



MVA100 Series

100 Watt Medical Open Frame Power Supply

- High Efficiency: Level V
- Up to 120W with Forced Air
- High Power Density 8.7W/in³
- Hold-up Time >24ms at full load
- EISA & CEC Compliant
- Output Floating
- Medical Approval - EN60601-1 Class I 3rd Edition
- Class II available, consult factory

Elpac Part Number	Output Voltage	Output Current ¹	Peak Current	Total Regulation ²	Typical Efficiency ³
MVA100012A	12.0V	8.3A	10.0A	±5%	90%
MVA100015A	15.0V	6.7A	8.0A	±5%	90%
MVA100018A	18.0V	5.6A	6.7A	±5%	91%
MVA100024A	24.0V	4.2A	5.0A	±5%	92%

Notes

¹ With convection cooling. Peak load (120W) lasting 500ms with a maximum 10% duty cycle.

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

³ Typical at 115VAC and full load.

Input

Input Voltage	85 - 264VAC 100 - 240VAC Nominal
Input Frequency	47 - 63Hz
Input Current	<2A rms
Inrush Current	<37A at 230VAC cold start
Zero Load Power Consumption	<0.5W
Patient Leakage Current	<50 μ A @ 132VAC @ 60Hz <80 μ A @ 264VAC @ 60Hz
Touch Leakage Current	<125 μ A @ 132VAC @ 60Hz <175 μ A @ 264VAC @ 60Hz

Output

Output Voltage	See Table
Total Regulation	+/-5%
Minimum Load	No minimum load required
Start-Up Delay	<750ms
Hold-Up Time	>24ms at any input voltage
Ripple & Noise	<1% pk-pk ** *
Over Voltage Protection	110-135%
Over Temperature Protection	Active - Recoverable; plus Passive - Non Recoverable
Over Current Protection	120 - 180%
Short Circuit Protection	shutdown, auto-restart (hiccup mode)

Notes

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


General

Efficiency	Avg Efficiency 88.6% @ 115VAC; 89.5% @ 230VAC
MTBF	min. 200,000 hours demonstrated
Size	4.50" x 2.5" x 1.22" 114mm x 63.5mm x 30.9mm
Weight	0.45 lbs (.20 kg)
Power Density	8.7W/in ³ (at 120W)

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	5-95%, non-condensing
Cooling	Natural Convection (100W) or Forced Air (120W)
Vibration	All units production tested to 19.6m/s ²

EMC & Safety

Emissions	FCC class B, CISPR11 class B EN61000-3-2, -3
Immunity	EN61000-4-2, -3, -4, -5, -6, -8, -11
Certified by TUV to the following:	cTUVus
	UL 60601-1
	CAN/CSA-22.2 No.601.1-M90
	CB per IEC60601-1 2nd and 3rd Edition
	CE marked to LVD

Input Configuration

Connection on Power Supply Body	AMP p/n 640445-3 (or equivalent)
Mating Connector	AMP p/n 640250-3 (or equivalent)

Output Configuration

Connector (PSU Side)	AMP p/n 640445-8 (or equivalent)
Mating Connector	AMP p/n 640250-8 (or equivalent)

Input Pin Assignments (P1)

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

Output Pin Assignments

Pin 1	+V1
Pin 2	+V1
Pin 3	+V1
Pin 4	+V1
Pin 5	Return
Pin 6	Return
Pin 7	Return
Pin 8	Return

