



SUNPOWER TECHNOLOGY CORP.  
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## SPE-500-xx Series

500W, Single Output  
 Active P.F.C Function



230 x 127 x 40.6 mm  
 9.06 x 5.00 x 1.6 inch



### Features:

- \* Universal AC input with active PFC circuit, P.F.>0.95
- \* 1U low profile 40.6mm
- \* Altitude during operation up to 16404ft ( 5000m )
- \* Power ON with LED indicator
- \* Built in EMI filter, low ripple noise
- \* Over voltage 、 over load & short circuit protection
- \* Over temperature protection
- \* Output voltage  $\pm 10\%$  adjustment
- \* Remote control ON/OFF
- \* 100% full load burn-in test
- \* UL, cUL, TUV, CB, CE pending
- \* 3 years warranty

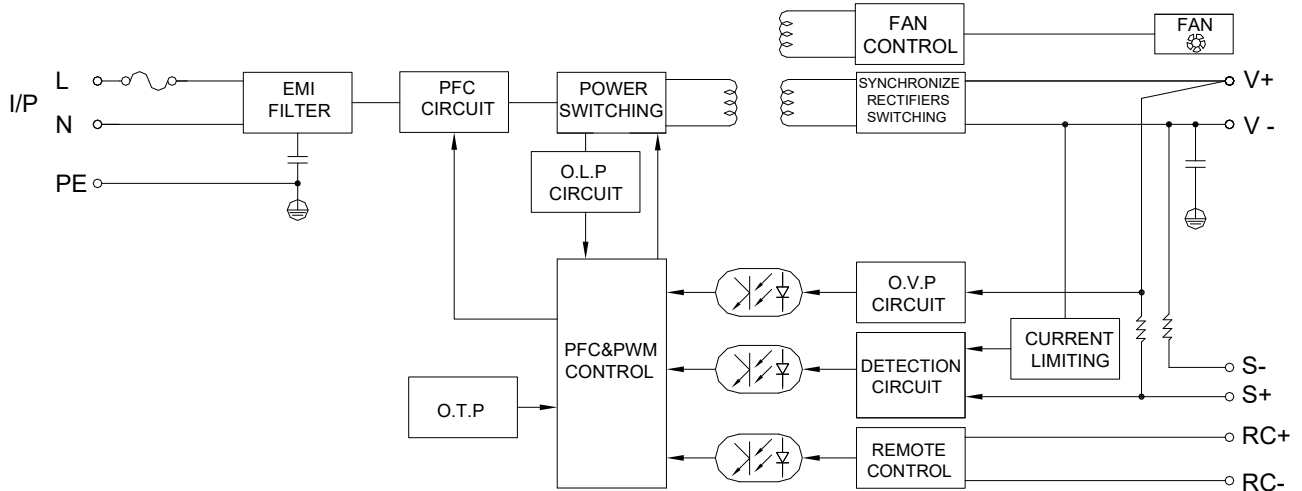
### Specification:

INPUT	Voltage	85V ~ 264VAC universal full range or 120V ~ 375VDC.				
	Frequency	47 ---- 63 Hz				
	Current	6.6A @100V AC input, full load condition				
	Inrush Current(TYP)	20A@115V , 40A@230V AC input. Cold start at 25°C ambient				
	Leakage Current	<1.5mA@264V AC input				
	Power Factor	PF > 0.95				
OUTPUT	MODEL No.	SPE-500-05	SPE-500-12	SPE-500-24	SPE-500-36	SPE-500-48
	Voltage	5V	12V	24V	36V	48V
	Min Load	0A	0A	0A	0A	0A
	Max Load	90A	41.7A	21A	14A	10.5A
	Output Tolerance ②	$\pm 2\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$
	Ripple Noise MAX. ③	150mV	150mV	150mV	150mV	150mV
	Efficiency (TYP.)	84%	88%	89%	90%	90.5%
PROTECTION	Output MAX.	450W	500.4W	504W	504W	504W
	Over Voltage	5.75V~7.0V	13.8V~16.8V	27.6V~33.6V	41.4V~50.4V	55.2V~67.2V
	OverLoad & ShortCircuit	Shutdown and latch off, recover after re-start up.				
	Over Temperature	When power supply over 105%~ 130% max load or short circuit acted, power supply will be constant current limiting and recover automatically after the fault is removed.				
ELEC. CHAR.	Remote Sensing	Shutdown o/p voltage, recovers automatically after temperature goes down				
	Rise time	<20mS				
	Hold up time	>18mS@230V, full load condition				
	Setup time	<3.0S@100 ~ 240V AC				
ENVIRONMENT	Remote Control	RC+/RC-:0~0.8V= Power On; 4~10V= Power Off.				
	Temperature ④	Operating: -30 ~ +70°C ; De-rating: 50 ~ 70°C : 2.5%/°C ; Storage: -40 ~ +85°C				
	Humidity	Operating: 20% ~ 90% RH (non condensing) ; Storage: 10% ~ 95% RH (non condensing)				
SAFETY	Withstand voltage	I/P-O/P:3KVAC, I/P-PE:1.5KVAC, O/P-PE:0.5KVAC, 1minute				
	Isolation resistance	I/P-O/P, I/P-PE, O/P-PE > 100MΩ/500VDC at 25°C / 70% RH				
	Safety standard	UL 60950-1 2 <sup>nd</sup> ,CAN/CSA C22.2 No. 60950-1- 07 2 <sup>nd</sup> ,UL 62368-1 2 <sup>nd</sup> (edition dated 2014-12-01) , IEC60950-1:2005+A1+A2, IEC 62368-1:2014 (2 <sup>nd</sup> .Edition),TUV EN 62368-1:2014 pending				
EMC	EMI	EN 55022 CLASS B, FCC CFR 47 PART 15 CLASS B, CNS 13438 CLASS B.				
	EMS	Compliance to EN61000-3-2 CLASS D, EN61000-3-3 EN 55024 : EN 61000-4-2,3,4,5,6,8,11				
OTHERS	Cooling	Forced airflow cooling with DC fan				
	M.T.B.F.	K hours				
	Dimension	230 x 127 x 40.6 mm (L*W*H)				
NOTE	Packing	N.W.: Kg / 1pc; pcs / CUFT / 1 CTN				
		① All measurements which not mentioned are based on 230VAC input, <b>output Max</b> at ambient 25°C / 70%RH				
		② Output tolerance included set up voltage, line regulation and load regulation.				
		③ Ripple & noise are measured at 100~254VAC input with 10~50°C condition and 20MHz of bandwidth by using a 10" ~15" twisted pair-wire terminated with a 0.1uF & a 47uF parallel capacitor.				
		④ The operating temperature shall follow the de-rating curve in spec The output load may be requested for decreasing as de-rating curve in spec when low input voltage is under 100VAC.				
	⑤ The power supply is considered a component of end-equipment. The end-equipment must be re-confirmed whether comply with EMC directives.					

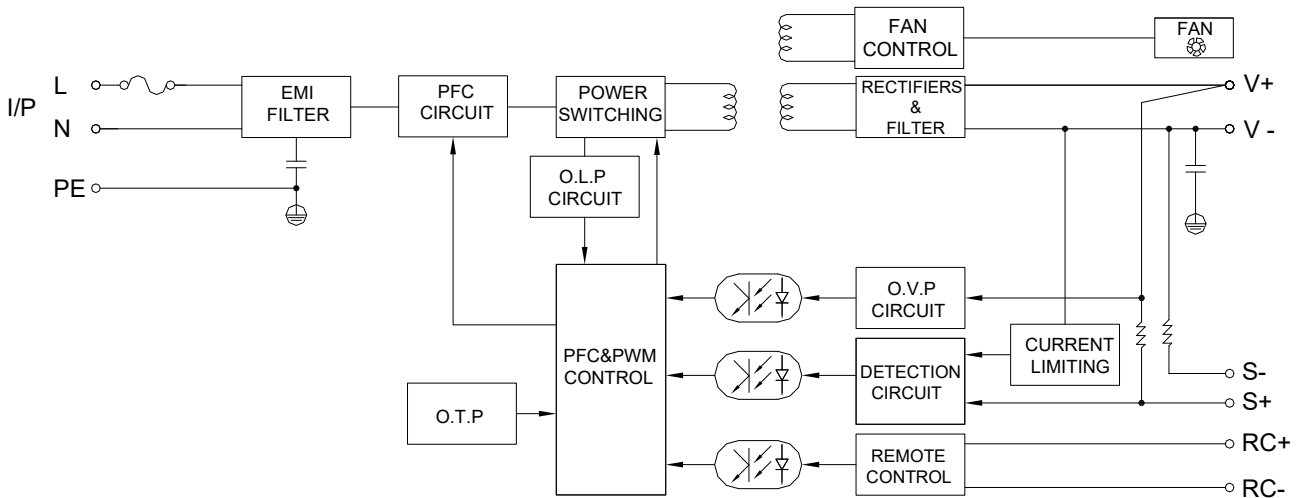
# SPE-500-xx Series

Block Diagram : PS33、PS33-1

SPE-500-05~12

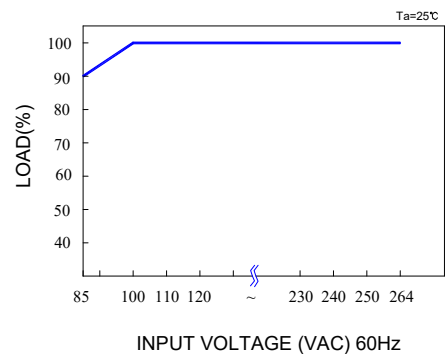
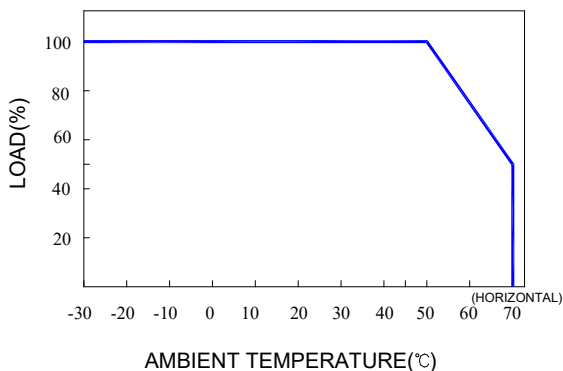


SPE-500-24~48



## De-rating Curve :

## Output De-rating Vs Input Voltage :



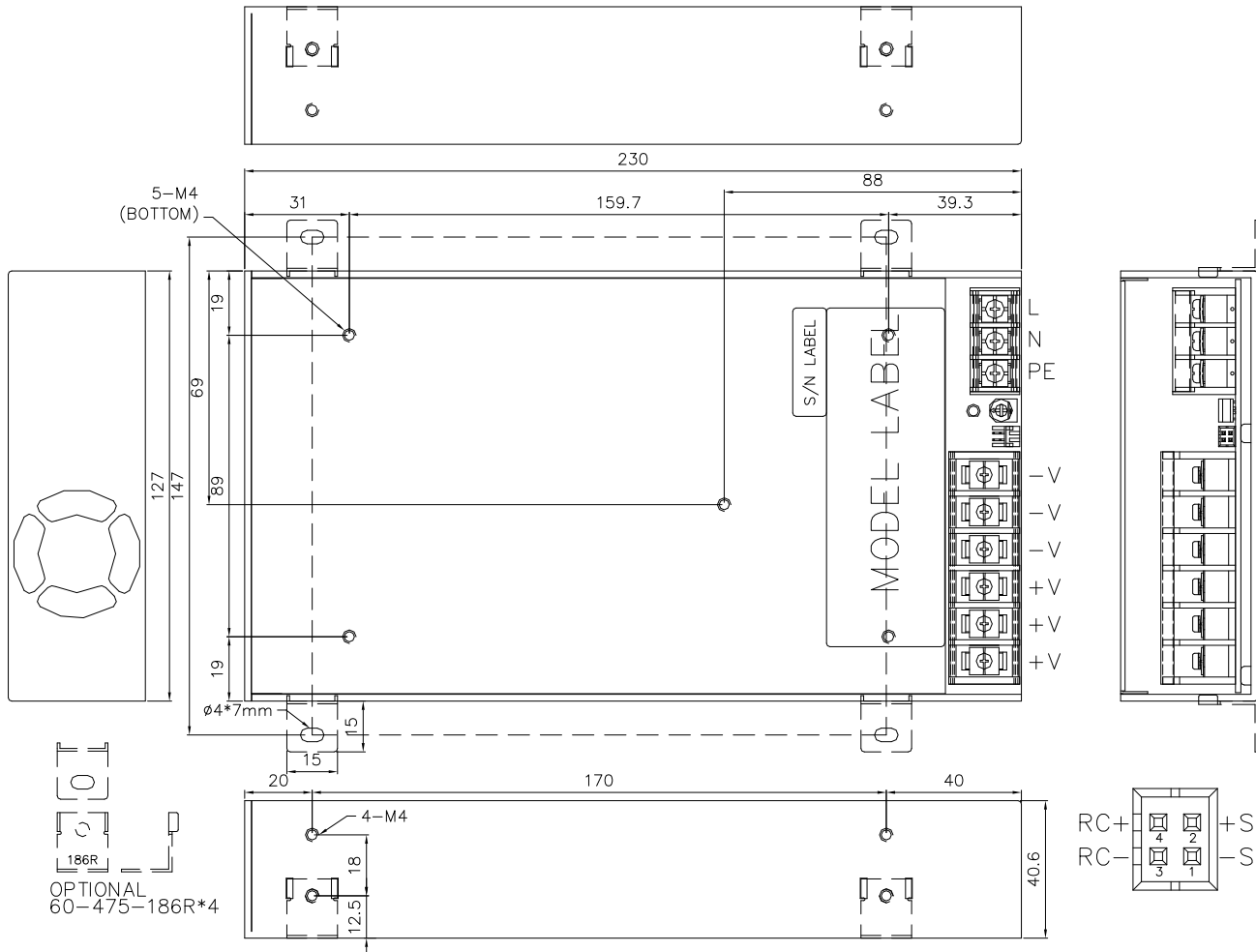


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# SPE-500-xx Series

**Dimension:**

**(Unit: mm)**



**NOTES:**

TERMINAL BLOCK: 3P, PITCH 9.5mm WITH PC COVER.

MODEL No.	1	2	3
SPE-500-xx	L	N	PE

TERMINAL BLOCK: 6P, PITCH 11 mm WITH PC COVER.

MODEL No.	1	2	3	4	5	6
SPE-500-xx	-V	-V	-V	+V	+V	+V

Connector Pin No. Assignment (CON):

HRS DF11-04DP-2DS or equivalent

Pin No	Assignment	Mating Housing	Terminal
1	-S	HRS DF11-4DS or equivalent	HRS DF11-**SC or equivalent
2	+S		
3	RC-		
4	RC+		

# SPE-500-xx Series

## Remote sense & Remote control ON/OFF:

- ❶ Remote control ON/OFF becomes available by applying voltage in CON
- ❷ Table A shows the specification of remote control ON/OFF function
- ❸ Fig 1 shows the example to connect remote control ON/OFF function

Table A : Specification of remote control ON/OFF

Connection Method		Fig 1	Between RC+ and RC-
SW Logic	Power ON	SW Open	0~0.8V
	Power OFF	SW Close	4~10V

Fig 1 Examples of connecting remote control ON/OFF

