



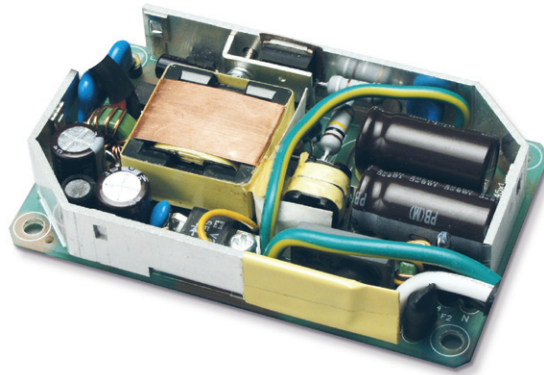
TECHNICAL SUPPORT

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Elpac Power Systems™

HIGHER EFFICIENCY, HIGHER POWER DENSITY, UNCOMPROMISED RELIABILITY



- High Efficiency
- Wide Range AC Input
- Fully Regulated DC Output
- Lifetime Expectation >5 years
- Hold-up Time >16ms at full load
- Output Floating
- Safety Approval - EN60601-1 Class I

5-YEAR LIMITED WARRANTY*

Input	
Input Voltage	85 – 264VAC 100 – 240VAC Nominal
Input Frequency	50 – 60Hz
Input Current	<0.3A rms
Inrush Current	37A@230VAC Cold Start
Zero Load Power Consumption	<0.8W
Earth Leakage Current	<90µA @ 132VAC @ 60Hz
	<150µA @ 264VAC @ 60Hz

Output	
Output Voltage	See Table
Total Regulation	+/-5%
Minimum Load	No minimum load required
Start-Up Delay	<210ms
Hold-Up Time	>16ms
Ripple & Noise	<1% pk-pk **
Over Voltage Protection	110 – 135%
Over Temperature Protection	Active - 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.





Model Number	Output Voltage	Output Current	Peak Current ¹	Total Regulation ²	Typical Efficiency ³
MSM2012	12.0V	1.67A	2.00A	±5%	77.8%
MSM2015	15.0V	1.34A	1.60A	±5%	79.0%

Notes
 1) Maximum peak load (24W) lasting 500ms with a maximum 10% duty cycle.
 2) Includes initial setting, line regulation, load regulation, and thermal drift.
 3) Typical at 115VAC at full load.

General	
Efficiency	Avg Efficiency 78.9% @ 115VAC; 80.6% @ 230VAC
MTBF	min. 200,000 hours demonstrated
Size	2.17" (54.99mm) x 3.543" (89.98mm) x 0.71" (18.00mm)
Weight	0.30 lbs (0.14 kg)
Power Density	3.67W/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°
Relative Humidity	5-95%, non-condensing
Cooling	Natural Convection
Vibration	All units production tested to 19.6m/s ²

EMC & Safety	
Emissions	FCC Part 15, Class B, EN55011 EN61000-3-2, -3
Immunity	EN61000-4-2, -3, -4, -5, -6, -8, -11
Certified by UL to the following:	cRUus
	UL 60601-1
	CAN/CSA-22.2 No.601.1-M90
	CB per IEC60601-1
	CE marked to LVD

Input Configuration	
Ground Connection	8.0" min green/yellow UL1015 Wire
Line Connection	8.0" min white UL1015 Wire
Neutral Connection	8.0" min black UL1015 Wire

Output Configuration	
+V Connection	8.0" min red UL1015 Wire
Common Connection	8.0" min black UL1015 Wire

