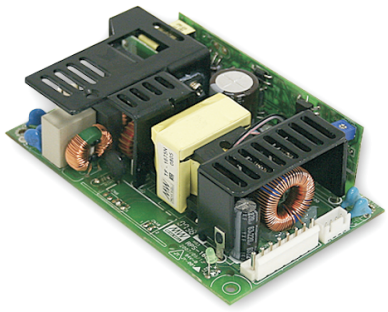
MEAN WELL

160W Single Output Medical Type

RPS-160 series



■ Features :

- Universal AC input / Full range
- Built-in active PFC function
- Protections: Short circuit / Overload / Over voltage / Over temperature
- 5"x3" compact size
- Free air convection for 110W and 160W with 20.5 CFM forced air
- With power good and fail signal output
- Built-in remote sense function for 5~15V
- No load power consumption under 0.75W by PS-ON control (Optional)
- Standby 5V@1A with Fan/0.6A without Fan (Optional)
- 3 years warranty

RPS G – 160 – 12

G: With 5Vsb
Blank: Without 5Vsb

SPECIFICATION

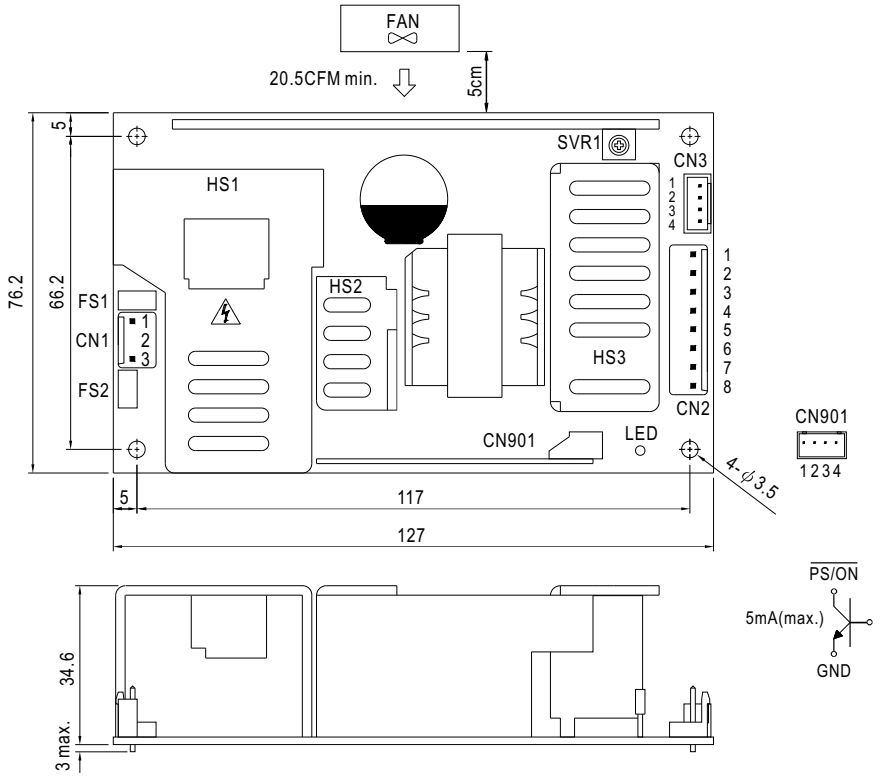
MODEL		RPS□-160-5	RPS□-160-12	RPS□-160-15	RPS□-160-24	RPS□-160-48
OUTPUT	DC VOLTAGE	5V	12V	15V	24V	48V
	RATED CURRENT (20.5CFM)	30A	12.9A	10.3A	6.5A	3.25A
	CURRENT RANGE (convection)	0 ~ 20A	0 ~ 9.1A	0 ~ 7.3A	0 ~ 4.6A	0 ~ 2.3A
	CURRENT RANGE (20.5CFM)	0 ~ 30A	0 ~ 12.9A	0 ~ 10.3A	0 ~ 6.5A	0 ~ 3.25A
	RATED POWER (convection) Note.7	103W	112.2W	112.5W	113.4W	113.4W
	RATED POWER (20.5CFM) Note.8	155W	159.8W	159.5W	161W	161W
	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-p	120mVp-p	150mVp-p	250mVp-p
	VOLTAGE ADJ. RANGE	CH1:4.5 ~ 5.5V	CH1:10.8 ~ 13.2V	CH1:13.5 ~ 16.5V	CH1:22 ~ 27V	CH1:43.2 ~ 52.8V
	VOLTAGE TOLERANCE Note.3	±4.0%	±3.0%	±3.0%	±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	1200ms, 30ms/230VAC 2500ms, 30ms/115VAC at full load				
	HOLD UP TIME (Typ.)	16ms/230VAC/115VAC at full load				
INPUT	VOLTAGE RANGE Note.6	90 ~ 264VAC 127 ~ 370VDC				
	FREQUENCY RANGE	47 ~ 63Hz				
	POWER FACTOR (Typ.)	PF>0.93/230VAC PF>0.98/115VAC at full load				
	EFFICIENCY (Typ.)	85%	87%	87%	87%	88%
	AC CURRENT (Typ.)	2A/115VAC 1.1A/230VAC				
	INRUSH CURRENT (Typ.)	COLD START 35A/115VAC 70A/230VAC				
	LEAKAGE CURRENT	Earth leakage current <300uA / 264VAC, Patient leakage current <100uA/264VAC				
PROTECTION	OVERLOAD	105 ~ 135% rated output power				
		Protection type : Hiccup mode, recovers automatically after fault condition is removed				
	OVER VOLTAGE	5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V	55.2 ~ 64.8V
		Protection type : Shut down o/p voltage, re-power on to recover				
	OVER TEMPERATURE	110℃(5V),105℃(12V,15V,24V,48V) (TSW1 : detect on heatsink of power transistor)				
		95℃(5V),90℃(12V,15V,24V,48V) (TSW2 : detect on heatsink of power transistor)				
		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	PS-ON INPUT SIGNAL (OPTIONAL)	Power on: PS-ON = "Hi" or ">2V" ; Power off: PS-ON = "Low" or "<0.5V"				
	POWER GOOD / POWER FAIL	500ms>PG>10ms PF>1ms				
	REMOTE SENSE	5 ~ 15V				
ENVIRONMENT	WORKING TEMP.	-20 ~ +70℃ (Refer to output load derating curve)				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)				
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes				
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60601-1, TUV EN60601-1 approved				
	WITHSTAND VOLTAGE	I/P-O/P:4KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC				
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH				
	EMI CONDUCTION & RADIATION	Compliance to EN55011 (CISPR11), EN55022 (CISPR22) Class B				
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3				
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, EN60601-1-2, EN61204-3, medical level, criteria A				
OTHERS	MTBF	230.5Khrs min. MIL-HDBK-217F (25℃)				
	DIMENSION	127*76.2*34.6mm (L*W*H)				
	PACKING	0.32Kg; 36pcs/12.5Kg/0.79CUFT				

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 0.1uf & 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.
5. HS1,HS2 & HS3 can not be shorted.
6. Derating may be needed under low input voltages. Please check the derating curve for more details.
7. The rated power includes 5Vsb @ 0.6A.
8. The rated power includes 5Vsb @ 1A.

■ Mechanical Specification

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 B8P-VH or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1,2,3,4	+V	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
5,6,7,8	-V		

Power Good Connector(CN3):JST B4B-XH or equivalent

Pin No.	Status	Mating Housing	Terminal
1	PG	JST XHP or equivalent	JST SXH-001T-P0.6 or equivalent
2	GND		
3	-S		
4	+S		

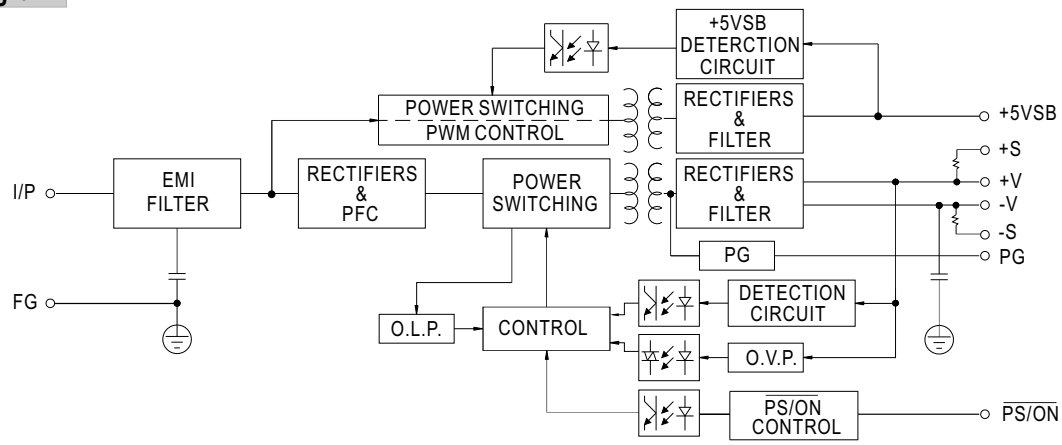
5VSB Connector(CN901) : JST B-XH or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	$\overline{\text{PS/ON}}$	JST XHP or equivalent	JST SXH-001T or equivalent
2,4	GND		
3	5VSB		

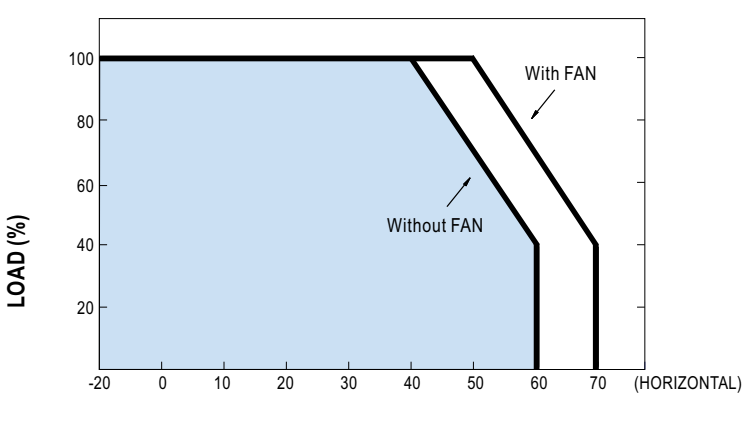
⚠ HS1,HS2,HS3 can not be shorted

■ Block Diagram

fosc :100KHz(5V)
70KHz(12~48V)

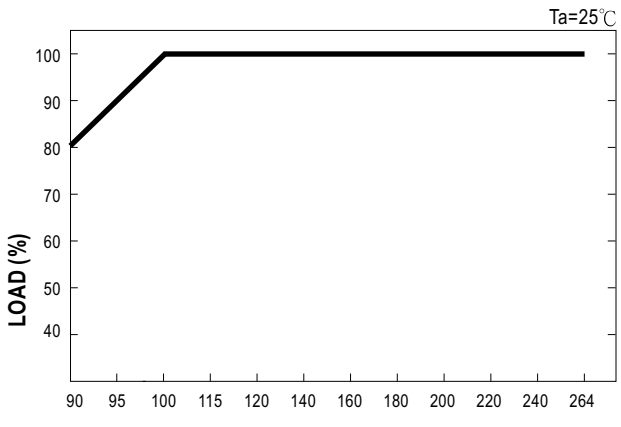


■ Derating Curve



AMBIENT TEMPERATURE (℃)

■ Output Derating VS Input Voltage



INPUT VOLTAGE (VAC) 60Hz