

CWA305

DC-DC Power Supply

(Document Rev A01, 2/10/16)



270VDC Input
Multiple Output, 2368W Max Total

Market: Military

Application: Electronic Equipment Rack

Features

- 270Vdc input.
Multiple Output, 2368W Total.
- Designed to meet portions of Mil-Std-461E EMI specifications.*
- I2C temperature monitoring.
- Liquid Cooled enclosure
50/50 glycol and water mixture.

* Contact AEGIS Power Systems for specific details.

Table 1: Maximum Ratings

Parameter	Rating	Unit	Notes
Vin max range	250 to 280	Vdc	
Temperature range	-40 to +60	°C	Liquid Temp
Output power	2368	W	
Input power	2980	W	
+3.3Vdc output	693	W	
+5Vdc output	1425	W	
+28Vdc output	250	W	

Product Highlights

This liquid cooled dc-dc power converter has three outputs (+3.3Vdc, +5Vdc, and +28Vdc) and total output power of 2368 Watts. This COTS solution works well for Mil-cots and is designed to meet portions 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, telecom, 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:	270Vdc. Transient, 200Vdc @ 10mSec. - 375Vdc @ 50mSec.
Input ripple voltage:	2.5% of input V P-P from 10Hz to 10MHz
Input current:	11.0A @ 270Vdc typical.
Input power:	2980W @ 270Vdctypical.
Output power:	2368W Maximum.
Holdup time:	10mSec. Minimum.
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:	500 mSec. Maximum.
Voltage set point:	± 2.5%.
Line regulation:	± 2.5%.
Load regulation:	± 2.5%.
Temperature regulation:	± 0.02% / °C.
Temperature:	-40°C to +85°C Operating. -40°C to +100°C Non-Operating.
Cooling:	Liquid cooled with an integrated cold plate, and military grade quick disconnects for circulation of 50% glycol and 50% water mixture. Coolant flow rate = 2.5 liter/minute.
Package:	Chassis mounted enclosed metal enclosure.
Dimensions:	2.5"H x 12"W x 19" L (see mechanical drawing).
Weight:	30.6 lbs. Typical.
Connector:	2ea Hypertac connectors. (see mechanical drawing)
Vibration:	Designed to meet MIL-STD-810F, Method 514.5, Category 6, Procedure I.
Shock:	Shock impact of 15g @ 11 ms along long axis on chassis, 15g @ 11ms vertical and 15g @ 11ms lateral (side to side)
Humidity:	0 – 95% non-condensing.
EMI:	Designed to meet MIL-STD-461E (CE102 and CS101).

Specifications subject to change without notice.

CWA305 Spec Sheet

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Table 2: Voltage Outputs

CWA305	V1	V2	V3	
Voltage	+3.3Vdc	+5Vdc	+28Vdc	
Current	210A	285A	8.93A	
Power	693W	1425W	250W	
Ripple	50mVpk-pk	50mVpk-pk	250mVpk-pk	
Maximum total output power is 2368W (all DC outputs combined).				