

# MPM-07S Series

## Compact 1 x 2 Inch 7W, Single Output AC/DC Power Supplies



### Key Features:

- 7W Output Power
- Compact 1 x 2 Inch Case
- Universal 85-265 VAC Input
- EN60950 Approved
- Meets EN55022 B
- Meets IEC Safety Class II
- >280 kHour MTBF



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### Electrical Specifications

Specifications typical @ +25°C, 230 VAC input voltage & rated output current, unless otherwise noted. Specifications subject to change without notice.

#### Input

Parameter	Conditions	Min.	Typ.	Max.	Units
Input Voltage Range		85		265	VAC
Input Frequency		47		440	Hz
Input Current	See Model Selection Guide				
Inrush Current	115 VAC		10.0		A Pk
	230 VAC		20.0		
EMI	Meets CISPR Pub. 22/FCC Class B				
Safety Ground Leakage Current	115 VAC			0.1	mA
	230 VAC			0.3	

#### Output

Parameter	Conditions	Min.	Typ.	Max.	Units
Output Voltage	See Model Selection Guide				
Output Current	See Model Selection Guide				
Output Voltage Accuracy			±1.0	±2.0	%
Line Regulation	V <sub>IN</sub> = Min to Max		±0.5	±1.0	%
Load Regulation	I <sub>o</sub> = Min to Max		±0.5	±1.0	%
Ripple & Noise (20 MHz)	3.3 & 5.0 VDC Output		1.5	1.8	%V <sub>P-P</sub> of V <sub>o</sub>
	All Other Outputs		0.8	1.0	
Hold-Up Time	115 VAC, 60 Hz		15		mSec
Temperature Coefficient			±0.02		%/°C
Over Voltage Protection	Zener Diode Clamp		120		% of V <sub>o</sub>
Short Circuit Protection, Note 3	Continuous (Autorecovery)				
Overload Protection, Note 4	Typ. 120% to 180% of Output Power				

#### General

Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation Voltage	Input to Output	3,000			VAC
Isolation Test Voltage	Input to Output, Flash Tested For 60S	4,700			VAC
Isolation Resistance	500 VDC	100			MΩ
EMI/RFI	Conducted	EN 55022 Level B			
	Electrostatic Discharge (ESD)	IEC/EN 61000-4-2 Level B			
EMC Compliance	RF Field Susceptibility	IEC/EN61000-4-3			
	Electrical Fast Transients/Bursts On Mains	IEC/EN 61000-4-4 Level 3 2 kV			
	Surge	IEC/EN 61000-4-5 Level 3 1kV/2 kV			
Switching Frequency			100		kHz

#### Environmental

Parameter	Conditions	Min.	Typ.	Max.	Units
Operating Temperature Range	Ambient	-25	+25	+71	°C
Storage Temperature Range		-40		+85	°C
Cooling	Free Air Convection (See Derating Curve)				
Humidity	RH, Non-condensing			95	%

#### Physical

Case Size	2.00 x 1.00 x 0.76 Inches (50.8 x 25.4 x 19.3 mm)				
Case Material	Non-Conductive Plastic & Fiberglass (UL94-V0)				
Weight	1.55 Oz (44g)				

#### Reliability Specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	280			kHours
Safety Standards	IEN 60950, IEC 60950				
Safety Approvals	IEN 60950, IEC 60950				
Safety Class	IEC 61140 Class II				

## Model Selection Guide

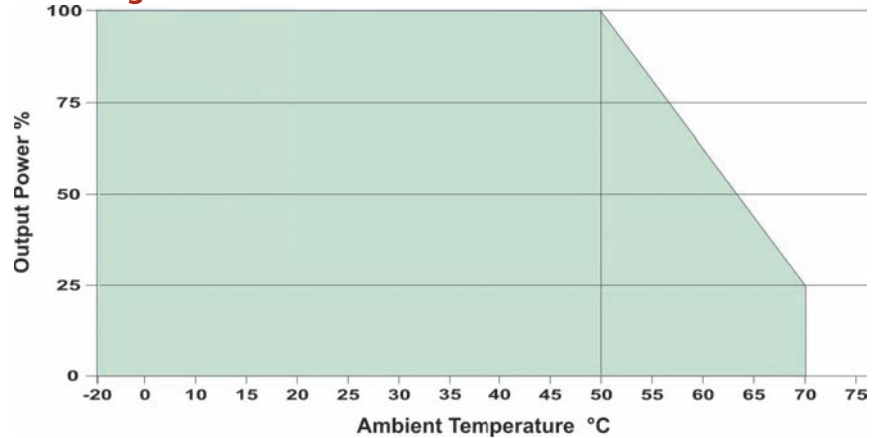
Model Number	Input		Output 1 (Vout 1)			Efficiency (% Typ)	Capacitive Load ( $\mu$ F Max)	Fuse Rating Slow-Blow (mA)
	Current (A)		Voltage (VDC)	Current (A)				
	115 VAC	230 VAC		Max.	Min.			
MPM-07S-03	0.96	0.051	3.3	1.400	0.140	70	2,200	1,500
MPM-07S-05	0.139	0.051	5.0	1.400	0.140	73	2,200	1,500
MPM-07S-12	0.130	0.051	12.0	0.583	0.058	78	1,000	1,500
MPM-07S-15	0.130	0.051	15.0	0.466	0.047	78	1,000	1,500
MPM-07S-24	0.130	0.051	24.0	0.291	0.029	78	680	1,500

Other outputs may be available  
Contact the factory for details at:  
[sales@micropowdirect.com](mailto:sales@micropowdirect.com)

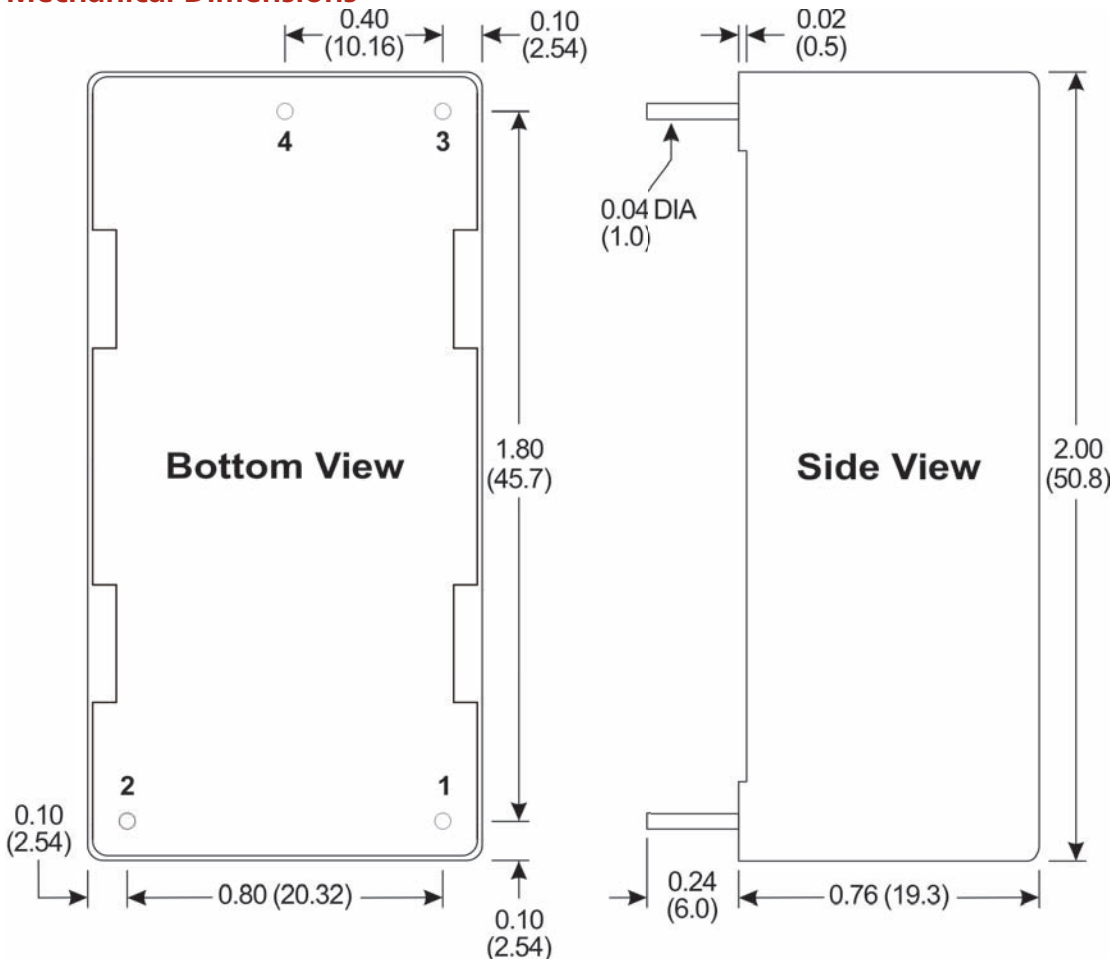
### Notes:

1. Load regulation is measured for an output change of 0% to 100% at nominal input line.
2. Operation at no-load will not damage these units. However, they may not meet all specifications.
3. Output short circuit protection is provided by a "hiccup mode" circuit. The unit recovers automatically when the fault condition is removed.
4. Output overload protection is provided by a fold back current limiting circuit.
5. It is recommended that an external slow blow fuse also be used on the input for protection. See the table above for the correct rating.

## Derating Curve



## Mechanical Dimensions



## Pin Connections

Pin	Function
1	AC-Neutral
2	AC-Line
3	+Vout
4	-Vout



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### Notes:

- All dimensions are typical in inches (mm)
- Tolerance x.xx =  $\pm 0.01$  ( $\pm 0.25$ )