

## MP8023

### AC-DC Power Supply

(Document Rev A03, 11/01/2015)



**Single Phase 115Vac 50/60/400Hz Input  
Multiple Output, 254W Max Total Power**

**Market: Military**

**Application: Missile Ground Support Equipment**

#### Features

- Battery Charging Circuit.
- LED Global Power Good Indicator.
- Output short protected, auto restart when short is removed.
- Designed to meet portions of MIL-STD-810 for shock bench handling, humidity, atmospheric pressure, sand, dust, and temperature.
- Designed to meet portions of MIL-STD-454 for fungi and bacteria exposure.

**Table 1: Maximum Ratings**

Parameter	Rating	Unit	Notes
Temperature	-45 to +49	°C	
Output Power	254	W	
+5Vdc output	125	W	Refer Table 2 (Outputs)
+7.75Vdc output	11.6	W	
-7.75Vdc output	11.6	W	
+15Vdc output	30	W	
-15Vdc output	30	W	
-48Vdc output	48	W	

#### Product Highlights

The MP8023 is a Mil-Cots military power supply used in a military defense application to provide DC power for missile ground support equipment. Input power can be 50/60/400Hz single phase 115Vac. This AC-DC single phase Mil-Cots military power supply features an LED global power indicator, a battery charging circuit, and short circuit protection with auto-restart after the short is removed. The MP8023 has an enclosed metallic case with attached forced air cooling fans and can operate in temperatures from -45°C to +49°C. The power supply weighs a maximum of 6.5lbs and is sized at 2.5"H x 7.7"W x 7.7"L.

**AEGIS Power Systems, Inc.** specializes in the front end design, development, and manufacture of Rapid Response Custom Switching Power Supplies for Mil-COTS, defense, industrial, telecomm, aircraft, shipboard, rack mount, and electric powered vehicle applications. Contact Aegis for specific details on what portions of a particular military standard are offered for this power converter power supply.

## **SPECIFICATIONS**

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

<b>Input voltage:</b>	105-135Vac, 47-440Hz.
<b>Power factor:</b>	0.99 typical.
<b>Output power:</b>	254W Max. See Table 2.
<b>Holdup time:</b>	Contact Aegis.
<b>Output voltages:</b>	See table 2 for details.
<b>Current Limit:</b>	Short circuit protected with automatic recovery when short is removed.
<b>Line regulation:</b>	+/-0.5% @ constant load.
<b>Load regulation:</b>	+/-1% no load to full load.
<b>Temperature:</b>	-45°C to +49°C Operating. -45°C to +71°C Non-Operating.
<b>Cooling:</b>	Attached forced air cooling fans.
<b>Package:</b>	Enclosed Metallic Case.
<b>Dimensions:</b>	2.5"H x 7.7"L x 7.7"W.
<b>Weight:</b>	6.5 lbs. Typical.
<b>Vibration:</b>	Operating: +4dB/ octave.
<b>Shock:</b>	Designed to meet MIL-STD-810, method 516.3, procedure VI.
<b>Humidity:</b>	0 - 95% non-condensing.
<b>EMI:</b>	Designed to meet FCC Class A EMI requirements.

Specifications subject to change without notice.

**Table 2: Voltage Outputs**

<b>MP2083</b>	<b>V1</b>	<b>V2</b>	<b>V3</b>	<b>V4</b>	<b>V5</b>	<b>V6</b>	
Voltage	+5Vdc	+7.75Vdc	-7.75Vdc	+15Vdc	-15Vdc	-48Vdc	
Current	25A	1.5A	1.5A	2A	2A	1A	
Power	125W	11.6W	11.6W	30W	30W	48W	
Ripple	100Vpk-pk	100Vpk-pk	100pk-pk	150Vpk-pk	150Vpk-pk	150Vpk-pk	
Maximum total output power is 254W (all DC outputs combined).							

**Pin Out Connector Assembly Charts**

**J1**

<b>Pin 1</b>	<b>CHASSIS</b>
<b>2</b>	<b>110 RTN</b>
<b>3</b>	<b>110 VAC</b>

**J2**

<b>Pin 1</b>	<b>RESERVED</b>
<b>2</b>	<b>POWER GOOD</b>
<b>3</b>	<b>+5V SHARE</b>
<b>4</b>	<b>+5V +SENSE</b>
<b>5</b>	<b>+5V -SENSE</b>

**J3**

<b>Pin 1</b>	<b>+5V</b>
<b>2</b>	<b>+5V</b>
<b>3</b>	<b>+5V</b>
<b>4</b>	<b>+5V</b>
<b>5</b>	<b>+5V RTN</b>
<b>6</b>	<b>+5V RTN</b>
<b>7</b>	<b>+5V RTN</b>
<b>8</b>	<b>+5V RTN</b>
<b>9</b>	<b>+5V RTN</b>
<b>10</b>	<b>+5V RTN</b>

**J4**

<b>Pin 1</b>	<b>+7.5V</b>
<b>2</b>	<b>+7.5V RTN</b>
<b>3</b>	<b>-7.5V</b>
<b>4</b>	<b>-7.5V RTN</b>

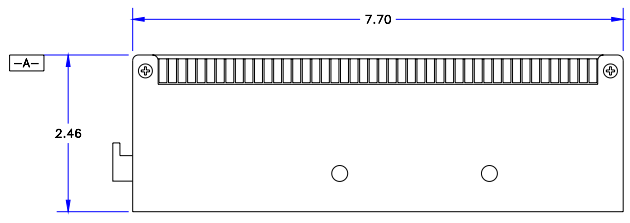
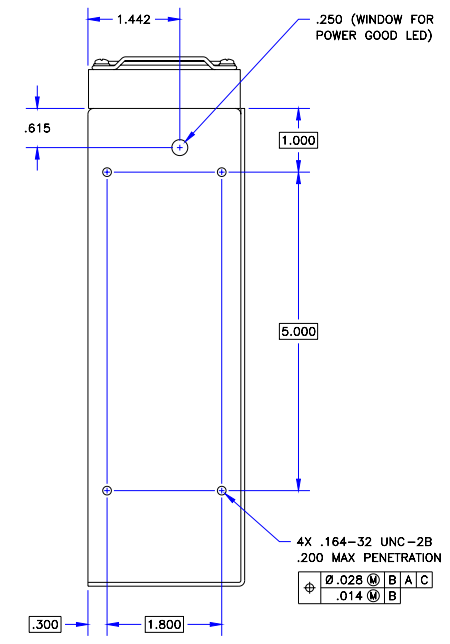
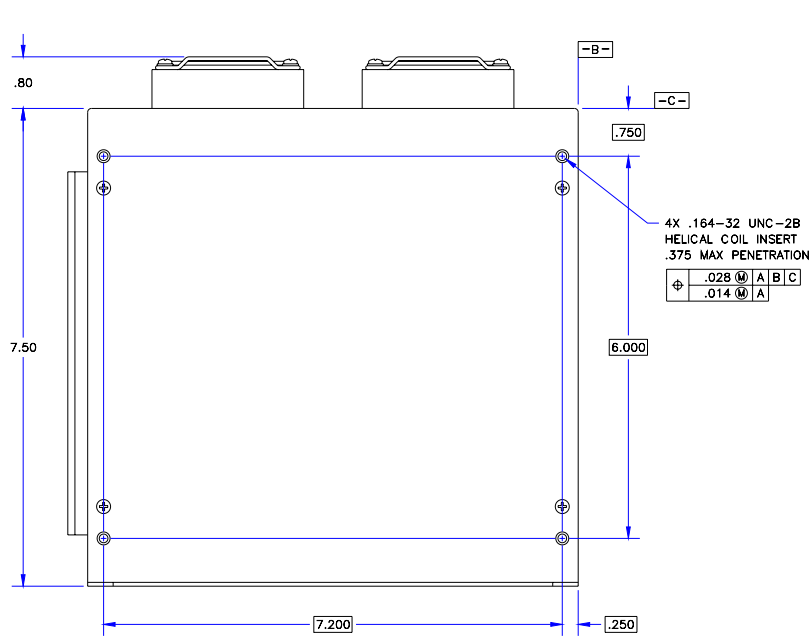
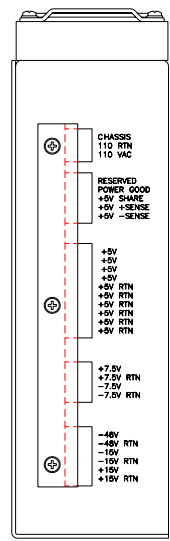
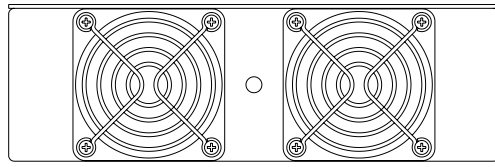
**J5**

<b>Pin 1</b>	<b>-48V</b>
<b>2</b>	<b>-48V RTN</b>
<b>3</b>	<b>-15V</b>
<b>4</b>	<b>-15V RTN</b>
<b>5</b>	<b>+15V</b>
<b>6</b>	<b>-15V RTN</b>

DWG NO.		SH		REV		1	
ZONE		REV		DESCRIPTION		DATE	
						APPROVED	

NOTES: UNLESS OTHERWISE SPECIFIED  
 1. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M-1982.

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



INTERFACE CONTROL DRAWING

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CONTRACT NO.		AEGIS POWER SYSTEMS MURPHY, NORTH CAROLINA	
APPROVALS	DATE	TITLE	
DRAWN L. CHOATE	990513	POWER SUPPLY	
CHECKED			
PROJ. ENG.			
MFG.		SIZE	FSCM NO.
QUALITY		D	06ES8
		DWG NO.	MP8023-M01
		SCALE	1/1
		REV	3
		SHEET 1 OF 1	

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS DECIMALS DEGREES	
& N/A	.02 & .5
.00X	.005
MATERIAL	
FINISH	
NEXT ASSY	USED ON
APPLICATION	DO NOT SCALE DRAWING