

## HY2620

### AC-DC Power Supply

(Document Rev A05, 09/28/15)



**115/200Vac Input, 3 Phase Y, 400Hz  
Multiple Output, 1600W Max Total**

### Market: Military COTS

### Application:

### Features

- Short circuit protected, automatic recovery
- Designed to meet portions of Mil-Std 704F and Mil-Std-810.\*

\* Contact AEGIS Power Systems for specific details.

**Table 1: Maximum Ratings**

Parameter	Rating	Unit	Notes
Vin max range	108-118	Vac	Line to Neutral
Temperature range	0 to +45	°C	
Output power	1600	W	
Input power	2184	W	
+3.3Vdc output	334	W	Refer Table 2 (Outputs)
+5Vdc output	1000	W	
+12Vdc output	132	W	
-12Vdc output	12	W	
+24Vdc output	280	W	

### Product Highlights

The HY2620 operates from a 3 phase Y connected 115/200Vac input at 400Hz with total combined output of 1600 Watts. It is designed to meet portions of Mil-Std-704F for AC Input voltage and Mil-Std-810 environmental specifications. This power supply features remote sense and overvoltage protection with automatic over current recovery.

**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. Contact Aegis for specific details on what portions of a particular military standard is offered for this power supply or what can be done for your particular military power supply application.

## **SPECIFICATIONS**

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

<b>AC Input voltage:</b>	3 Phase Y 400Hz Normal Range. 108Vac – 118Vac Line Neutral. 187Vac-205Vac Line-Line. 180 Vac 50 msec transient, shutdown for longer, automatic restart. Shuts down for low abnormal range automatic restart @ 100Vac line-neutral. Designed to meet MIL-STD-704F.
<b>Input current:</b>	8A Max @ 108Vac per phase.
<b>Input power:</b>	2184W Max. All phases combined.
<b>Power factor:</b>	0.85 minimum per Mil-Std-704F.
<b>Output power:</b>	1600W Max. all outputs combined. See Table 2.
<b>Holdup time:</b>	Contact Aegis.
<b>Output voltages:</b>	See table 2 for details.
<b>Efficiency:</b>	75% minimum.
<b>Output ripple:</b>	See table 2.
<b>Current Limit:</b>	Short circuit protected with automatic recovery.
<b>Start up time:</b>	500 mSec. Maximum.
<b>Voltage set point:</b>	± 0.5%.
<b>Line/ Load regulation:</b>	± 1%.
<b>Temperature regulation:</b>	± 0.01% / °C.
<b>Temperature:</b>	-0°C to +45°C Operating baseplate temperature max. -40°C to +100°C Non-operating.
<b>Cooling:</b>	Forced Internal Fan Cooling.
<b>Package:</b>	Enclosed case chassis mount.
<b>Dimensions:</b>	12.27" x 17.75" x 2.6" (see mechanical drawing).
<b>Weight:</b>	16.8 lbs. Typical.
<b>Overvoltage protection:</b>	Typical 115%, recycle input power to reset (1 minute off).
<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-461C. (CE03 and CS01).

Specifications subject to change without notice.

**Table 2: Voltage Outputs**

<b>HY2620</b>	<b>V1</b>	<b>V2</b>	<b>V3</b>	<b>V4</b>	<b>V5</b>
Voltage	+5Vdc	+3.3Vdc	+12Vdc	-12Vdc	24Vdc
Current	200A	101A	11A	1A	11.67A
Power	1000W	334W	132W	12W	280W
Ripple	100mVpk-pk	50mVpk-pk	150mVpk-pk	150mVpk-pk	100mVpk-pk
Maximum total output power is 1600W (all DC outputs combined).					

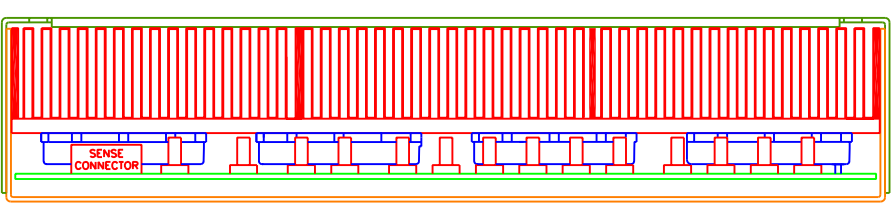
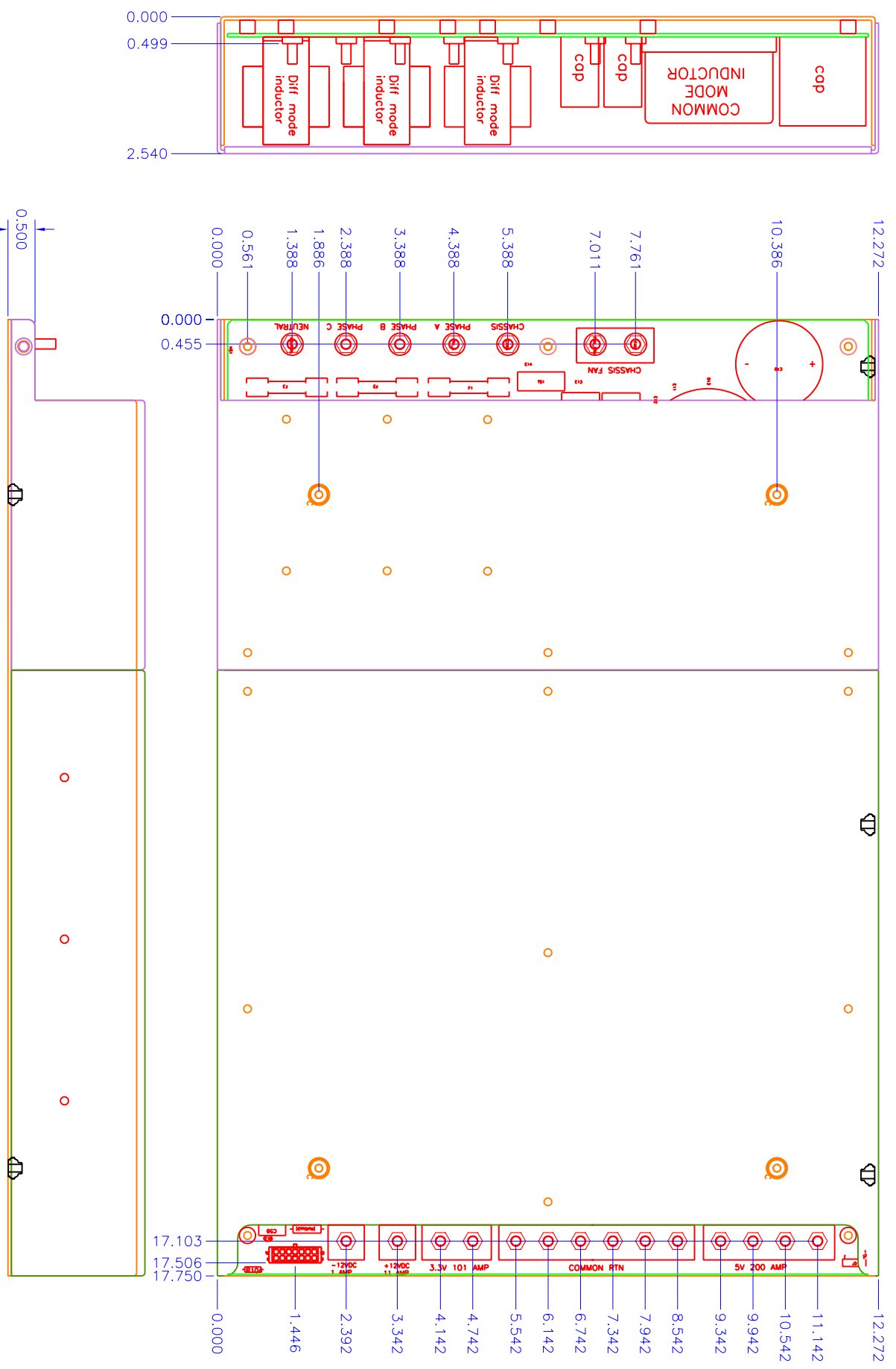
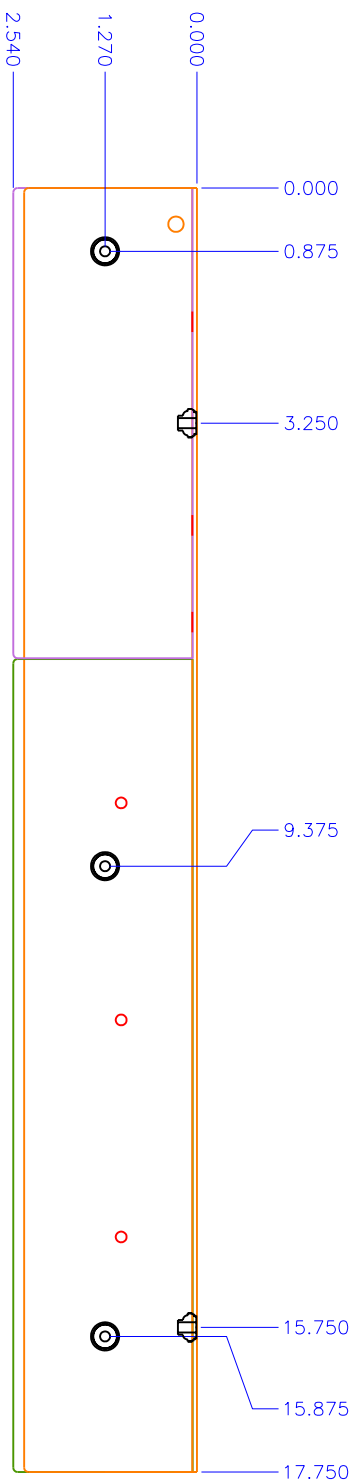
**Table 3: J1 Remote Sense Connections**

Pin No	Signal
1	Neg Sense 3.3V RTN
2	Neg Sense 5V RTN
3	Neg Sense +12V RTN
4	Pos Sense -12V RTN
5	Power O.K.
6	+12Vdc External LED
7	Neg DC Inhibit
8	Pos Sense 3.3V
9	Pos Sense 5V
10	Pos Sense +12V
11	Neg Sense -12V
12	Power O.K. RTN
13	External LED RTN
14	Pos DC Inhibit

**Table 4: Input and Output Studs**

Stud	Qty	
10-32	4	5Vdc Output
10-32	6	Common Output Return
10-32	2	3.3Vdc Output
10-32	1	+12Vdc Output
10-32	1	-12Vdc Output
10-32	1	Chassis
10-32	1	Phase A
10-32	1	Phase B
10-32	1	Phase C
10-32	1	Neutral
10-32	1	Pos 24Vdc Fan Output
10-32	1	Neg 24Vdc Fan Output

CHASSIS MOUNTING LOCATIONS (7 TOTAL: PEM-LAC-632-2)  
(3 ON LEFT SIDE AND 4 ON BOTTOM)



**J1 SENSE CONNECTOR**  
 PIN 7: -DC INHIBIT  
 PIN 6: +12VDC EXTERNAL LED  
 PIN 5: POWER O.K. RTN  
 PIN 4: +SENSE -12V (RTN)  
 PIN 3: -SENSE +12V (RTN)  
 PIN 2: -SENSE 5V (RTN)  
 PIN 1: -SENSE 3.3V (RTN)

**OUTPUTS:**  
 +5VDC, 123AMP, 615W  
 +3.3VDC, 78.7AMP, 260W  
 +12VDC, 7AMP, 84W  
 -12VDC, 4AMP, 48W  
 +24VDC SYS FAN 10.4AMP, 250W  
 COMMON RTN

**NOTE:**  
 -SENSE -12V IS COMMON RETURN  
 +SENSE +12V IS COMMON RETURN  
 DC INHIBIT EXTERNAL SWITCH  
 OPEN IS DC OUTPUT ENABLE  
 CLOSE IS DC OUTPUT DISABLE  
 J1:6 +12VDC WITH 560 OHM  
 CURRENT LIMITING RESISTOR

CAD MAINTAINED. CHANGES SHALL BE  
 INCORPORATED BY THE DESIGN ACTIVITY.

ZONE	REV	DESCRIPTION	DATE	APPROVED
A01	INITIAL	RELEASE	03/11/10	MRA

NOTES: UNLESS OTHERWISE SPECIFIED

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

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. FRACTIONS DECIMALS .XX ± .02 .XXX ± .005		CONTRACT NO.	
MATERIAL SEE NOTE 2		APPROVALS	
FINISH SEE NOTE 3		DRAWN MRA 01/04/07	
DO NOT SCALE DRAWING		CHECKED	
APPLICATION		TRD. ENC.	
USED ON		WTC.	
NEXT ASSY		QUALITY	
TITLE HY2620 MOUNTING DETAIL		DATE	
AEGIS P/N: HY2620-01		SCALE 1/1	
SITE / FSOU NO. 06ES8		DWG NO. HY2620-01-M10	
REV. A01		SHEET 1 OF 1	

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