



SUNPOWER TECHNOLOGY CORP.
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SPE-150-xx Series

150W, Single Output
 Active P.F.C Function



188 x 99 x 30 mm
 7.4 x 3.9 x 1.18 inch



Features:

- * Universal AC input with active PFC circuit, P.F.>0.95
- * 1U low profile 30mm
- * 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

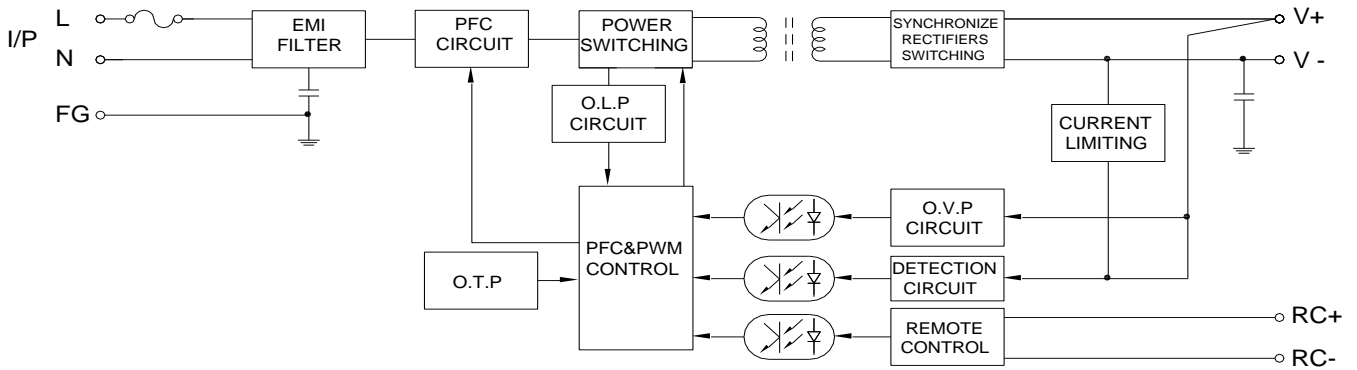
Specification:

INPUT	Voltage	85V ~ 264VAC universal full range or 120V ~ 375VDC.			
	Frequency	47 ---- 63 Hz			
	Current	<2.2A @100V AC input, full load condition			
	Inrush Current(TYP.)	45A@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-150-05	SPE-150-12	SPE-150-24	SPE-150-48
	Voltage	5V	12V	24V	48V
	Min Load	0A	0A	0A	0A
	Max Load	30A	12.5A	6.3A	3.2A
	Output Tolerance ②	$\pm 2\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$
	Ripple Noise MAX. ③	100mV	100mV	150mV	200mV
	Efficiency (TYP.)	86%	88%	89%	90%
Output MAX.	150W	150W	151W	154W	
PROTECTION	Over Voltage	5.8V~7.0V	13.8V~16.8V	27.6V~33.6V	55.2V~67.2V
		Shutdown and latch off, recover after re-start up.			
	Over Load & Short Circuit	When power supply over 105%~ 150% max load or short circuit acted, power supply will go into hiccup mode and recover automatically after the fault is removed.			
	Over Temperature	Shutdown output voltage, recovers automatically after fault condition has been removed.			
ELEC. CHAR.	Rise time	<20mS			
	Hold up time	>16mS@230V, full load condition			
	Setup time	<2.5S@100 ~ 240V AC			
	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 approved			
EMC	EMI	EN 55032 CLASS B, FCC 47 CFR PART 15 CLASS B Compliance to EN61000-3-2 CLASS D, EN61000-3-3			
	EMS	EN 55024 : EN 61000-4-2,3,4,5,6,8,11			
OTHERS	Cooling	Natural cooling			
	M.T.B.F.	162.8 K hours			
	Dimension	188 x 99 x 30 mm (L*W*H)			
	Packing	N.W.:0.56Kg / 1pc; 24pcs / 0.96 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/100m, when operating altitude higher than 2000m (6500 ft)			

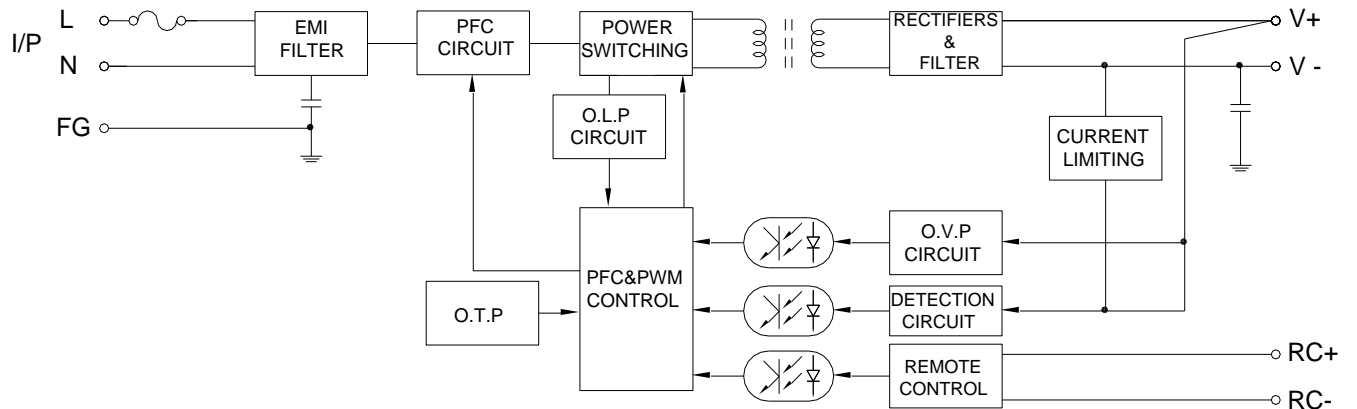
SPE-150-xx Series

Block Diagram : PS39-1、PS40-1

SPE-150-05~12

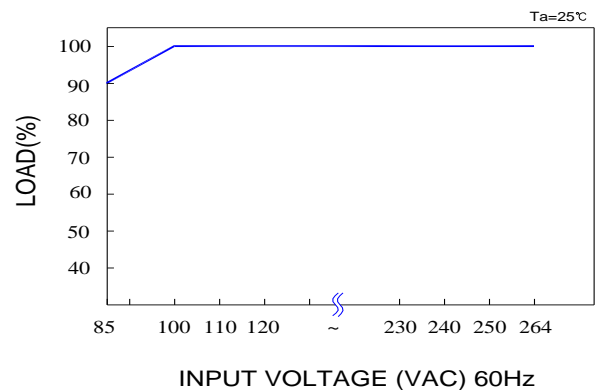
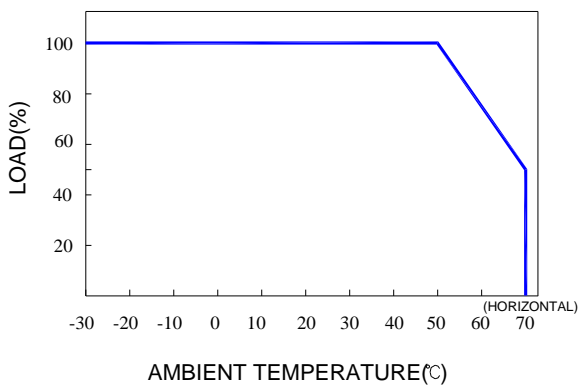


SPE-150-24~48



De-rating Curve :

Output De-rating Vs Input Voltage :



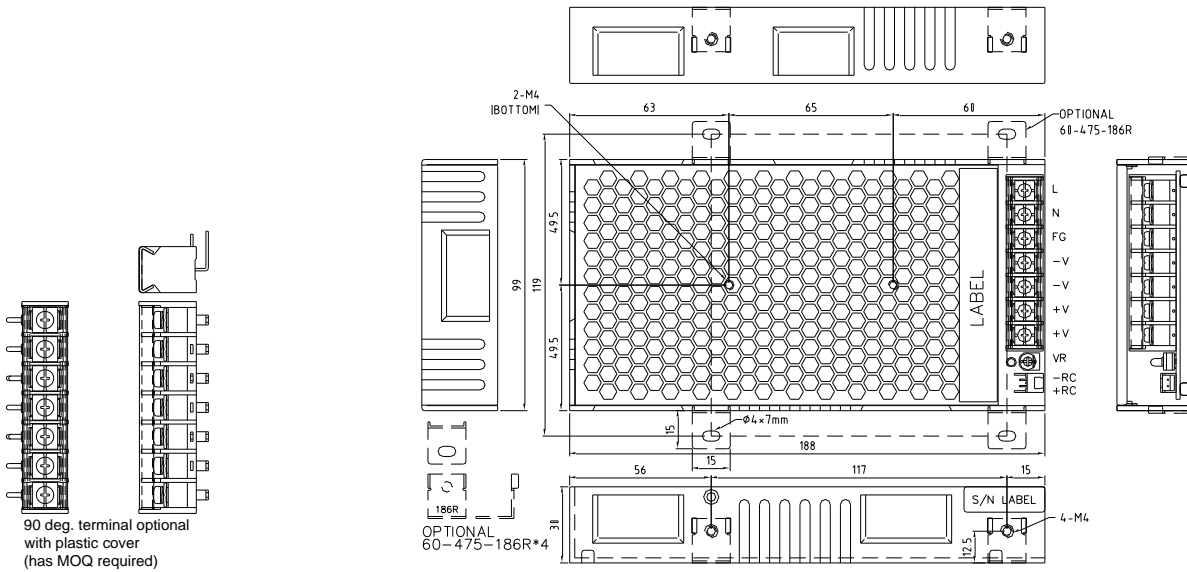


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SPE-150-xx Series

Dimension:

(Unit: mm)



NOTES:

TERMINAL BLOCK: 7P, PITCH 9.5mm WITH PC COVER.

MODEL No.	1	2	3	4	5	6	7
SPE-150-xx	L	N	FG	-V	-V	+V	+V

Connector Pin No. Assignment (CON):

JST B-XH or equivalent

Pin No	Assignment	Mating Housing	Terminal
1	RC+	JST XHP	JST SXH-001T
2	RC-	or equivalent	or equivalent

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

