

# MPM-40SVI

## Compact, Wide Input, 40W, High Isolation AC/DC Power Supplies



### Key Features:

- 40W Output Power
- Universal 90-305 VAC Input
- 4,300 VAC Isolation
- Compact Size
- EN 62368 Approved (UL)
- Efficiency to 90%
- OVC Category III
- -40°C to +85°C Temp Range
- Meets EN 55032 B
- >300 kHour MTBF
- Isolation Class II

### 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, See Note 1		90		305	VAC	
		120		430	VDC	
Input Frequency		47		440	Hz	
Input Current	See Model Selection Guide					
Inrush Current, <2ms	115 VAC			60.0	A Pk	
	230 VAC			100.0		
Leakage Current	100 - 240 VAC			0.25	mA	
No Load Power Consumption	115/230 VAC			<0.1	W	

Output						
Parameter	Conditions	Min.	Typ.	Max.	Units	
Output Voltage Accuracy			±2.0		%	
Line Regulation	V <sub>IN</sub> = Min to Max		±0.5		%	
Load Regulation	0 to 100%		±1.0		%	
Minimum Load			0		%	
Ripple/Noise, See Note 1	5V & 12V Output		120		mV <sub>P-P</sub>	
	15V Output		150			
	24V Output		240			
	48V Output		480			
Hold-Up Time	230 VAC	30			mSec	
Temperature Coefficient			±0.05		%/°C	
Over Voltage Protection	Zener Diode Clamp					
Over Power Protection	Autorecovery					
Short Circuit Protection, See Note 2	Hiccup Mode (Autorecovery)					

General						
Parameter	Conditions	Min.	Typ.	Max.	Units	
Isolation Voltage	Input to Output	4,300			VAC	
EMC	EMI (Conducted/Radiated Emmissions)				EN 55032 Level B	
	EMS (Noise Immunity)				EN 55035	

Environmental						
Parameter	Conditions	Min.	Typ.	Max.	Units	
Operating Temperature Range	Ambient	-40	+25	+85	°C	
Storage Temperature Range		-40		+85	°C	
Temperature Coefficient						
Cooling	Free Air Convection (See Derating Curve)					
Humidity	RH, Non-condensing			95	%	
Altitude During Operation				5,000	m	

Physical						
Case Size & Weight	See Mechanical Diagram (Page 2)					
Case Material	Non-Conductive Plastic Resin (UL94-V0)					

Reliability Specifications						
Parameter	Conditions	Min.	Typ.	Max.	Units	
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	300			kHours	
Safety Standards	UL/cUL 62368-1 recognition (UL certificate)					
Over Voltage Category	III: Compliance to EN 61558, Altitude to 2,000 meters					
Vibration	IEC 60068-2-6, 10-500 Hz, 2G 10 min/1 cycle, 60 min each along X, Y, Z axis					
Shock	IEC 60068-2-27					



### MicroPower Direct

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Unit 1  
Easton, MA 02375  
USA

T: (781) 344-8226  
F: (781) 344-8481  
E: sales@micropowerdirect.com  
W: www.micropowerdirect.com



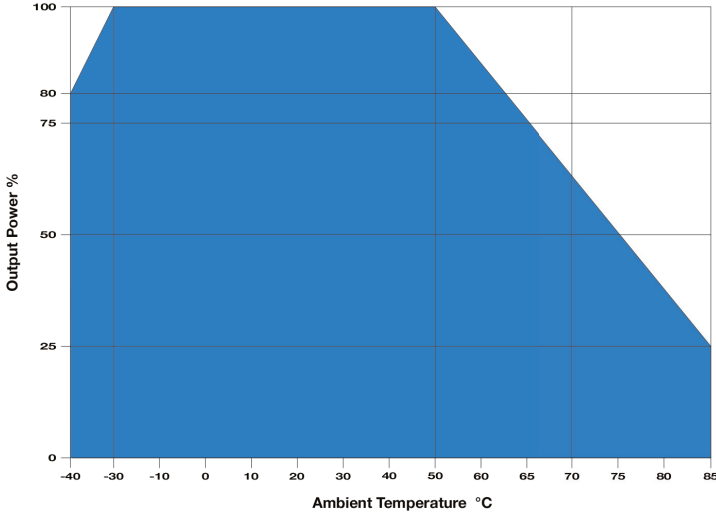
[www.micropowerdirect.com](http://www.micropowerdirect.com)

# Model Selection Guide

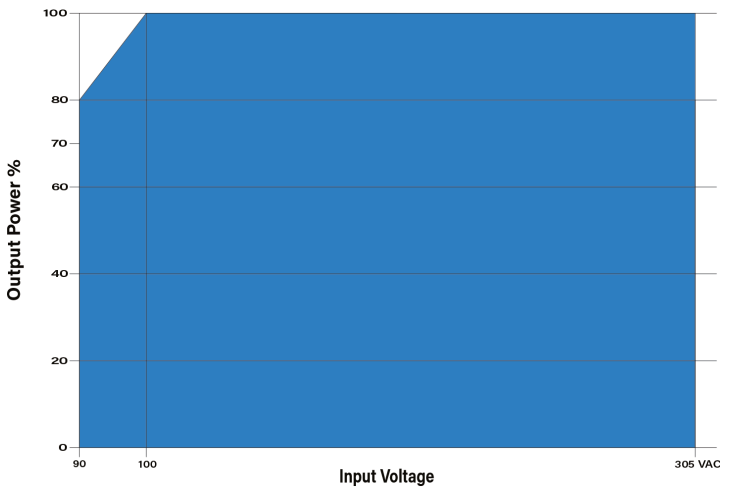
Model Number	Input		Output			Capacitive Load ( $\mu$ F, Max)	Efficiency (230 VAC, %, Typ)
	Current (mA Max)		Voltage (VDC)	Current (mA Max)	Power (W)		
	115 VAC	230 VAC					
MPM-40SVI-05	1,000	500	5.0	7,000	35.0	8,000	87
MPM-40SVI-12	1,000	500	12.0	3,333	40.0	6,000	90
MPM-40SVI-15	1,000	500	15.0	2,666	40.0	5,000	90
MPM-40SVI-24	1,000	500	24.0	1,666	40.0	1,200	89
MPM-40SVI-48	1,000	500	48.0	833	40.0	820	89

- Notes:**
- Ripple and noise are measured at 20 Mhz bandwidth with a  $0.1\mu$ F and a  $47\mu$ F capacitor connected in parallel as close to the unit output terminals as possible.
  - Output short circuit protection is provided by a "hiccup mode" circuit. The unit recovers automatically when the fault condition is removed.
  - Caution:** The unit uses Double Pole neutral fusing. Disconnect the mains before servicing. For more information, contact the factory.

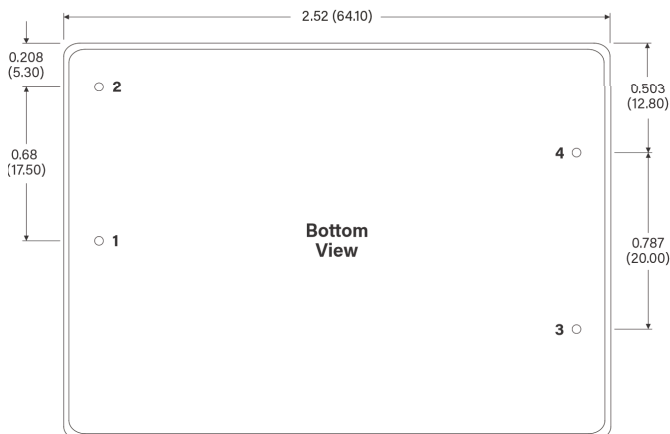
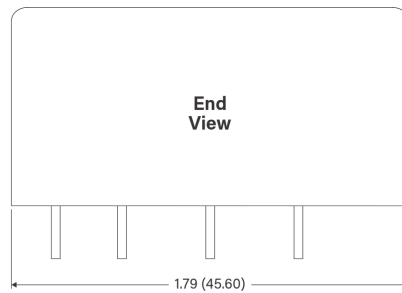
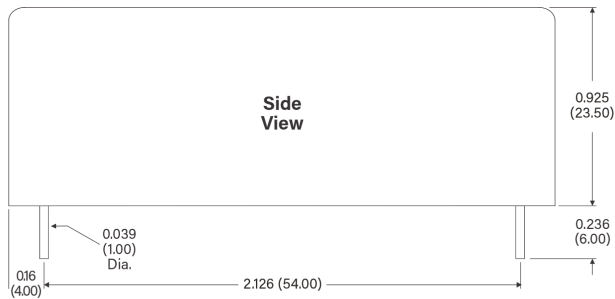
## Power Derating Curve, Temperature



## Power Derating Curve, Input Voltage



## Mechanical Dimensions



## Pin Connections

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

- Notes:**
- All dimensions are typical in inches (mm)
  - Tolerance x.xx =  $\pm 0.02$  ( $\pm 0.50$ )
  - Module Weight is: 4.40 Oz (125g)