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(Document Rev A10, 7/17/20)

CTA803

Overview

AC-DC Power Supply
Three Phase 50/60Hz 208Vac Input (Line-Line)
+28 Output, 9000W Max
Water Resistant (Sealed Enclosure)

Market(s)

MIL-COTS, Industrial

Typical Application(s)

Electronic Equipment Rack

Product Highlights

This ruggedized military Commercial Off the Shelf (COTS) power supply operates from a 3-Phase 208Vac input. The single 9000W 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-461F. In comparison to other power supplies using conventional technology, this package provides its users with higher efficiency (83% Maximum), less weight and higher power output. This power supply is designed to power military 28Vdc electronic equipment including communication centers.

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

* 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 max range	182 to 216	Vac	Line to Line (Neutral not connected)
Temperature	–40 to +60	°C	-40 to +100 Non-operating
Output Power	9000	W	Combined (+60°C)
Input power	10840	W	Combined (+60°C)
Max +28Vdc output	9000	W	Refer to Table 2 (Output)

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	3 Phase, 208Vac L-L, 50/60 Hz, Nominal. Input range 47 - 63Hz, 182Vac - 216Vac Line-Line.
Input Current	32A per phase (9000W Output)
Input Power	10840W (9000W Output)
Power factor	.97 (Passive Power Factor Correction)
Holdup time	Contact Aegis.
Output power	9000W Maximum
Output voltages	+28Vdc See table 2 for details.
Efficiency	83% Maximum, 81% Minimum.
Output Ripple	See table 2.
Current Limit	Short circuit protected with automatic recovery.
Start-Up Time	1 to 2 second.
Voltage Set Point	25-30Vdc for +28Vdc output (@25C ambient)
Line/Load Regulation	+/- 5%
Temperature regulation	± 0.02% / °C.
Temperature	–40°C to +60°C Operating, -40ºC 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 25” H
Weight	115 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)

	V1
Voltage	+28Vdc
Current	322A
Power	9000W
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 @ 95°C)

DC Output Studs

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

NOTES: UNLESS OTHERWISE SPECIFIED

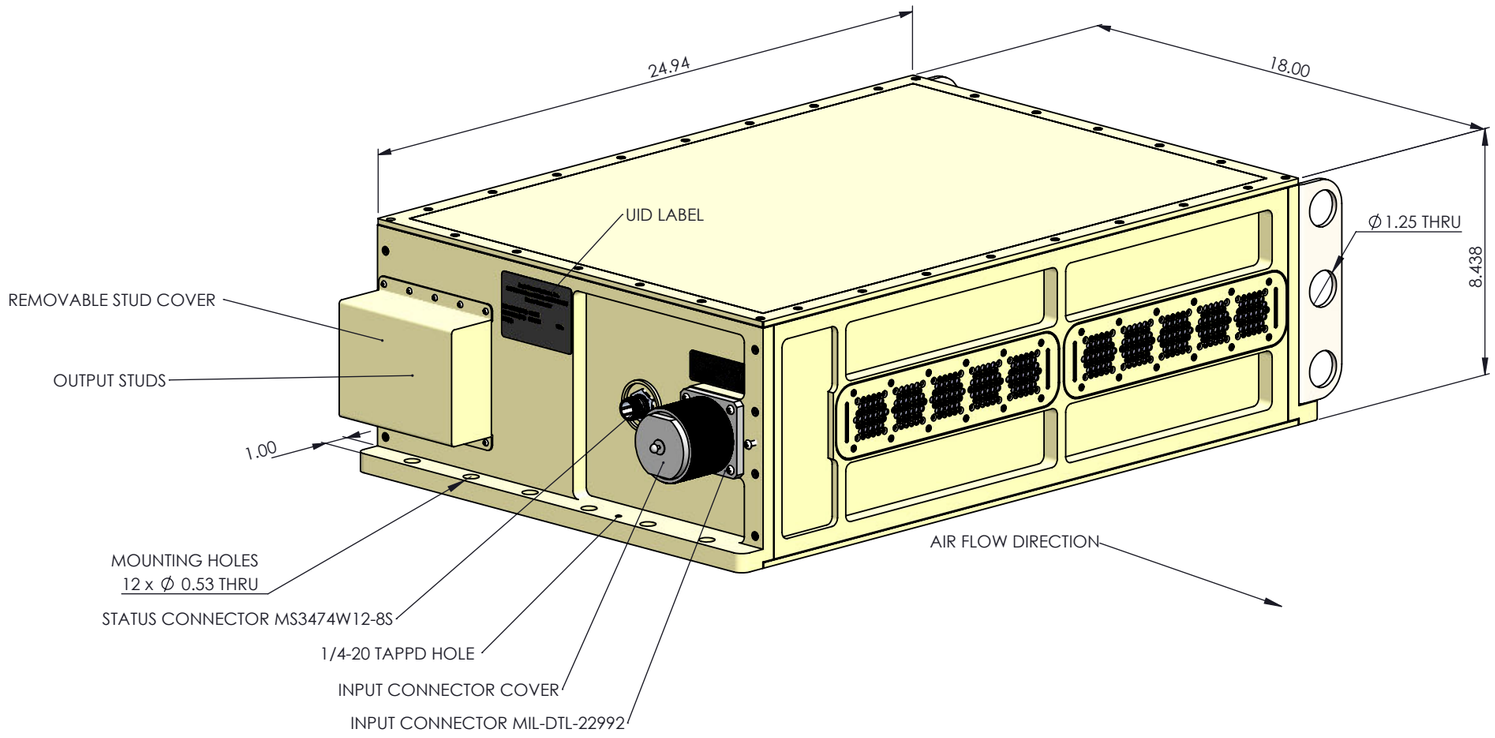
1. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M-1994.
2. MATERIAL:
3. FINISH:

DWG NO.		SH	REV

REVISIONS

ZONE	REV		DATE	APPROVED
	A01	INITIAL RELEASE	2/23/17	TBL
	A02	ADDED AIR FLOW NOTES	3/29/18	TBL
	A03	CONNECTOR LOCATION CHANGE	4/5/18	TBL
	A04	MECH REVIEW CHANGES	5/9/18	TBL
	B01	PRODUCTION RELEASE	6/25/18	TBL
	C01	CHANGE STUD COVER	10/8/18	TBL
	C02	HEATSINK MODS	4/25/19	TBL

CAD MAINTAIN CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.



NEXT ASSY	USED ON
APPLICATION	

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

MATERIAL

FINISH

DO NOT SCALE DRAWING

CONTRACT NO.

APPROVALS	NAME	DATE
DRAWN	TL	3/20/18
CHECKED	MVM	3/20/18
ENG APPR.	TL	3/20/18
MFG APPR.	JM	3/20/18
Q.A.	MH	3/20/18

COMMENTS:
GENERATED BY: SOLID WORKS

AEGIS POWER SYSTEMS
MURPHY, NORTH CAROLINA

TITLE:
CTA803-M00 ASSY

SIZE	FSCM NO.	DWG. NO.	REV
B	06ES8		C02

SCALE 1:5 | SHEET 1 OF 1