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NG2602

AC-DC Enclosed Power Supply

(Document Rev A05 11/01/2015)

Three Phase 60Hz 115/208Vac Input
Single +28Vdc Output, 5500W Max Total

Market: Mil-Cots, Industrial

Application: Electronic Equipment Rack

Features

- 3 Phase "Y" 115/208Vac
- MIL-STD-704F*
- MIL-STD-1275B*
- MIL-STD-810F Environmental *****
- MIL-STD-461E EMI *****
- Enclosed case power supply

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

Table 1: Maximum Ratings

Parameter	Rating	Unit	Notes
Vin max range	105 to 125	Vac	LIne to Neutral
Temperature	–46 to +49	°C	-46 to +71 Non-operating
Output Power	5500	W	
Input power	6470	W	
Max +28Vdc output	5500	W	Refer Table 2 (Output)
Max output ripple	840	mV	3% pk-pk Max (20Mhz BW)

Product Highlights

This ruggedized Military Commercial Off the Shelf (COTS) power supply operates from a 3-Phase 115/208Vac "Y" connected input. The single +28Vdc 5500W output capability is the power supply solution for military COTS applications. It is designed to meet the environmental requirements of MIL-STD-810F and the EMI requirements of MIL-STD-461E. In comparison to other power supplies using conventional technology, this package provides its users with higher efficiency (85% typical), less weight and higher power output. This power supply is designed to power military 28Vdc electronic equipment including communication centers.

AEGIS Power Systems, Inc. specializes in the front end design, development, and manufacture of Rapid Response Custom Switching Power Supplies for Mil-COTS, defense, industrial, telecomm, aircraft, shipboard, rack mount, and electric powered vehicle applications. Contact Aegis for specific details on what portions of a particular military standard is offered for this power converter power supply.

SPECIFICATIONS

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

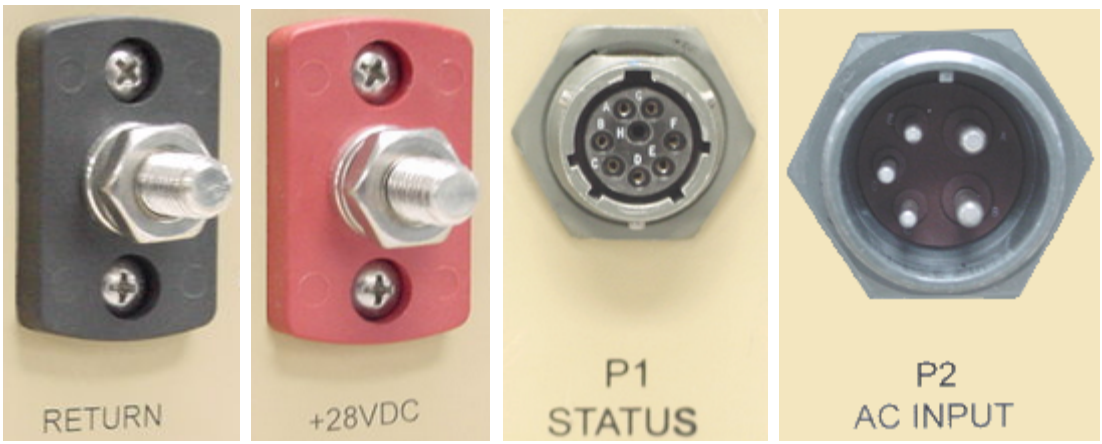
Input voltage:	**3 Phase, Y connected, 208Vac L-L, 60 Hz, 120Vac Line Neut. Nominal. Input range 59.5 - 60.5 Hz, 105Vac - 125Vac Line-Neut. Transient 70Vac to 270Vac, 100mSec. Designed to meet MIL-STD-704F Normal and Abnormal Range.**
Input current:	**19A nominal per phase.**
Input power:	**6470W nominal.**
Power factor:	**Contact Aegis.**
Holdup time:	**Contact Aegis.**
Output power:	**5500W nominal.**
Output voltages:	**+28Vdc. See table 2 for details. Designed to meet portions of MIL-STD-1275B.**
Efficiency:	**85% Nominal, 83% Minimum.**
Output ripple:	**See table 2.**
Current Limit:	**Short circuit protected with automatic recovery.**
Start up time:	**Less than 1 second.**
Voltage set point:	**25-30Vdc**
Line/Load regulation:	**± 2%.**
Temperature regulation:	**± 0.02% / °C.**
Temperature:	**–40°C to +49°C Operating, -46ºC to +71ºC Non-operating.**
Cooling:	**Forced Fan Cooling.**
Package:	**Enclosed case chassis mounted.**
Dimensions:	**16.4” D X 15.9” W X 7” H (see mechanical drawing).**
Weight:	**50 lbs. maximum.**
Connectors:	**AC Input Connector P/N MS3454W20-14P. DC Output Connectors, two (2) each 3/8” Lugs, one Pos, one Neg. LED Status Output Connector P/N MS3474W12-8S.**
Environmental:	**Designed to meet portions of MIL-STD-810F, Ground Mobile. Call for details.**
Humidity:	**0 – 95% non-condensing.**
EMI:	**Designed to meet portions of MIL-STD-461E Requirement: CE102, CS101, CS114, and RE102. (Ground Range)**
Built in Test:	**Six Monitor Signals to drive six customer status LEDs. 3 Input AC Phase OK, 3 Output DC Pwr Ok.**

Table 2: Voltage Output (Nominal)

NG2602	V1			
Voltage	+28Vdc			
Current	196A			
Power	5500W			
Ripple*	280mVpk-pk*	Nominal (1%)		
*840mVpk-pk Max (3%) (20Mhz BW) Supersedes Mil-Std-1275B.				

Table 3: Connector Specifications

CONNECTION	SIGNAL
BLACK 3/8" STUD	**RETURN for VDC Output**
RED 3/8" STUD	**+28VDC Output**
P2 AC INPUT	**P/N MS3454W20-14P**
PIN A	NEUTRAL
PIN B	GROUND
PIN C	PHASE C
PIN D	PHASE A
PIN E	PHASE B
P1 STATUS	**P/N MS3474W12-8S**
PIN A	AC OK PHASE A
PIN B	AC OK PHASE B
PIN C	AC OK PHASE C
PIN D	DC OK #1
PIN E	DC OK #2
PIN F	DC OK #3
PIN G	+28VDC Status Power
PIN H	No Connection



DWG NO.	SH	REV

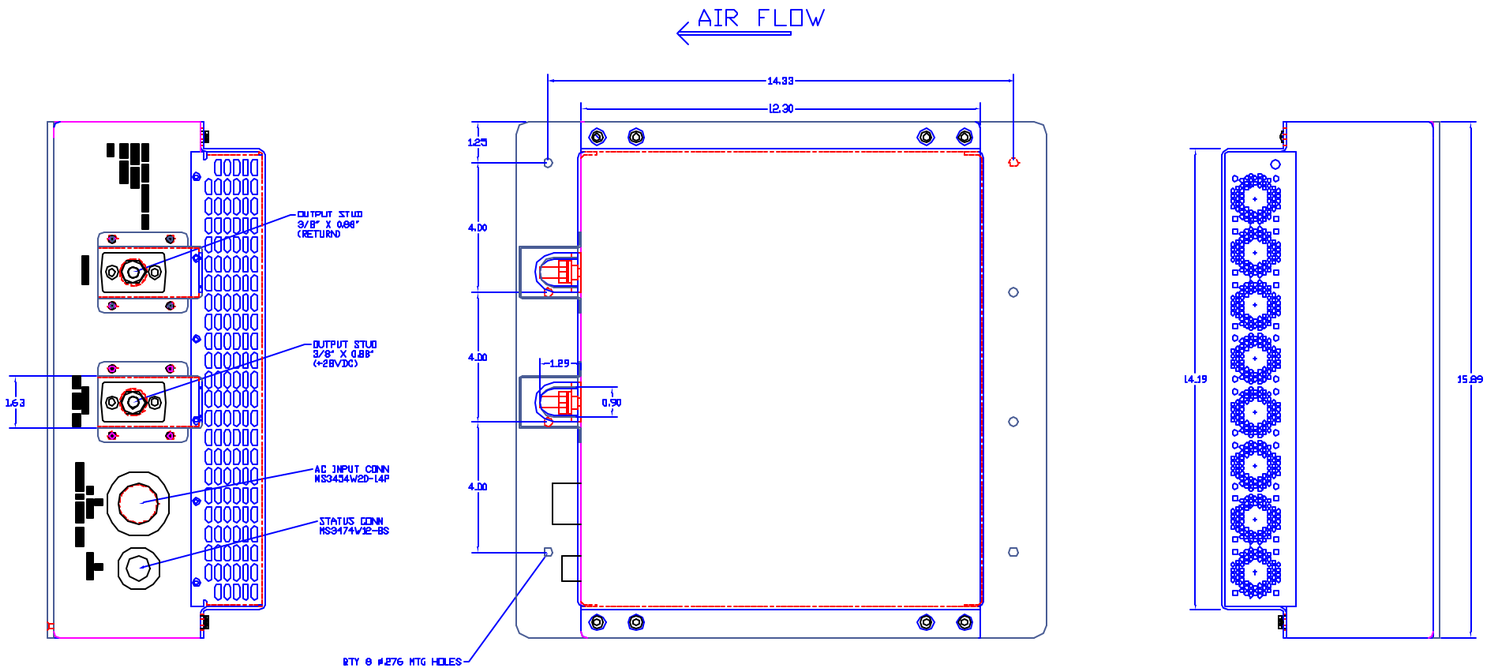
REVISIONS

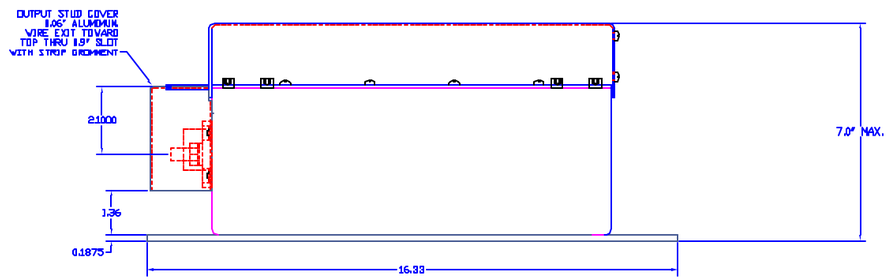
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A01	INITIAL RELEASE	XX/XX/XX	JFS
	B01	CORRECTED MOUNTING HOLE LOCATIONS	XX/XX/XX	JFS
	B02	CHANGED OUTPUT WIRE COVER, AND		
		REMOVED FAN CONNECTOR	04/10/07	JFS
	B03	REMOVED FAN CONNECTOR	12/10/07	MRA

NOTES: UNLESS OTHERWISE SPECIFIED

1. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M-1994.
2. MATERIAL: ALUMINUM ALLOY
3. FINISH: CHEMICAL AGENT RESISTANT IAW MIL-DTL-53072. COLOR PER P.O.

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





CONNECTOR J1, STATUS: MS3474W12-8S

PIN A - AC PHASE A OK
PIN B - AC PHASE B OK
PIN C - AC PHASE C OK
PIN D - DC #1 OK
PIN E - DC #2 OK
PIN F - DC #3 OK
PIN G - 28 VDC LED INPUT POWER

CONNECTOR J2, AC INPUT: MS3454W20-14P

PIN A - NEUTRAL
PIN B - CHASSIS GROUND
PIN C - AC PHASE C INPUT
PIN D - AC PHASE A INPUT
PIN E - AC PHASE B INPUT

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
FRACTIONS ± N/A DECIMALS .XX ± .02 .XXX ± .005 DEGREES ± .5

MATERIAL: SEE NOTE 2

FINISH: SEE NOTE 3

DO NOT SCALE DRAWING

CONTRACT NO.	
APPROVALS	DATE
DRAWN JFS	12/13/06
CHECKED	
PROJ. ENG.	
MFG.	
QUALITY	

AEGIS POWER SYSTEMS
MURPHY, NORTH CAROLINA

TITLE: NG2602 MOUNTING INFO

AEGIS P/N: NG2602

SIZE	FSCM NO.	DWG NO.	REV
D	06ES8	NG2602-M01	B03

SCALE 1/1 SHEET 1 OF 1