

■ 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°C wide range of operating temperature
- Operating altitude up to 4000 meters(Note 7.)
- LED indicator for power on
- 3 years warranty

■ Applications

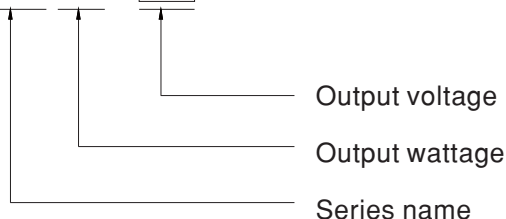
- Oral irrigator
- Hemodialysis machine
- Medical monitors
- Sleep apnea devices

■ Description

RPS-30 is a 30W 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-30 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

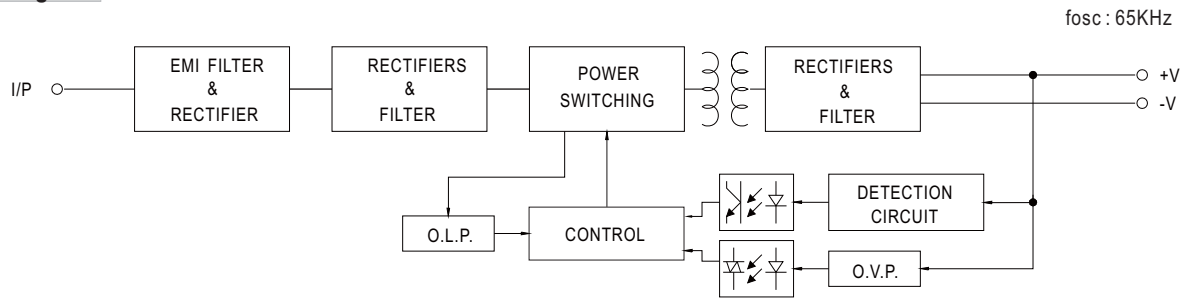
RPS-30-3.3



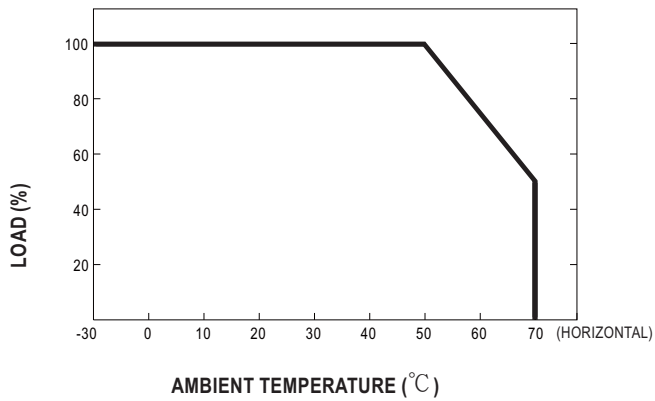
SPECIFICATION

ORDER NO.		RPS-30-3.3	RPS-30-5	RPS-30-7.5	RPS-30-12	RPS-30-15	RPS-30-24	RPS-30-48	
OUTPUT	DC VOLTAGE	3.3V	5V	7.5V	12V	15V	24V	48V	
	RATED CURRENT	6A	6A	4A	2.5A	2A	1.25A	0.625A	
	CURRENT RANGE	0 ~ 6.6A	0 ~ 6.6A	0 ~ 4.4A	0 ~ 2.75A	0 ~ 2.2A	0 ~ 1.375A	0 ~ 0.687A	
	RATED POWER	19.8W	30W	30W	30W	30W	30W	30W	
	PEAK LOAD(10sec.) <small>Note.2</small>	21.8W	33W	33W	33W	33W	33W	33W	
	RIPPLE & NOISE (max.) <small>Note.3</small>	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	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±1.0%	±1.0%	
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	SETUP, RISE TIME	200ms, 30ms / 230VAC 200ms, 30ms / 115VAC at full load							
HOLD UP TIME (Typ.)	50ms / 230VAC 12ms / 115VAC at full load								
INPUT	VOLTAGE RANGE <small>Note.5</small>	80 ~ 264VAC							
	FREQUENCY RANGE	47 ~ 63Hz							
	EFFICIENCY (Typ.)	80%	82%	84%	88%	89%	89.5%	91%	
	AC CURRENT (Typ.)	1A / 115VAC 0.5A / 230VAC							
	INRUSH CURRENT (Typ.)	COLD STAR 30A/115VAC 60A/230VAC							
	LEAKAGE CURRENT(max.)	Touch current < 100 μ A/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 $^{\circ}$ C (Refer to "Derating Curve")							
	WORKING HUMIDITY	20% ~ 90% RH non-condensing							
	STORAGE TEMP., HUMIDITY	-40 ~ +85 $^{\circ}$ C, 10 ~ 95% RH							
	TEMP. COEFFICIENT	±0.03% / $^{\circ}$ C (0 ~ 50 $^{\circ}$ C)							
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes							
SAFETY & EMC (Note. 8)	SAFETY STANDARDS	ANSI/AAMI ES60601-1, TUV EN60601-1, EN60601-1-1 approved							
	ISOLATION LEVEL	Primary-Secondary: 2xMOPP							
	WITHSTAND VOLTAGE	I/P-O/P: 4KVAC							
	ISOLATION RESISTANCE	I/P-O/P: 100M Ohms / 500VDC / 25 $^{\circ}$ 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, EN55024, EN60601-1-2 medical level, criteria A							
OTHERS	MTBF	628.7Khrs min. MIL-HDBK-217(25 $^{\circ}$ C)							
	DIMENSION	76.2*50.8*24mm or 3" * 2" * 0.945" inch (L*W*H)							
	PACKING	0.09Kg; 120pcs/11.8Kg/0.97CUFT							
NOTE	<ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25$^{\circ}$C of ambient temperature. 33% Duty cycle maximum within every 30 seconds. Average output power should not exceed the rated power. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μf & 47μf parallel capacitor. Tolerance : includes set up tolerance, line regulation and load regulation. Derating may be needed under low input voltages. Please check the derating curve for more details. Touch current was measured from primary input to DC output. The ambient temperature derating of 5$^{\circ}$C/1000m is needed for operating altitude greater than 2000m (6500ft). 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. 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) 								

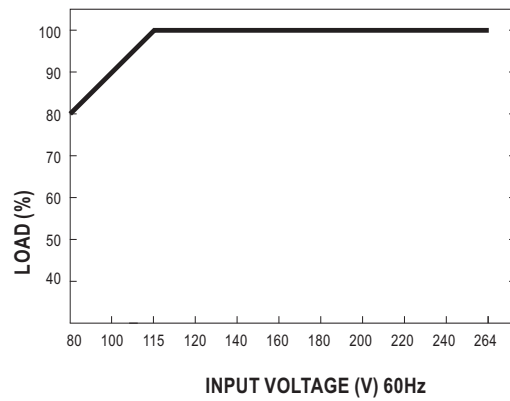
Block Diagram



Derating Curve

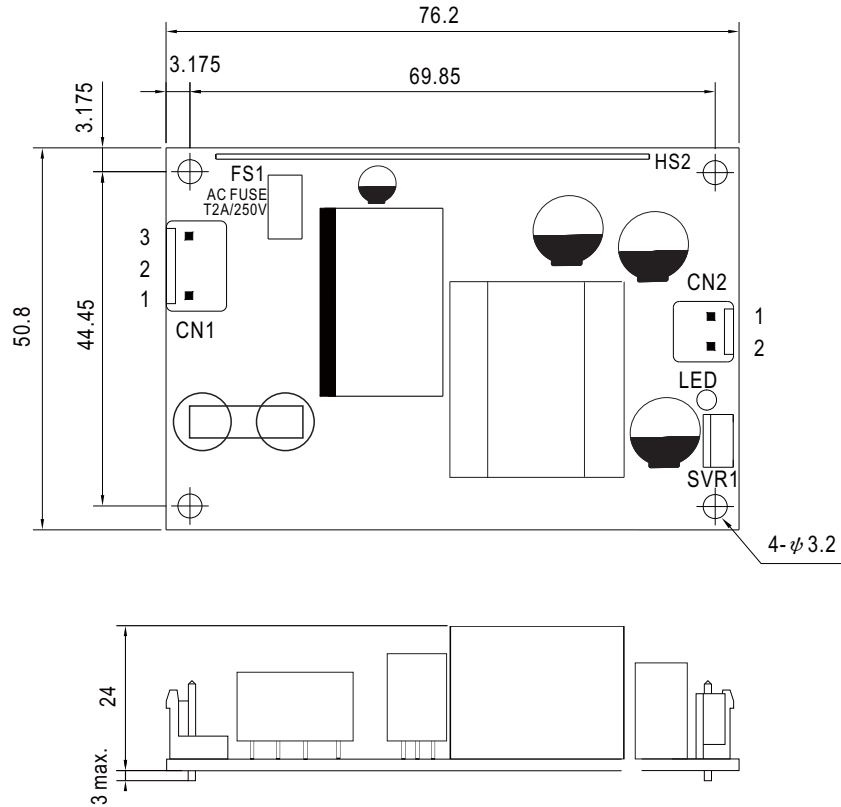


Static Characteristics



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		

Installation Manual

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