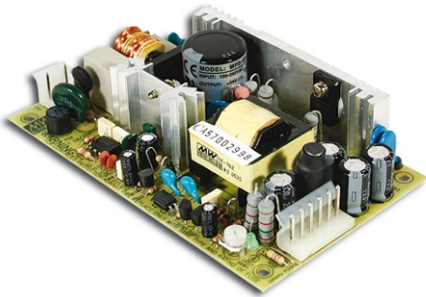


# MPS-45 series



## 45W Single Output Medical Type



### ■ Features :

- Universal AC input / Full range
- Low leakage current <250µA
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Medical safety approved (2 x MOPP between primary to secondary)
- 100% full load burn-in test
- Fixed switching frequency at 45KHz
- 3 years warranty



### SPECIFICATION

MODEL	MPS-45-3.3	MPS-45-5	MPS-45-7.5	MPS-45-12	MPS-45-13.5	MPS-45-15	MPS-45-24	MPS-45-27	MPS-45-48		
OUTPUT	DC VOLTAGE	3.3V	5V	7.5V	12V	13.5V	15V	24V	27V	48V	
	RATED CURRENT	8A	8A	5.4A	3.7A	3.3A	3A	1.9A	1.7A	1A	
	CURRENT RANGE	0 ~ 10.7A	0 ~ 10.5A	0 ~ 7A	0 ~ 4.4A	0 ~ 3.9A	0 ~ 3.5A	0 ~ 2.2A	0 ~ 1.95A	0 ~ 1.1A	
	RATED POWER	26.4W	40W	40.5W	44.4W	44.55W	45W	45.6W	45.9W	48W	
	OUTPUT POWER (max.)	52W(+3.3V:35W)with 18CFM min. Forced air convection									
	RIPPLE & NOISE (max.) Note.2	80mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	100mVp-p	
	VOLTAGE ADJ. RANGE	2.97 ~ 3.63V	4.5 ~ 5.5V	6.75 ~ 8.25V	10.8 ~ 13.2V	12.2 ~ 14.85V	13.5 ~ 16.5V	21.6 ~ 26.4V	24.3 ~ 29.7V	43.2 ~ 52.8V	
	VOLTAGE TOLERANCE Note.3	±3.0%	±3.0%	±3.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	
	LINE REGULATION	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	LOAD REGULATION	±3.0%	±3.0%	±3.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	
	SETUP, RISE TIME	800ms, 30ms/230VAC      1200ms, 30ms/115VAC at full load									
HOLD UP TIME (Typ.)	50ms/230VAC      16ms/115VAC at full load										
INPUT	VOLTAGE RANGE	90 ~ 264VAC		127 ~ 370VDC							
	FREQUENCY RANGE	47 ~ 63Hz									
	EFFICIENCY(Typ.)	65%	72%	75%	76%	76%	77%	78%	78%	78%	
	AC CURRENT (Typ.)	1.2A/115VAC		0.7A/230VAC							
	INRUSH CURRENT (Typ.)	COLD START 17A/115VAC		40A/230VAC							
LEAKAGE CURRENT Note.7	Earth leakage current < 250µA/264VAC , Touch current < 60µA/264VAC										
PROTECTION	OVERLOAD	53 ~ 75W (3.3V:36 ~ 55W) rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed									
	OVER VOLTAGE	3.8 ~ 4.46V	5.75 ~ 6.75V	8.63 ~ 10.1V	13.8 ~ 16.2V	15.5 ~ 18.2V	17.25 ~ 20.25V	27.6 ~ 32.4V	31 ~ 36.45V	55.2 ~ 64.8V	
ENVIRONMENT	WORKING TEMP.	-10 ~ +60°C (Refer to "Derating Curve")									
	WORKING HUMIDITY	20 ~ 90% RH non-condensing									
	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH									
	TEMP. COEFFICIENT	±0.04%/°C (0 ~ 50°C)									
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes									
SAFETY & EMC (Note 4)	SAFETY STANDARDS	ANSI/AAMI ES60601-1, TUV EN60601-1, IEC60601-1 approved									
	ISOLATION LEVEL	Primary-Secondary: 2xMOPP, Primary-Earth:1xMOPP									
	WITHSTAND VOLTAGE	I/P-O/P:4KVAC			I/P-FG:2KVAC			O/P-FG:0.5KVAC			
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG:100M Ohms / 500VDC / 25°C / 70% RH									
	EMC EMISSION	Compliance to EN55011 (CISPR11) Class B, EN61000-3-2,-3									
EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN60601-1-2, medical level, criteria A										
OTHERS	MTBF	366.1Khrs min. MIL-HDBK-217F (25°C)									
	DIMENSION	127*76*28mm (L*W*H)									
	PACKING	0.18Kg; 72pcs/15.1Kg/1.35CUFT									
NOTE	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>4. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</li> <li>5. Mounting holes M1 and M2 should be grounded for EMI purposes.</li> <li>6. Heat Sink HS1,HS2 can not be shorted.</li> <li>7. Touch current was measured from primary input to DC output.</li> </ol>										

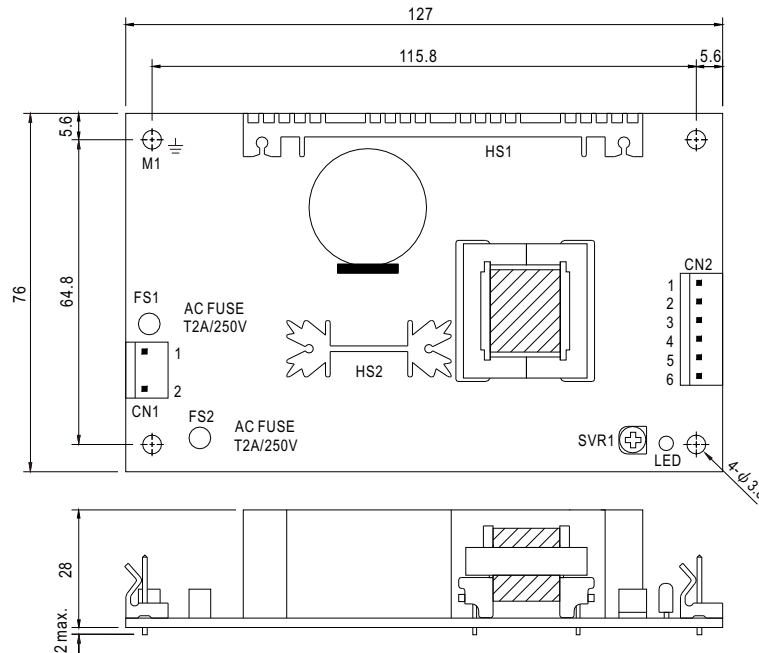
File Name:MPS-45-SPEC 2017-08-21



Note: all features are subject to change without notice.

**Mechanical Specification**

Unit:mm



AC Input Connector (CN1) : Molex 5277-02 or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	AC/L	Molex 5195 or equivalent	Molex 5194 or equivalent
2	AC/N		

DC Output Connector (CN2) : Molex 5273-06 or equivalent

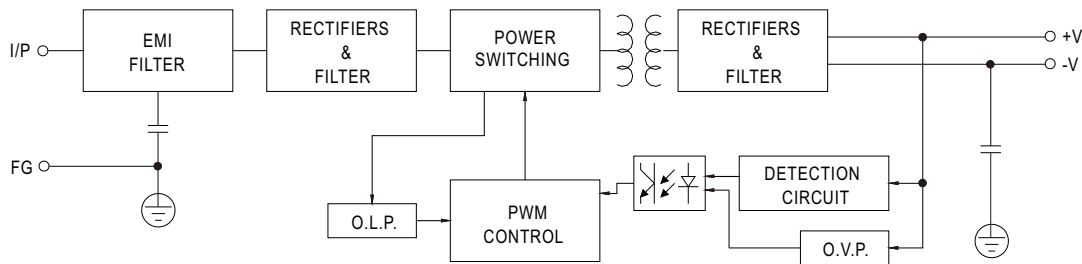
Pin No.	Assignment	Mating Housing	Terminal
1,2,3	+V	Molex 5195 or equivalent	Molex 5194 or equivalent
4,5,6	-V		

⊥ : Grounding Required

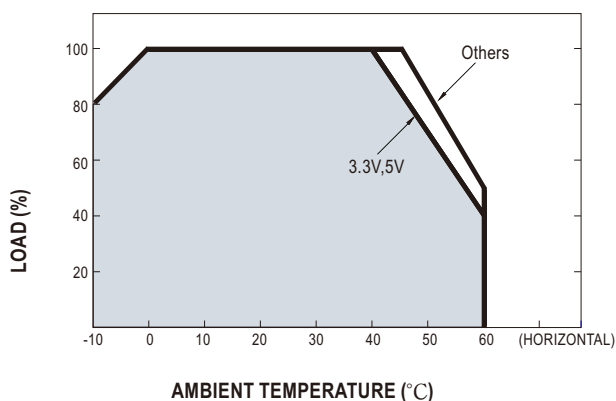
- ⚠ 1.HS1,HS2 cannot be shorted
- 2.M1 is safety ground

**Block Diagram**

fosc : 45KHz



**Derating Curve**



**Static Characteristics**

