Aegis Power Systems, Inc., P.O. Box 429, 805 Greenlawn Road, Murphy, NC 28906 Tel: (828) 837-4029 www.aegispower.com

GTA401-B

AC-DC
Power Supply

(Document Rev A01 8/3/16)

Single Phase 47- 440Hz 95/250Vac Input
Dual Output, 200W Max Total

Market: Military, Industrial

Application: Electronic Equipment Rack

Features

- 95/250Vac input.
- Designed to meet portions of MIL-Std-704F*
- Dual Output, 200W.
- Designed to meet portions of Mil-Std-810F environmental specs.*
- Designed to meet portions of Mil-Std-461F EMI specifications.*

* Contact AEGIS Power Systems for specific details.

Table 1: Maximum Ratings

Parameter	Rating	Unit	Notes
Vin max range	95 to 250	Vac	
Temperature range	–40 to +85	°C	
Output power	200	W	
Input power	230	W	
+3.8Vdc output	100	W	
+5.6Vdc output	100	W	

Product Highlights

This chassis mounted filtered ac-dc power converter has Power Factor Correction. Factory configured outputs (+3.8Vdc, +5.6Vdc) with 200W max total combined output. This COTS solution works well for Mil-cots and is designed to meet portions of Mil-Std-704F input, MIL-STD-810F vibration and shock, and MIL-STD-461E EMI requirements.

AEGIS Power Systems, Inc. specializes in the front end design, development, and manufacture of Rapid Response Custom Switching Power Supplies for defense, industry, telecomm, aircraft, shipboard, rack mount, electric powered vehicle, and Mil-Cots military power supply applications. Contact Aegis for specific details on what can be designed for your particular military power supply application and what portions of a particular military standard can be offered for that power supply.

SPECIFICATIONS

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

Input voltage:	Normal 95VAC to 250VAC, 47Hz to 440Hz (Optimized for 400Hz) Transient 70VAC to 270VAC, 100 msec Mil-Std-704F Normal and abnormal range
Input current:	2.1A @ 115VAC.
Input power:	234W@ 115VAC.
Power factor:	0.97 typical 360-440Hz.
Output power:	200W Max. All outputs combined.
Holdup time:	18 msec typical.
Output voltages:	See table 2 for details.
Efficiency:	83%/115VAC typical. full load.
Output ripple:	See table 2 for details.
Current Limit:	Short circuit protected with automatic recovery.
Start up time:	500 millisecond Max.
Voltage set point:	± 2%.
Line regulation:	± 2%.
Load regulation:	± 2%.
Temperature regulation:	± 0.02% / °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:	Chassis mounted enclosed metal case.
Dimensions:	9" x 5" x 1.5" see mech dwg.
Weight:	3.05 lbs. Typical.
Connector:	Molex Minifit Jr. 39-30-0040 (Input Power) Molex Minifit Jr. 39-30-0120 (Output Power)
Vibration:	MIL-STD-810F, Method 514.5, Procedure 1
Shock:	MIL-STD-810F, Method 514.5, Procedure 1
Humidity:	0 – 95% non-condensing.
EMI:	Mil-Std-461F, CE102, CS101

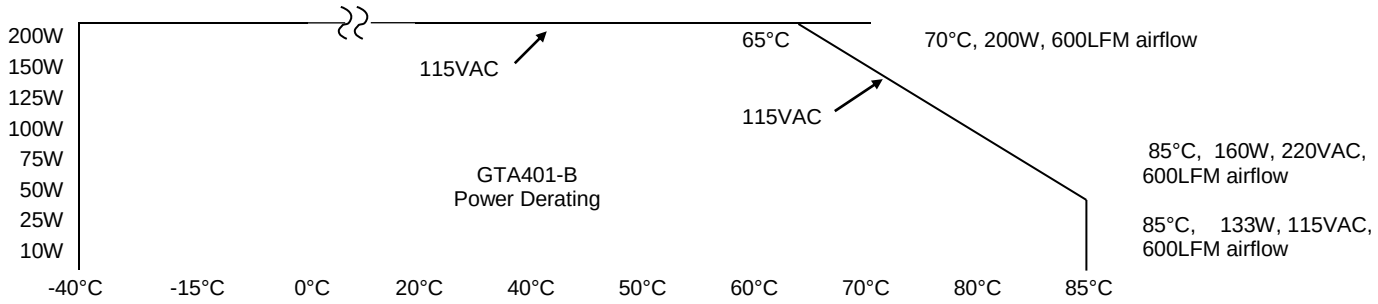
Table 2: Voltage Outputs

GTA401-B	V1	V2
Voltage	+3.8Vdc	+5.6Vdc
Current	26.8A	17.3A
Power	100W[1]	100W[1]
Ripple	150mVpk-pk[2]	150mVpk-pk[2]
Maximum total output power is 200W (all DC outputs combined).		

1 Isolated from input and chassis.
2 pk-pk 20MHz BW limit.

Figure 1: Power Derating for Temperature and Input Voltage

Power Derating for Temperature and Input Voltage per below Graph



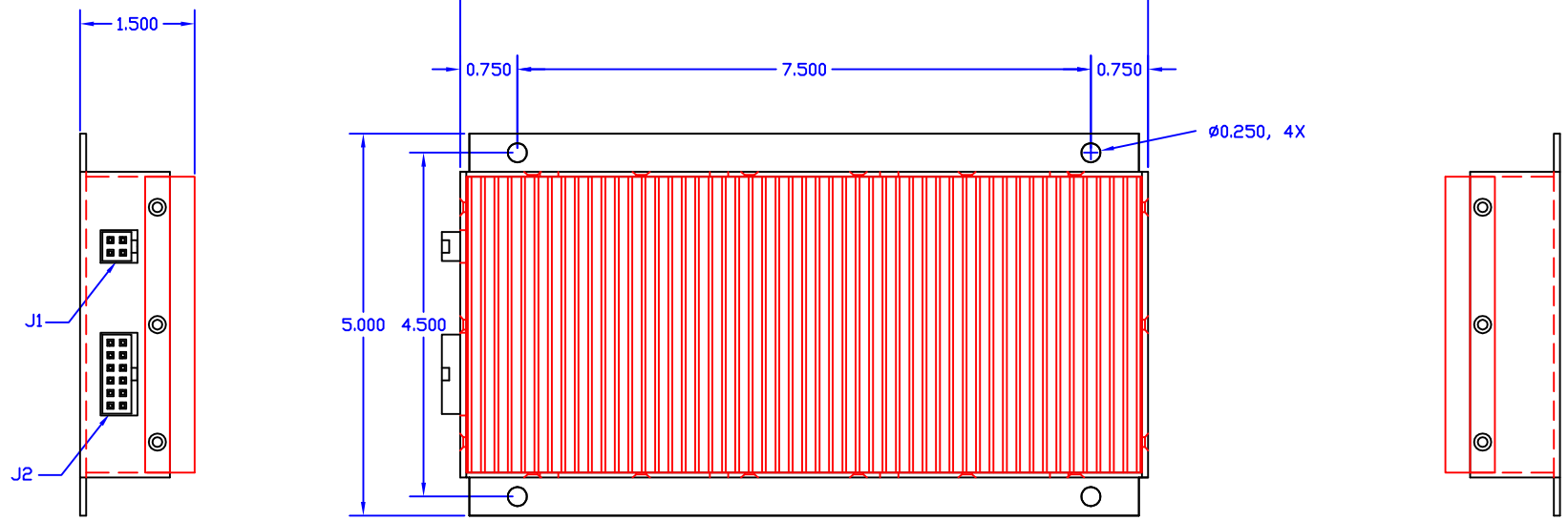
Forced Air Cooling 600LFM

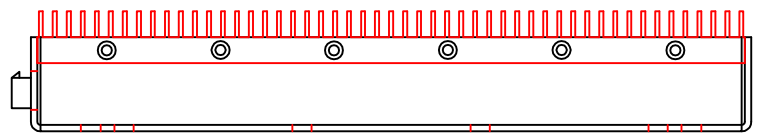
NOTES: UNLESS OTHERWISE SPECIFIED

1. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M-1994.
2. MATERIAL: ALUMINUM ALOY
3. FINISH: CHEMICAL FILM PER MIL-DTL-5541F, CLASS 3, TYPE II, COLOR CLEAR

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A01	Initial Release	8/3/16	TLO

CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.





NOTE: MIN 600 LFM EXPECTED AT MAX LOAD

MINI-FIT JR. 39-30-0040

CONNECTION	FUNCTION
J1:1	SPARE
J1:4	NEUTRAL
J1:2	CHASSIS GND
J1:3	LINE

MINI-FIT JR. 39-30-0120

CONNECTION	FUNCTION
J2:1	3.8V RETURN
J2:7	3.8V
J2:2	3.8V RETURN
J2:8	3.8V
J2:3	3.8V RETURN
J2:9	3.8V
J2:4	5.6V SENSE
J2:10	5.6V SENSE RTN
J2:5	5.6V RETURN
J2:11	5.6V
J2:6	5.6V RETURN
J2:12	5.6V

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± N/A DECIMALS .XX ± .02 .XXX ± .005 DEGREES ± .5

MATERIAL: SEE NOTE 2

FINISH: SEE NOTE 3

DO NOT SCALE DRAWING

CONTRACT NO.		
APPROVALS		DATE
DRAWN	TLO	6/11/14
CHECKED		
PROJ. ENG.		
MFG.		
QUALITY		

AEGIS POWER SYSTEMS
MURPHY, NORTH CAROLINA

TITLE: GTA401-B OUTLINE

AEGIS P/N: GTA401-B REV A01

SIZE	FSCM NO.	DWG NO.	REV
D	06ES8	GTA401-B-M00	A01

SCALE 1/1 SHEET 1 OF 1