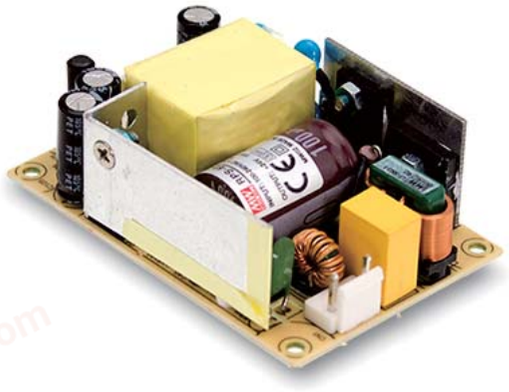
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45W Single Output Medical Type RPS-45 series



Features

- 3"×2" miniature size
- Universal AC input / Full range
- Class Ⅱ (without FG) installations
- Medical safety approved
  (2 x MOPP between primary to secondary)
- Suitable for BF application with appropriate system consideration
- Low leakage current <100μA
- No load power consumption<0.1W
- High efficiency up to 91%
- For 1U applications
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- -30~70℃ wide range of operating temperature
- Operating altitude up to 4000 meters(Note 7.)
- LED indicator for power on
- 3 years warranty

Applications

- Oral irrigator
- Hemodialysis machine
- Medical monitors
- Sleep apnea devices

Description

RPS-45 is a 45W highly reliable green PCB type medical power supply with a high power density on the 3” by 2” footprint. It accepts 80~264VAC input and offers various output voltages between 3.3V and 48V. The working efficiency is up to 91% and the extremely low no load power consumption is down below 0.1W. RPS-45 is able to be used for Class Ⅱ (no FG) system design. The extremely low leakage current is less than 100μA. In addition, it conforms to international medical regulations (2*MOPP) and EMC EN55011, perfectly fitting all kinds of BF rated “patient contact” medical system equipment.

Model Encoding

RPS- 45 - 3.3

- 3.3 — Output voltage
- 45 — Output wattage
- RPS — Series name

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SPECIFICATION

ORDER NO.		RPS-45-3.3	RPS-45-5	RPS-45-7.5	RPS-45-12	RPS-45-15	RPS-45-24	RPS-45-48
OUTPUT	DC VOLTAGE	3.3V	5V	7.5V	12V	15V	24V	48V
	RATED CURRENT	8A	8A	5.4A	3.8A	3A	1.9A	0.94A
	CURRENT RANGE	0 ~ 8.8A	0 ~ 8.8A	0 ~ 5.95A	0 ~ 4.18A	0 ~ 3.3A	0 ~ 2.1A	0 ~ 1.03A
	RATED POWER	26.4W	40W	40.5W	45.6W	45W	45.6W	45.1W
	PEAK LOAD(10sec.) Note.2	29W	44W	44.6W	50.2W	49.5W	50.2W	49.4W
	RIPPLE & NOISE (max.) Note.3	80mVp-p	80mVp-p	80mVp-p	120mVp-p	150mVp-p	240mVp-p	300mVp-p
	VOLTAGE ADJ.RANGE	3.1~3.6V	4.7~5.5V	7.12~8.3V	11.4~13.2V	13.5~16.5V	22.8~27.6V	45.6~52.8V
	VOLTAGE TOLERANCE Note.4	±2.0%	±2.0%	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±2.0%	±2.0%	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%
	SETUP, RISE TIME	500ms, 30ms / 230VAC 500ms, 30ms / 115VAC at full load						
	HOLD UP TIME (Typ.)	30ms / 230VAC 12ms / 115VAC at full load						
INPUT	VOLTAGE RANGE Note.5	80 ~ 264VAC						
	FREQUENCY RANGE	47 ~ 63Hz						
	EFFICIENCY (Typ.)	80%	83%	85%	88%	89%	90%	91%
	AC CURRENT (Typ.)	1.2A / 115VAC 1A / 230VAC						
	INRUSH CURRENT (Typ.)	COLD STAR 30A/115VAC 60A/230VAC						
	LEAKAGE CURRENT(max.)	Touch current< 100μA/264VAC						
PROTECTION	OVERLOAD	115 ~ 150% rated output power						
		Protection type : Hiccup mode, recovers automatically after fault condition is removed						
	OVER VOLTAGE	3.8~5V	5.7~6.8V	8.62~11.3V	13.8~16.2V	17.25~20.3V	28.4~32.4V	55.2~64.8V
		Protection type : Shut down o/p voltage, re-power on to recover						
ENVIRONMENT	WORKING TEMP.	-30 ~ +70℃ (Refer to "Derating Curve")						
	WORKING HUMIDITY	20% ~ 90% RH non-condensing						
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH						
	TEMP. COEFFICIENT	±0.03% / ℃ (0 ~ 50℃)						
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes						
SAFETY & EMC (Note. 7)	SAFETY STANDARDS	ANSI/AAMI ES60601-1 / TUV EN60601-1 / IEC60601-1 approved						
	ISOLATION LEVEL	Primary-Secondary: 2xMOPP						
	WITHSTAND VOLTAGE	I/P-O/P: 4KVAC						
	ISOLATION RESISTANCE	I/P-O/P: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, EN55024, EN60601-1-2 medical level, criteria A						
OTHERS	MTBF	726.2Khrs min. MIL-HDBK-217(25℃)						
	DIMENSION	76.2*50.8*24mm (L*W*H)						
	PACKING	0.11Kg; 120pcs/14.2Kg/0.97CUFT						

NOTE

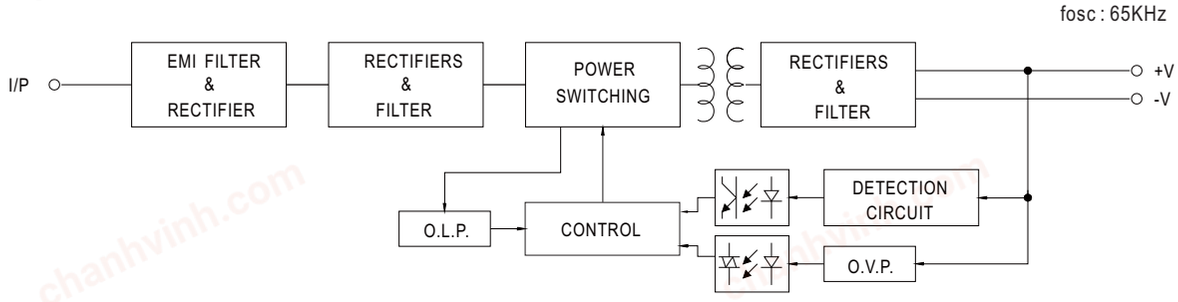
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. 33% Duty cycle maximum within every 30 seconds. Average output power should not exceed the rated power.
3. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
4. Tolerance : includes set up tolerance, line regulation and load regulation.
5. Derating may be needed under low input voltages. Please check the derating curve for more details.
6. Touch current was measured from primary input to DC output.
7. The ambient temperature derating of 5℃/1000m is needed for operating altitude greater than 2000m (6500ft).
8. 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)

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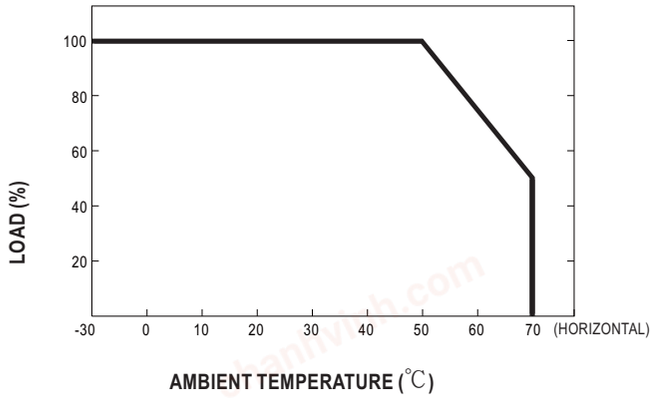
45W Single Output Medical Type

RPS-45 series

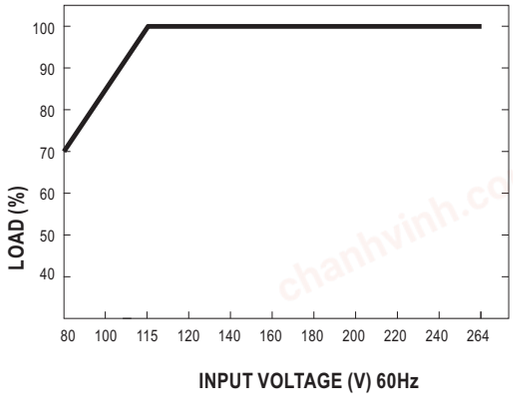
■ Block Diagram



■ Derating Curve



■ Static Characteristics

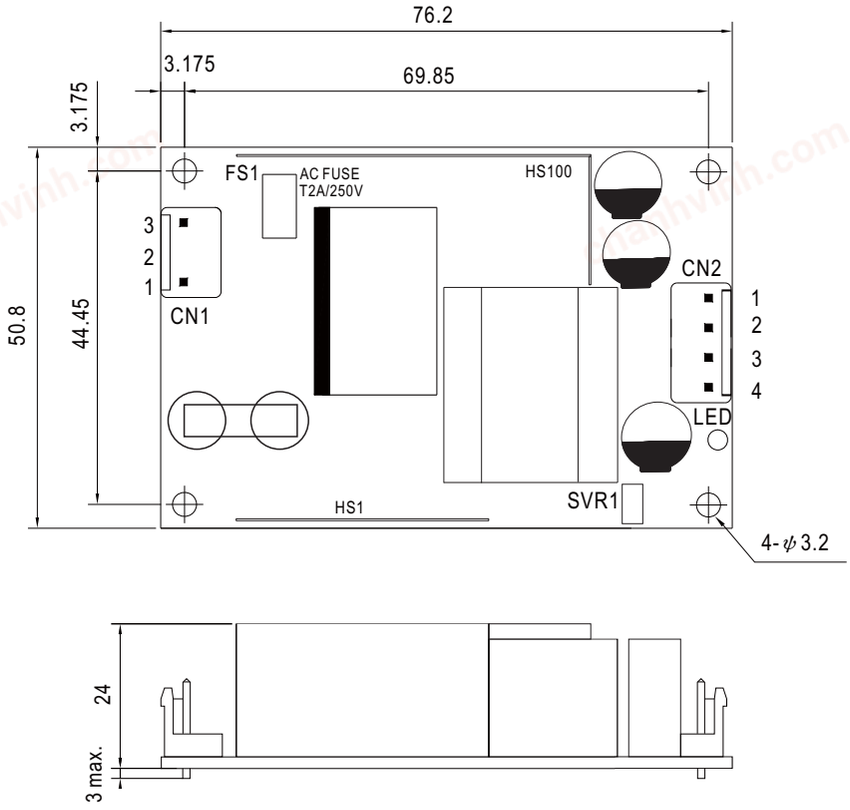


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■ Mechanical Specification

Case No. 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 B2P-VH or equivalent

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

■ Installation Manual

Please refer to : http://www.meanwell.com/webnet/search/InstallationSearch.html