MPM-10IS Series

Board Mount, 10W Single & Dual Output AC/DC Power Supplies



Key Features:

- 10W Output Power
- Universal 85-265 VAC Input
- EN 60950 Approved (UL)
- ErP Directive Compliant
- Meets IEC Safety Class II
- Industry Standard Pin-Out
- Meets EN 55022 B
- >300 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
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				

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, Single Output	I_O = Min to Max		±0.5	±1.0	%
Load Regulation, Dual Output	I_O = Min to Max		±2.5	±5.0	%
Ripple & Noise (20 MHz)	3.3V & 5.0 VDC Output		1.5	1.8	%V_{P-P} of V_O
	All Other Outputs		0.8	1.0	
Hold-Up Time	115 VAC, 60 Hz		20		mSec
Temperature Coefficient			±0.02		%/°C
Over Voltage Protection	Zener Diode Clamp		120		% of V_O
Short Circuit Protection, See Note 3	Continuous (Autorecovery)				
Overload Protection	See Note 4	105			% of I_{NOM}

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
EMC Compliance	Electrostatic Discharge (ESD)				EN 61000-4-2 Level 3
	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	-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	2.52 x 1.77 x 0.75 Inches (64.0 x 45.0 x 19.0 mm)
Case Material	Non-Conductive Plastic & Fiberglass (UL94-V0)
Weight	3.23 Oz (92g)

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 61140 Class II				
ECO Design	ErP Directive 2009/125/EC				

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Model Selection Guide

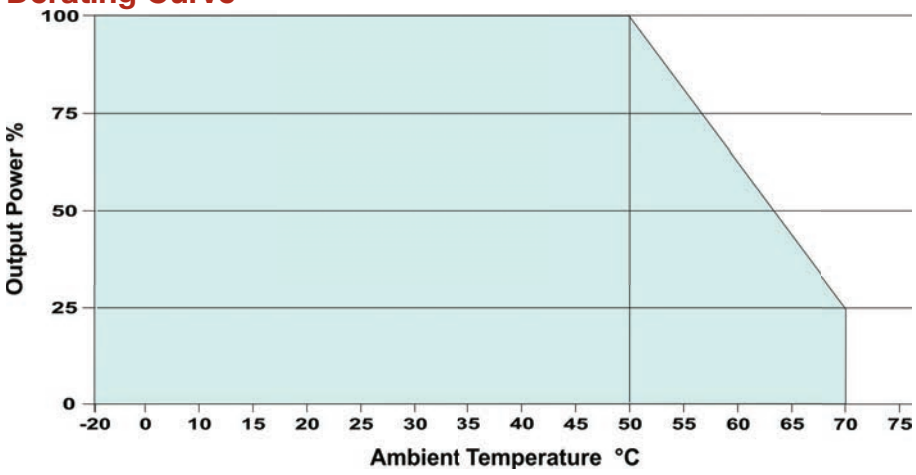
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Model Number	Input		Output 1 (Vout 1)			Output 2 (Vout 2)			Capacitive Load (µF, Max)	Efficiency (%, Typ)
	Current (A)		Voltage (VDC)	Current (A)		Voltage (VDC)	Current (A)			
	115 VAC	230 VAC		Max.	Min.		Max.	Min.		
MPM-10S-03IS	0.137	0.075	3.3	2.000	0.200				3,900	70
MPM-10S-05IS	0.199	0.075	5.0	2.000	0.200				3,300	73
MPM-10S-12IS	0.191	0.075	12.0	0.833	0.083				2,200	76
MPM-10S-15IS	0.191	0.075	15.0	0.666	0.066				2,200	76
MPM-10S-24IS	0.190	0.075	24.0	0.416	0.042				1,000	76
MPM-10D-12IS	0.172	0.075	+12.0	+0.380	+0.038	-12.0	-0.380	-0.038	±1,000	77
MPM-10D-15IS	0.169	0.075	+15.0	+0.300	+0.030	-15.0	-0.300	-0.030	±1,000	77

Other output combinations are 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. For multiple output models, the loads are balanced.
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. The **MPM-10IS** series includes a built-in 2A/250 VAC fuse. It is recommended that an external 1.5A slow blow fuse also be used on the input for protection.

Derating Curve



Model Number

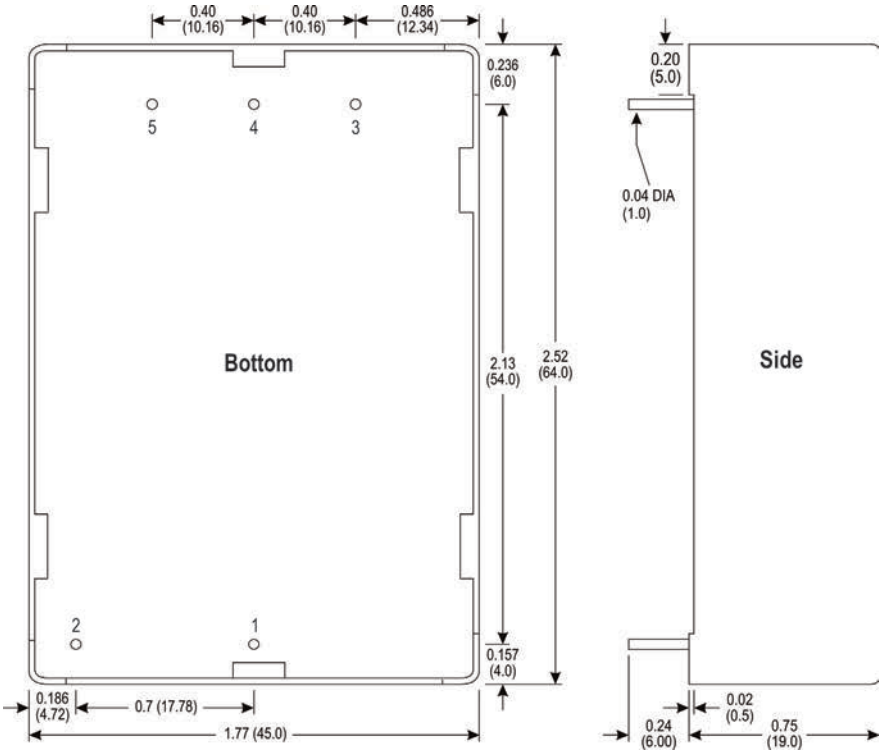
MPM10X-YYIS

Outputs
S = Single
D = Dual

Output Voltage Selection
(i.e. 05 = 5 VDC, 24 = 24 VDC, etc)

Mounting Type
IS = Industry Standard Board Mount

Mechanical Dimensions



Pin Connections

Pin	Single	Dual
1	AC-Neutral	AC-Neutral
2	AC-Line	AC-Line
3	-Vo	-Vo
4	NC	Common
5	+Vo	+Vo

NP = No Connection

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

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