



SPECIFICATION

For

SWITCHING ADAPTER

M/N: MPM-X30 series

Revisions History

REV.	Mar. 28 th 2011	Updated the safety approved status.
REV.	Nov. 3 rd 2011	CEC level V is available.
REV.	Feb. 7 th 2012	Defined the specification of output cable in section 7.
REV.	Apr. 26 th 2012	Updated the safety approvals status.



FEATURES

- 30W class II medical approved adapter
- CEC level V compliant
- Over voltage protection
- IEC, EN, UL Medical standard 3rd edition certified
- Conductive EMI meets CISPR/FCC class B

1. Description

MPM-X30 series is single output, 30Watts, universal input switching mode power supply, which is UL 60601-1 1st medical safety regulations approved. The standby wattage at no load condition is lower than 0.5W which meet CEC level V. It is specially designed for external desktop application.

Model	Output Voltage	Mini. Output Current	Rated Output Current	Line ^(Note 1) Regulation	Load ^(Note 2) Regulation	Voltage Setting ^(Note 3)	Ripple & Noise p-p ^(Note 4)	Efficiency (% typ.)
MPM-X30-05	5V	0A	4A	±1%	±6%	±2%	1%	73
MPM-X30-09	9V	0A	3A	±1%	±4%	±2%	1%	77
MPM-X30-12	12V	0A	2.5A	±1%	±3%	±2%	1%	78
MPM-X30-15	15V	0A	2A	±1%	±3%	±2%	1%	80
MPM-X30-18	18V	0A	1.65A	±1%	±2%	±2%	1%	80
MPM-X30-24	24V	0A	1.25A	±1%	±2%	±2%	1%	82

Note: 1) Line regulation is measuring at full load from 100~240Vac.
 2) Load regulation measurement is done by changing the measured output load +/-40% from 60% rated load.
 3) The output at 60% rated load and input is nominal 110/220VAC.
 4) Measured by a 20MHz bandwidth limited oscilloscope and the each output is connected with a 10µF Electrolytic Capacitor and a 0.1µF Ceramic Capacitor.

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 (115VAC), 75% load.		16		ms
Input Current	Nominal AC Input Voltage (115VAC/230VAC), 75% load.			0.6	A
Inrush Current	At 240VAC.			50	A

3. Output Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Efficiency		See Chart of 1.Description			
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 out of control. Use the TVS Component to Clamp.



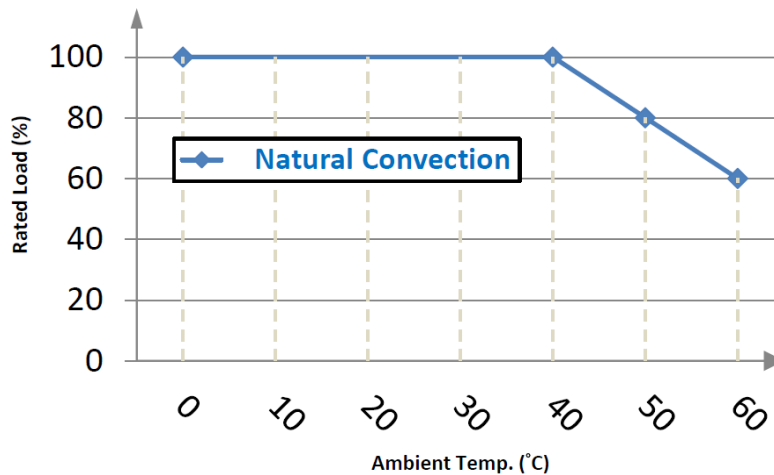
5. Safety Approvals, EMI and EMS Specification

Parameter	Conditions/Description		
Approvals	IEC 60601-1, 3rd edition		CB approved
	EN 60601-1, 3rd edition		CE declaration
	ANSI/AAMI ES 60601-1:2005, 1st Edition		UL approved
	CAN/CSA-C22.2 No. 60601-1:08, 2nd Edition		cUL approved
Hi-Pot	Input to output	5656	VDC
EMI	EN 55011	B	Class
	EN 60601-1-2		
PFC	EN 61000-3-2	A	Class
	EN 61000-3-3		
EMS	IEC 61000-4-2 ±6KV indirect discharge	3	Level
	IEC 61000-4-3 3 V/m	2	
	IEC 61000-4-4 ±2KV line	3	
	IEC 61000-4-5 ±1KV L-N	3	
	IEC 61000-4-6 3V	2	
	IEC 61000-4-8 3A/m	2	
	IEC 61000-4-11		

6. Environment Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Operating Temperature		0		60	°C
Storage Temperature		-20		+85	°C
Relative Humidity	Non-condensing.	10		93	%RH
MTBF	MIL-HDBK-217F, GB, 25°C /115VAC	300K			Hr

◆ Derating curve





7. Mechanical Specification

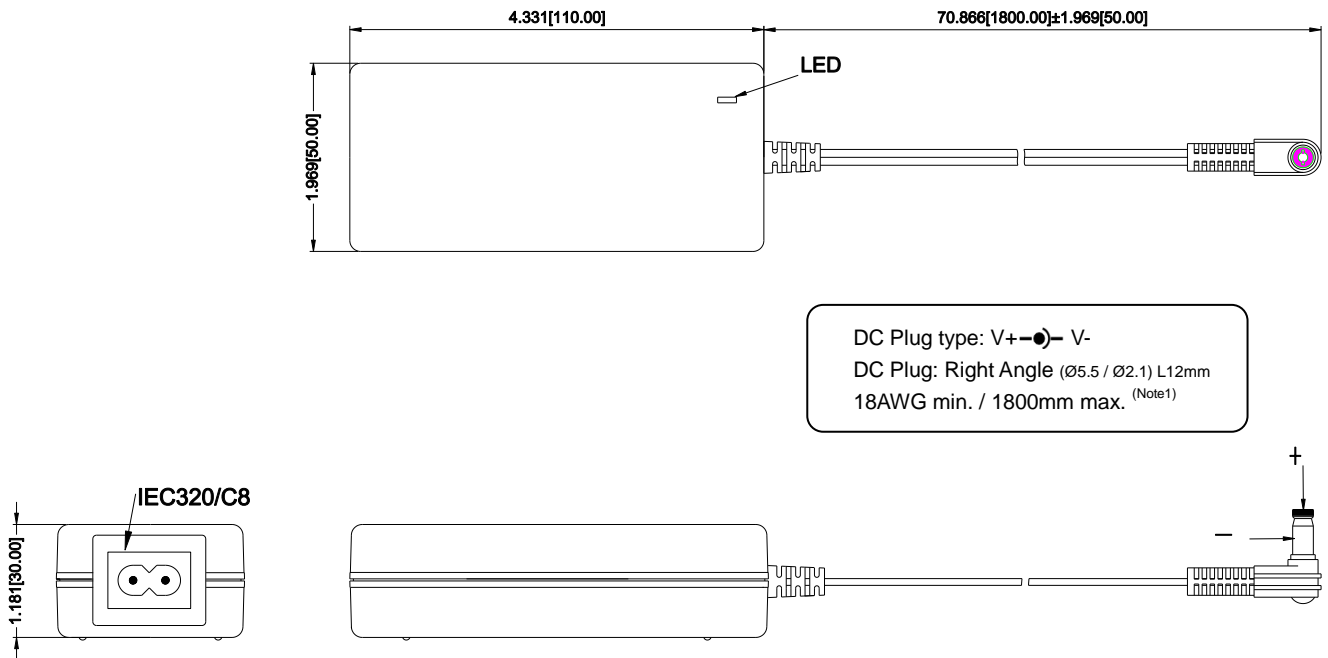
Parameter	Conditions/Description
Dimension	110 x 50 x 30 mm, Tolerance +/- 0.5mm.
AC Input Connector	IEC-320/C8 (2 Pin)
DC Plug ^(Note 2)	V+ V-, right angle, (Ø5.5 / Ø2.1) L12mm
Output Cable ^(Note 2)	18AWG min. / 1800mm max. ^(Note 1)

◆Mechanical drawing

All dimensions are in inches(mm)

Tolerance: Inches: X.XXX±0.02

mm: X.XX±0.5



Note: 1) For model MPM-X30-05 is 18AWG min. / 720mm max., MPM-X30-09 output cable length is 18AWG min. / 1220mm max.

2) Customized output connector and cable are available, please feel free to contact us.