MPM-60PB Series

Single Output, 60W Compact "Power Brick" AC/DC Power Supplies

Key Features:

- 60W Output Power
- High Power Density Case
- Universal 85-265 VAC Input
- EN 60950 Approved (UL)
- -40°C to + 70°C Operation
- Meets EN 55022 B
- 4,000 VAC I/O Isolation
- >130 kHour MTBF

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
		100		370	VDC
Input Frequency		47		63	Hz
Input Current	See Model Selection Guide				
Inrush Current	115 VAC		30.0		A Pk
	230 VAC		50.0		
Leakage Current				0.5	mA
EMI	Meets CISPR Pub. 22/FCC Class B				
EMC	Meets EN 55024				

Output

Parameter	Conditions	Min.	Typ.	Max.	Units
Output Voltage	See Model Selection Guide				
Output Current	See Model Selection Guide				
Output Voltage Accuracy			±2.0		%
Output Voltage Adjustment			±10.0		%
Line Regulation	V_{IN} = Min to Max		±1.0		%
Load Regulation	Io = 5% to 100%		±1.0		%
Ripple (20 MHz), See Note 1			<±0.2% Vout + 40 mV		mV_{P-P}
Noise, See Note 1			<±0.5% Vout + 50 mV		mV_{P-P}
Hold-Up Time	115 VAC		10		mSec
	230 VAC		60		
Temperature Coefficient			±0.02		%/°C
Over Voltage Protection	Zener Diode Clamp		120		% of V_O
Short Circuit Protection, See Note 2	Continuous (Autorecovery)				
Overload Protection		150			% of Io

General

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

Environmental

Parameter	Conditions	Min.	Typ.	Max.	Units
Operating Temperature Range	Ambient	-40	+25	+70	°C
Storage Temperature Range		-50		+85	°C
Cooling	Free Air Convection (See Derating Curve)				
Humidity	RH, Non-condensing			95	%

Physical

Case Size	4.30 x 2.30 x 1.18 Inches (109.0 x 58.5 x 30.0 mm)
Case Material	Non-Conductive Plastic & Fiberglass (UL94-V0)
Weight	10.92 Oz (310g)

Reliability Specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	130			kHours
Safety Standards	UL 60950, EN 60950				
Safety Approvals	UL, cUL; File No. E245422				

MicroPower Direct

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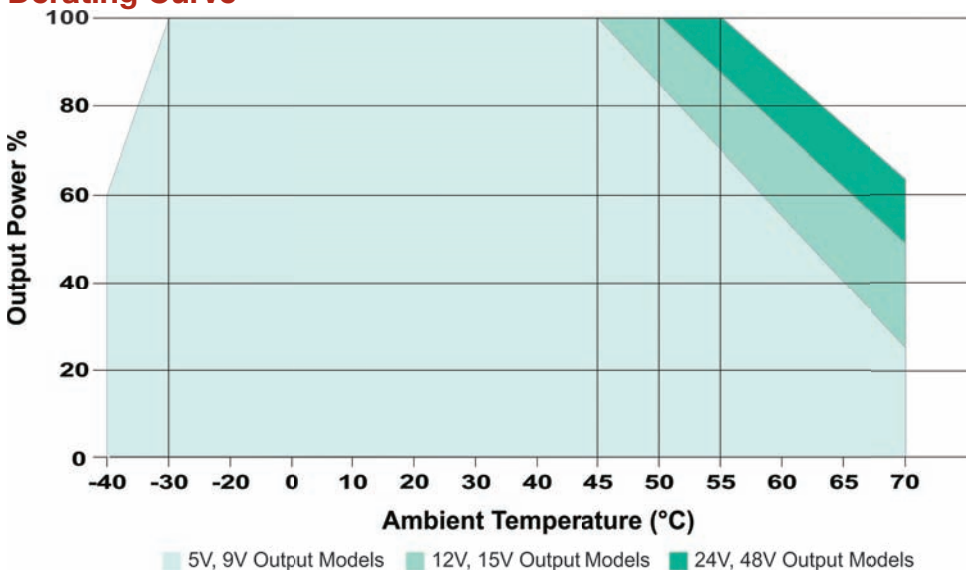
Model Selection Guide

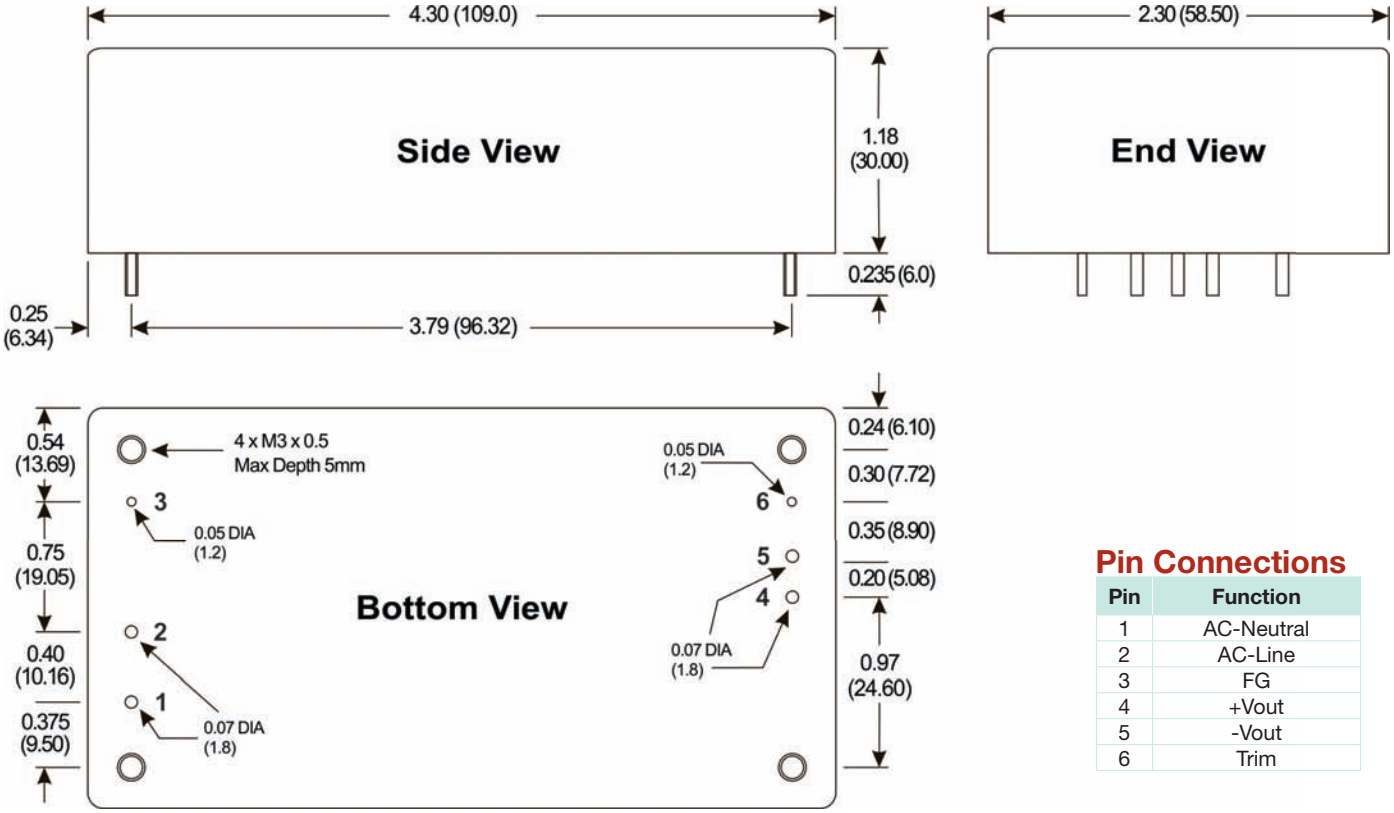
Model Number	Input Current (A) 115 VAC	Input Current (A) 230 VAC	Output Voltage (VDC)	Output Current Max. (A)	Output Current Min. (%)	Maximum Capacitive Load (µF)	Maximum Output Power (W)	Efficiency (%, Typ)
MPM-60S-05PB	2.0	1.0	5.0	10.0	1.0	80,000	50.0	82
MPM-60S-09PB	2.0	1.0	9.0	6.66	1.0	28,000	60.0	84
MPM-60S-12PB	2.0	1.0	12.0	5.00	1.0	14,000	60.0	86
MPM-60S-15PB	2.0	1.0	15.0	4.00	1.0	12,000	60.0	86
MPM-60S-24PB	2.0	1.0	24.0	2.50	1.0	4,000	60.0	86
MPM-60S-48PB	2.0	1.0	48.0	1.25	1.0	950	60.0	86

Notes:
1. Ripple and noise are measured at 20 Mhz bandwidth with a 0.1µF and a 47 µF capacitor connected in parallel as close to the unit output terminals as possible.
2. Output short circuit protection is provided by a "hiccup mode" circuit. The unit recovers automatically when the fault condition is removed.
3. Operation at under no load conditions will not damage these units.
4. It is recommended that a fuse be used on the input of a power supply for protection. For the **MPM-60PB** series, a 4A/250 VAC slow blow should be used.

Derating Curve



Mechanical Dimensions



Pin Connections

Pin	Function
1	AC-Neutral
2	AC-Line
3	FG
4	+Vout
5	-Vout
6	Trim

Notes:
- All dimensions are typical in inches (mm)
- Tolerance x.xx = ±0.01 (±0.25)

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