

BW2901

Overview

AC-DC Power Supply
 Single Phase 60Hz or 400Hz, 115 Vac Input
 300W, or 600W Isolated Power Supply
 With Current Sharing Capability

Market(s)

Military Cots

Typical Application(s)

Aircraft Electronic Equipment

Product Highlights

This single-phase power supply takes 115VAC input and converts it into an isolated and regulated DC output. Three output options available: Model BW2901-002 outputs 24Vdc 300W. Model BW2901-003 outputs 24Vdc 600W. Model BW2901-004 outputs 28Vdc 300W. Model BW2901-005 is 400Hz input and outputs 28Vdc at 300W. Model BW2901-006 outputs 28Vdc at 600W. Designed to meet applicable portions of MIL-STD-1399 sections 300 A/B.



Table 1: Maximum Continuous Operating Ratings

Parameter	Rating	Unit	Notes
Vin max range	107 to 123	Vac	Type 1, 1-phase
Frequency max range	58 to 62	Hz	Type 1, 1-phase
Temperature range	-40 to +71	°C	Operating
Input power	360 - 722	W	(Depending on output option)
24Vdc output	300	W	BW2901-002 (60Hz)
24Vdc output	600	W	BW2901-003 (60Hz)
28Vdc output	300	W	BW2901-004 (60Hz)
28Vdc output	300	W	BW2901-005 (400Hz)
28Vdc output	600	W	BW2901-006 (60Hz)

Features

- MIL-STD-1399 Section 300 A/B* (-002, -003, -004, -006 option)
- MIL-STD-704F* (-005 option)
- MIL-STD-810F* (-005 option)
- Single Output (Choose one of 5 standard options)

**Designed to meet applicable portions of this standard. Contact Aegis Power Systems, Inc. for specific details.

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
AC input Voltage	MIL-STD-1399 Section 300A/B Type I, 115Vac 60Hz (-001, -002, -003, -004, -006 option) MIL-STD-704 115Vac 400Hz (-005 option)
Input Current	3.13A – 6.27A @ 115Vac typical
Input Power	360W – 722W @ 115 typical
Power Factor	0.99 typical 47Hz - 63Hz (-001, -002, -003, -004, -006 option) 0.97 typical 393Hz – 407Hz (-005 option)
Output Power	See Table 2.
Current Share	Two or more units can be configured to current share with as much as 2400W capability.
Holdup Time	2ms
Output Voltages	See Table 2.
Efficiency	83% Typical
Current Limit	Short circuit protected with automatic recovery.
Start-Up Time	500ms Max.
Voltage Set Point	± 2.5%.
Line Regulation	± 2.5%.
Load Regulation	± 2.5%.
Temperature	-40°C to +71°C Operating. -40°C to +85°C Non-Operating.
Dimensions	9.5" x 9.5" x 2.32" (see mechanical drawing).
Weight	4.8Lbs for models: (-002, -004, -005), 5.1Lbs for model: (-003, -006)
Connector	Circular (see mechanical drawing)
Vibration	Designed to meet MIL-STD-167 (-002, -003, -004, -006 option) Designed to meet MIL-STD-810F, Method 514.5, Procedure I. (-005 option)
Shock	Designed to meet MIL-STD-901D (-002, -003, -004, -006 option) Designed to meet MIL-STD-810F, Method 516.5, Procedure I. (-005 option)
Noise	Designed to meet MIL-STD-740 (-002, -003, -004, -006 option)
Humidity	0 – 95% non-condensing.
EMI	Designed to meet MIL-STD-461C, CE01, CE03, CS01 (-002, -003, -004, -006 option) Designed to meet MIL-STD-461G, CE101, CE102, CS101 (-005 option)
Isolation	1000Vdc In-Out, 1500Vdc In-Chassis, 500Vdc Out-Chassis
Altitude	50kFt Operational (-005 option)

Specifications subject to change without notice.

Table 2: Voltage Output (Nominal)

	BW2901-002	BW2901-003	BW2901-004	BW2901-005	BW2901-006
Voltage	+24Vdc	+24Vdc	+28Vdc	+28Vdc	+28Vdc
Current	12.5A	25A	10.7A	10.7A	21.4A
Power	300W	600W	300W	300W	600W
Ripple	300mVp-p*	300mVp-p*	300mVp-p*	300mVp-p*	300mVp-p*
Operating Frequency	47Hz - 63Hz	47Hz - 63Hz	47Hz - 63Hz	393Hz – 407Hz	47Hz - 63Hz

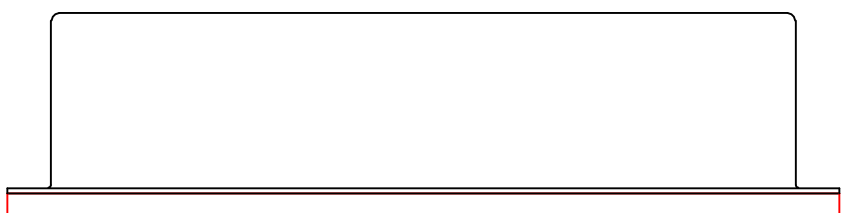
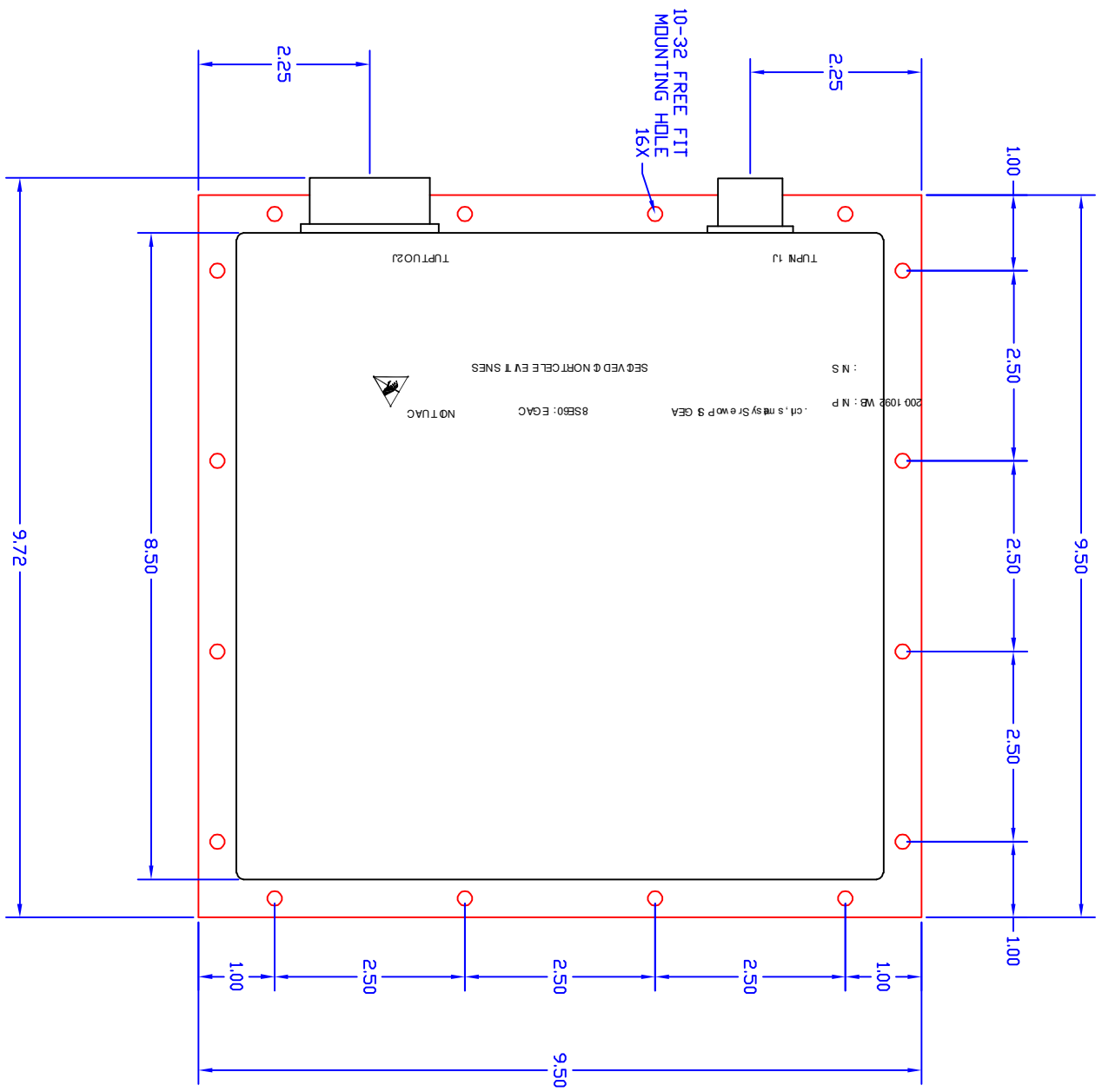
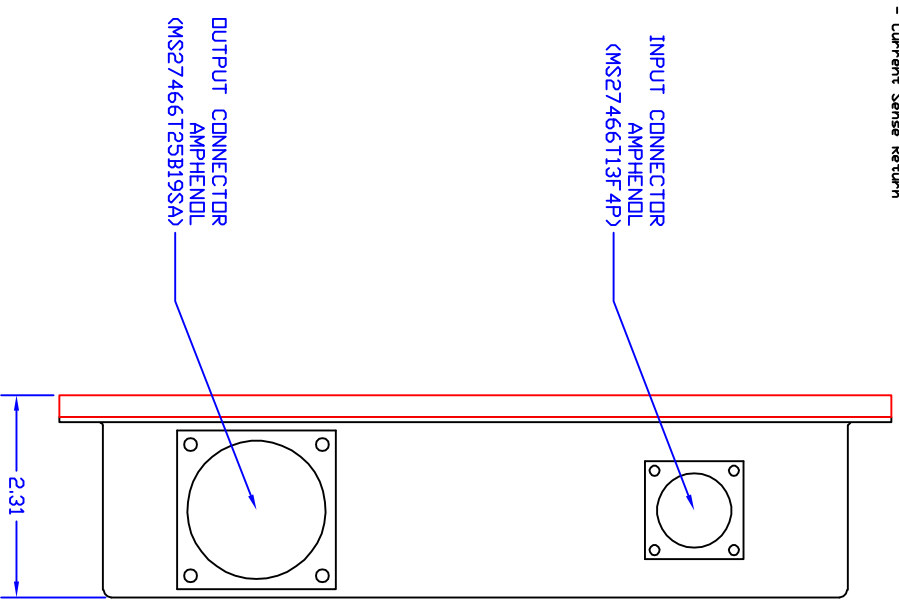
* 20 MHz BW limited

NOTES: UNLESS OTHERWISE SPECIFIED

- 1. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M-1994.
- 2. MATERIAL: ALUMINUM ALLOY
- 3. FINISH: CHEMICAL FILM PER MIL-DTL-5541F, CLASS 3, TYPE II, COLOR CLEAR
- 4. INPUT CONNECTOR
 - A-LINE
 - B-NEUTRAL
 - C-CHASSIS GND
 - D-OPEN
- 5. OUTPUT CONNECTOR
 - A - +V OUT
 - B - +V OUT
 - C - +V OUT
 - D - +V OUT
 - E - RETURN
 - F - RETURN
 - G - RETURN
 - H - RETURN
 - J - +V OUT
 - K - +V OUT
 - L - +V OUT
 - M - +V OUT
 - N - RETURN
 - P - RETURN
 - R - RETURN
 - S - +SENSE
 - T - SENSE
 - V - Current Sense Return

CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY

ZONE	REV	DESCRIPTION	DATE	APPROVED
A01		INITIAL RELEASE	XXXXX	XXX
A02		OUTPUT CONNECTOR PIN OUT	11/29/11	NVM
A03		MATERIAL AND FINISH	1/4/12	NVM
A04		CONN. FROM NUMBER TO LETTER	2/1/12	NVM



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

CONTRACT NO.	APPROVALS	DATE	TITLE
	MVM	10/28/09	SINLE PHASE PFC 650W 24V MECHANICAL LAYOUT
MATERIAL	CHECKED		AEGIS P/N: BW2901-002
SEE NOTE 2	FRBL ENR		
FINISH	FTG		
SEE NOTE 3	QUALITY		
DO NOT SCALE DRAWING	SIZE	F3DM NO.	DWG NO.
	D	06ES8	BW2901-002-M00
	SCALE	1/1	REV
			A04