

MPM-07PB 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 85-264 VAC Input
- EN 60950 Approved (UL)
- ErP Directive Compliant
- Meets EN 55022 B
- Meets IEC Safety Class II
- >330 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		264	VAC
		120		370	VDC
Input Frequency		47		440	Hz
Input Current	See Model Selection Guide				
Inrush Current	115 VAC			10.0	A Pk
	230 VAC			20.0	
No Load Power Consumption				0.3	W

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 _{IN} = Min to Max		±0.5	±1.0	%
Load Regulation	I _{OUT} = 0% to 100%		±0.5	±1.0	%
Ripple & Noise (20 MHz), See Note 1	3.3V and 5V Models		1.5	1.8	% V _{P-P} of V _{OUT}
	12V, 15V, and 24V Models		0.8	1.0	
Hold-Up Time	115 VAC		20		
	230 VAC		60		mSec
Temperature Coefficient			±0.01	±0.02	%/°C
Over Voltage Protection	Zener Diode Clamp		120		%V _{OUT}
Over Temperature Protection	Autorecovery (at 67 °C)		90		°C
Short Circuit Protection	Continuous (Autorecovery)				
Overload Protection	Foldback, Autorecovery	105			%W

General					
Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation Voltage	Input to Output	3,000			VAC
Isolation Resistance	500 VDC	100			MΩ
Switching Frequency			100		kHz

EMI Characteristics					
Parameter	Standard	Min.	Typ.	Max.	Units
Radiated Emissions	EN 55022				Class B
Conducted Emissions	EN 55022				Class B
ESD	EN 61000-4-2				Criteria B; ±8 kV Air/±4 kV Contact
RS	EN 61000-4-3				Criteria A; 10V/m
EFT	EN 61000-4-4				Criteria B; ±2 kV
Surge	EN 61000-4-5				Criteria B; ±1 kV
CS	EN 61000-4-6				Criteria B; 10 Vrms
PFM	EN 61000-4-8				Criteria A; 30A/m
Voltage Dips	EN 61000-4-11				Criteria B; 10 mS

Environmental					
Parameter	Conditions	Min.	Typ.	Max.	Units
Operating Temperature Range	Ambient	-25	+25	+70	°C
Storage Temperature Range		-40		+85	°C
Cooling	Free Air Convection (See Derating Curve)				
Humidity	RH, Non-condensing			95	%

Physical					
Parameter	Conditions	Min.	Typ.	Max.	Units
Case Size		2.00 x 1.00 x 0.76 Inches (50.8 x 25.4 x 19.3 mm)			
Case Material		Non-Conductive Black Plastic (UL94-V0)			
Weight		1.55 Oz (44g)			

Reliability Specifications					
Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	300			kHours
Safety Standards	EN 60950				
Safety Class	IEC 60536 Class II				
ECO Design	ErP Directive 2009/125/EC				

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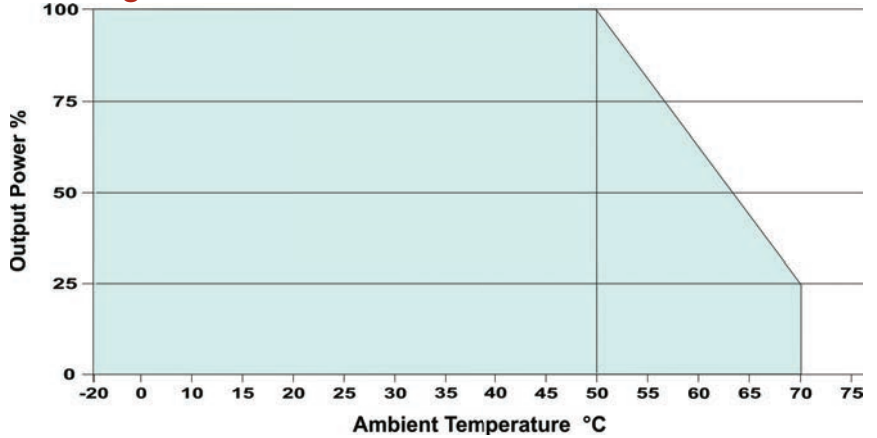
Model Number	Input		Output 1 (Vout 1)			Efficiency (% Typ)	Capacitive Load (µF Max)	Fuse Rating Slow-Blow (mA)
	Current (A)		Voltage (VDC)	Current (A)				
	115 VAC	230 VAC		Max.	Min.			
MPM-07S-03PB	0.96	0.051	3.3	1.400	0.140	70	2,200	1,500
MPM-07S-05PB	0.139	0.051	5.0	1.400	0.140	73	2,200	1,500
MPM-07S-12PB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

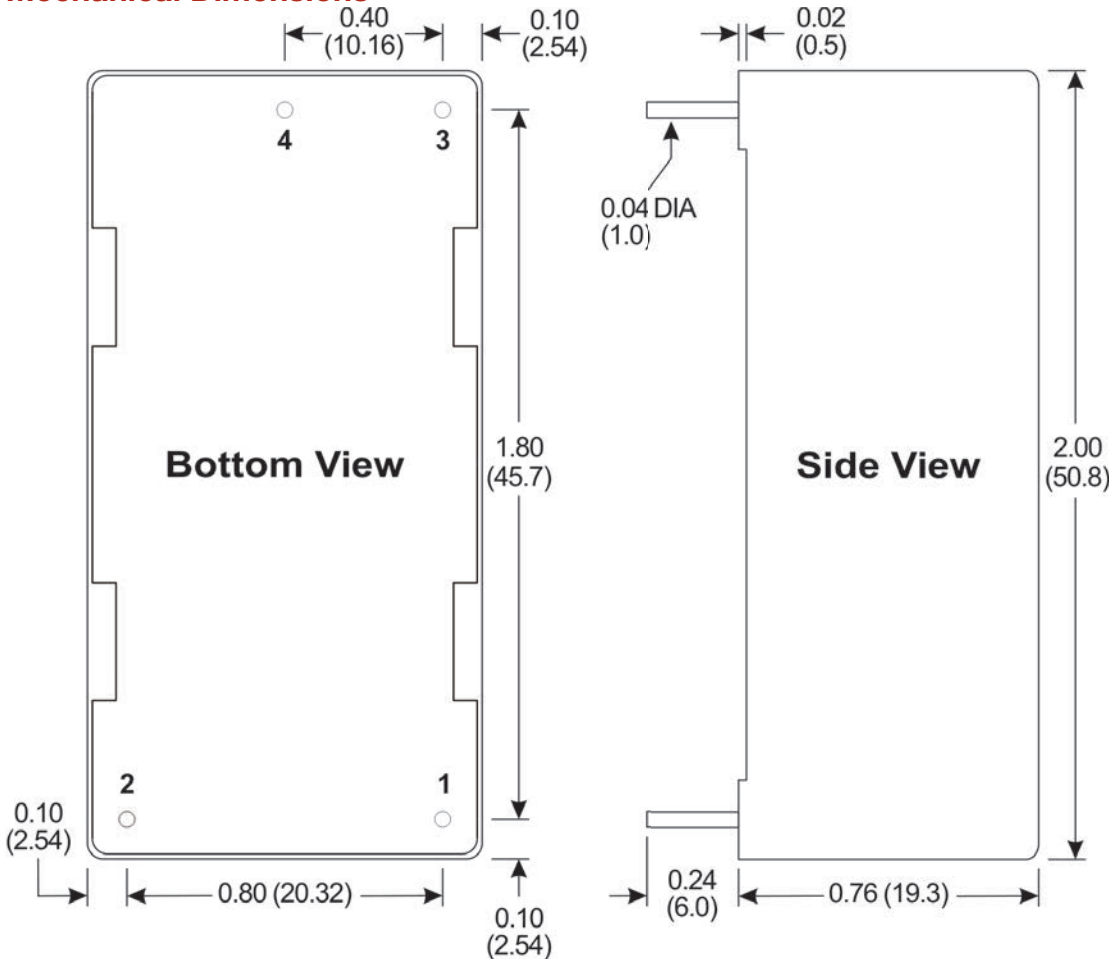
Notes:

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 = ±0.01 (±0.25)