innovative energies

45W Single Output Power Supply IEMP45 series

Features :

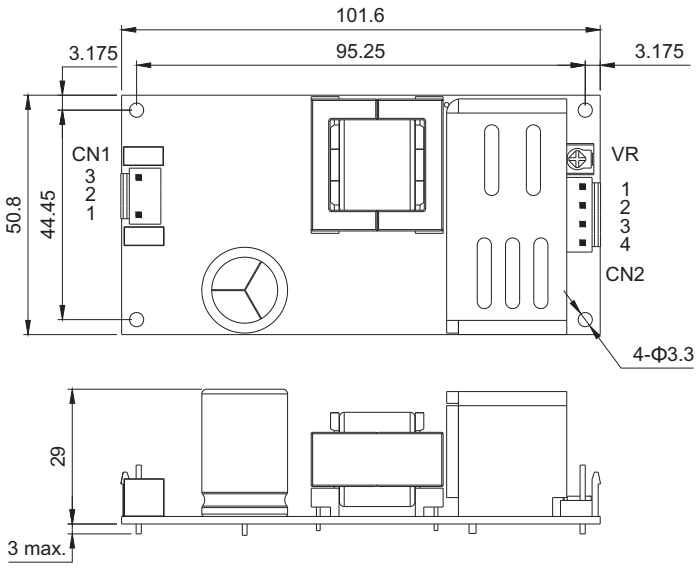
- Green design, No-load power consumption < 0.5W
- Universal AC input / Full range
- Protections: Short circuit / Over load / Over voltage
  Brown-out (Low AC Input voltage)
- Cooling by free air convection
- UL60601-1/IEC60601-1/EN60601-1:2006 medical safety approved
- All using 105°C long life electrolytic capacitors
- High operation temperature up to 70°C
- 100% full load burn-in test
- Withstand 2G vibration test
- High efficiency ,long life and high reliability
- 3 years warranty

MEDICAL c UL us E324816 EN 60601-1 IEC 60601-1 CE

MODEL		MP45-12	MP45-15	MP45-24	MP45-48
OUTPUT	DC Voltage Range	12V	15V	24V	48V
	Rated Current	3.75A	3A	1.875A	0.94A
	Current Range	0 ~ 4.125A	0 ~ 3.3A	0 ~ 2.06A	0 ~ 1.032A
	Rated Power	45W	45W	45W	45W
	PEAK LOAD(10sec.)	49.5W	49.5W	49.4W	49.53W
	Ripple & Noise (max.)	120 mV	150 mV	240 mV	300 mV
	Voltage Adjustment Range	±10%			
	Voltage Tolerance	±2.0%	±2.0%	±1.0%	±1.0%
	Line Regulation	±0.5%	±0.5%	±0.5%	±0.5%
	Load Regulation	±1.0%	±1.0%	±1.0%	±1.0%
	Setup, Rise Time	500ms, 30ms/230VAC 500ms, 30ms/115VAC at full load			
	Hold Up Time	50ms / 230VAC 13ms / 115VAC at full load			
INPUT	Voltage Range	90V ~ 264VAC 127 ~ 373VDC (Withstand 300VAC surge for 5sec. Without damage)			
	Frequency Range	47Hz ~ 63Hz			
	Efficiency (Typ.) at 230Vac	85%	85%	86%	87%
	AC Current (Typ.)	0.9A / 115VAC 0.5A / 230VAC			
	Inrush Current (Typ.)	Cold Start 30A / 115VAC 60A / 230VAC			
	LEAKAGE CURRENT	For earth <200uA/264VAC, For patient <100uA/264VAC			
Protection	Over Load	Above 110% rated output power			
		Protection type : Hiccup mode, recovers automatically after fault condition is removed			
	Over Voltage	115% ~ 140% rated output voltage			
		Protection type : latch-off mode			
Environment	Working Temp.	-20°C ~ 70°C (Refer to output load de-rating curve)			
	Working Humidity	20 ~ 90% RH non-condensing			
	Storage Temp., Humidity	-40 ~ +85°C , 10 ~95% R.H			
	Temp.Coefficient	±0.03%/°C (0 ~ 50°C)			
	Vibration	10 ~ 500Hz, 2G 10min/1cycle, period for 60 min each along X,Y,Z axes			
Safety & EMC	Safety Standards	UL60601-1 / TUV EN60601-1: 2006 / IEC60601-1 Approved			
	Withstand Voltage	I/P - O/P: 4KVAC I/P-FG:1.5KVAC O/P-FG:1.5KVAC			
	Isolation Resistance	I/P - O/P : 100M Ohms / 500VDC			
	EMI Conduction & Radiation	EN55011 : 2007+A2 : 2007 Class B			
	Harmonic Current	EN61000-3-2 : 2006 Class A, EN61000-3-3 : 1995+A1 :2001+A2 : 2005			
	EMS Immunity	EN60601-1-2:2001+A1:2006, IEC61000-4-2,3,4,5,6,8,11			
Others	MTBF	215.48K Hours			
	Dimension	101.6x50.8x29 mm			
	Packing	0.151kg ; 80pcs / 13.56kg			
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. Line regulation is measured from low line to high line at rated load. 5. Load regulation is measured from 0% to 100% rated load. 6. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. 7. Length of set up time is measured at cold first start. Turning ON/OFF the power supply very quickly may lead to increase of the set up time 8. 33% Duty cycle maximum within every 30 seconds. Average output power should not exceed the rated power.				

Mechanical Specification

Unit : mm



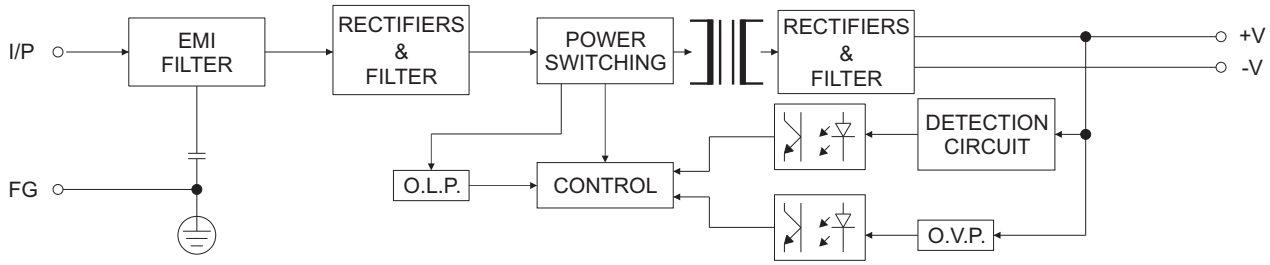
AC Input Connector (CN1) : JST B3P-VH or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	AC / N	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2	No Pin		
3	AC / L		

DC Output Connector (CN2) : JST B4P-VH or equivalent

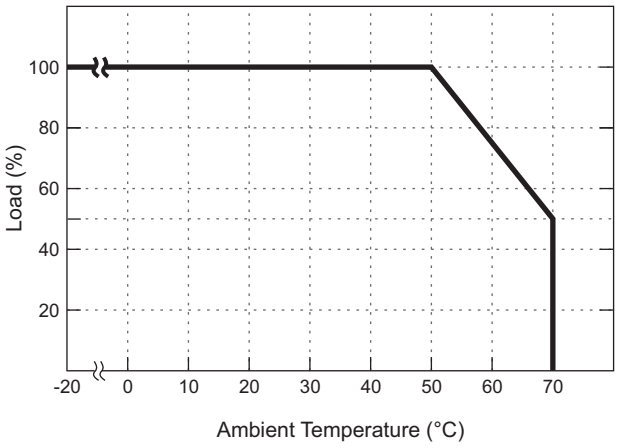
Pin No.	Assignment	Mating Housing	Terminal
1,2	+V	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
3,4	-V		

Block Diagram



De-rating Curve

Load V.S Temp.



Load V.S I/P Voltage