



SUNPOWER TECHNOLOGY CORP.  
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# SPS-100 -xx Series

# SPS-100P-xx Series

100W, Single Output  
 Green mode function



198 x 95 x 38 mm  
 7.80 x 3.74 x 1.50 inch



### Features:

- \* Green-mode design, no load < 1W
- \* Power ON with LED indicator
- \* Built-in EMI filter, low ripple noise
- \* Over voltage, over load & short circuit protection
- \* Output voltage  $\pm 10\%$  adjustment
- \* 100% full load burn-in test
- \*  $-20^{\circ}\text{C}$  to  $70^{\circ}\text{C}$  operating temperature
- \* UL, cUL, TUV, CB, CE approved
- \* 3 years warranty

### Specification:

INPUT	<b>Voltage</b>	88V ~ 264VAC universal full range or 125V ~ 375VDC.							
	<b>Frequency</b>	47 ---- 63 Hz							
	<b>Current</b>	<2.8A @100V AC input, full load condition							
	<b>Inrush Current</b>	<35A@115V, <70A@230V AC input. Cold start at 25°C ambient							
	<b>Leakage Current</b>	<1.0mA@264V AC input							
OUTPUT	<b>MODEL No.</b>	SPS-100 -3.3 SPS-100P-3.3	SPS-100 -05 SPS-100P-05	SPS-100 -12 SPS-100P-12	SPS-100 -15 SPS-100P-15	SPS-100 -24 SPS-100P-24	SPS-100 -30 SPS-100P-30	SPS-100 -48 SPS-100P-48	
	<b>Voltage</b>	3.3V	5V	12V	15V	24V	30V	48V	
	<b>Min Load</b>	0A	0A	0A	0A	0A	0A	0A	
	<b>Max Load</b>	23A	20A	8.5A	7A	4.3A	3.5A	2.3A	
	<b>Output Tolerance</b> ②	$\pm 3\%$	$\pm 2\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$	
	<b>Ripple Noise MAX.</b> ③	70mV	70mV	120mV	150mV	240mV	240mV	250mV	
	<b>Efficiency (TYP.)</b>	74%	78%	83%	84%	84%	84%	84%	
PROTECTION	<b>Output MAX.</b>	76W	100W	102W	105W	103W	105W	110W	
	<b>Over Voltage</b>	3.8~4.6V	5.8~7.0V	13.8~16.8V	17.3~21.0V	27.6~33.6V	34.5~42.0V	55.2~67.2V	
ELEC. CHAR.	<b>Over Load &amp; Short Circuit</b>	Shutdown and latch off, recover after re-start up.							
	<b>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.</b>								
ENVIRONMENT	<b>Rise time</b>	<20mS							
	<b>Hold up time</b>	>60mS@230V, full load condition							
	<b>Setup time</b>	<1 Sec@100 ~ 240V AC							
SAFETY	<b>Green mode function</b>	Power consumption at no load < 1W at 240VAC input							
	<b>Temperature</b> ④	Operating: $-20 \sim 70^{\circ}\text{C}$ ; De-rating: $45 \sim 70^{\circ}\text{C}$ : 2.5%/°C; Storage: $-40 \sim +85^{\circ}\text{C}$							
EMC	<b>Humidity</b>	Operating: 20% ~ 90% RH (non condensing); Storage: 10% ~ 95% RH (non condensing)							
	<b>Withstand voltage</b>	I/P-O/P:3KVAC, I/P-PE:1.5KVAC, O/P-PE:0.5KVAC, 1minute							
	<b>Isolation resistance</b>	I/P-O/P, I/P-PE, O/P-PE > 100MΩ/500VDC at 25°C/ 70% RH							
OTHERS	<b>Safety standard</b>	UL 60950-1 2 <sup>nd</sup> , CSA C22.2 No. 60950-1- 07 2 <sup>nd</sup> , TUV EN 60950-1:2006+A11, IEC 60950-1:2005, approved.							
	<b>EMI</b>	EN 55022 CLASS B, FCC CFR 47 PART 15 CLASS B, CNS 13438 CLASS B.							
	<b>EMS</b>	Compliance to EN61000-3-2 CLASS A, EN61000-3-3, SPS-100P-xx models are built-in PFC choke to lower 25% THD (Total Harmonic Distortion) performance, EN 55024 : EN 61000-4-2,3,4,5,6,8,11							
NOTE	<b>Cooling</b>	Natural cooling.							
	<b>M.T.B.F.</b>	271K hours							
	<b>Terminal pitch</b>	7P / 9.5mm with plastic cover, 90 deg terminal optional (with MOQ)							
NOTE	<b>Packing</b>	N.W.:0.72Kg / 1pc; 24pcs / 1.22 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								
⑤	The power supply is considered a component of end-equipment. The end-equipment must be re-confirmed whether comply with EMC directives.								

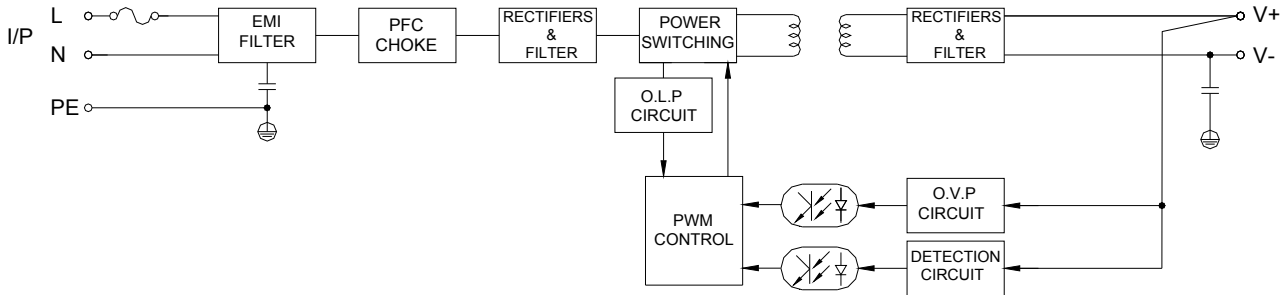


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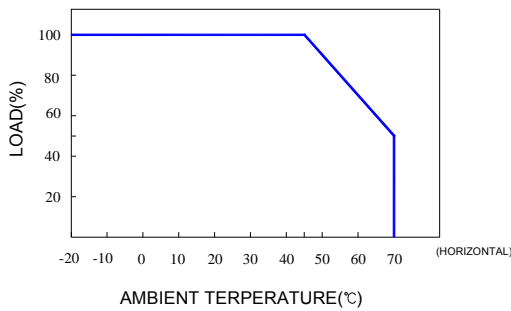
## SPS-100P-xx Series

### Block Diagram : US3

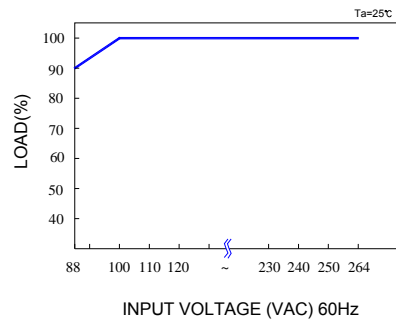


### SPS-100 -xx series without PFC choke

### De-rating Curve :

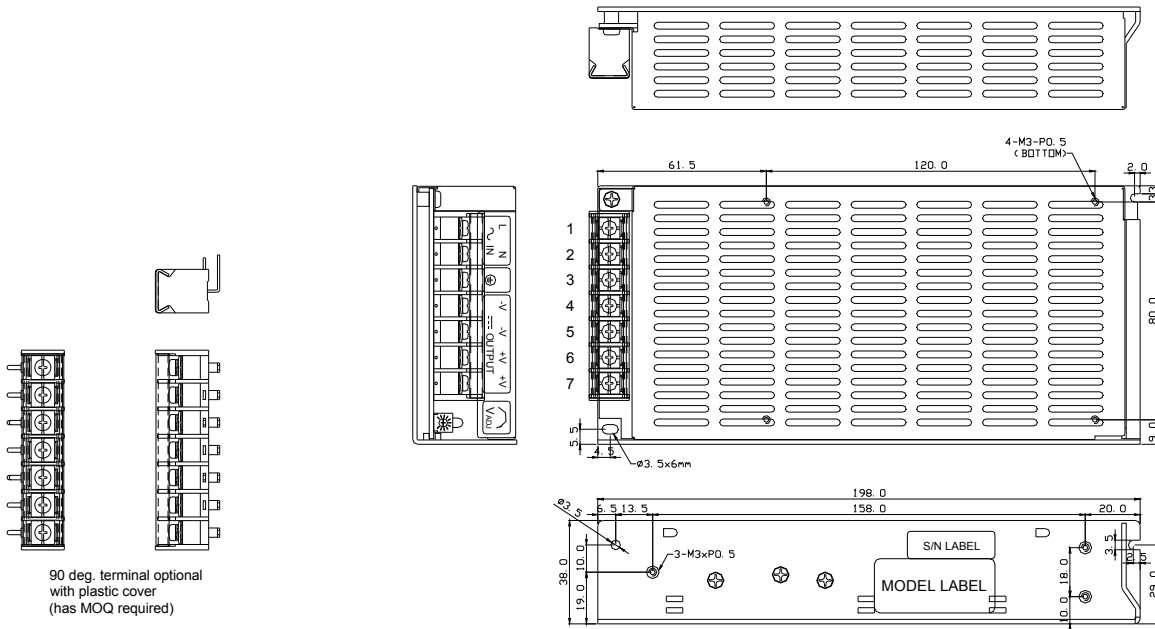


### Output De-rating Vs Input Voltage :



### Dimension:

(Unit: mm)



### NOTES:

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

MODEL No.	1	2	3	4	5	6	7
SPS-100(P)-xx	L	N	PE	-V	-V	+V	+V