

UHP3AC4K5

Overview

AC-DC Power Supply, Water Resistant (Sealed Enclosure), Three Phase 50/60Hz 208Vac Input (Line-Line), +28 Output, 4500W Max

Market(s)

Defense, Industrial

Typical Application(s)

Electronic equipment rack, Onboard vehicle power



Product Highlights

This ruggedized Ultra High Power PSU operates from a 3-Phase 208Vac input. The single 4500W output capability is the power supply solution for military COTS applications. It is designed to meet the environmental requirements of MIL-STD-810F and EMI requirements of MIL-STD-461F. In comparison to other power supplies using conventional technology, this package provides users with higher efficiency (83% typical), less weight, and higher power output. This power supply is designed to power military electronic equipment including communication centers. Contact Aegis Power Systems, Inc. for specific details on what applicable portions of a military standard is offered for this power supply.

Features

- 3 Phase 208Vac
- MIL-STD-810F Environmental *
- MIL-STD-461F EMI *
- MIL-STD-1275E +28V Vehicle Power *
- MIL-STD-1472F Safety Markings *
- Enclosed case power supply
- Conformal Coated Circuit Boards

Table 1: Maximum Continuous Operating Ratings

Parameter	Rating	Unit	Notes
Vin max range	182 to 216	Vac	Line to Line (Neutral not connected)
Temperature	-20 to +50	°C	-40 to +100 Non-operating
Output Power	4500	W	(+50°C)
Input power	5420	W	(+50°C)
Max output	4500	W	Refer to Table 2 (Output)

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

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.)

Input Voltage	3 Phase, 208Vac L-L, 50/60 Hz, Nominal. Input range 47 - 63Hz, 182Vac - 216Vac Line-Line.
Input Current	16A per phase (4500W Output)
Input Power	5420W (4500W Output)
Power Factor	.97 (Passive Power Factor Correction)
Holdup Time	Contact Aegis Power Systems, Inc. for more details
Output Power	4500W Maximum
Output Voltages	+28Vdc - See table 2 for details
Efficiency	83% Nominal, 81% Minimum.
Output Ripple	See table 2.
Current Limit	Short circuit protected with automatic recovery
Start-Up Time	1 to 2 seconds
Voltage Set Point	25-30Vdc for +28VDC output (@25C ambient)
Line/Load Regulation	+/- 2%
Output Voltage Temperature Coefficient	-3.73 mV / °C.
Temperature	-20°C to +50°C Operating / -40°C to +100°C Non-operating
Cooling	Forced Fan Cooling. (Fans come on when needed.)
Package	Enclosed case chassis mounted.
Dimensions	8.44" D x 18" W x 17" H
Weight	60 lbs. maximum
Connectors	AC Input Connector MIL-DTL-22992 P/N: MS90558C32413P +28VDC Output Connectors, 1/2" Lugs, one Pos, one Neg.
Environmental	Designed to meet applicable portions of MIL-STD-810F, Ground Mobile
Humidity	0 – 95% non-condensing
EMI	Designed to meet applicable portions of MIL-STD-461F Requirement: CE102, CS101, CS114, and RE102. (Ground Range)

Specifications subject to change without notice.

Table 2: Voltage Output (Nominal)

UHP3AC9K-01	V1			
Voltage	+28Vdc			
Current	160A			
Power	4500W			
Ripple	280mVpk-pk*			

* 20MHz Bandwidth Limited.

Table 3: Connector Specifications

AC Input Connector MIL-DTL-22992 P/N: MS90558C32413P

Contact Designation	Conductor Circuit
A	PHASE A
B	PHASE B
C	PHASE C
N	NEUTRAL (not connected)
G	SAFETY GROUNDING

Status Connector P/N: MS3474W12-8S.

Contact Designation	Conductor Circuit
A	AC OK Collector *
B	DC OK Collector*
C	Over Temp * **
D	Enable Anode
E	Enable Cathode
F	
G	+5V Standby
H	Standby Return

*Common emitter internally tied to +5V Standby Return.

**Normally closed thermal switch (Open @ 90°C)

DC Output Studs

Connection	Circuit
Black ½" Stud	Return for DC output
Red ½" Stud	+28V Output

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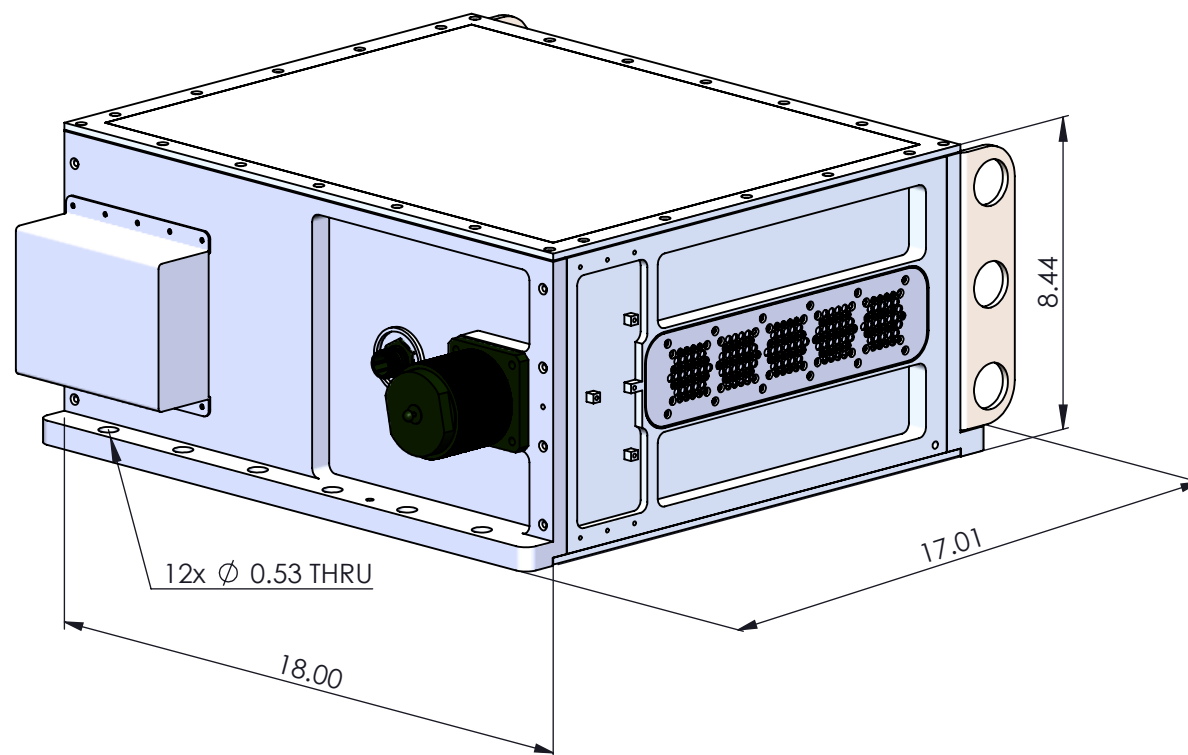
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NOTES: UNLESS OTHERWISE SPECIFIED

- 1. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M-1994.
- 2. FINISH: ROHS COMPLIANT CLEAR NON-CROMATE CHEMICAL FILM PER MIL-C-5541 CLASS 3, (IN ACCORDANCE WITH MIL-DLT-81706, TYPE II, CLASS 3).
- 3. MATERIAL: 6061-T6 ALUMINUM ALLOY

DWG NO.		SH		REV	
REVISIONS					
ZONE	REV	INITIAL RELEASE		DATE	APPROVED
	A01			9/18/18	TBL



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UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 TOLERANCES:
 FRACTIONAL ± N/A
 DEGREES: ± .5
 TWO PLACE DECIMAL ± .02
 THREE PLACE DECIMAL ± .005

REFER TO 3D PART :	
CTA803-M03 FRONT PLATE A03	
MATERIAL	SEE NOTE 2
FINISH	SEE NOTE 3
	DO NOT SCALE DRAWING

CONTRACT NO.		
APPROVALS	NAME	DATE
DRAWN	TL	9/18/18
CHECKED	MSM	
ENG APPR.	TL	
MFG APPR.	JM	
Q.A.	MH	

**AEGIS POWER SYSTEMS
MURPHY, NORTH CAROLINA**

TITLE:
UHP3AC4K51HS
 AEGIS P/N: ULTRA HIGH POWER SERIES

SIZE	FSCM NO.	DWG. NO.	REV
B	06ES8		

COMMENTS:

SCALE: 1:5

SHEET 1 OF 1

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