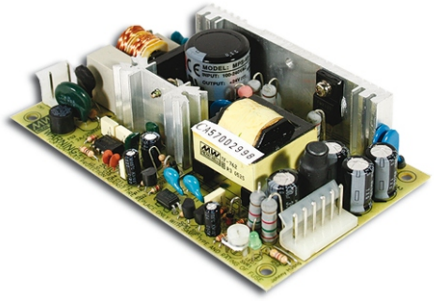
MEAN WELL

45W Dual Output Medical Type

MPD-45 series



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

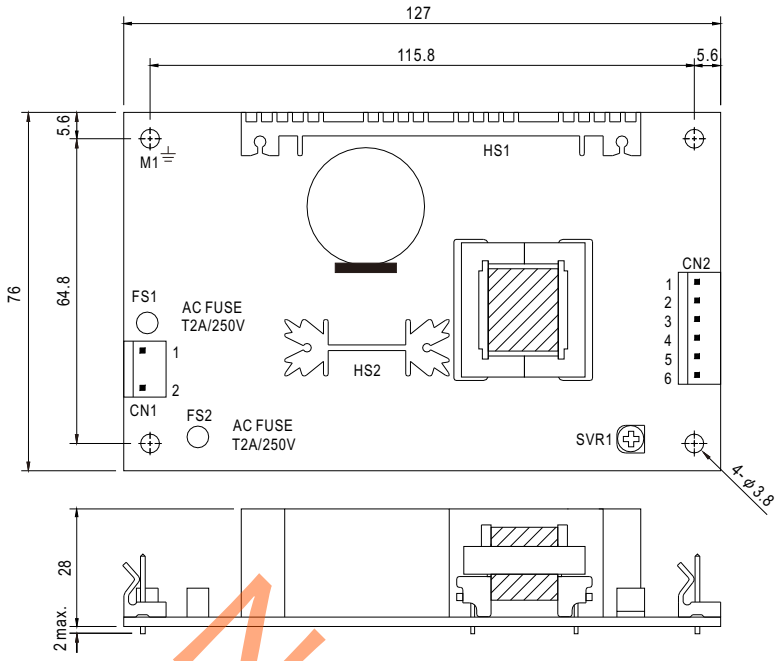
MODEL		MPD-45A		MPD-45B	
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH1	CH2
	DC VOLTAGE	5V	12V	5V	24V
	RATED CURRENT	3.2A	2A	3.2A	1.2A
	CURRENT RANGE	0.4 ~ 5A	0.2 ~ 2.5A	0.4 ~ 5A	0.2 ~ 1.8A
	RATED POWER	40W		44.8W	
	OUTPUT POWER (max.)	52W with 18CFM min. Forced air convection			
	RIPPLE & NOISE (max.) Note.2	60mVp-p	120mVp-p	60mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	CH1:4.5 ~ 5.5V		CH1:4.5 ~ 5.5V	
	VOLTAGE TOLERANCE Note.3	±4.0%	±7.0%	±4.0%	±7.0%
	LINE REGULATION	±1.0%	±2.0%	±1.0%	±2.0%
	LOAD REGULATION	±3.0%	±4.0%	±3.0%	±4.0%
	SETUP, RISE TIME	800ms, 20ms/230VAC 800ms, 20ms/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.)	76%		78%	
	AC CURRENT (Typ.)	1.2A/115VAC 0.7A/230VAC			
	INRUSH CURRENT (Typ.)	COLD START 15A/115VAC 30A/230VAC			
	LEAKAGE CURRENT Note.7	Earth leakage current < 250μA/264VAC , Touch current < 60μA/264VAC			
PROTECTION	OVERLOAD	53 ~ 75W rated output power			
		Protection type : Hiccup mode, recovers automatically after fault condition is removed			
	OVER VOLTAGE	5.75 ~ 6.75V on CH1			
		Protection type : Hiccup mode, recovers automatically after fault condition is removed			
ENVIRONMENT	WORKING TEMP.	-10 ~ +60℃ (Refer to "Derating Curve")			
	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-20 ~ +85℃, 10 ~ 95% RH			
	TEMP. COEFFICIENT	±0.04%/℃ (0 ~ 50℃) on +5V output			
	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℃/ 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	291.3Khrs min. MIL-HDBK-217F (25℃)			
	DIMENSION	127*76*28mm (L*W*H)			
	PACKING	0.2Kg; 72pcs/17.4Kg/1.35CUFT			

NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
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 http://www.meanwell.com)
5. Mounting holes M1 and M2 should be grounded for EMI purposes.
6. Heat Sink HS1,HS2 can not be shorted.
7. Touch current was measured from primary input to DC output.

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

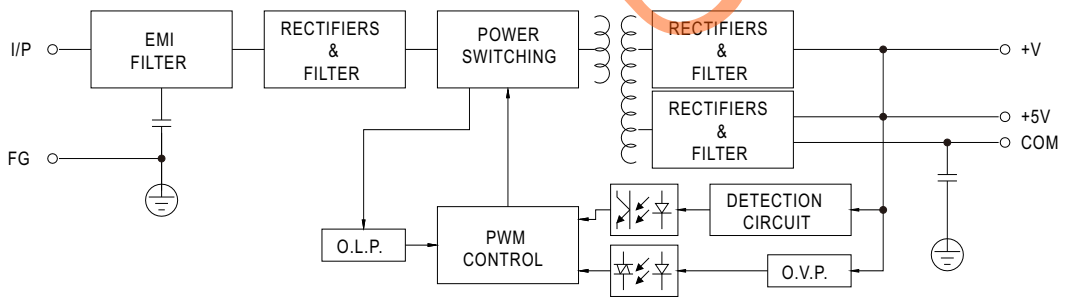
Pin No.	Assignment	Mating Housing	Terminal
1	+V	Molex 5195 or equivalent	Molex 5194 or equivalent
2,3	+5V		
4,5	COM		
6	NC		

⏚ : Grounding Required

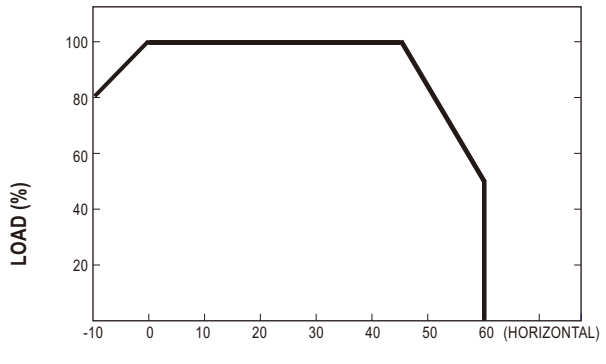
⚠ 1.HS1,HS2 cannot be shorted
2.M1 is safety ground

Block Diagram

fosc : 45KHz



Derating Curve



Static Characteristics