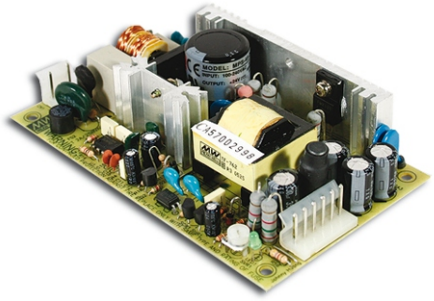
MPS-45 series

45W Single Output Medical Type

User's Manual



■ 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
		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℃)								
	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	366.1Khrs min. MIL-HDBK-217F (25℃)								
	DIMENSION	127*76*28mm (L*W*H)								
	PACKING	0.18Kg; 72pcs/15.1Kg/1.28CUFT								

NOTE

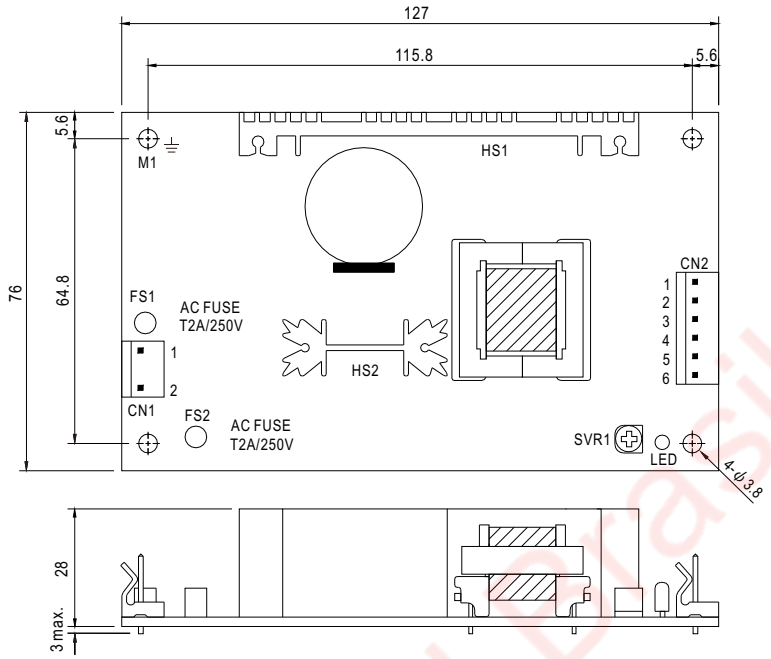
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation 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.

※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

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■ 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

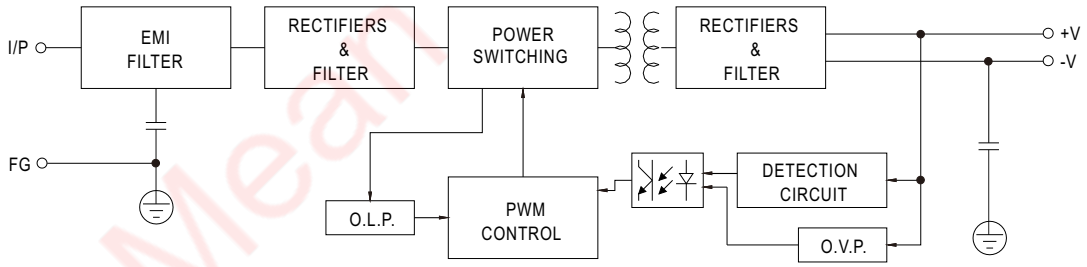
Pin No.	Assignment	Mating Housing	Terminal
1,2,3	+V	Molex 5195 or equivalent	Molex 5194 or equivalent
4,5,6	-V		

⏚ : Grounding Required

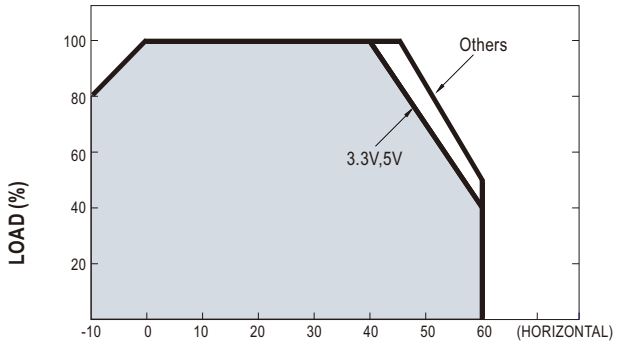
⚠ 1.HS1,HS2 cannot be shorted
2.M1 is safety ground

■ Block Diagram

fosc : 45KHz

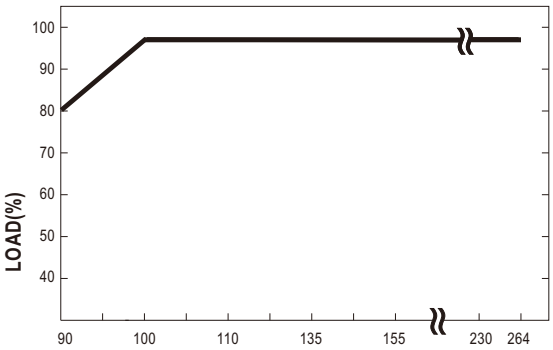


■ Derating Curve



AMBIENT TEMPERATURE (°C)

■ Static Characteristics



INPUT VOLTAGE (V) 60Hz

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