

## AGI500

### AC-DC Power Supply

(Document Rev A04,09/01/2015)



**Single Phase 60Hz 115/230Vac Input  
Factory Configured Single Output, 500W Max Total**

**Market: Mil-Cots, Industrial**

**Application: Electronic Equipment Power Supply**

#### Features

- 115Vac input.
- Single 500W Output, factory selectable for 5Vdc, 12Vdc, 15Vdc, 24Vdc, 28Vdc, 36Vdc, or 48Vdc.(1)
- Designed to meet portions of Mil-Std-810F environmental specs.\*
- Designed to meet portions of Mil-Std-461F EMI specifications.\*
- Internal forced fan cooled.

\* Contact AEGIS Power Systems for specific details.

(1) Power supply can only be configured for one output voltage.

**Table 1: Maximum Ratings**

Parameter	Rating	Unit	Notes
Vin max range	90 to 264	Vac	47-63 Hz
Temperature range	-40 to +85	°C	
Output power	500/400	W	
Input power	568/454	W	
5Vdc output	400	W	(1)
12Vdc output	500	W	(1)
15Vdc output	500	W	(1)
24Vdc output	500	W	(1)
28Vdc output	500	W	(1)
36Vdc output	500	W	(1)
48Vdc output	500	W	(1)

#### Product Highlights

The AGI500 ac-dc power supply is a chassis mounted power supply having forced air cooling from internally mounted fans. The 60Hz AC input is internally filtered and has an output selection from seven possible factory configured outputs of 5Vdc (400W), 12Vdc, 15Vdc, 24Vdc, 28Vdc, 36Vdc, or 48Vdc (all at 500W). Other custom output voltages available. This COTS solution works well for Industrial and Military applications and is designed to meet portions of MIL-STD-810F vibration and shock, and MIL-STD-461F 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 power supply application and what portions of a particular industrial or military standard can be offered for that power supply.

## **SPECIFICATIONS**

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


<b>Input voltage:</b>	Single Phase 90Vac - 264Vac, 47Hz - 63Hz.
<b>Input current:</b>	4.9A @ 115Vac.
<b>Input power:</b>	568W @ 115Vac for all outputs except 5Vdc; which is 454W.
<b>Output power:</b>	500W Maximum all outputs except 5Vdc; which is at 400W.
<b>Holdup time:</b>	10ms Minimum.
<b>Output voltages:</b>	See table 2 for details.
<b>Efficiency:</b>	88% Typical.
<b>Output ripple:</b>	See table 2 for details.
<b>Current Limit:</b>	Short circuit protected with automatic recovery.
<b>Start up time:</b>	500 msec. Maximum.
<b>Voltage set point:</b>	± 2.5%.
<b>Line regulation:</b>	± 2.5%.
<b>Load regulation:</b>	± 2.5%.
<b>Temperature regulation:</b>	± 0.02% / °C.
<b>Temperature:</b>	-40°C to +85°C Operating. -55°C to +125°C Non-Operating.
<b>Cooling:</b>	Internal fans provide forced fan cooling. (Turn off at about 0.0°C.)
<b>Package:</b>	Chassis mounted enclosed metal case.
<b>Dimensions:</b>	2.75" H x 4.93" W x 12.75" L (see mechanical drawing).
<b>Weight:</b>	6 lbs. Typical.
<b>Connector:</b>	Vac Input Connector: TEC 15CUS1 (IEC 320-C14). Vdc Output Connections: 1/4-20 Stud. Monitor/Control Connector; Molex 03-06-1091 (see Table 3).
<b>Vibration:</b>	Designed to meet MIL-STD-810F, Method 514.5, Procedure I.
<b>Shock:</b>	Designed to meet MIL-STD-810F, Method 516.5, Procedure I.
<b>Humidity:</b>	0 – 95% non-condensing.
<b>EMI:</b>	Designed to meet MIL-STD-461F (CE101, CE102, and CS101).

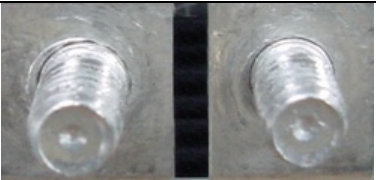
Specifications subject to change without notice.


**Table 2: Voltage Outputs**

Part Number	Vdc out	Watts out	Amps Out	Ripple (20MHz BW)
AGI500-001	5	400	80	100mVpk-pk
AGI500-002	12	500	41.6	280mVpk-pk
AGI500-003	15	500	33.3	250mVpk-pk
AGI500-004	24	500	20.8	125mVpk-pk
AGI500-005	28	500	17.8	100mVpk-pk
AGI500-006	36	500	13.8	100mVpk-pk
AGI500-007	48	500	10.4	100mVpk-pk

**Table 3: Connector Pin Out Assignments**

Input: TEC 15CUS1 (IEC 320-C14)		
Top Left	Neutral	
Top Right	Line	
Bottom Center	Safety Ground	

Output: (1/4-20 Stud)		
POS	Positive	
NEG	Negative	

Monitor/Control: (Molex 03-06-1091) *			
Pin	Signal	Description	
1	-S	Negative Sense	
2	+S	Positive Sense	
3	N/A	Not Used	
4	+En	Positive Enable	
5	-En	Negative Enable	
6	+CS	Negative Current Share	
7	-POK	Negative Power OK	
8	+POK	Positive Power OK	
9	+CS	Positive Current Share	

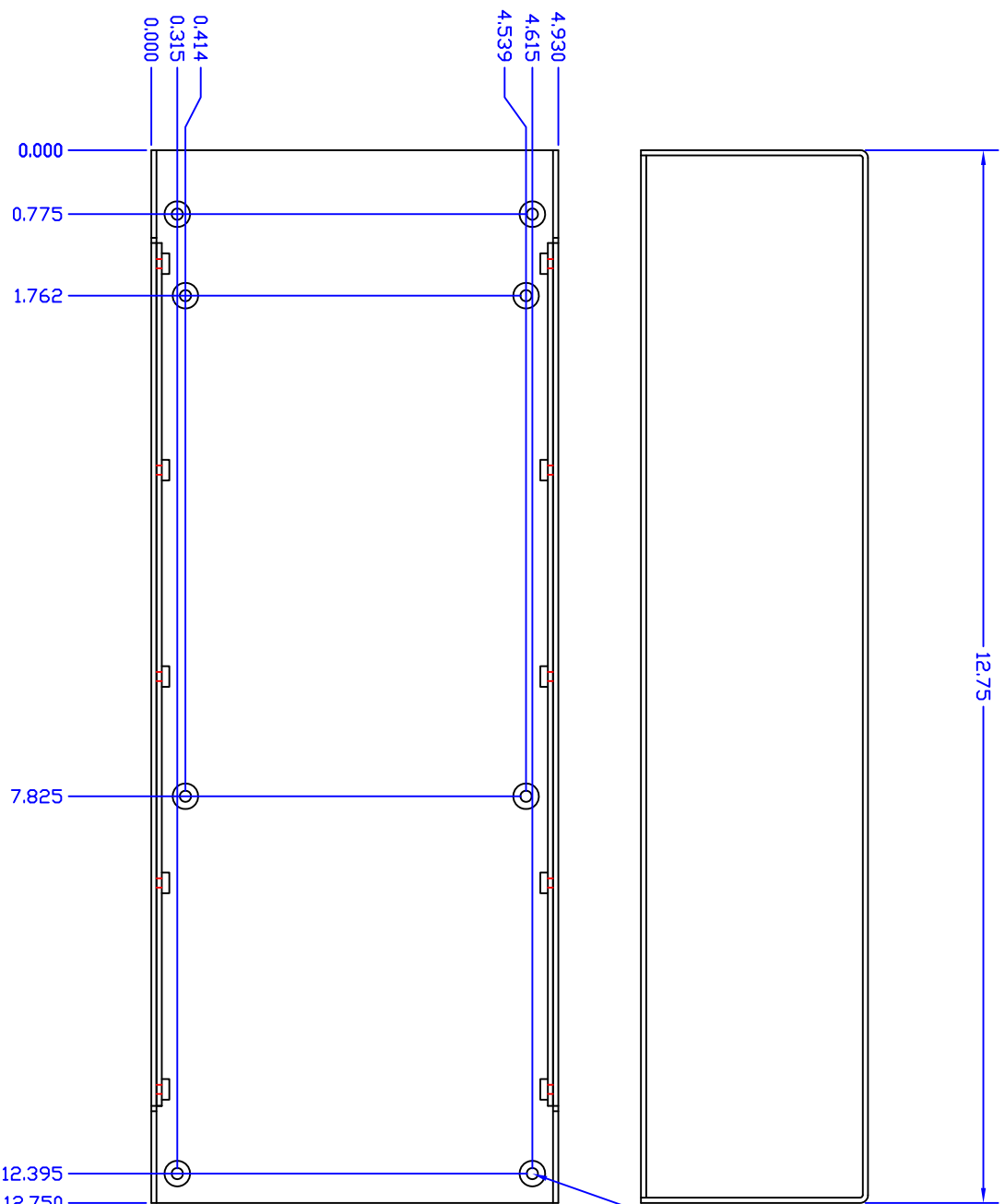
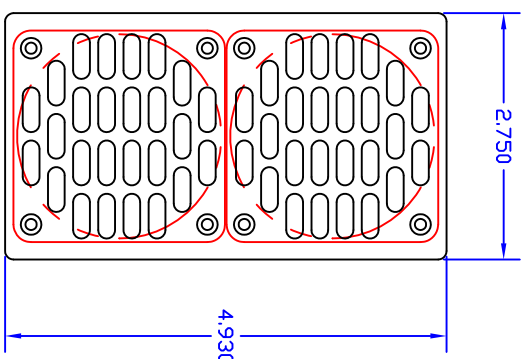
\* Customer mate: Molex 03-06-2092P

NOTES: UNLESS OTHERWISE SPECIFIED

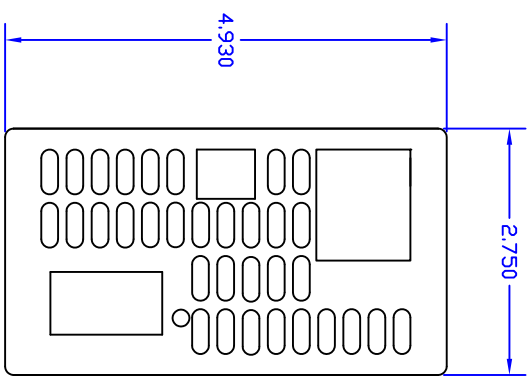
1. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M-1994.
2. MATERIAL: TUCKER ENGINEERING 8413
3. FINISH:

CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY

REVISONS		DATE	APPROVED
ZONE	REV	DESCRIPTION	



INSTALL  $\phi 0164-32$  SELF CLINCHING NUT, 8X, PEM P/N CLS-832-2 OR EQUIVALENT.



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CONTRACT NO.		DATE		TITLE	
APPROVALS		DRAWN		AEGIS P/N: AG1500/AGI1000	
TLD		4/25/13		MECH CONCEPT	
MATERIAL		FINISH		DRAWING NO.	
SEE NOTE 2		SEE NOTE 3		AG1500/AGI1000-M00	
N/A		XXX ± .005		REV	
FRACTIONS DECIMALS ANGLES		DO NOT SCALE DRAWING		A01	
± N/A				SCALE 1/1	
± .5				SHEET 1 OF 1	
± .02					
± .005					
NEXT ASSY		USED ON			
APPLICATION					

A

B

C

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A

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