



MSMP115 Series

115 Watt Medical Open Frame Power Supply

- Wide Range AC Input
- Power Factor Correction
- External Fan Power
- Fully regulated DC output
- Output Floating
- High Efficiency
- Medical Approval - EN60601-1 Class I
- EISA, RoHs Compliant

Elpac Part Number	Output Voltage	Output Current ¹	Forced Air Current ²	Adjustable Fan Output Current ³	Typical Efficiency ⁴
MSMP11512F	12.0V	6.7A	9.6A	100mA	85.5%
MSMP11515F	15.0V	5.3A	7.7A	100mA	86%
MSMP11524F	24.0V	3.3A	4.8A	100mA	87.6%
MSMP11528F	28.0V	2.9A	4.2A	100mA	86%

Notes

1 With convection cooling. Peak load (115W) lasting up to 500ms with a maximum 10% duty cycle.

2 Sustained output current with minimum 150 LFM.

3 Voltage tolerance of 12V-14.81V

4 Typical at 115VAC.

Input

Input Voltage	85 - 264VAC 100 - 240VAC Nominal
Input Frequency	47 - 63Hz
Input Current	<2A @ 100VAC
Inrush Current	<37A at 230VAC cold start
Power Factor	>0.99
Zero Load Power Consumption	<8W @115VAC
Touch Leakage Current	<250 μ A @ 132VAC @ 60Hz <300 μ A @ 264VAC @ 60Hz

Output

Output Voltage	See Table
Total Regulation	+/-5%
Minimum Load	No minimum load required
Start-Up Delay	<300ms
Hold-Up Time	>24ms at full load, 115VAC
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	Pulsing Mode Auto Recovery

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 86% @ 115VAC; 87% @ 230VAC
MTBF	min. 200,000 hours demonstrated
Size	5.25" x 3.30" x 1.50" 133.35mm x 83.82mm x 38.10mm
Weight	1.1 lbs (0.47 kg)
Power Density	4.4W/in ³

Environmental

Operating Temperature	0 – 50°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 (80W) or Forced Air (115W)
Vibration	All units production tested to 19.6m/s2

EMC & Safety

Emissions	FCC class B, CISPR11 class B, EN60601-1-2
Immunity	EN61000-3-2 Class D EN61000-3-3
Certified by UL to the following:	UR/cUR
	UL 60601-1
	CAN/CSA-22.2 No.601.1-M90
	CB per IEC60601-1
	CE marked to LVD

Input Configuration (P1)

Connector	AMP P/N 640445-5
Mating Connector	AMP P/N 640250-5
Pin 1	AC Line
Pin 2	<not assembled>
Pin 3	AC Neutral
Pin 4	<not assembled>
Pin 5	Ground

Output Configuration (P3)

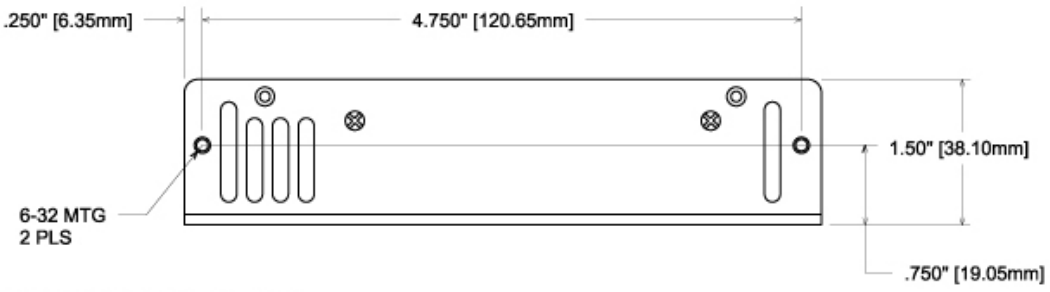
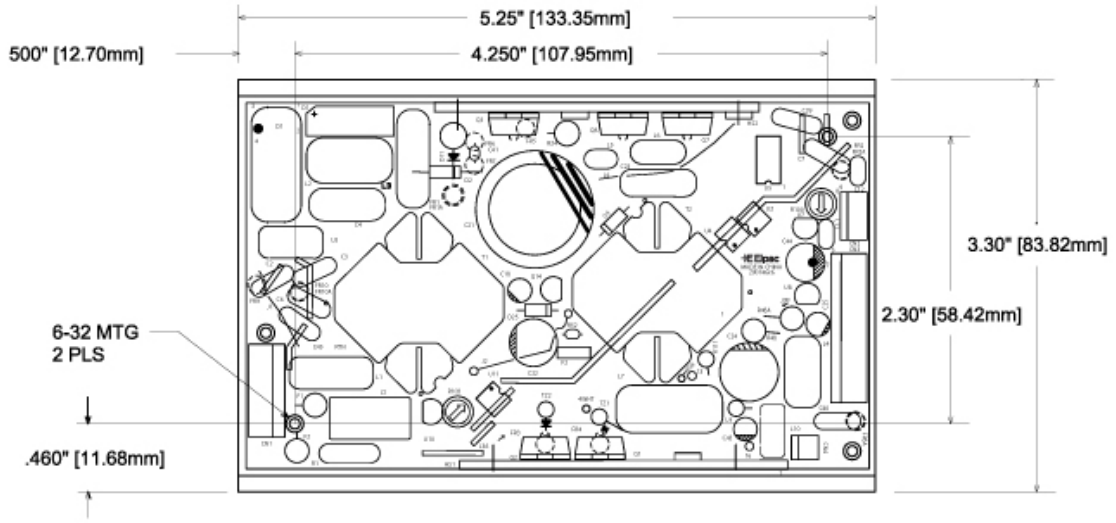
Connector (CN3)	AMP P/N 640445-8
Mating Connector	AMP P/N 640250-8
Pin 1	+V
Pin 2	+V
Pin 3	+V
Pin 4	+V
Pin 5	Return
Pin 6	Return
Pin 7	Return
Pin 8	Return

Signal Configuration (P2)

Connector (CN2)	AMP P/N 640456-4
Mating Connector	AMP P/N 640621-4
Mating Contacts	AMP P/N 770476
Pin 1	Power Fail
Pin 2	-Sense
Pin 3	+Sense
Pin 4	Com

Fan Configuration (CN4)

Connector (CN4)	AMP P/N 640456-2 or equivalent
Mating Connector	AMP p/n 640621-2 or equivalent
Pin 1	+V
Pin 2	-V



TOLERANCES: X.XX=0.030 [0.76mm]
X.XXX=0.010 [0.25mm]

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