

## CS2401

### AC-DC Power Supply System

(Document Rev A04 09/17/15)



**Three Phase "Y" 400Hz 115/208Vac Input  
Multiple (5) Output, 1.6 KW Max Total**

**Market: MIL-COTS**

**Application: Aircraft Electronics**

#### Features

- Ruggedized
- Over current and voltage protected
- MIL-STD-167-1 Vibration\*
- MIL-STD-461E CE102 EMI\*
- Mil-Std-704 Input Specifications\*

\* Designed to meet portions of this particular standard. Contact AEGIS Power Systems for specific details.

**Table 1: Maximum Ratings**

Parameter	Rating	Unit	Notes
Temperature	0 to +50 -32 to +71	°C	Operating Non-Operating
Output Power	1.6	KW	@ 45°C
Input power	2052	W	120/208 Vac 3 phase "Y"
+5Vdc	800	W	160A
+3.3Vdc	528	W	160A
+12Vdc	240	W	20A
+24Vdc	240	W	10A
+5Vdc	2.5	W	0.5A

#### Product Highlights

The CS2401 is a ruggedized metallic enclosed multiple output power supply, operable from a 3 phase 400Hz VAC input source. An attached forced air fan provides cooling through internal cooling fins. This Mil-Cots military power supply has over current and over voltage protection.

**AEGIS Power Systems, Inc.** specializes in the front end design, development, and manufacture of Rapid Response Custom Switching Power Supplies for defense, industrial, telecomm, aircraft, shipboard, rack mount, electric powered vehicle, and Mil-Cots military power supply applications.

## SPECIFICATIONS

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

<b>AC input voltage:</b>	3 Phase "Y" 115/208Vac, 400Hz (Designed to meet MIL-STD-704).
<b>AC input line current:</b>	10A Max @ 115Vac.
<b>Input power:</b>	2052W Max.
<b>Output power:</b>	1600W Max.
<b>Holdup Time:</b>	Contact Aegis.
<b>Output voltages:</b>	See Table 2. (+5Vdc, +3.3Vdc, +12Vdc, +24Vdc, and +5Vdc)
<b>Over Voltage Protection:</b>	Typically 125% of nominal output voltage (outputs 1 &2) Typically 117% of nominal output voltage (outputs 3 &4)
<b>Efficiency:</b>	78% Minimum
<b>Inrush Current:</b>	25A Maximum
<b>Output ripple:</b>	See Table 2.
<b>Current Limit:</b>	Typically 115% of nominal output current.
<b>Voltage set point:</b>	± 0.5 %.
<b>Line/ Line regulation:</b>	± 1 %. (Outputs 1-4) +/- 2% (Output 5).
<b>Temperature regulation:</b>	± 0.01 % / °C.
<b>Temperature:</b>	-0°C to +50°C Operating. -32°C to +71°C Non-Operating.
<b>Cooling:</b>	Forced Fan Cooling.
<b>Package:</b>	Rugged metallic enclosed Case.
<b>Dimensions:</b>	5" H x 8.5" W x 12" L.
<b>Weight:</b>	22 lbs Max.
<b>Connector:</b>	Input: DAMM3W3P; Output: DBMMG24H7SJ (2); DBMMG5H5SJ (2).
<b>Signals:</b>	DC OK and AC OK status: open collector output: Low = Ok, High = Failure. Over Temperature status: open collector output: Low = Ok, High = Failure. Remote inhibit: signal inhibits the output when connected to inhibit return. Remote sensing with 0.25V compensation (output 1 through 4).
<b>Vibration:</b>	Designed to meet portions of Mil-Std-167-1.
<b>Shock:</b>	24Gs, 11ms half sine, on three axis.
<b>Humidity:</b>	0-95% non-condensing.
<b>EMI:</b>	MIL-STD-461E (CE102).

Specifications subject to change without notice.

**Table 2: Voltage Outputs**

Output	Vdc out	Watts out	Amps out	Ripple (20MHz BW)
V1	+5Vdc	800W	160A	50mVp-p
V2	+3.3Vdc	528W	160A	50mVp-p
V3	+12Vdc	240W	20A	120mVp-p
V4	+24Vdc	240W	10A	240mVp-p
V5	+5Vdc	2.5W	0.5A	50mVp-p

**Connector Pin Outs**

J1 Pins	Signal	J3 Pins	Signal	J2 Pins	Signal
A1	+3.3V RTN	A1	+5V RTN	A1	+3.3V RTN
A2	+3.3Vdc	A2	+5Vdc	A2	+3.3V RTN
A3	+3.3Vdc	A3	+5Vdc	A3	+3.3V RTN
A4	+3.3Vdc	A4	+5Vdc	A4	+3.3V RTN
A5	+3.3Vdc	A5	+5Vdc	A5	+3.3V RTN
A6	+3.3Vdc	A6	+5Vdc		
A7	+3.3Vdc	A7	+5Vdc		
1	Inhibit	1	5V Standby		
2	Inhibit RTN	2	5V Standby	<b>J4 Pins</b>	<b>Signal</b>
3	Over Temp	3	5V Standby RTN	A1	+5V RTN
4	AC OK	4	5V Standby RTN	A2	+5V RTN
5	+12Vdc	5	+24Vdc	A3	+5V RTN
6	+12Vdc	6	+24Vdc	A4	+5V RTN
7	+12Vdc	7	+24Vdc	A5	+5V RTN
8	+12Vdc	8	+24Vdc		
9	+12Vdc RTN	9	+24Vdc RTN		
10	+12Vdc RTN	10	+24Vdc RTN	<b>J5 Pins</b>	<b>Signal</b>
11	+12Vdc RTN	11	+24Vdc RTN	A1	TBD
12	+12Vdc RTN	12	+24Vdc RTN	A2	TBD
13	NO Connection	13	Global DC OK	A3	TBD
14	3.3V Sense +	14	5V Sense +		
15	3.3V Sense -	15	5V Sense -		
16	12V Sense +	16	24V Sense +		
17	12V Sense -	17	24V Sense -		

DWG NO.		SH		REV	
				REVISIONS	
ZONE	REV	DESCRIPTION	DATE	APPROVED	
	A01	INITIAL RELEASE	06/07/04	JFS	
	A02	Moved Chassis Stud location	07/13/04	JFS	
	A03	ADDED FAN DIM INFO	07/14/04	JFS	

NOTES: UNLESS OTHERWISE SPECIFIED  
 1. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M-1994.  
 2. MATERIAL:  
 3. FINISH:

CONNECTOR J1 & J3 P/N DDMG24H7SJ (SOCKET TYPE)  
 CONNECTOR J2 & J4 P/N DBMMG5H5SJ (SOCKET TYPE)  
 CONNECTOR J5 P/N DAMM3W3P (PIN TYPE)

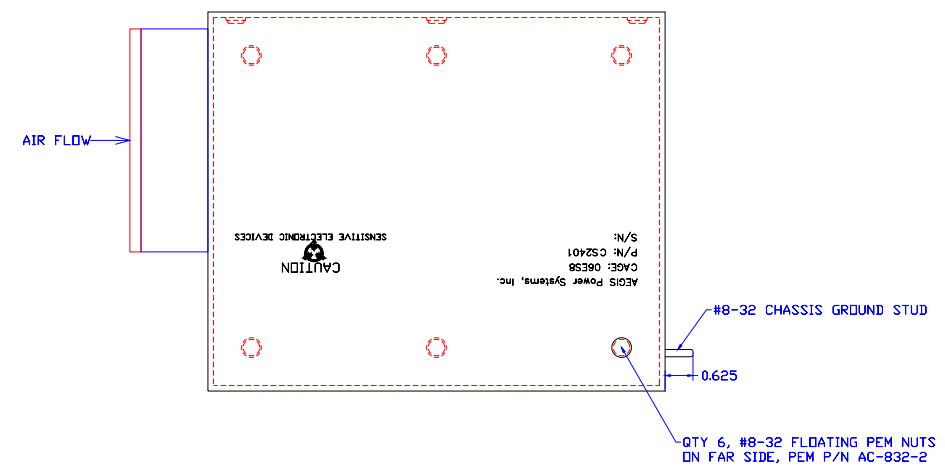
J1 PINOUT:  
 A1, +3.3V RTN  
 A2 - A7, +3.3VDC  
 PIN 1, INHIBIT  
 PIN 2, INHIBIT RTN  
 PIN 3, OVER TEMP SIGNAL  
 PIN 4, AC DK SIGNAL  
 PINS 5 - 8, +12VDC  
 PINS 9 - 12, +12V RTN  
 PIN 13, NO CONNECT  
 PIN 14, 3.3V SENSE +  
 PIN 15, 3.3V SENSE -  
 PIN 16, 12V SENSE +  
 PIN 17, 12V SENSE -

J3 PINOUT:  
 A1, +5V RTN  
 A2 - A7, +5VDC  
 PIN 1, 5V STANDBY  
 PIN 2, 5V STANDBY  
 PIN 3, 5V STANDBY RTN  
 PIN 4, 5V STANDBY RTN  
 PINS 5 - 8, +24VDC  
 PINS 9 - 12, +24V RTN  
 PIN 13, GLOBAL DC DK SIGNAL  
 PIN 14, 5V SENSE +  
 PIN 15, 5V SENSE -  
 PIN 16, 24V SENSE +  
 PIN 17, 24V SENSE -

J2 PINOUT:  
 A1 - A5, 3.3V RTN

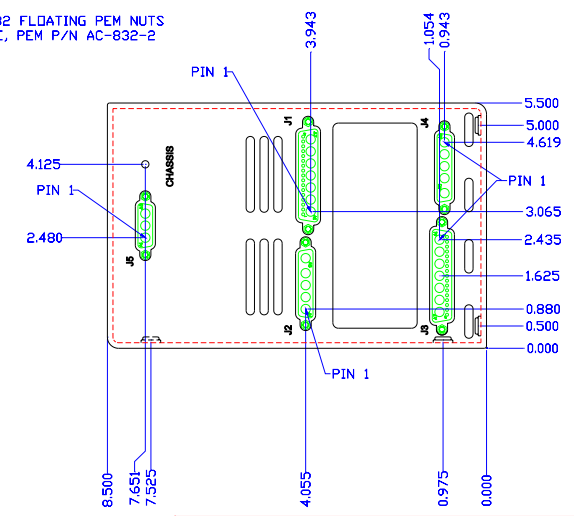
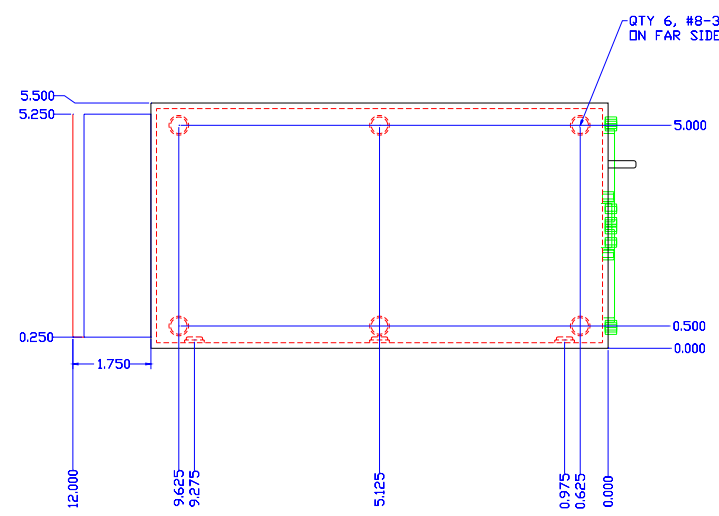
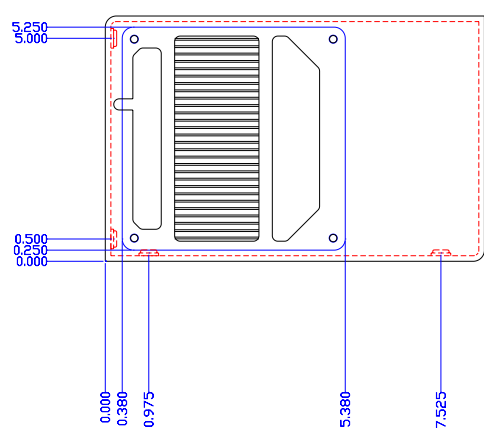
J4 PINOUT:  
 A1 - A5, +5V RTN

J5 PINOUT:  
 A1, TBD  
 A2, TBD  
 A3, TBD



CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY

QTY 6, #8-32 FLOATING PEM NUTS ON FAR SIDE, PEM P/N AC-832-2



QTY 6, #8-32 FLOATING PEM NUTS ON FAR SIDE, PEM P/N AC-832-2

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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES FRACTIONS DECIMALS DEGREES N/A .000 .02 .005 .5		CONTRACT NO.		AEGIS POWER SYSTEMS MURPHY, NORTH CAROLINA	
MATERIAL SEE NOTE 2		APPROVALS DRAWN JFS		DATE 07/14/04	
FINISH SEE NOTE 3		CHECKED		TITLE CS2401 MOUNTING INFO	
NEXT ASSY USED ON		PROJ. ENL.		AEGIS P/N: CS2401	
APPLICATION		MFG		SCALE 1/1	
DO NOT SCALE DRAWING		QUALITY		REV A03	
				SHEET 1 OF 1	

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