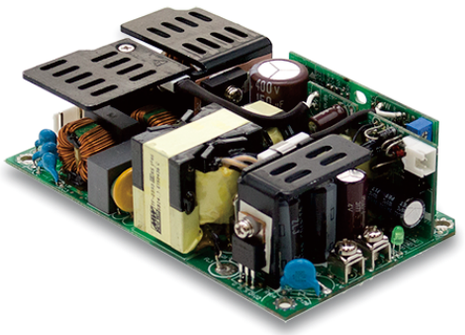
300W Reliable Green Medical Power Supply — RPS-300 series



ANSI/AAMI ES60601-1 | EN60601-1 | IEC60601-1

ECO | Medical | 2xMOPP | BF rated

Features

- 5"×3" compact size
- Medical safety approved (2 x MOPP) accroding to ANSI/AAMI ES60601-1 and IEC/EN60601-1
- Suitable for BF application with appropriate system consideration
- 200W convection,300W force air
- No load power consumption<0.5W by PS-ON control
- Extremely low leakage current
- 5Vdc standby output, 12Vdc fan supply, Power Good, Power Fail and remote sense
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Typical Lifetime > 40K hours
- 3 years warranty

Applications

- Oral irrigator
- Hemodialysis machine
- Medical computer monitors
- Sleep apnea devices
- Pump machine
- Electric bed

Description

RPS-300 is a 300W highly reliable green PCB type medical power supply with a high power density on the 5" by 3" footprint. It accepts 90~264VAC input and offers various output voltages between 12V and 48V. The working efficiency is up to 93% and the extremely low no load power consumption is down below 0.5W. The extremely low leakage current is less than 150 μA. 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. RPS-300 series also offers the enclosed style model (RPS-300-C).

Model Encoding

RPS - 300 - 12 -C

- -C: Type
- 12: Output voltage
- 300: Rated wattage
- RPS: Series name

Type	Description	Note
Blank	PCB Type	In stock
C	Enclosed casing Type	In stock

MEAN WELL

300W Reliable Green Medical Power Supply

RPS-300 series

SPECIFICATION

MODEL			RPS-300-12□	RPS-300-15□	RPS-300-24□	RPS-300-27□	RPS-300-48□
OUTPUT	DC VOLTAGE		12V	15V	24V	27V	48V
	RATED CURRENT (20.5CFM)		25A	20A	12.5A	11.12A	6.25A
	CURRENT	Convection	0 ~ 16.67A	0 ~ 13.33A	0 ~ 8.33A	0 ~ 7.4A	0 ~ 4.17A
		20.5CFM	0 ~ 25A	0 ~ 20A	0 ~ 12.5A	0 ~ 11.12A	0 ~ 6.25A
	RATED POWER	Convection	200W	200W	200W	200W	200.2W
		20.5CFM	300W	300W	300W	300W	300W
	RIPPLE & NOISE (max.) Note.2		120mVp-p	120mVp-p	150mVp-p	200mVp-p	250mVp-p
	VOLTAGE ADJ. RANGE (main output)		11.4 ~ 12.6V	14.25 ~ 15.75V	22.8 ~ 25.2V	25.65 ~ 28.35V	45.6 ~ 50.4V
	VOLTAGE TOLERANCE Note.3		±3.0%	±3.0%	±2.0%	±2.0%	±2.0%
	LINE REGULATION		±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION		±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	SETUP, RISE TIME		2500ms, 30ms/230VAC 3000ms, 30ms/115VAC at full load				
	HOLD UP TIME (Typ.)		13ms/230VAC/115VAC at full load				
INPUT	VOLTAGE RANGE Note.4		90 ~ 264VAC 127 ~ 370VDC				
	FREQUENCY RANGE		47 ~ 63Hz				
	POWER FACTOR (Typ.)		PF>0.93/230VAC PF>0.98/115VAC at full load				
	EFFICIENCY (Typ.)		90%	90%	92.5%	93%	93%
	AC CURRENT (Typ.)		3.5A/115VAC 1.8A/230VAC				
	INRUSH CURRENT (Typ.)		COLD START 35A/115VAC 70A/230VAC				
	LEAKAGE CURRENT(max.) Note.5		PCB Type: Earth leakage current <150μA / 264VAC, Touch current <70μA/264VAC Enclosed Type: Earth leakage current <200μA / 264VAC, Touch current <70μA/264VAC				
PROTECTION	OVERLOAD		105 ~ 135% rated output power				
			Protection type : Hiccup mode, recovers automatically after fault condition is removed				
	OVER VOLTAGE		13.5 ~ 15V	16.2 ~ 18.5V	26 ~ 30V	29.5 ~ 33.5V	52 ~ 59.5V
			Protection type : Shut down o/p voltage, re-power on to recover				
	OVER TEMPERATURE		Protection type : (TSW1)Shut down o/p voltage, recovers automatically after temperature goes down				
			Protection type : (TSW2)Shut down o/p voltage, re-power on to recover				
FUNCTION	5V STANDBY		5Vsb : 5V@0.6A without fan, 1A with fan 20.5CFM ; tolerance ± 2%, ripple : 150mVp-p(max.)				
	FAN SUPPLY		12V@0.5A for driving a fan ; Tolerance -15% ~ +10%				
	PS-ON INPUT SIGNAL		Power on: PS-ON = "Hi" or " > 2 ~ 5V" ; Power off: PS-ON = "Low" or " < 0 ~ 0.5V"				
	POWER GOOD / POWER FAIL		500ms>PG>10ms ; The TTL signal goes high with 10ms to 500ms delay after power set up ; The TTL signal goes low at least 1ms before Vo below 90% of rated value				
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%/℃ (0 ~ 50℃)				
	VIBRATION		10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes				
	OPERATING ALTITUDE Note.6		2000 meters				