



# SPECIFICATION

For

SWITCHING POWER SUPPLY

**M/N: MPM-X50 series**

## Revision Index

REV.	Dec. 28 <sup>th</sup> 2011	Changed the Hi-pot test value.
REV.	Mar. 28 <sup>th</sup> 2013	Updated safety approvals status.



FEATURES

- 50W Medical approved adapter
- Over Voltage Protection
- Conductive EMI Meets CISPR/FCC Class B

1. Description

MPM-X50 series is single output, 50Watts, universal input switching mode power supply, which is designed to meet IEC, EN, UL 60601-1 medical regulations. It is specially designed for external desktop application.

Model Name	Output Voltage	Mini. Output Current	Rated Output Current	Line Regulation	Load Regulation	Ripple & Noise p-p	Initial Setting Accuracy
MPM-X50-05	+5V	0A	7.0A	±1%	3%	100mV	2%
MPM-X50-12	+12V	0A	4.17A	±1%	3%	120mV	2%
MPM-X50-138	+13.8V	0A	3.62A	±1%	2%	120mV	2%
MPM-X50-15	+15V	0A	3.33A	±1%	2%	150mV	2%
MPM-X50-19	+19V	0A	2.63A	±1%	2%	190mV	2%
MPM-X50-24	+24V	0A	2.1A	±1%	2%	240mV	2%

2. Input Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Input Voltage-AC	Continuous input range.	90	115/230	264	VAC
Input Frequency	AC input.	47		63	Hz
Hold Up Time	Nominal AC Input Voltage (230VAC), rated load.	12			ms
Input Current	Nominal AC Input Voltage (115VAC/230VAC), rated load.			1.5	A
Inrush Current	Nominal AC Input Voltage (115VAC/230VAC), one cycle at 25°C.			60	A
Leakage Current	Nominal AC Input voltage (115VAC/230VAC), rated load. Earth: Enclosure:			0.5 0.1	mA

3. Output Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Efficiency	Rated load, 115VAC. Varies with distribution of loads among output.		75		%
Minimum load					See Chart of 1.Description
Ripple & Noise	Rated load, 20MHz bandwidth and the each output is connected With a 10µF Electrolytic Capacitor and a 0.1µF Ceramic Capacitor.				See Chart of 1.Description

4. Internal Protection

Parameter	Conditions/Description
Short Circuit Protection	Fully protected against output overload and short circuit. Automatic recovery upon of overload condition.
Over Voltage Protection	Fully protected against output voltage higher than .Automatic recovery upon of over voltage condition



### 5. Safety Approvals, EMI and EMS Specification

Parameter	Conditions/Description		
Safety	IEC 60601-1 EN 60601-1 UL 60601-1, CAN/CSA-C22.2 No. 601.1-M90		TUV approved CE declaration  UL, cUL approved
	Hi-Pot	Input to output	5656 VDC
EMI	EN 60601-1-2: 2002	B	Class
EMS	IEC 61000-4-2: 1991, 8KV air discharge and 6KV contact discharge	3	Level
	IEC 61000-4-3: 1984, 3V/M	2	
	IEC 61000-4-4: 1988, 2KV line & PE	3	
	IEC 61000-4-5, 2KV	3	

### 6. Environment Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Operating Temperature		0		40	°C
Storage Temperature		-20		+85	°C
Relative Humidity	Non-condensing.	10		90	%RH

### 7. Mechanical Specification

Parameter	Conditions/Description
Dimension	141 x 71 x 35 mm, Tolerance +/- 0.4mm.
Connector	AC input: IEC-320/C14 (3 Pin) DC output plug: 5.5 x 2.1 x 12mm

#### ◆ Dimension

