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## CTA803

AC-DC Power Supply

Water Resistant

(Sealed Enclosure)

(Document Rev A07, 7/23/18)

Three Phase 50/60Hz 208Vac Input (Line-Line)  
+28 Output, 9000W Max



Market: Defense, Industrial

Application: Electronic Equipment Rack

### 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 particular 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)

### 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% 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 design, development, and manufacture of Rapid Response Custom Switching Power Supplies for COTS, defense, industrial, telecom, aircraft, shipboard, rack mount, and electric powered vehicle applications. Contact Aegis Power Systems, Inc. for specific details on what applicable 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.)**

<b>Input voltage:</b>	<b>3 Phase, 208Vac L-L, 50/60 Hz, Nominal. Input range 47 - 63Hz, 182Vac - 216Vac Line-Line.</b>
<b>Input current:</b>	<b>32A per phase (9000W Output)</b>
<b>Input power:</b>	<b>10840W (9000W Output)</b>
<b>Power factor:</b>	<b>.97 (Passive Power Factor Correction)</b>
<b>Holdup time:</b>	<b>Contact Aegis.</b>
<b>Output power:</b>	<b>9000W Maximum</b>
<b>Output voltages:</b>	<b>+28Vdc See table 2 for details.</b>
<b>Efficiency:</b>	<b>83% Nominal, 81% Minimum.</b>
<b>Output ripple:</b>	<b>See table 2.</b>
<b>Current Limit:</b>	<b>Short circuit protected with automatic recovery.</b>
<b>Start up time:</b>	<b>1 to 2 second.</b>
<b>Voltage set point:</b>	<b>25-30Vdc for +28VDC output (@25C ambient)</b>
<b>Line/Load regulation:</b>	<b>+/- 2%</b>
<b>Output Voltage Temperature Coefficient:</b>	<b>-3.73 mV / °C.</b>
<b>Temperature:</b>	<b>-40°C to +60°C Operating, -40°C to +100°C Non-operating.</b>
<b>Cooling:</b>	<b>Forced Fan Cooling. (Fans come on when needed.)</b>
<b>Package:</b>	<b>Enclosed case chassis mounted.</b>
<b>Dimensions:</b>	<b>8.375" D x 18" W x 25" H</b>
<b>Weight:</b>	<b>115 lbs. maximum.</b>
<b>Connectors:</b>	<b>AC Input Connector MIL-DTL-22992 P/N: MS90558C32413P. +28VDC Output Connectors, 1/2" Lugs, one Pos, one Neg.</b>
<b>Environmental: Humidity:</b>	<b>Designed to meet applicable portions of MIL-STD-810F, Ground Mobile. 0 – 95% non-condensing.</b>
<b>EMI:</b>	<b>Designed to meet applicable portions of MIL-STD-461F Requirement: CE102, CS101, CS114, and RE102. (Ground Range)</b>

Specifications subject to change without notice.

**Table 2: Voltage Output (Nominal)**

<b>CTA803</b>	<b>V1</b>			
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.**

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

**Status Connector P/N: MS3474W12-8S.**

<b>Contact Designation</b>	<b>Conductor Circuit</b>
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**

<b>Connection</b>	<b>Circuit</b>
Black ½" Stud	Return for DC output
Red ½" Stud	+28V Output

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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 TL
	A02			ADDED AIR FLOW NOTES	3/29/18 TL
	A03			CONNECTOR LOCATION CHANGE	4/5/18 TL
	A04			MECH REVIEW CHANGES	5/9/18 TL
	B01			PRODUCTION RELEASE	6/25/18 TL

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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

CONTRACT NO.	APPROVALS	NAME	DATE	TITLE:
	DRAWN	TL	3/20/18	CTA803-M00 ASSY
	CHECKED	MSM		
	ENG APPR.			
	MFG APPR.	JM		
	Q.A.	MH		
	COMMENTS:			
NEXT ASSY	USED ON	MATERIAL	SEE NOTE 2	SIZE
		FINISH	SEE NOTE 3	<b>B</b>
				FSCM NO.
				06ES8
				DWG. NO.
				REV
				B01
				SCALE 1:5
				SHEET 1 OF 1

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