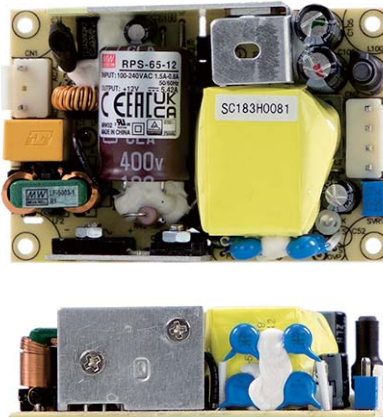




65W Reliable Green Medical Power Supply

RPS-65 series



User's Manual



■ 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
- Operating altitude up to 4000 meters
- 3 years warranty

■ Applications

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

■ GTIN CODE

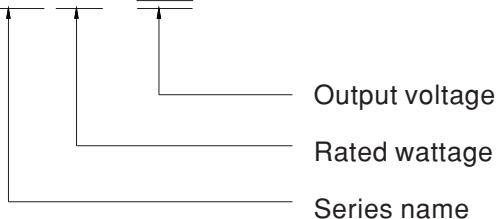
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

■ Description

RPS-65 is a 65W 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-65 is able to be used for Class II (no FG) system design. The extremely low leakage current is less than 100 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- 65 - 3.3



SPECIFICATION

ORDER NO.		RPS-65-3.3	RPS-65-5	RPS-65-7.5	RPS-65-12	RPS-65-15	RPS-65-24	RPS-65-48	
OUTPUT	DC VOLTAGE	3.3V	5V	7.5V	12V	15V	24V	48V	
	RATED CURRENT	10A	10A	8A	5.42A	4.34A	2.71A	1.36A	
	CURRENT RANGE	0 ~ 11A	0 ~ 11A	0 ~ 8.8A	0 ~ 5.96A	0 ~ 4.77A	0 ~ 2.98A	0 ~ 1.49A	
	RATED POWER	33W	50W	60W	65W	65.1W	65W	65.3W	
	PEAK LOAD(10sec.)	36.3W	55W	66W	71.5W	71.6W	71.5W	71.5W	
	RIPPLE & NOISE (max.) Note.2	80mVp-p	80mVp-p	80mVp-p	120mVp-p	120mVp-p	120mVp-p	150mVp-p	
	VOLTAGE ADJ.RANGE	2.9~3.6V	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.3	±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.4	80 ~ 264VAC							
	FREQUENCY RANGE	47 ~ 63Hz							
	EFFICIENCY (Typ.)	80%	84%	85%	88%	89%	90%	91%	
	AC CURRENT (Typ.)	1.5A / 115VAC 1A / 230VAC							
	INRUSH CURRENT (Typ.)	COLD STAR 30A/115VAC 50A/230VAC							
	LEAKAGE CURRENT(max.) Note.5	Touch current< 100μA/264VAC							
PROTECTION	OVERLOAD	115 ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed							
	OVER VOLTAGE	3.8~4.5V	5.7~6.8V	8.6~11.3V	13.8~16.2V	17.2~20.3V	27.6~32.4V	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 non-condensing							
	TEMP. COEFFICIENT	±0.03% / °C (0 ~ 50℃)							
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes							
	OPERATING ALTITUDE Note.6	4000 meters							
SAFETY & EMC (Note. 7)	SAFETY STANDARDS	IEC 60601-1:2005+A1+A2, TUV BS EN/ EN 60601-1:2006+A1+A12+A2, ANSI/AAMI ES60601-1:2005+A2 CAN/CSA C22.2 No. 60601-1:2014+A2, EAC TP TC 004 approved; Design refer to BS EN/EN60335-1(by request)							
	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	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		
		Voltage flicker	BS EN/EN61000-3-3				-----		
	EMC IMMUNITY	BS EN/EN55035,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		
		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			
OTHERS	MTBF	3334.3K hrs min. Telcordia SR-332 (Bellcore) ; 959.1K hrs min. MIL-HDBK-217F (25℃)							
	DIMENSION (L*W*H)	76.2*50.8*24mm or 3" * 2" *0.945" inch							
	PACKING	0.11Kg; 120pcs/14.2Kg/0.94CUFT							
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 0.1 μ F & 47 μ F parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltages. Please check the derating curve for more details. 5. Touch current was measured from primary input to DC output. 6. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft) 7. 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 https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf) ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx								

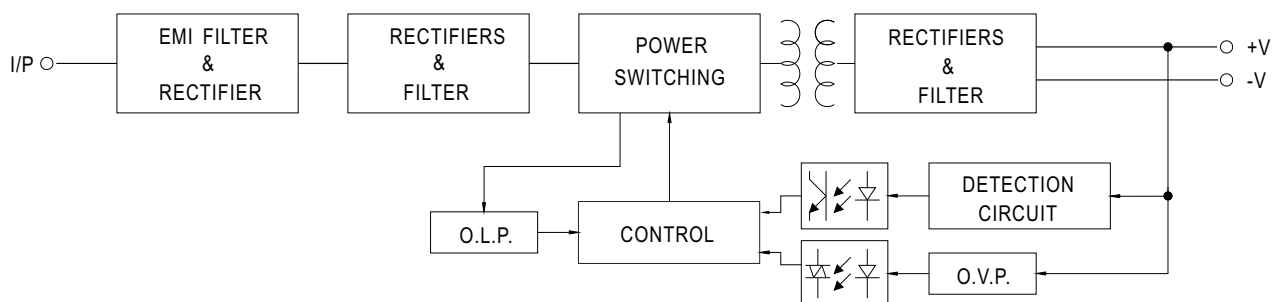


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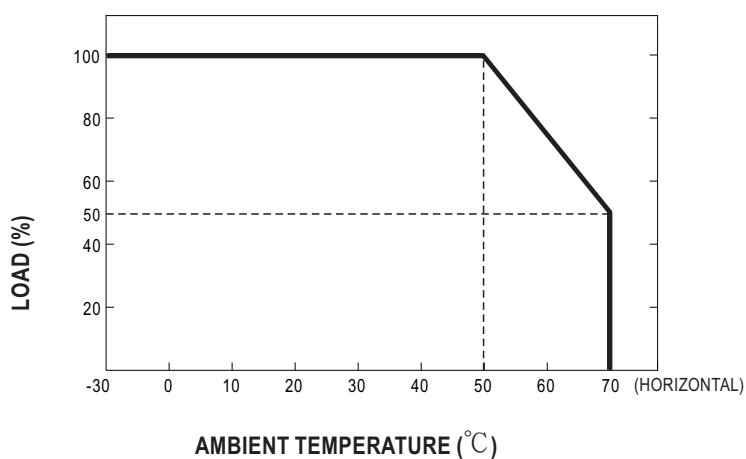
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■ Block Diagram

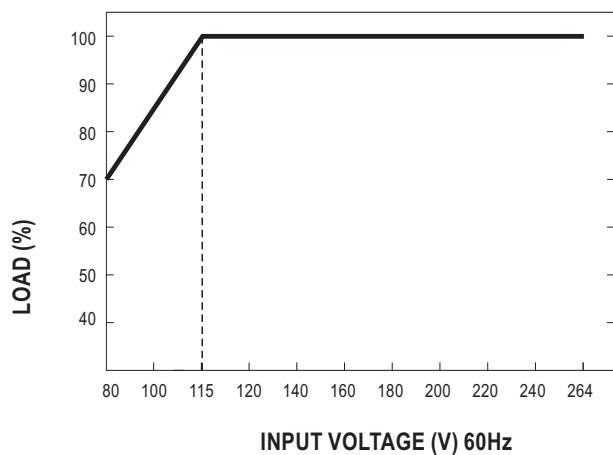
fosc : 65KHz



■ Derating Curve



■ Static Characteristics



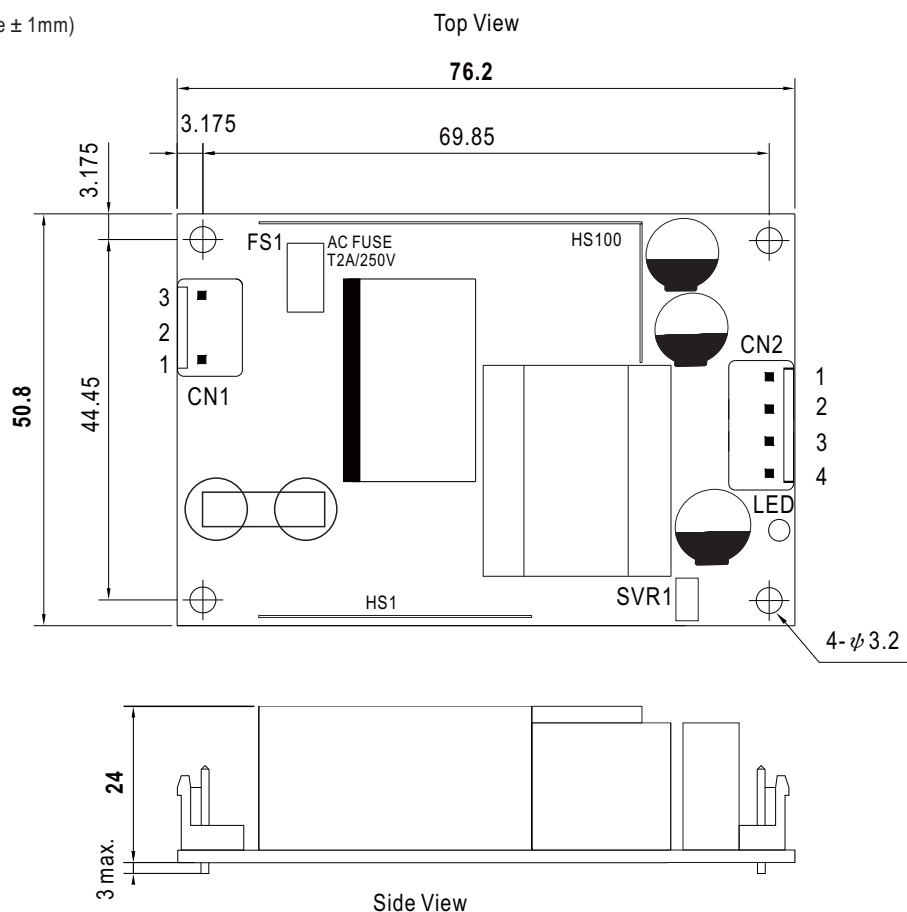


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Mechanical Specification

(Unit: mm , tolerance ± 1 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	+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/manual.html>