD-810F Environmental *
• MIL-STD-461E EMI *
• Conduction Cooled

* Designed to meet applicable portions of the standard. Contact Aegis Power Systems, Inc. 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>95 - 264 V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature</td>
<td>-40 to +71 °C</td>
<td></td>
<td>100% Load</td>
</tr>
<tr>
<td>Output Power</td>
<td>375 W</td>
<td></td>
<td>28Vdc Output</td>
</tr>
<tr>
<td>Input power</td>
<td>500 W</td>
<td></td>
<td>115Vac Input</td>
</tr>
<tr>
<td>Max +28Vdc power</td>
<td>375 W</td>
<td></td>
<td>13.4A</td>
</tr>
</tbody>
</table>

Product Highlights

This military COTS power supply solution is designed to meet applicable portions of: MIL-STD-704F, MIL-STD-810F vibration and shock requirements, and MIL-STD-461E EMI requirements. When compared to other power supplies using conventional technology, this conduction cooled ac-dc power supply converter provides users with higher efficiency, lower weight, and higher power.

Aegis Power Systems, Inc. specializes in the front end design, development, and manufacture of Rapid Response Custom Switching Power Supplies for COTS, defense, industrial, telecom, aircraft, shipboard, rack mount, and electric powered vehicle applications. Contact Aegis Power Systems, Inc. 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.*

**Input voltage:**
- 95Vac - 265Vac, 47Hz - 440Hz.
- Transient 70Vac to 270Vac, 100mSec.
- Designed to meet MIL-STD-704F Normal and Abnormal Range.

**Input line current:**
- 16A @ +28VDC, 4.4A @ 115Vac, 2.3A @ 220Vac.

**Input power:**
- 446W @ +28VDC, 500W @ 115Vac, 500W @ 220Vac, Typical.

**Power Factor:**
- 0.99 Typical @ 47Hz - 63Hz.

**Output power:**
- 375W Max.

**Holdup Time:**
- 50mSec Typical.

**Output voltages:**
- See table 2.

**Output ripple:**
- See table 2.

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

**Efficiency:**
- 84% +28VDC, 75%/115VAC, 75%/220VAC, Typical at full load.

**Start up time:**
- 500 mSec. Max.

**Voltage set point:**
- ±2.5%.

**Line regulation:**
- ± 2.5%.

**Load regulation:**
- ± 2.5%.

**Temperature regulation:**
- ± 0.01% / °C.

**Temperature rating:**
- -40°C to +71°C Operating baseplate temperature max.

**Cooling:**
- Conduction through baseplate attached to customer cold plate.

**Package:**
- Enclosed with baseplate

**Dimensions:**
- (see mechanical drawing on last page).

**Weight:**
- 5.8 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 (CE102 and CS101).
Specifications subject to change without notice.
Table 2: Voltage Outputs

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Vdc out</th>
<th>Watts out</th>
<th>Amps out</th>
<th>Ripple (20MHz BW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS2703</td>
<td>+28V</td>
<td>375W</td>
<td>13.4A</td>
<td>280mVp-p</td>
</tr>
</tbody>
</table>