



SUNPOWER TECHNOLOGY CORP.
16F-1, No.150, Jian 1st Rd., Zhonghe Dist., New Taipei City 235, Taiwan (R.O.C.).
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SPH-150S-xx Series

150W, Single Output

Active P.F.C Function

High power density



159 x 95 x 38 mm

6.26 x 3.74 x 1.50 inch



Features:

- * Universal AC input with active PFC circuit, P.F.>0.95
- * High reliability and high efficiency up to 89%
- * Green mode function, no load power consumption < 0.5W, when RC+/RC-: 0~0.7V or short
- * 5V/0.3A standby output
- * Over voltage, over load & short circuit, over temperature protection
- * Output voltage $\pm 10\%$ adjustment
- * Output voltage remote sense
- * Remote control ON/OFF function
- * 100% full load burn-in test
- * UL, cUL, TUV, CB, CE approved
- * 5 years warranty

Specification:

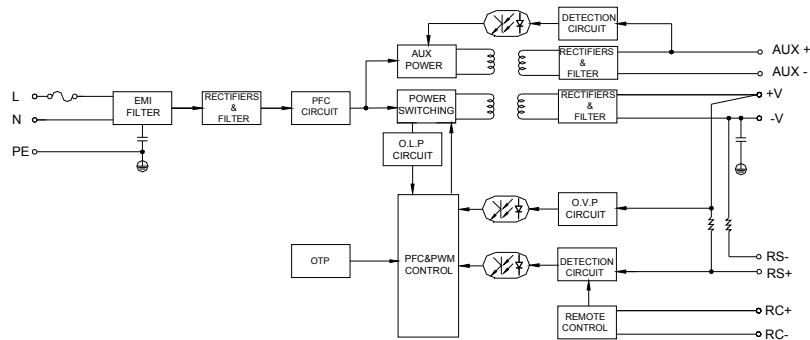
INPUT	Voltage	85V ~ 264VAC universal full range or 120V ~ 375VDC.			
	Frequency	47 ~ 63 Hz			
	Current	<2.0A @100V AC input, full load condition			
	Inrush Current	<35A@115V, <70A@230V AC input. Cold start at 25°C ambient			
	Leakage Current	<1.0mA@264V AC input			
	Power Factor	PF > 0.95			
OUTPUT	MODEL No.	SPH-150S-05	SPH-150S-12	SPH-150S-24	SPH-150S-48
	Voltage	5V	12V	24V	48V
	Min Load	0A	0A	0A	0A
	Max Load	26A	12.5A	6.3A	3.2A
	Output Tolerance ②	$\pm 2\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$
	Ripple Noise MAX. ③	80mV	120mV	200mV	240mV
	Efficiency (TYP.)	84%	87%	88%	89%
	Output MAX.	130W	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	Optional, Over 95°C $\pm 5^\circ\text{C}$ Shutdown, recovers automatically after fault condition has been removed.			
ELEC. CHAR.	Rise time	<30mS @230V, full load condition			
	Hold up time	>16mS @230V, full load condition			
	Setup time	<2S@100 ~ 240V AC			
	Remote sensing	RS+, RS-			
	Remote Control	RC+/RC-: 0~0.7V or short = Power On, 3.5~5V or Open = Power Off. ; Sink Current: 3~10 mA			
ENVIRONMENT	Green mode function	No load power consumption < 0.5W, when RC+/RC-: 0~0.7V or short			
	Temperature ④	Operating: -30 ~ +70°C ; De-rating: Refer to de-rating curve ; 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 > 100MQ/500VDC at 25°C / 70% RH			
	Safety standard	UL 60950-1 2 nd , CSA C22.2 No. 60950-1- 07 2 nd , TUV EN 60950-1:2006+A11+A1+A12, IEC 60950-1:2005+A1, approved.			
EMC	EMI	EN 55022 CLASS B, FCC CFR 47 PART 15 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 ; ENV50204 ; EN61000-6-2			
OTHERS	Cooling	Natural cooling			
	M.T.B.F.	157.4K hours			
	Dimension	159 x 95 x 38 mm (L*W*H)			
NOTE	Packing	N.W.: 0.75Kg / 1pc; 30pcs / 1.20 CUFT / 1 CTN			
		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 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.			



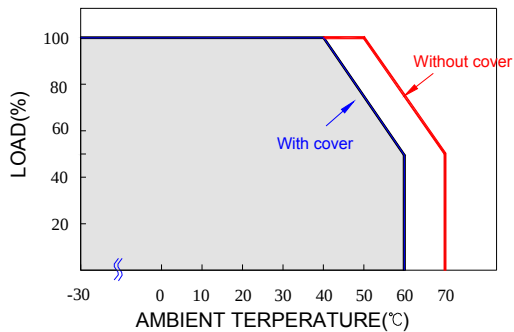
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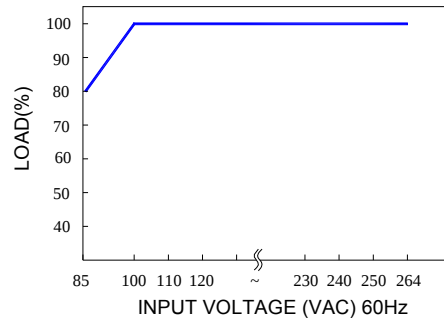
Block Diagram : PS23



De-rating Curve :

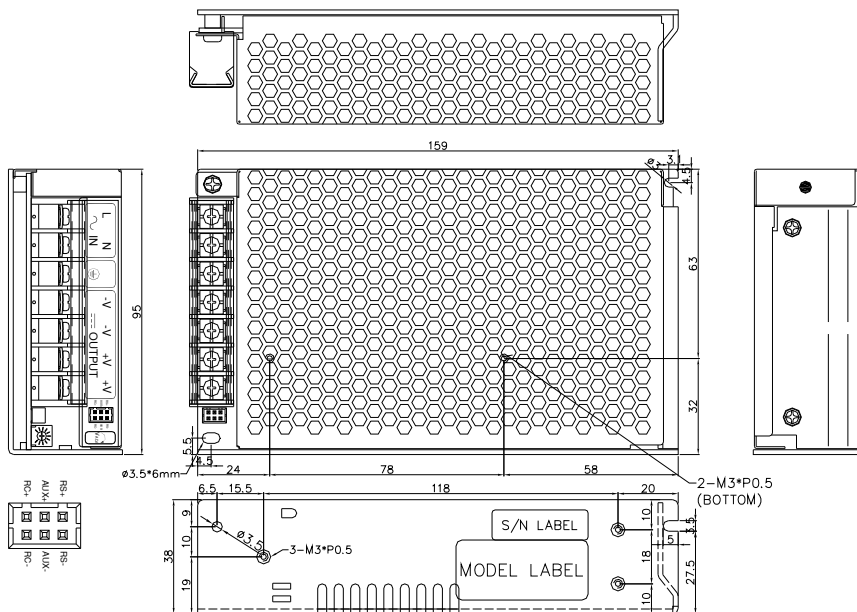


Output De-rating Vs Input Voltage :



Dimension:

(Unit: mm)



NOTES:

Terminal Pin. No Assignment : CN1

7P, PITCH 9.5mm			
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4 · 5	DC OUTPUT -V
2	AC/N	6 · 7	DC OUTPUT +V
3	PE		

Signal connector : CN11

HRS DF11-06DP-2DSA or equivalent					
Pin No.	Assignment	Pin No.	Assignment	Mating Housing	Terminal
1	RC+	4	AUX-	HRS	HRS
2	RC-	5	RS+	DF11-060DS-2C	DF11-EP22SCB
3	AUX+	6	RS-	or equivalent	or equivalent