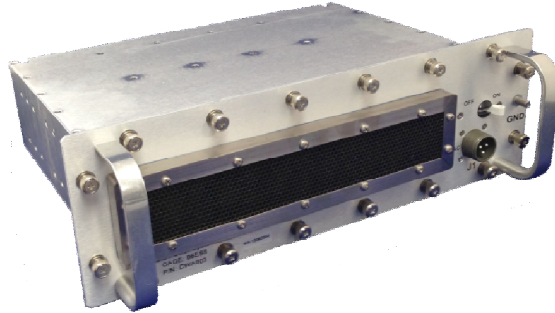


CWA003

**AC-DC
Power Supply N+1 redundant**

(Document Rev A04,09/17/15)

**Single Phase 60Hz 115Vac Input
Multiple Output, 2,012 Max Total**



Market: Military

Application: Electronic Warfare, VME

Features

- 115Vac +/- 10%, Single Phase, 60 Hz +/- 5% input power. Designed to meet portions of MIL-STD-704*
- Designed to meet portions of Mil-Std-810F environmental specs.*
- Designed to meet portions of Mil-Std-461F for surface ship applications.*
- VME Power.

* Contact AEGIS Power Systems for specific details.

Table 1: Maximum Ratings

Parameter	Rating	Unit	Notes
Vin max range	103.5 to 126.5	Vac	
Temperature range	0 to +50	°C	
Output power	2012	W	
+3.3Vdc output	277	W	On when enabled
+5Vdc output	847.5	W	On when enabled
+12Vdc output	450	W	On when enabled
-12Vdc output	19	W	On when enabled
+15Vdc output	18.75	W	On when enabled
+12Vdc output	400	W	On when power applied

Product Highlights

This chassis mount slide-in filtered ac-dc power converter has multiple outputs available with N+1 redundancy. This COTS solution works well for Mil-cots and is designed to meet portions of Mil-Std-704 input, MIL-STD-810F vibration and shock, and MIL-STD-461E EMI requirements. When compared to VME power supplies using conventional technology, this chassis mount forced air cooled ac-dc power supply converter provides users with higher efficiency (74%), lower weight (27.4 lbs), and higher power (up to 2012W, N+1 redundant).

[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.)

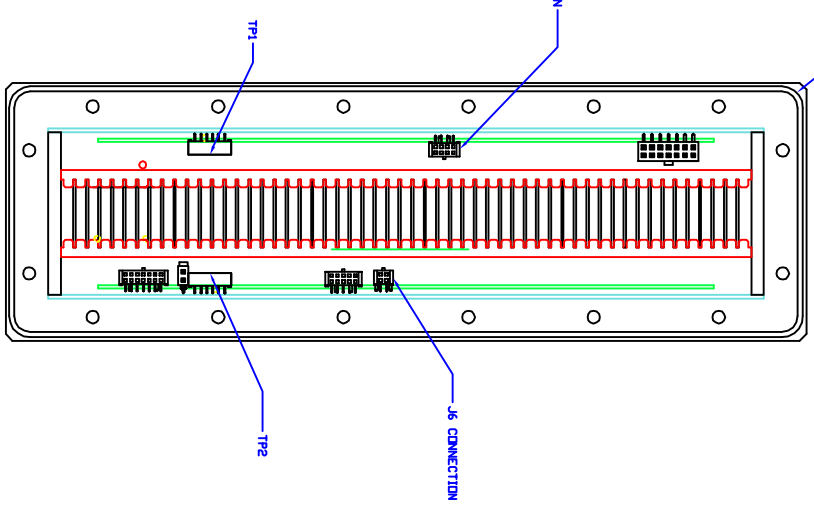
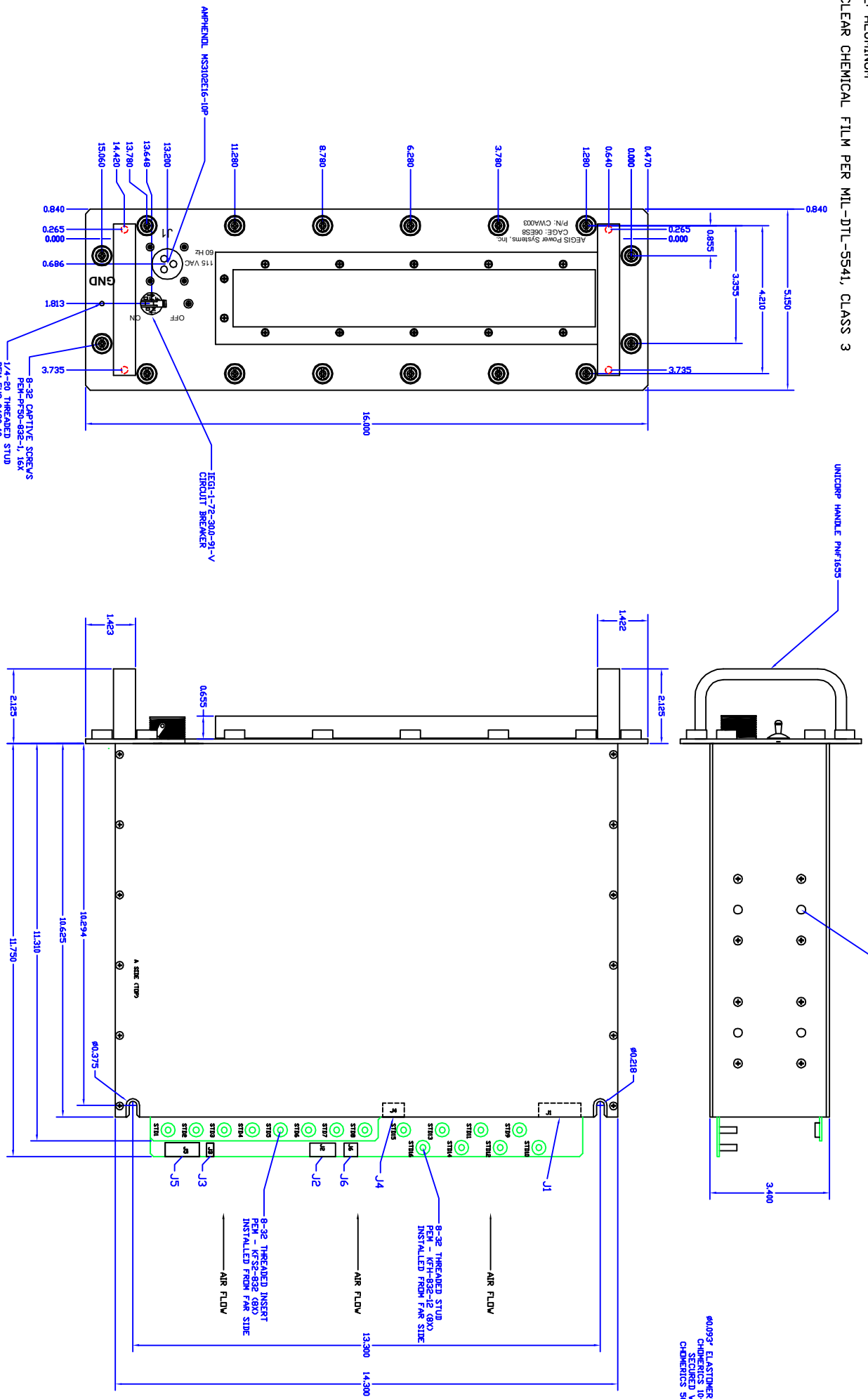
Input voltage:	Single Phase, 103.5Vac - 126.5Vac, 57Hz - 63Hz.
Input current:	23.65A @ 115Vac, typical.
Input power:	2,719W @ 115Vac, typical.
Power factor:	0.99 typical 57Hz - 63Hz.
Output power:	2012W Maximum. (N+1 redundant)
Output voltages:	See table 2 for details.
Efficiency:	74% Typical, 70% Minimum.
Output ripple:	See table 2 for details.
Current Limit:	Short circuit protected with automatic recovery.
Start up time:	500 mSec. Maximum.
Voltage set point:	± 2.5%.
Line regulation:	± 2.5%.
Load regulation:	± 2.5%.
Temperature regulation:	± 0.02% / °C.
Temperature:	0°C to +50°C Operating. -40°C to +70°C Non-Operating.
Cooling:	Internal fan, forced fan cooling across internal Heatsink.
Package:	Chassis mounted enclosed metal case.
Dimensions:	3.4"H x 11.75"W x 14.3" L (see mechanical drawing).
Weight:	27.4 lbs. Typical.
Connector:	(see mechanical drawing).
Vibration:	Designed to meet MIL-STD-810F, Method 514.5, Procedure I.
Shock:	Designed to meet MIL-STD-810F, Method 516.5, Procedure I.
Humidity:	0 – 95% non-condensing.
EMI:	Designed to meet MIL-STD-461E (CE101,CE102 and CS101).

Specifications subject to change without notice.

Table 2: Voltage Outputs

CWA003	V1	V2	V3	V4	V5	V6
Voltage	+3.3Vdc	+5Vdc	+12Vdc	-12Vdc	15Vdc	12Vdc
Current	84A	170A	37.5A	1.6A	1.25A	33.3A
Power	277W	847.5W	450W	19W	18.75W	400W
Ripple	50mVpk-pk	50mVpk-pk	100mVpk-pk	100mVpk-pk	100mVpk-pk	100mVpk-pk
Maximum total output power is 1887W (all DC outputs combined).						

- NOTES: UNLESS OTHERWISE SPECIFIED
1. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M-1994.
 2. MATERIAL: ALUMINUM
 3. FINISH: CLEAR CHEMICAL FILM PER MIL-DTL-5541, CLASS 3



ZONE	REV	DESCRIPTION	DATE	APPROVED
A07	FDR	PDR (3/14/11)	3/20/11	NVM
A08	PDR	CHANGES	3/15/11	NVM
A09	EMI	SCREEN	4/9/11	NVM
A10	DFSET	THE BODY TO FACE 0035*	4/13/11	NVM
A11	ADDED	J1 SILK, REMOVED CHASSIS SILK	4/28/11	NVM
A12	REMOVED	4 PIN TEST CONN. REAR VIEW	5/9/11	NVM
B01	SENSE	INDUCTOR BABY BOARD	6/23/14	NVM
C01	SENSE	INDUCTOR ADDED TO MAIN BOARD	10/20/14	NVM
		30A BRIDGE ADDED TO PFC	EC0#140018	

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

CVA003 CONNECTOR DEFINITION 3/30/11

8/32 THREAD	CONNECTION	FUNCTION
J11	12V No. Switch	
J12	12V Rtn. No. Switch	
J13	12V No. Switch	
J14	12V Rtn. No. Switch	
J15	12V No. Switch	
J16	12V Rtn. No. Switch	
J17	12V No. Switch	
J18	12V Rtn. No. Switch	
J19	12V No. Switch	
J20	12V Rtn. No. Switch	
J21	12V No. Switch	
J22	12V Rtn. No. Switch	
J23	12V No. Switch	
J24	12V Rtn. No. Switch	
J25	12V No. Switch	
J26	12V Rtn. No. Switch	
J27	12V No. Switch	
J28	12V Rtn. No. Switch	
J29	12V No. Switch	
J30	12V Rtn. No. Switch	
J31	12V No. Switch	
J32	12V Rtn. No. Switch	
J33	12V No. Switch	
J34	12V Rtn. No. Switch	
J35	12V No. Switch	
J36	12V Rtn. No. Switch	
J37	12V No. Switch	
J38	12V Rtn. No. Switch	
J39	12V No. Switch	
J40	12V Rtn. No. Switch	
J41	12V No. Switch	
J42	12V Rtn. No. Switch	
J43	12V No. Switch	
J44	12V Rtn. No. Switch	
J45	12V No. Switch	
J46	12V Rtn. No. Switch	
J47	12V No. Switch	
J48	12V Rtn. No. Switch	
J49	12V No. Switch	
J50	12V Rtn. No. Switch	
J51	12V No. Switch	
J52	12V Rtn. No. Switch	
J53	12V No. Switch	
J54	12V Rtn. No. Switch	
J55	12V No. Switch	
J56	12V Rtn. No. Switch	
J57	12V No. Switch	
J58	12V Rtn. No. Switch	
J59	12V No. Switch	
J60	12V Rtn. No. Switch	
J61	12V No. Switch	
J62	12V Rtn. No. Switch	
J63	12V No. Switch	
J64	12V Rtn. No. Switch	
J65	12V No. Switch	
J66	12V Rtn. No. Switch	
J67	12V No. Switch	
J68	12V Rtn. No. Switch	
J69	12V No. Switch	
J70	12V Rtn. No. Switch	
J71	12V No. Switch	
J72	12V Rtn. No. Switch	
J73	12V No. Switch	
J74	12V Rtn. No. Switch	
J75	12V No. Switch	
J76	12V Rtn. No. Switch	
J77	12V No. Switch	
J78	12V Rtn. No. Switch	
J79	12V No. Switch	
J80	12V Rtn. No. Switch	
J81	12V No. Switch	
J82	12V Rtn. No. Switch	
J83	12V No. Switch	
J84	12V Rtn. No. Switch	
J85	12V No. Switch	
J86	12V Rtn. No. Switch	
J87	12V No. Switch	
J88	12V Rtn. No. Switch	
J89	12V No. Switch	
J90	12V Rtn. No. Switch	
J91	12V No. Switch	
J92	12V Rtn. No. Switch	
J93	12V No. Switch	
J94	12V Rtn. No. Switch	
J95	12V No. Switch	
J96	12V Rtn. No. Switch	
J97	12V No. Switch	
J98	12V Rtn. No. Switch	
J99	12V No. Switch	
J100	12V Rtn. No. Switch	

AMPHENDL. MS3102E16-10P	CONNECTION	FUNCTION
INPUT A	LINE	
INPUT B	NEUTRAL	
INPUT C	CHASSIS GND	

AMPHENDL. MS3102E16-10P	CONNECTION	FUNCTION
J11	12V No. Switch	
J12	12V Rtn. No. Switch	
J13	12V No. Switch	
J14	12V Rtn. No. Switch	
J15	12V No. Switch	
J16	12V Rtn. No. Switch	
J17	12V No. Switch	
J18	12V Rtn. No. Switch	
J19	12V No. Switch	
J20	12V Rtn. No. Switch	
J21	12V No. Switch	
J22	12V Rtn. No. Switch	
J23	12V No. Switch	
J24	12V Rtn. No. Switch	
J25	12V No. Switch	
J26	12V Rtn. No. Switch	
J27	12V No. Switch	
J28	12V Rtn. No. Switch	
J29	12V No. Switch	
J30	12V Rtn. No. Switch	
J31	12V No. Switch	
J32	12V Rtn. No. Switch	
J33	12V No. Switch	
J34	12V Rtn. No. Switch	
J35	12V No. Switch	
J36	12V Rtn. No. Switch	
J37	12V No. Switch	
J38	12V Rtn. No. Switch	
J39	12V No. Switch	
J40	12V Rtn. No. Switch	
J41	12V No. Switch	
J42	12V Rtn. No. Switch	
J43	12V No. Switch	
J44	12V Rtn. No. Switch	
J45	12V No. Switch	
J46	12V Rtn. No. Switch	
J47	12V No. Switch	
J48	12V Rtn. No. Switch	
J49	12V No. Switch	
J50	12V Rtn. No. Switch	
J51	12V No. Switch	
J52	12V Rtn. No. Switch	
J53	12V No. Switch	
J54	12V Rtn. No. Switch	
J55	12V No. Switch	
J56	12V Rtn. No. Switch	
J57	12V No. Switch	
J58	12V Rtn. No. Switch	
J59	12V No. Switch	
J60	12V Rtn. No. Switch	
J61	12V No. Switch	
J62	12V Rtn. No. Switch	
J63	12V No. Switch	
J64	12V Rtn. No. Switch	
J65	12V No. Switch	
J66	12V Rtn. No. Switch	
J67	12V No. Switch	
J68	12V Rtn. No. Switch	
J69	12V No. Switch	
J70	12V Rtn. No. Switch	
J71	12V No. Switch	
J72	12V Rtn. No. Switch	
J73	12V No. Switch	
J74	12V Rtn. No. Switch	
J75	12V No. Switch	
J76	12V Rtn. No. Switch	
J77	12V No. Switch	
J78	12V Rtn. No. Switch	
J79	12V No. Switch	
J80	12V Rtn. No. Switch	
J81	12V No. Switch	
J82	12V Rtn. No. Switch	
J83	12V No. Switch	
J84	12V Rtn. No. Switch	
J85	12V No. Switch	
J86	12V Rtn. No. Switch	
J87	12V No. Switch	
J88	12V Rtn. No. Switch	
J89	12V No. Switch	
J90	12V Rtn. No. Switch	
J91	12V No. Switch	
J92	12V Rtn. No. Switch	
J93	12V No. Switch	
J94	12V Rtn. No. Switch	
J95	12V No. Switch	
J96	12V Rtn. No. Switch	
J97	12V No. Switch	
J98	12V Rtn. No. Switch	
J99	12V No. Switch	
J100	12V Rtn. No. Switch	

AMPHENDL. MS3102E16-10P	CONNECTION	FUNCTION
INPUT A	LINE	
INPUT B	NEUTRAL	
INPUT C	CHASSIS GND	

AMPHENDL. MS3102E16-10P	CONNECTION	FUNCTION
INPUT A	LINE	
INPUT B	NEUTRAL	
INPUT C	CHASSIS GND	

AMPHENDL. MS3102E16-10P	CONNECTION	FUNCTION
INPUT A	LINE	
INPUT B	NEUTRAL	
INPUT C	CHASSIS GND	

AMPHENDL. MS3102E16-10P	CONNECTION	FUNCTION
INPUT A	LINE	
INPUT B	NEUTRAL	
INPUT C	CHASSIS GND	

AMPHENDL. MS3102E16-10P	CONNECTION	FUNCTION
INPUT A	LINE	
INPUT B	NEUTRAL	
INPUT C	CHASSIS GND	

AMPHENDL. MS3102E16-10P	CONNECTION	FUNCTION
INPUT A	LINE	
INPUT B	NEUTRAL	
INPUT C	CHASSIS GND	

AMPHENDL. MS3102E16-10P	CONNECTION	FUNCTION
INPUT A	LINE	
INPUT B	NEUTRAL	
INPUT C	CHASSIS GND	

AMPHENDL. MS3102E16-10P	CONNECTION	FUNCTION
INPUT A	LINE	
INPUT B	NEUTRAL	
INPUT C	CHASSIS GND	

ADDED INTERCONNECT PINOUT 3/28/11
 J6 EDIT 3/29/11
 J4 AND J5 EDIT 3/29/11
 MOVE 12V Rtn. SWITCH FROM J4 TO J5
 TPI AND TPE TO 12PIN 12V Rtn. SWITCH
 ADDED 3/30/11
 ADDED INPUT CONNECTOR PINOUT 4/13/11

ADDED INTERCONNECT PINOUT 3/28/11
 J6 EDIT 3/29/11
 J4 AND J5 EDIT 3/29/11
 MOVE 12V Rtn. SWITCH FROM J4 TO J5
 TPI AND TPE TO 12PIN 12V Rtn. SWITCH
 ADDED 3/30/11
 ADDED INPUT CONNECTOR PINOUT 4/13/11

ADDED INTERCONNECT PINOUT 3/28/11
 J6 EDIT 3/29/11
 J4 AND J5 EDIT 3/29/11
 MOVE 12V Rtn. SWITCH FROM J4 TO J5
 TPI AND TPE TO 12PIN 12V Rtn. SWITCH
 ADDED 3/30/11
 ADDED INPUT CONNECTOR PINOUT 4/13/11

ADDED INTERCONNECT PINOUT 3/28/11
 J6 EDIT 3/29/11
 J4 AND J5 EDIT 3/29/11
 MOVE 12V Rtn. SWITCH FROM J4 TO J5
 TPI AND TPE TO 12PIN 12V Rtn. SWITCH
 ADDED 3/30/11
 ADDED INPUT CONNECTOR PINOUT 4/13/11

ADDED INTERCONNECT PINOUT 3/28/11
 J6 EDIT 3/29/11
 J4 AND J5 EDIT 3/29/11
 MOVE 12V Rtn. SWITCH FROM J4 TO J5
 TPI AND TPE TO 12PIN 12V Rtn. SWITCH
 ADDED 3/30/11
 ADDED INPUT CONNECTOR PINOUT 4/13/11

UNLESS OTHERWISE SPECIFIED, DIMENSIONS IN INCHES FRACTIONS DECIMALS ANGLES DEGREES

* N/A xx * .02 * 5 xxx * .005

APPROVALS:

DESIGNED	DATE	TITLE
MVM	12/06/10	CVA003 OUTLINE

AGIS POWER SYSTEMS
 MURPHY, NORTH CAROLINA

AGIS P/N: CVA003 REV F01

SIZE: F304 NO. D 06ES8 DNG NO. CVA003-M00 REV C01

SCALE: 1/1 SHEET: 1 OF 1