MPM-15IS Series

Board Mount, 15W Single, Dual & Triple Out AC/DC Power Supplies

Key Features:

- 15W 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!

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		15.0		A Pk
	230 VAC		30.0		
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, Triple Aux Output	I_O = Min to Max		±2.5	±5.0	%
Ripple & Noise (20 MHz)	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, Note 3	Continuous (Autorecovery)				
Overload Protection, Note 4	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	500			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	2.91 x 2.13 x 0.76 Inches (74.0 x 54.0 x 19.3 mm)
Case Material	Non-Conductive Plastic& Fiberglass (UL94-V0)
Weight	4.01 Oz (114g)

Reliability Specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	280			kHours
Safety Standards	UL 60950, EN 60950				
Safety Approvals	UL, cUL; File No. E245422				
Safety Class	IEC 61140 Class II				

MicroPower Direct
292 Page Street
Suite D
Stoughton, MA 02072
USA

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

Model Selection Guide

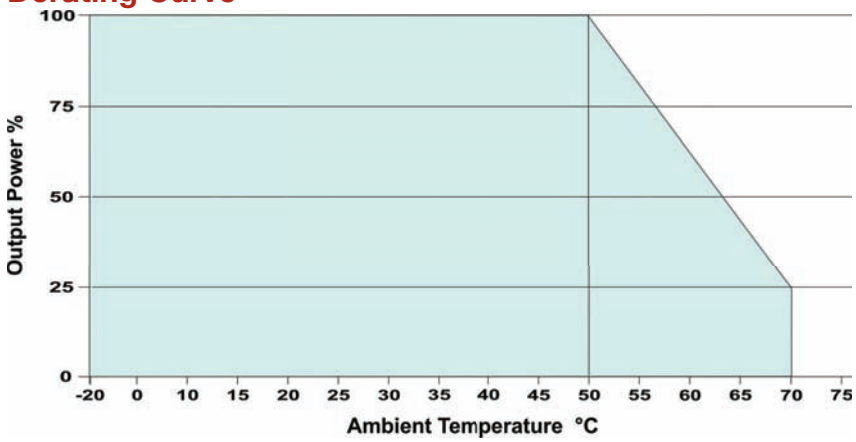
Model Number	Input Current (A)		Output 1 (Vout 1)			Output 2 (Vout 2)			Output 3 (Vout 3)			Capacitive Load (µF, Max)	Efficiency (%, Typ)
	115 VAC	230 VAC	Voltage (VDC)	Current (A) Max.	Current (A) Min.	Voltage (VDC)	Current (A) Max.	Current (A) Min.	Voltage (VDC)	Current (A) Max.	Current (A) Min.		
MPM-15S-05IS	0.290	0.14	5.0	3.000	0.300							3,900	75
MPM-15S-12IS	0.275	0.14	12.0	1.250	0.125							2,200	79
MPM-15S-15IS	0.275	0.14	15.0	1.000	0.100							2,200	79
MPM-15S-24IS	0.275	0.14	24.0	0.625	0.063							2,200	79
MPM-15S-48IS	0.273	0.14	48.0	0.310	0.030							1,000	79
MPM-15D-12IS	0.275	0.14	+12.0	+0.625	+0.063	-12.0	-0.625	-0.063				±1,500	79
MPM-15D-15IS	0.275	0.14	+15.0	+0.500	+0.050	-15.0	-0.500	-0.050				±1,500	79
MPM-15T-0512IS	0.290	0.14	5.0	2.000	+0.200	+12.0	+0.200	+0.020	-12.0	-0.200	-0.020	Note 5	74
MPM-15T-0515IS	0.284	0.14	5.0	1.80	+0.200	+15.0	+0.150	+0.015	-15.0	-0.150	-0.015	Note 5	74

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. For triple output models, the maximum capacitive load for the primary (5 VDC) output is 2,200 µF. For the auxilliary outputs it is ±1,500 µF.
6. The **MPM-15IS** 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

MPM15X-YYIS

Outputs
S = Single
D = Dual
T = Triple

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

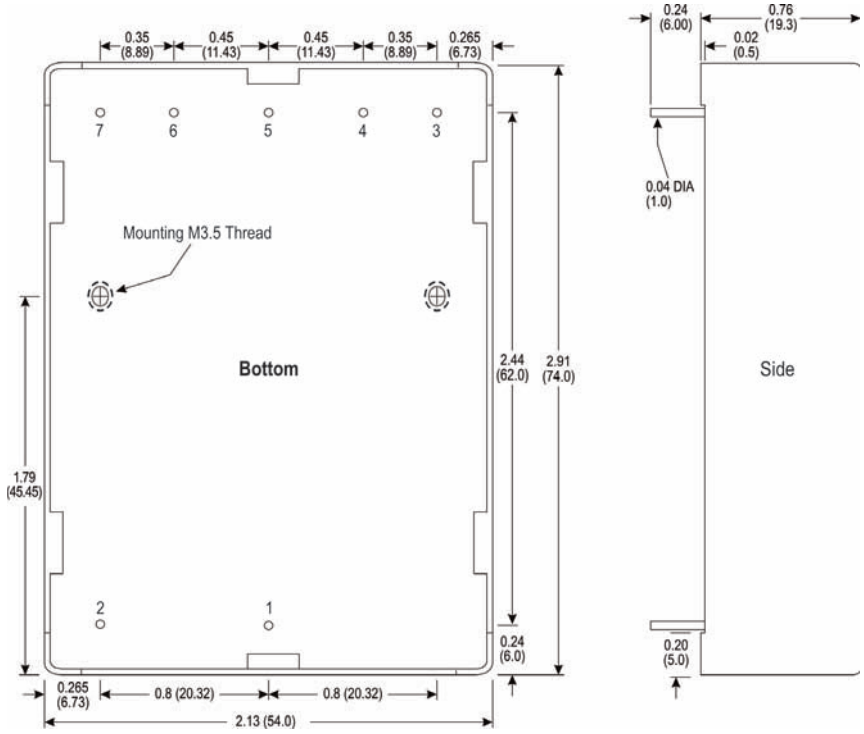
Mounting Type
IS = Industry Standard Board Mount

Pin Connections

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

NP = No Pin

Mechanical Dimensions



Notes:

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

MicroPower Direct
We Power Your Success - For Less!
292 Page Street Ste D Stoughton, MA 02072 • TEL: (781) 344-8226 • FAX: (781) 344-8481 • E-Mail: sales@micropowerdirect.com