

ELPAC MTA040 SERIES CLASS I

40 Watt
Medical Open Frame Power Supply

- Medical Approval – IEC/EN60601-1 Class I 3.1 Edition
- EMC safety - IEC/EN 60601-1-2 4th edition
- Low Leakage Current
- High Efficiency: Level V
- High Power Density 4.7W/in³
- Lifetime Expectation >5 years
- Floating Output
- 5-Year Limited Warranty



INPUT	
Input Voltage	90 – 264VAC (100 – 240VAC Nominal)
Input Frequency	47 – 63Hz (50-60Hz Rated)
Input Current	1.0A-0.6A rms
Inrush Current	<37A at 230VAC cold start
Power Factor	N/A
Zero Load Power	<0.3W
Earth Leakage Current (Typical)	<200µA @ 132VAC @ 60Hz
	<400µA @ 264VAC @ 60Hz
Touch Leakage Current	<50µA @ 132VAC @ 60Hz
	<100µA @ 264VAC @ 60Hz

OUTPUT	
Output Voltage	See Table
Total Regulation	±5%
Minimum Load	No minimum load required
Start-Up Delay	<0.25s
Hold-Up Time	>10ms at any input voltage of full load
Ripple & Noise	<1% pk-pk **
Over Voltage Protection	110 – 135%
Over Temperature Protection	Active - Recoverable; Passive - Non recoverable
Over Current Protection	120 – 180%
Short Circuit Protection	Shutdown, auto-restart (hiccup mode)

Notes

**Ripple and noise measured with 20MHz bandwidth; 10µF tantalum capacitor in parallel with a 0.1µF ceramic capacitor.

Model Number	Output Voltage	Output Current	Forced Air Current ¹	Total Regulation ²	Typical Efficiency ³
MTA040009A	9.0V	4.44A	5.3A	±5%	85%
MTA040012A	12.0V	3.33A	4.0A	±5%	87%
MTA040015A	15.0V	2.67A	3.2A	±5%	88%
MTA040024A	24.0V	1.67A	2.0A	±5%	87%

Notes

1) Maximum peak load (48W) lasting 500ms with a maximum 10% duty cycle.

2) Includes initial setting, line regulation, load regulation, and thermal drift.

3) Typical Efficiency at 40W full Load 115VAC.

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POWER

General

Efficiency	Avg. Efficiency 87% @ 115VAC; Avg. Efficiency 87% @ 230VAC;
MTBF	min. 200,000 hours, SR-332 issue 3
Size	4.00" (101.6mm) x 2.00" (50.8mm) x 1.06" (26.9mm)
Weight	0.29 LBS (0.13 Kg)
Power Density	4.7W/in ³
Altitude (Operating/ Non Operating)	3000M

Environmental

Operating Temperature	0–70°C (Full load to 50°C, derate linearly to 50% load at 70°C)
Storage Temperature	-40°C to +85°C
Relative Humidity	5-93%, non-condensing
Cooling	Natural Convection (40W)
Vibration	Unites meet MIL-STD-810G Figure 514.6C-1 category 4

EMC & Safety

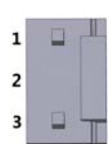
Emissions	FCC class B, CISPR11 class B IEC/EN60601-1-2(Ed.4) EN61000-3-2, -3
Immunity	EN61000-4-2, -3, -4, -5, -6, -11
Certified by TUV to the following:	cTUVus
	ANSI/AAMI ES60601-1:2005+A2+A1
	CAN/CSA-C22.2 No.60601-1:14
	CB per IEC60601-1 3.1 Edition
	CE marked to LVD and CE EMC

Input & Output Configuration

Standard Input Cable	Not Provided, input mating connector: AMP#640250-3 or equivalent
Connection on Power Supply Body	AMP#640445-3 or equivalent
Standard Output Cable	Not Provided
Output Cable Cord Size	N/A
Output Cable Connector	AMP#640445-6 or equivalent
Output Cable Mating Connector	AMP#640250-6 or equivalent

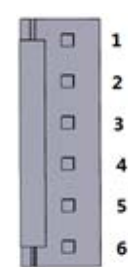
Input Pin Assignments

Pin 1	AC Line
Pin 2	not assembled
Pin 3	AC Neutral

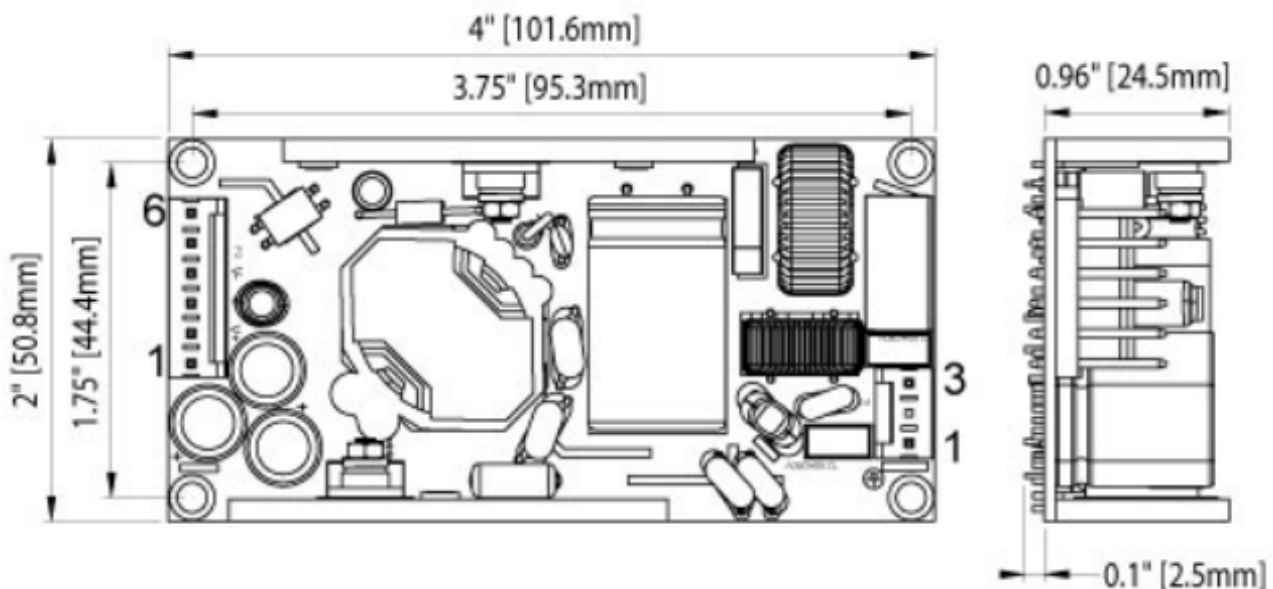


Output Pin Assignments

Pin 1	+V1
Pin 2	+V1
Pin 3	Return
Pin 4	Return
Pin 5	N/C
Pin 6	N/C



Mechanical Drawing



MTA040-DWG