



SUNPOWER TECHNOLOGY CORP.
 16F.-1, No.150, Jian 1st Rd., Zhonghe Dist., New Taipei City 235, Taiwan (R.O.C.).
 TEL: 886-2-8226-3100 FAX: 886-2-8226-3111
 http://www.sunpower.com.tw
 E-mail: sunpower@sunpower.com.tw

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 approved
- * 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	200mV	200mV
	Efficiency (TYP.)	84%	88%	89%	90%	90.5%
	Output MAX.	450W	500.4W	504W	504W	504W
PROTECTION	Over Voltage	5.75V~7.0V	13.8V~16.8V	27.6V~33.6V	41.4V~50.4V	55.2V~67.2V
		Shutdown and latch off, recover after re-start up.				
	Over Load & Short Circuit	When power supply over 105%~ 130% max load or short circuit acted, power supply will go into hiccup mode and recover automatically after the fault is removed.				
	Over Temperature	Shutdown o/p voltage, recovers automatically after temperature goes down				
ELEC. CHAR.	Rise time	<20mS				
	Hold up time	>18mS@230V, full load condition				
	Setup time	<3.0S@100 ~ 240V AC				
	Remote Sensing	(RS+, RS-).				
	Remote Control	RC+/RC-:0~0.8V= Power On; 4~10V= Power Off.				
ENVIRONMENT	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-FG:1.8KVAC, O/P-FG:0.5KVAC, 1minute				
	Isolation resistance	I/P-O/P, I/P-FG, O/P-FG > 100MΩ/500VDC at 25°C / 70% RH				
	Safety standard	UL 60950-1 2 nd , CAN/CSA C22.2 No. 60950-1- 07 2 nd , UL 62368-1 2 nd (edition dated 2014-12-01) , IEC60950-1:2005+A1+A2, IEC 62368-1:2014 (2 nd .Edition),TUV EN 62368-1:2014+A11 approved				
EMC	EMI	EN /BS EN 55032 CLASS B, FCC 47 CFR PART 15 CLASS B Compliance to EN /BS EN 61000-3-2 CLASS D, EN /BS EN 61000-3-3				
	EMS	EN /BS EN 55035 : 2017 EN /BS EN 61000-4-2,3,4,5,6,8,11				
OTHERS	Cooling	Forced airflow cooling with DC fan				
	M.T.B.F.	138.7 K hours				
	Dimension	230 x 127 x 40.6 mm (L*W*H)				
	Packing	N.W.:1.11Kg / 1pc; 15pcs / 1.32 CUFT / 1 CTN				
NOTE		① All measurements which not mentioned are based on 230VAC input, output Max 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.				
		⑥ The ambient temperature should be de-rating by 5°C/1000m, when operating altitude higher than 2000m (6500 ft)				

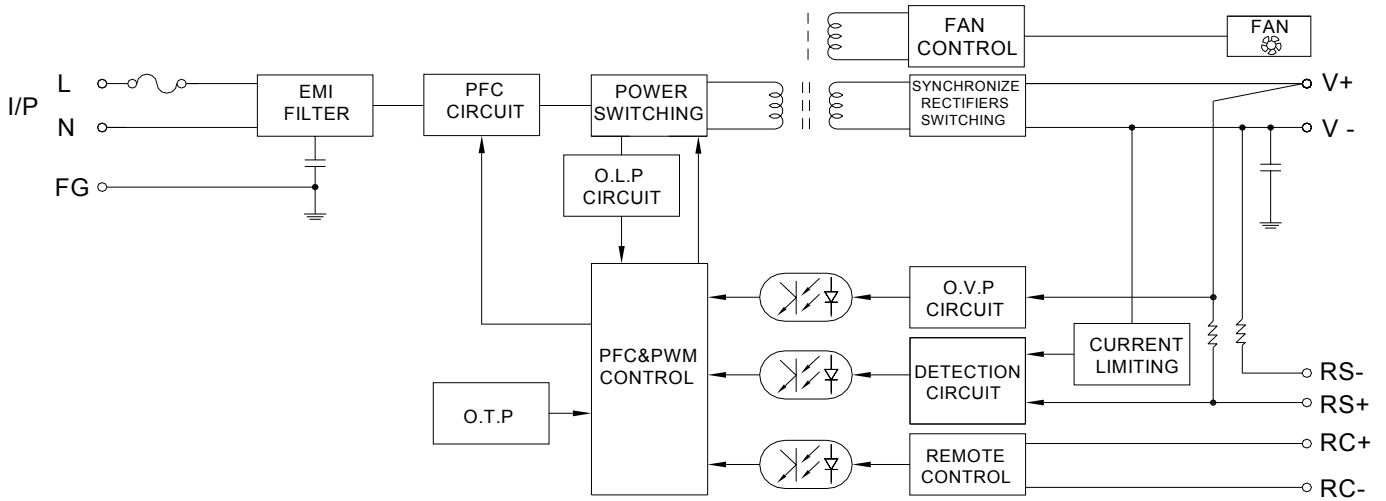


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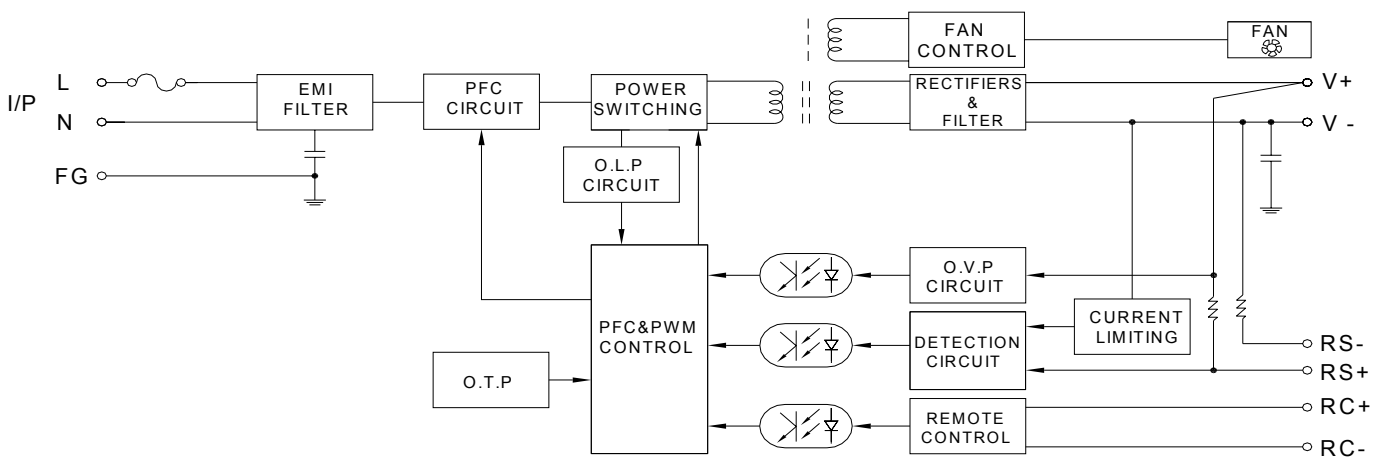
SPE-500-xx Series

Block Diagram : PS49-1、PS50-1

SPE-500-05~12

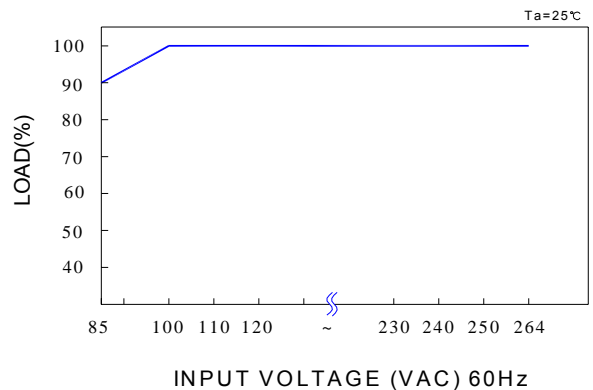
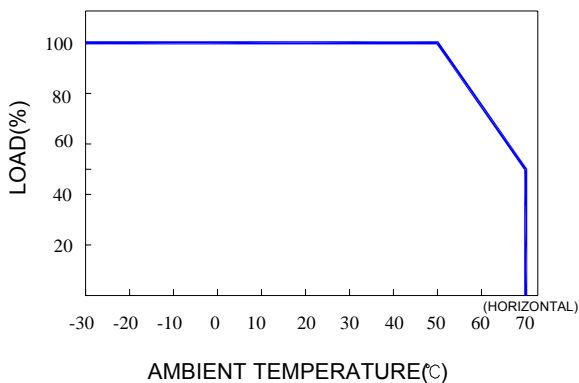


SPE-500-24~48



De-rating Curve :

Output De-rating Vs Input Voltage :



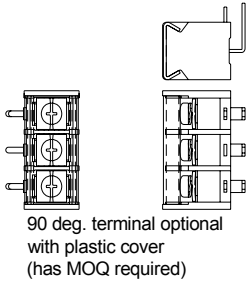


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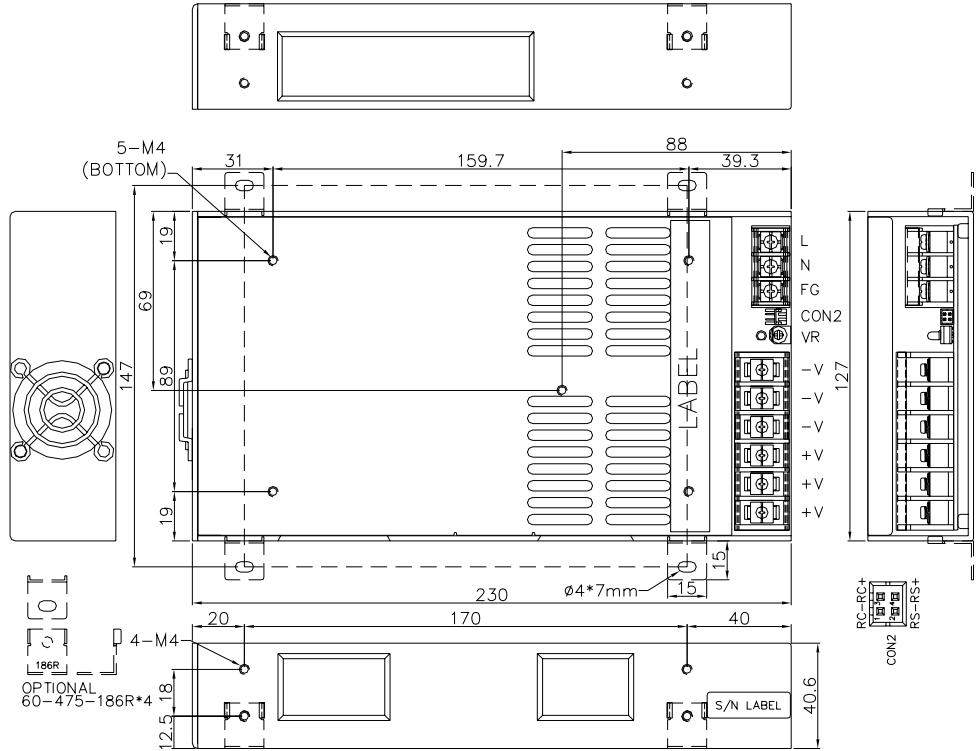
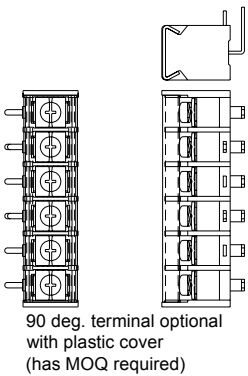
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Dimension: (Unit: mm)

Input Terminal :



Output Terminal :



NOTES:

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

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

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	RC-	HRS DF11-4DS or equivalent	HRS DF11-**SC or equivalent
2	RS-		
3	RC+		
4	RS+		

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

