

GTA805

Overview

AC-DC Power Supply, Single Phase 47-440Hz 95-250Vac Input, Multiple Output, 190W Total

Market(s)

Defense, Industrial, Communication

Typical Application(s)

Communications equipment (air-interface-based, network based, handset-based)



Product Highlights

This ruggedized military Commercial Off the Shelf (COTS) power supply operates from Aircraft 400Hz power. The multiple 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 (82% typical), less weight, and higher power output. This power supply is designed to power low noise electronic equipment including radio wave communication detection centers. Contact Aegis Power Systems, Inc. for specific details on what applicable portions of a military standard is offered for this power converter power supply.

Features

- MIL-STD-704F Input Voltage*
- MIL-STD-810F Environmental *
- MIL-STD-461F EMI *
- 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	95 to 250	Vac	
Temperature	-40 to +85	°C	-20 to +120 Non-operating
Output Power	190	W	(+65°C)
Input power	232	W	(+65°C)
+3.6Vdc output	75	W	
+6Vdc output	105	W	
+12Vdc output	10	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.)

Input Voltage	95Vac to 250Vac, 47Hz to 440Hz (Optimized for 400Hz) Transient 70Vac to 270Vac 100ms (MIL-STD-704F Normal and Abnormal)
Input Current	2.0Amp @ 115Vac 400Hz input (190W Output)
Input Power	232W (190W Output)
Power Factor	0.97 typical @ 115Vac 400Hz
Holdup Time	20 milliseconds
Output Power	190W Maximum, (See Figure 1 for power derating)
Output Voltages	See table 2 for details
Efficiency	82% Nominal, 76% Minimum.
Output Ripple	See table 2.
Current Limit	Short circuit protected with automatic recovery
Start-Up Time	500 milliseconds Max.
Voltage Set Point	+/- 2%
Line/Load Regulation	+/- 2%
Output Voltage Temperature Coefficient	-3.73 mV / °C.
Temperature	-40°C to +85°C Operating / -20°C to +120°C Non-operating
Cooling	Customer provided forced fan cooling across attached heatsink.
Package	Enclosed case chassis mounted.
Dimensions	7.5" L x 4" W x 1.3" H
Weight	2.3 lbs. maximum
Connectors	Molex Minifit Jr. 39-30-0040 (Input Power) Molex Minifit Jr. 39-30-0240 (Output Power)
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 (with added AGA901 external Filter), CS101

Specifications subject to change without notice.

Table 2: Voltage Output (Nominal)

GTA805	V1	V2	V3
Voltage	+3.6Vdc	+6Vdc	+12Vdc
Current	21.7A	17.5A	0.834A
Power	75W	105W	10W
Ripple	20mVpk-pk*	30mVpk-pk*	120mVpk-pk*

* Ripple voltage is millivolts pk-pk measured with 20MHz Bandwidth Limited Scope.

Table 3: Connector Specifications

DC Input Connector Molex Minifit Jr. 39-30-0040

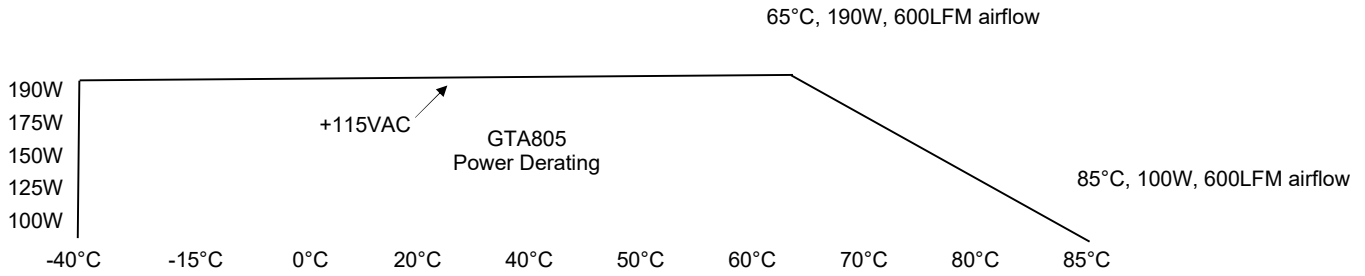
Contact Designation	Conductor Circuit
1	Spare
2	Chassis
3	Line
4	Neutral

Output Connector Molex Minifit Jr. 39-30-0240

Contact Designation	Conductor Circuit
1,2,3,4,5	+6VDC_OUT
6	+12VDC_OUT
7,8,9,10,11,12	+3.6VDC_OUT
13,14,15,16,17	6V_RTN (COMMON_RTN)
18	12V_RTN (ISOLATED RTN)
19,20,21,22,23,24	3.6V_RTN (COMMON_RTN)

Figure 1: Power Derating for Temperature and Input Voltage

Power Derating for Temperature and Input Voltage per below Graph



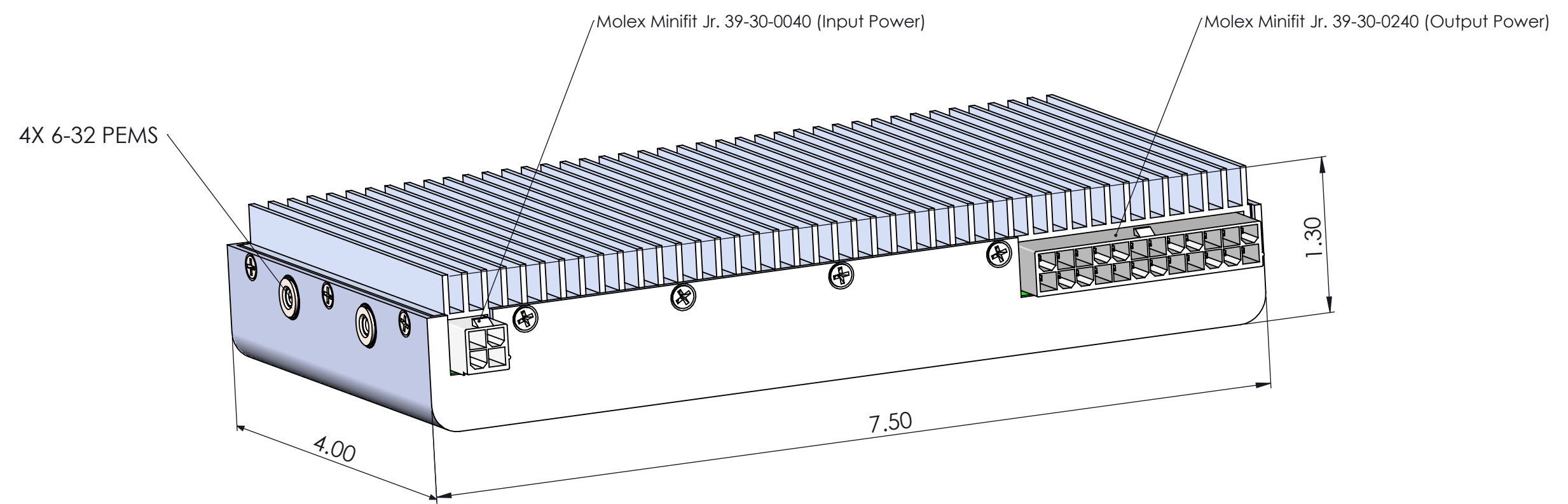
Forced Air Cooling 600LFM

NOTES: UNLESS OTHERWISE SPECIFIED

1. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M-1994.

DWG NO.		2		1	
		SH	REV	REVISIONS	
ZONE	REV	INITIAL RELEASE		DATE	APPROVED
	A01			8/21/18	TBL

NOTE: FOR QUOTING PURPOSES ONLY



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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	7/31/18
CHECKED	MSM	
ENG APPR.	TBL	
MFG APPR.	JM	
Q.A.	MH	

**AEGIS POWER SYSTEMS
MURPHY, NORTH CAROLINA**

TITLE: **GTA805**

AEGIS P/N:

SIZE	FSCM NO.	DWG. NO.	REV
B	06ES8		A01

SCALE: 1:1 SHEET 1 OF 2