

ANSI/AAMI ES60601-1 BS EN/EN60601-1 IEC60601-1 TPTC004



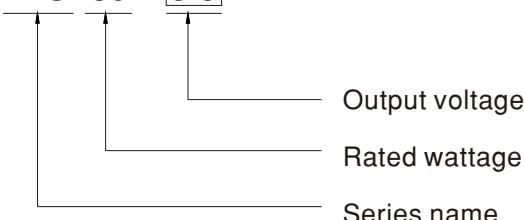
■ Features

- 3"x2" compact size
- Medical safety approved (2 x MOPP) according to ANSI/AAMI ES60601-1 and IEC/BS EN/EN60601-1
- Suitable for BF application with appropriate system consideration
- Cooling by free air convection
- EMI class B for class II configuration
- No load power consumption<0.1W
- Extremely low leakage current
- Protections: Short circuit / Overload / Over voltage
- Lifetime > 105K hours
- Operating altitude up to 4000 meters
- 3 years warranty

■ 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 92% 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 80 μ A. In addition, it conforms to international medical regulations (2*MOPP) and EMC BS EN/EN55011, perfectly fitting all kinds of BF rated "patient contact" medical system equipment.

■ Model Encoding

 RPS - 30 - **3.3**


■ Applications

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

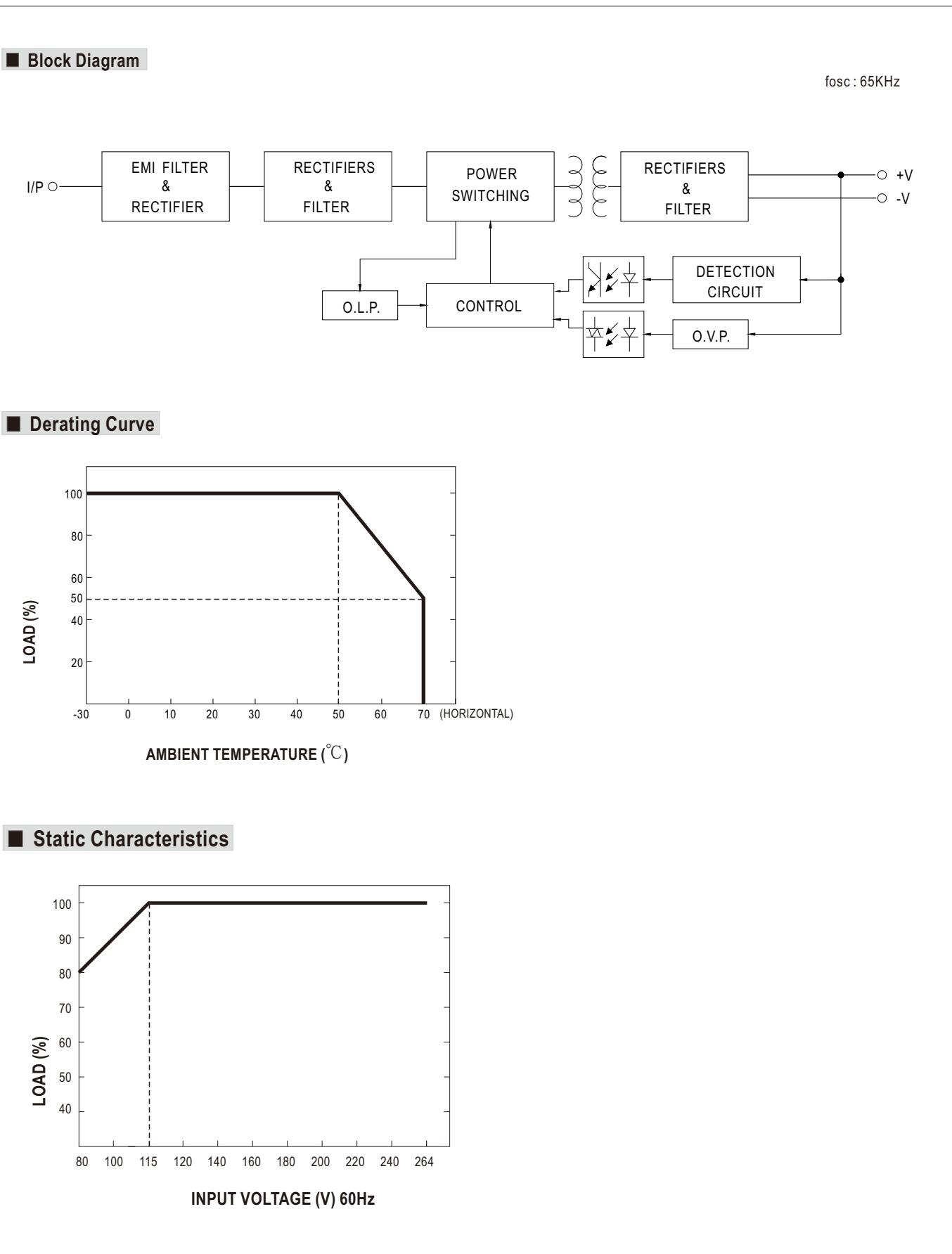
SPECIFICATION

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												
	RATED CURRENT	6A	6A	4A	2.5A	2A	1.25A												
	CURRENT RANGE	0 ~ 6.6A	0 ~ 6.6A	0 ~ 4.4A	0 ~ 2.75A	0 ~ 2.2A	0 ~ 1.375A												
	RATED POWER	19.8W	30W	30W	30W	30W	30W												
	PEAK LOAD(10sec.) Note.2	21.8W	33W	33W	33W	33W	33W												
	RIPPLE & NOISE (max.) Note.3	80mVp-p	80mVp-p	80mVp-p	100mVp-p	100mVp-p	150mVp-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												
	VOLTAGE TOLERANCE	±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%												
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%												
INPUT	SETUP, RISE TIME	200ms, 30ms / 230VAC	200ms, 30ms / 115VAC	at full load															
	HOLD UP TIME (Typ.)	30ms / 230VAC	16ms / 115VAC	at full load															
PROTECTION	VOLTAGE RANGE Note.5	80 ~ 264VAC																	
	FREQUENCY RANGE	47 ~ 63Hz																	
	EFFICIENCY (Typ.)	80%	82%	84%	88%	89%	89.5%	92%											
	AC CURRENT (Typ.)	1A / 115VAC	0.5A / 230VAC																
	INRUSH CURRENT (Typ.)	COLD STAR 30A/115VAC 60A/230VAC																	
ENVIRONMENT	LEAKAGE CURRENT(max.) Note.6	Touch current< 80 μA/264VAC																	
	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	8.6~11.3V	13.8~16.2V	17.2~20.3V	28.4~32.4V	55.2~64.8V											
			Protection type : Shut down o/p voltage, re-power on to recover																
SAFETY & EMC (Note. 8)	WORKING TEMP.	-30 ~ +70°C (Refer to "Derating Curve")																	
	WORKING HUMIDITY	20% ~ 90% RH non-condensing																	
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing																	
	TEMP. COEFFICIENT	±0.03% / °C (0 ~ 50°C)																	
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes																	
SAFETY & EMC (Note. 8)	OPERATING ALTITUDE Note.7	4000 meters																	
	SAFETY STANDARDS	IEC60601-1, TUV BS EN/EN60601-1, EAC TP TC 004, UL ANSI / AAMI ES60601-1 (3.1 version), CAN/CSA-C22.2 No. 60601-1:14 - Edition 3 approved; Design refer to BS EN/EN60335-1																	
	ISOLATION LEVEL	Primary-Secondary: 2xMOPP																	
	WITHSTAND VOLTAGE	I/P-O/P: 4kVAC																	
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH																	
	EMC EMISSION	Parameter	Standard	Test Level / Note															
		Conducted emission	BS EN/EN55011 (CISPR11)	Class B															
		Radiated emission	BS EN/EN55011 (CISPR11)	Class B															
		Harmonic current	BS EN/EN61000-3-2	Class A															
	EMC IMMUNITY	Voltage flicker	BS EN/EN61000-3-3	-----															
		BS EN/EN60601-1-2																	
		Parameter	Standard	Test Level / Note															
		ESD	BS EN/EN61000-4-2	Level 4, 15kV air ; Level 4, 8kV contact															
		RF field susceptibility	BS EN/EN61000-4-3	Level 3, 10V/m(80MHz~2.7GHz) Table 9, 9~28V/m(385MHz~5.78GHz)															
		EFT bursts	BS EN/EN61000-4-4	Level 3, 2kV															
		Surge susceptibility	BS EN/EN61000-4-5	Level 4, 2kV/Line-Line															
		Conducted susceptibility	BS EN/EN61000-4-6	Level 3, 10V															
OTHERS	Magnetic field immunity	BS EN/EN61000-4-8	Level 4, 30A/m																
	Voltage dip, interruption	BS EN/EN61000-4-11	100% dip 1 periods, 30% dip 25 periods, 100% interruptions 250 periods																
	DIMENSION (L*W*H)	76.2*50.8*24mm or 3" * 2" * 0.945" inch																	
NOTE	PACKING	0.09Kg; 120pcs/11.8Kg/0.94CUFT																	
	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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 0.1μF & 47μF 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 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft). 8. 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) ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx																		



30W Reliable Green Medical Power Supply

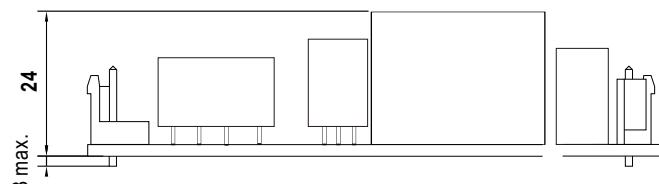
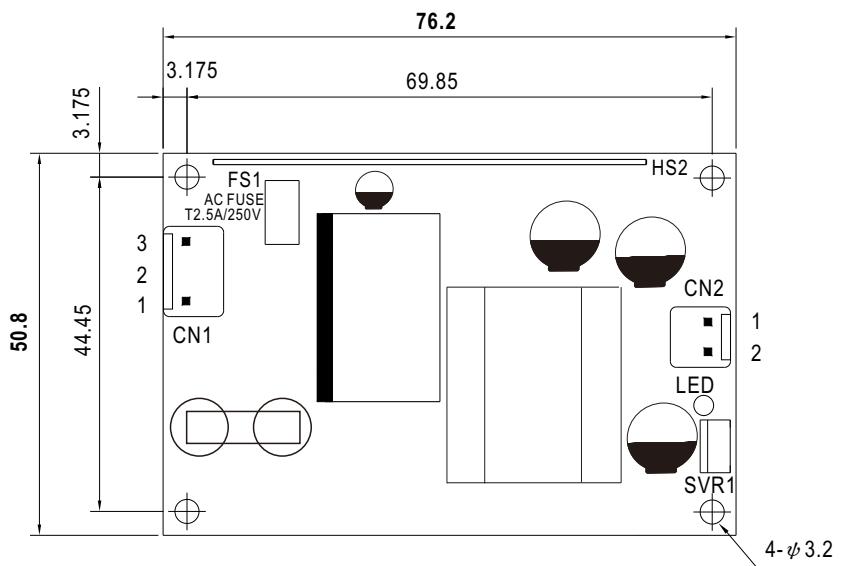
RPS-30 series



■ Mechanical Specification

Case No. Unit:mm

Top View



Side View

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

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

DC Output Connector (CN2) : JST B2P-VH or equivalent

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

■ Installation Manual

 Please refer to : <http://www.meanwell.com/manual.html>