


300 Watt, 15 Volt, "Patient Contact" Approved, Single Output Medical Power Supply with PFC

UNIT CODE	DESCRIPTION
MED-RPS 300-15	300 Watt, 15 Volt, Single Output, MOPP Level Medical Power Supply with PFC Function

SPECIFICATIONS		
AC Input	DC Output (cooling type)	Approvals
Universal AC input 90 ~ 264V	+15VDC @ 0 ~ 13.3A (convection) +15VDC @ 0 ~ 20A (w/ 20.5 CFM)	

NOTE: There is a significant (~30%) drop difference in performance when cooling by fan-less, natural convection vs. forced convection (fan) cooling. See following pages to ensure you get what you require.



Features at a Glance:

- Medical safety certified, MOPP level
- High efficiency (up to 93%)
- Built-in active PFC function, PF>0.95
- Withstands 300VAC surge for 5 seconds
- Low leakage current <300µA / 264VAC
- No load power consumption < 0.5W
- Built-in 12V/0.5A auxiliary output for fan
- Protection: Short circuit / Overload / Over voltage / Over temperature
- Built-in remote sense function
- Built-in remote ON/OFF control
- Power good and fail (PG-PF) signal output
- Working temperature range -30°C ~ +70°C
- Certificates: UL / CUL / TUV / CB / CE
- Safety standards: ANSI/AAMI ES60601-1, TUV EN60601-1, and CE
- EMC: Conduction Class B, Radiation Class A (see following pages for complete EMC details)
- MTBF hours: 160K hrs min. MIL-HDBK-217F (25°C)
- Weight: 0.81 lbs (0.37 Kgs)
- Dimensions: 5.0 x 3.0 x 1.37 inches (LxWxH)
127 x 76 x 35mm (LxWxH)
- 3 year warranty

The MED-RPS 300 Series was designed to comply with international medical safety regulations (MOPP level) so that they are suitable for "patient contact" medical equipment.

Standard functions include P.G./ P.F. signal output, built-in remote sense and 12V/0.5A auxiliary output. With built-in remote ON/OFF control and 5V/1A standby output, the series is able to achieve a "no- load power consumption <0.5W" allowing use in "green mode" medical equipment or electric devices that need to fulfill that energy-saving requirement. Naturally, MED-RPS 300 series are also suitable for medical equipment requiring low leakage current.

The MED-RPS 300 series has global certificates for compliance with medical power supply requirements requirements per UL/CUL/TUV/CB/CE, assuring patient safety.

[Release & Application Notes](#)

Pricing:	1 ~ 9	\$ 149.00
	10+	123.50
	25+	111.50

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■ Features :

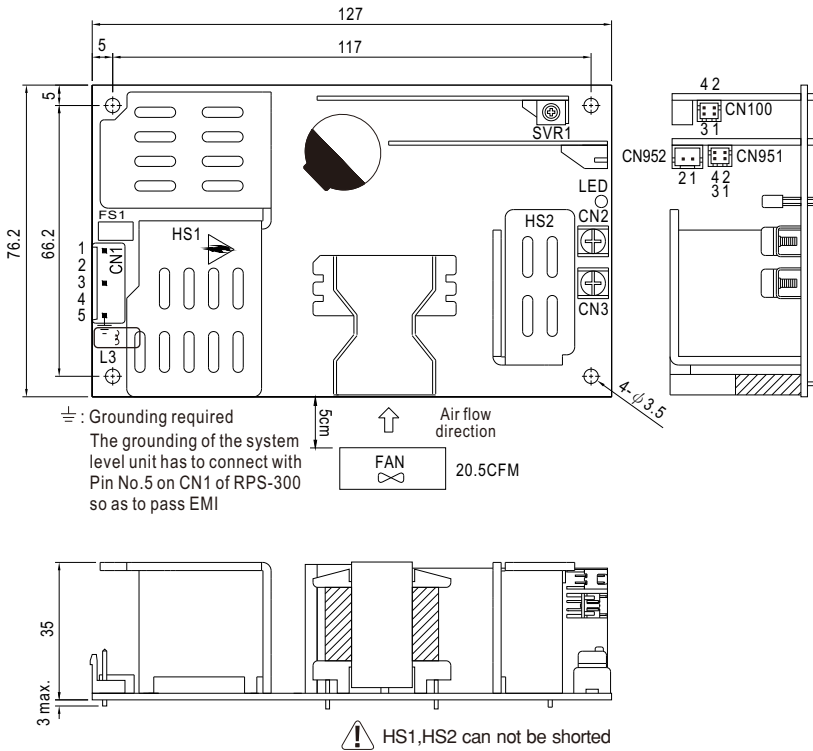
- Universal AC input / Full range
- High efficiency up to 93%
- Built-in active PFC function
- Low leakage current < 300uA
- Withstand 300VAC surge input for 5 seconds
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in 12V/0.5A auxiliary output
- 5"x3" compact size
- Medical safety approved (2 x MOPP between primary to secondary)
- Free air convection for 200W and 300W with 20.5 CFM forced air
- With power good and fail signal output
- Built-in remote sense function
- No load power consumption under 0.5W by PS-ON control
- Standby 5V@1A with fan, @ 0.6A without fan
- Suitable for BF application with appropriate system consideration
- 3 years warranty



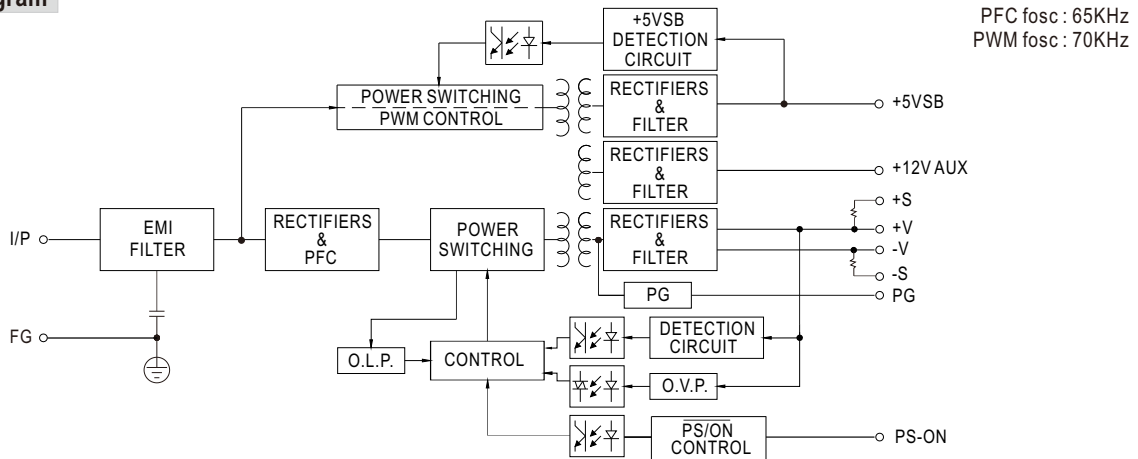
SPECIFICATION

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 RANGE (convection)	0 ~ 16.67A	0 ~ 13.33A	0 ~ 8.33A	0 ~ 7.4A	0 ~ 4.17A
	CURRENT RANGE (20.5CFM)	0 ~ 25A	0 ~ 20A	0 ~ 12.5A	0 ~ 11.12A	0 ~ 6.25A
	RATED POWER (convection)	200W	200W	199.9W	199.8W	200.2W
	RATED POWER (20.5CFM)	300W	300W	300W	300.24W	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	Main output:14.25 ~ 15.75V	Main output:22.8 ~ 25.2V	Main output:25.65 ~ 28.35V	Main output: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.5	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 40A/115VAC 80A/230VAC				
LEAKAGE CURRENT	Earth leakage current <300uA / 264VAC, Touch current <100uA/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
	OVER TEMPERATURE	110°C ±5°C (TSW1) detect on heatsink of power transistor				
		115±5°C (12V,15V),85±5°C (24V,27V,48V) (TSW2) detect on heatsink of output diode 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.)				
	AUXILIARY POWER (AUX)	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°C (Refer to "Derating Curve")				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C , 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)				
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes				
SAFETY & EMC (Note 4)	SAFETY STANDARDS	ANSI/AAMI ES60601-1, TUV EN60601-1, IEC60601-1 approved				
	ISOLATION LEVEL	Primary-Secondary: 2xMOPP, Primary-Earth:1xMOPP, Secondary-Earth:1xMOPP				
	WITHSTAND VOLTAGE	I/P-O/P:4KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC				
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH				
	EMC EMISSION	Compliance to EN55011 (CISPR11), EN55022 (CISPR22) ,Conduction Class B ,Radiation Class A;EN61000-3-2,-3;				
OTHERS	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN60601-1-2, criteria A				
	MTBF	160Khrs min. MIL-HDBK-217F (25°C)				
	DIMENSION	127*76.2*35mm (L*W*H)				
NOTE	PACKING	0.37 Kg; 36pcs/14.3Kg/1.03CUFT;				
		1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. 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) 5. Derating may be needed under low input voltages. Please check the derating curve for more details. 6. Heat Sink HS1,HS2 can not be shorted.				

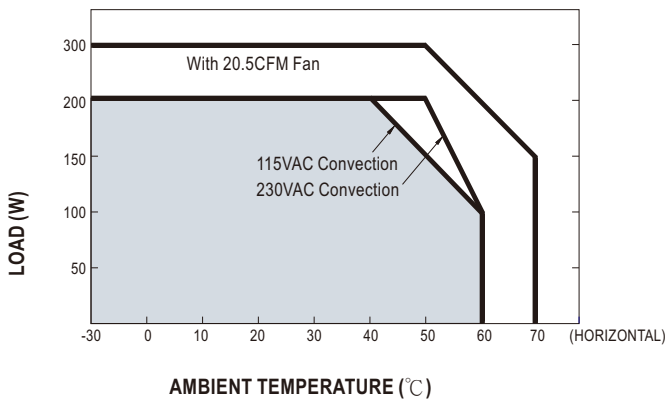
Mechanical Specification



Block Diagram



Derating Curve



Output Derating VS Input Voltage

