

NRA202

Overview

AC-DC Power Supply
 3 Phase "Y" 60Hz 120/208Vac Input
 Triple Output, 4500W Max Total

Market(s)

Military Cots

Typical Application(s)

Maximum Ratings

Product Highlights

This ruggedized military commercial off the shelf (Mil-Cots) ac-dc filtered 3 phase "Y" 120/208Vac input power supply has three +28Vdc outputs available with a total output capacity of 4500W. This COTS solution works well for MIL-COTS and is designed to meet portions of MIL-STD-810F vibration and shock, and designed to meet portions of MIL-STD-461F EMI requirements. In comparison to other power supplies using conventional technology, this package provides its users with higher efficiency (83% maximum), higher power factor (0.99), less weight and higher power output. This power supply incorporates a configured array of AEGIS Power System's cutting edge proprietary high reliability and high density 1PH60 power assemblies, leading the Mil-COTS industry in power density and technical performance.



Features

- 3 Phase "Y" 120/208Vac input.
- Triple Outputs @ 4500W total.
- MIL-STD-810F environmental specs. *
- MIL-STD-461F EMI specifications. *

* Designed to meet applicable portions of this standard. Contact Aegis Power Systems, Inc. for specific details.

Table 1: Maximum Continuous Operating Ratings

Parameter	Rating	Unit	Notes
Vin	120/208	Vac	3 Phase "Y" Input
Temperature range	-20 to +70	°C	Operating Range
Output power	4500	W	
Input power	5421	W	
+28Vdc output (V1)	2700	W	
+28Vdc output (V2)	900	W	
+28Vdc output (V3)	900	W	

About Us

Aegis Power Systems, Inc. specializes in the design, development, and manufacture of AC-DC and DC-DC power supplies for high-performance, rugged, critical, and specialty applications. Markets served include defense, industrial, communications, aircraft, shipboard, rack mount, embedded computing, and electric vehicle applications.

[Contact us](#) to find out if this item can be configured or redesigned to meet your specific technology need.

SPECIFICATIONS

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

Parameter	Notes
Input Voltage	Three Phase "Y", 120/208Vac, 47Hz - 63Hz.
Input Current	5.45A @ per phase @ 120/208Vac
Input Power	5625W (5682VA), all three phases combined.
Power factor	0.99
Total Output Power	4500W, all outputs combined.
Output Voltages	See table 2 for details.
Over voltage	117%, recycle input power to reset.
Efficiency	80%
Output Ripple	See table 2 for details.
Current Limit	Short circuit protected with automatic recovery.
Start-Up Time	700 msec. Maximum (After being enabled).
Voltage Set Point	± 2.5%.
Line/Load Regulation	± 2.5%.
Temperature Regulation	± 0.02% / °C.
Temperature	-20°C to +70°C Operating. -55°C to +100°C Non-Operating.
Cooling	Conduction through cold plate
Package	Chassis mounted enclosed metal case.
Dimensions	8.5" H x 9.75" W x 14.75" L (see mechanical drawing).
Weight	38 lbs.
Connectors	AC Input Connector: ITT Cannon; PN CA3102R24-22PF80. DC Output Connector: Nextek; PN HPR1754705Z10.
Vibration	Designed to meet MIL-STD-810F, Method 514.5, Procedure I. 4-15 Hz @ 0.030"; 16-25 Hz @ 0.020"; 26-33Hz @ 0.010".
Shock	Designed to meet MIL-STD-810F, Method 516.5, Procedure I. 40G, 11mSec half sine pulse.
Humidity	0 – 95% non-condensing.
EMI	Designed to meet MIL-STD-461F (CE101, CE102 and CS101).
Status	DC OK Signal, Opto Isolated, Opto on = DC OK.
Enable	Apply power to enable outputs, Opto Isolated.

Specifications subject to change without notice.

Table 2: Voltage Output (Nominal)

	V1	V2	V3	
Voltage	+28Vdc	+28Vdc	+28Vdc	+28Vdc
Current	96.4A	32A	32A	96.4A
Power	2700W	900W	900W	2700W
Ripple	150mVpk-pk*	150mVpk-pk*	150mVpk-pk*	150mVpk-pk*
Maximum total output power is 4500W (all DC outputs combined).				

* 20MHz Bandwidth Limited.

Table 3: Connector Specifications

Input Connector Pin-Out Assignment

Contact Designation	Conductor Circuit
A	Phase A input power
B	Phase B input power
C	Phase C input power
D	Power Ground

Status/Enable Connector Pin-Out Assignment

Contact Designation	Conductor Circuit
1	+Sense Output 1
2	- Sense Output 1
3	+Sense Output 2
4	- Sense Output 2
5	+Sense Output 3
6	- Sense Output 3
7	Enable Output 1 Anode
8	Enable Output 1 Cathode
9	Enable Output 2 Anode
10	Enable Output 2 Cathode
11	Enable Output 3 Anode
12	Enable Output 3 Cathode
13	Status Output 1 Collector
14	Status Output 1 Emitter
15	Status Output 2 Collector
16	Status Output 2 Emitter
17	Status Output 3 Collector
18	Status Output 3 Emitter
19	No Connection



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PDF Mechanical Drawing
As provided by Project Engineer