International Components Corporation™

MSA150 Series
150 Watts
Medical Switch Mode Power Supply

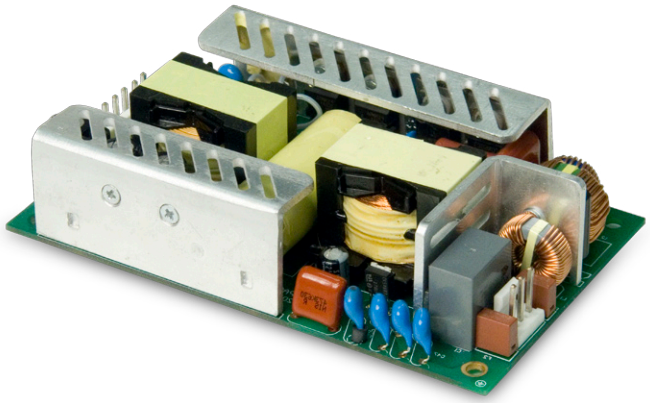
Elpac Power Systems™

HIGHER EFFICIENCY, HIGHER POWER DENSITY, UNCOMPROMISED RELIABILITY

TECHNICAL SUPPORT

WORLDWIDE
1-888-357-2280
saleselpac@iccus.com
www.iccus.com

EUROPE
+44.1383.432920
saleseurope@iccus.com



5-YEAR LIMITED WARRANTY*

- High Efficiency: Level V
- Up to 180W with Forced Air
- High Power Density 9.8W/in^3
- Lifetime Expectation >5 years
- Hold-Up Time >25ms at full load
- EISA & CEC Compliant
- Floating Output
- Medical Approval - EN60601-1 Class I

Input	
Input Voltage	85 – 264VAC 100 – 240VAC Nominal
Input Frequency	47 – 63Hz
Input Current	<2A rms
Inrush Current	<37A at 230VAC cold start
Power Factor	>0.97
Zero Load Power Consumption	<0.5W
Earth Leakage Current (Typical)	<150µA @ 132VAC @ 60Hz
	<300µA @ 264VAC @ 60Hz
Patient Leakage Current (Typical)	<50µA @ 132VAC @ 60Hz
	<75µA @ 264VAC @ 60Hz

Output	
Output Voltage	See Table
Total Regulation	+/-5%
Minimum Load	No minimum load required
Start-Up Delay	<1.5s
Hold-Up Time	>25ms 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
*visit www.iccus.com for complete details
**Ripple and noise measured with 20MHz bandwidth; 10µF tantalum capacitor in parallel with a 0.1µF ceramic capacitor.

CE RoHS Compliant CEC Compliant

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Model Number	Output Voltage	Output Current [1]	Forced Air Current [2]	Total Regulation [3]	Typical Efficiency [4]
MSA150012A	12.0V	12.5A/15.0A PK	15.0A	±5%	91%
MSA150015A	15.0V	10.0A/12.0A PK	12.0A	±5%	91%
MSA150018A	18.0V	8.3A/10.0A PK	10.0A	±5%	91%
MSA150024A	24.0V	6.3A/7.5A PK	7.5A	±5%	92%

Notes
1) With convection cooling. Peak load (180W) lasting up to 500ms with a maximum 10% duty cycle.
2) Sustained output current with minimum 100 LFM
3) Includes initial setting, line regulation, load regulation, and thermal drift.
4) Typical at 115VAC.

General

Efficiency	Avg Efficiency 91.7% @ 115VAC; 93.4% @ 230VAC
MTBF	min. 200,000 hours demonstrated
Size	5.00" (127mm) x 3.00" (76.2mm) x 1.22" (30.9mm)
Weight	0.75 lbs (0.34 Kg)
Power Density	9.8W/in^3

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°
Relative Humidity	5-95%, non-condensing
Cooling	Natural Convection (150W) or Forced Air (180W)
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
	CE marked to LVD

Input Configuration

Standard Input Cable	Not provided
Connection on Power Supply Body	AMP 640445-3
Mating Connector	AMP 640250-3 or Equivalent

Output Configuration

Standard Output Cable	Not provided
Connector (PSU side)	AMP 640445-8
Mating Connector	AMP 640250-8 or equivalent

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

Input Pin Assignments

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

Ordering Options Available

Cooling	Cable Harness
Grounded Output	Load Share
Chassis Mount	

Mechanical Drawing