

MPM-30IS Series

Board Mount, 30W Single, Dual & Triple Out AC/DC Power Supplies



Key Features:

- 30W Output Power
- Universal 85-265 VAC Input
- EN 60950 Approved (UL)
- Meets IEC Safety Class II
- Industry Standard Pin-Out
- Single, Dual & Triple Outputs
- Meets EN 55022 B
- >250 kHour MTBF

Chassis Mount Models
& DIN Rail Mount
Option Available!



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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		20.0		A Pk
	230 VAC		40.0		
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, Note 1			±1.0	±2.0	%
Line Regulation	V _{IN} = Min to Max		±0.2	±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	%
Load Regulation, Triple Output - Primary	I _O = Min to Max		±2.5	±5.0	%
Load Regulation, Triple Output - Aux.	I _O = Min to Max		±4.0		%
Ripple & Noise (20 MHz)	3.3 & 5.0 VDC Output		1.5	1.8	%V _{P-P} of V _O
	All Other Outputs		1.0	1.3	
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, Note 4	Continuous (Autorecovery)				
Overload Protection, Note 5	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)	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			
EMC Compliance	Surge	EN 61000-4-5 Level 3 1kV/2 kV			
		100			kHz
Switching Frequency					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	3.50 x 2.50 x 0.85 Inches (88.9 x 63.5 x 21.5 mm)				
Case Material	Non-Conductive Plastic & Fiberglass (UL94-V0)				
Weight	6.23 Oz (177g)				

Reliability Specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	250			kHours
Safety Standards	UL 60950, EN 60950				
Safety Approvals	UL, cUL; File No. E245422				
Safety Class	IEC 61140 Class II				

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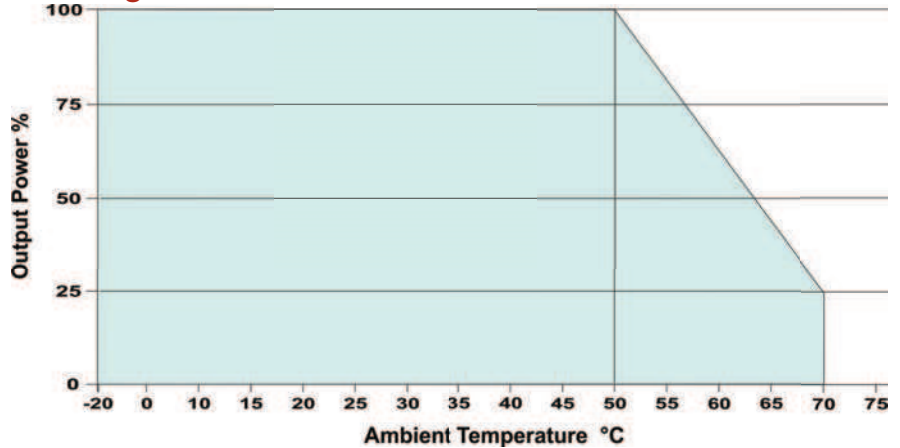
Model Number	Input		Output 1 (Vout 1)			Output 2 (Vout 2)			Output 3 (Vout 3)			Capacitive Load (µF, Max)	Efficiency (% Typ)
	Current (A)		Voltage (VDC)	Current (A)		Voltage (VDC)	Current (A)		Voltage (VDC)	Current (A)			
	115 VAC	230 VAC		Max.	Min.		Max.	Min.		Max.	Min.		
MPM-30S-05IS	0.557	0.14	5.0	6.000	0.600							8,000	78
MPM-30S-12IS	0.543	0.14	12.0	2.500	0.250							3,900	80
MPM-30S-15IS	0.543	0.14	15.0	2.000	0.200							3,900	80
MPM-30S-24IS	0.543	0.14	24.0	1.250	0.125							1,500	80
MPM-30S-48IS	0.543	0.14	48.0	0.625	0.063							1,000	80
MPM-30D-12IS	0.565	0.14	+12.0	+1.300	+0.130	-12.0	-1.300	-0.130				±1,500	80
MPM-30D-15IS	0.543	0.14	+15.0	+1.000	+0.100	-15.0	-1.000	-0.100				±1,500	80
MPM-30T-0512IS	0.572	0.14	5.0	3.000	+0.600	+12.0	+0.600	+0.120	-12.0	-0.600	-0.120	See Note 6	76
MPM-30T-0512ISA	0.572	0.14	5.0	3.000	+0.600	+12.0	+1.000	+0.200	-12.0	-0.250	-0.050	See Note 6	76
MPM-30T-0515IS	0.572		5.0	3.000	+0.300	+15.0	+0.500	+0.050	-15.0	-0.500	-0.050	See Note 6	76
MPM-30T-5312IS	0.588		5.0	4.500	+0.900	+3.3	+1.000	+0.220	+12.0	+0.250	+0.050	See Note 6	71
MPM-30T-3512IS	0.483		3.3	4.000	+0.800	+5.0	+1.500	+0.300	+12.0	+0.250	+0.050	See Note 6	71

Other output combinations are available
 Contact the factory for details at:
sales@micropowerdirect.com

Notes:

- For triple output models, the output voltage accuracy of the auxiliary outputs is typically ±4%.
- Load regulation is measured for an output change of 0% to 100% at nominal input line. For multiple output models, the loads are balanced.
- Operation at no-load will not damage these units. However, they may not meet all specifications.
- Output short circuit protection is provided by a "hiccup mode" circuit. The unit recovers automatically when the fault condition is removed.
- Output overload protection is provided by a fold back current limiting circuit.
- For triple output models, the maximum capacitive load for 5 VDC and 3.3VDC outputs is 2,200 µF. For all other outputs it is ±1,500 µF.
- The **MPM-30IS** series includes a built-in 3.5A/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
MPM-30X-YYIS

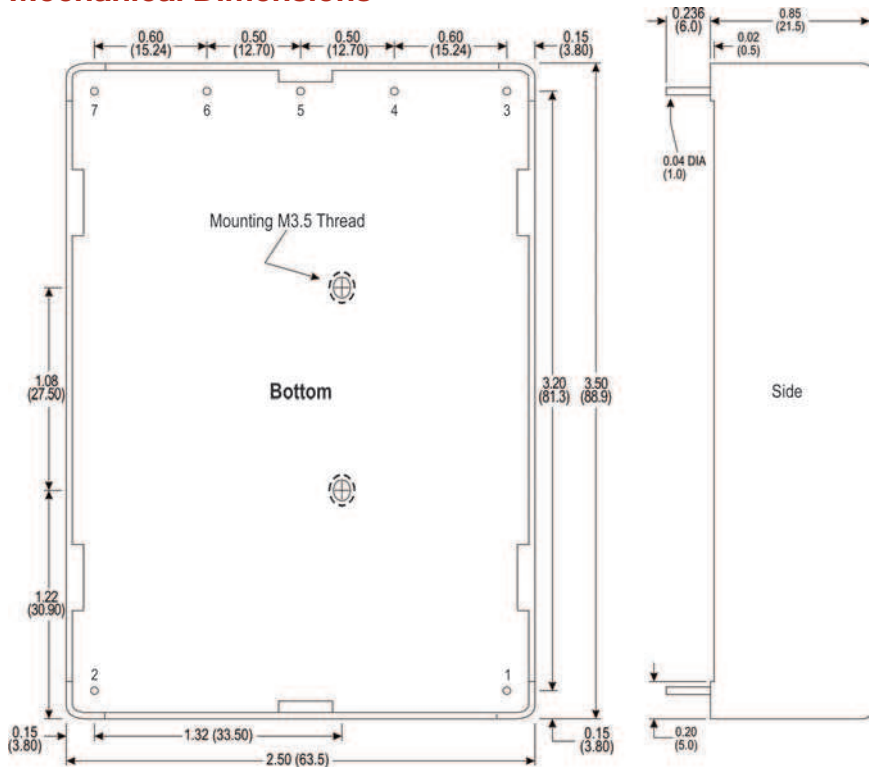
Outputs
 S = Single
 D = Dual
 T = Triple

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

Mounting Type
 IS = Industry Standard Board Mount

Models with an "A" at the end of the model number have an alternate output (unbalanced auxiliaries).

Mechanical Dimensions



Pin Connections

Pin	Single	Dual	Triple
1		AC-Neutral	
2		AC-Line	
3	+Vo	+Vo	+Vo 2
4	NP	NP	+Vo 1
5	-Vo	Common	Common 2/3
6	NP	NP	-Vo 1
7	NP	-Vo	+Vo 3

NC = No Connection

Notes:

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



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