

EIA301

AC-DC Power Supply

(Document Rev A01, 02/24/16)



**Single Phase 400Hz 115Vac Input
Six DC Outputs, 225W Max Total**

Market: Military, Industrial

Application: Electronic Equipment Rack

Features

- 115/400Hz Vac input. Designed to meet portions of MIL-Std-704F* and MIL-Std-1399.*
- Six DC Outputs, 225W Total power.
- Designed to meet portions of Mil-Std-810F environmental specs.*
- Designed to meet portions of Mil-Std-461E EMI specifications.*

* Contact AEGIS Power Systems for specific details.

Table 1: Maximum Ratings

Parameter	Rating	Unit	Notes
Vin max range	108-118	Vac	
Temperature range	-15 to +37	°C	Operating
Output power	225	W	
Input power	300	W	
+3.3Vdc output	42	W	
+5Vdc output	110	W	
+12Vdc output	13	W	
-12Vdc output	13	W	
+15Vdc output	23	W	
-15Vdc output	23	W	

Product Highlights

This chassis mounted ac-dc power supply has a six DC outputs. It operates on 115Vac/400Hz and provides a minimum 50ms hold-up time per Mil-STD-704F. This COTS solution works well for Mil-cots and is designed to meet portions of Mil-Std-704F input, Mil-Std-1399 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:	Single Phase, 108Vac - 118Vac, 400Hz.
Input current:	2.62A @ 115Vac
Input power:	300W @ 115Vac
Power factor:	0.90 typical @ 400Hz.
Output power:	225W Maximum.
Holdup time:	50mSec. Minimum.
Output voltages:	See table 2 for details.
Efficiency:	78% 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:	-15°C to +37°C Operating. -55°C to +71°C Non-Operating.
Cooling:	Customer provided forced fan cooling across attached Heatsink (600LFM min).
Package:	Chassis mounted enclosed metal case.
Dimensions:	2"H x 6.4"W x 11.5" L (see mechanical drawing).
Weight:	6.06 lbs. Typical.
Connector:	1ea - D38999 / 20WB5PN (Input AC) 1ea - D38999 / 20WF32SN (Output DC)
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.

Table 2: Voltage Outputs

EIA301	V1	V2	V3	V4	V5	V6
Voltage	+5Vdc	+3.3Vdc	+12Vdc	-12Vdc	+15Vdc	-15Vdc
Current	22 A	12.75A	1.1A	1.1A	1.5A	1.5A
Power	110W	42W	13W	13W	23W	23W
Ripple	50mVpk-pk	50mVpk-pk	50mVpk-pk	50mVpk-pk	150mVpk-pk	150mVpk-pk
Maximum total output power is 225W (all DC outputs combined).						

Connector Pin Out Assignment

INPUT AC CONNECTOR (J1)

- D38999 / 20WB5PN - SHELL SIZE 11 (B)
- (5x) #20 CONTACTS (PINS)
- PIN 1&2 - AC LINE
- PIN 3&4 - AC NEUTRAL
- PIN 5 - CHASSIS GROUND

OUTPUT DC CONNECTOR (J2)

- D38999 / 20WF32SN - SHELL SIZE 19 (F)
- (32x) #20 CONTACTS (SOCKETS)
- PINS A,B,C,D,E +5V OUT
- PINS F,G,H,J,K +5V RETURN
- PINS L,M,N +3.3V OUT
- PINS P,R,S +3.3V RETURN
- PIN T +12V OUT
- PIN U +12V RETURN
- PIN V -12V OUT
- PIN W -12V RETURN
- PIN X +15V OUT
- PIN Y +15V RETURN
- PIN Z -15V OUT
- PIN a -15V RETURN
- PIN b POWER OK (COLLECTOR)
- PIN c CHASSIS GND
- PIN d +5V SENSE+
- PIN e +5V SENSE-
- PIN f +3.3V SENSE+
- PIN g +3.3V SENSE-
- PIN h POWER OK (EMITTER)
- PIN j UNUSED