



SUNPOWER TECHNOLOGY CORP.
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SPS-750P-xx Series

750W, Single Output

Active P.F.C Function



275x125x63 mm
 10.83 x 4.92 x 2.48 inch

Features:

- * Universal AC input with active power factor correction, P.F.>0.95
- * High reliability and high efficiency up to 90%
- * Inrush current limit soft start function
- * Over voltage · over load & short circuit · over temperature protection
- * Output voltage $\pm 10\%$ adjustment
- * Output voltage remote sense & Remote Control ON/OFF
- * With power good signal output
- * Current sharing function, 2+1 up to 2250W
- * Built-in 12V/0.1A auxiliary output
- * UL, cUL, TUV, CB, CE standard
- * 3 years warranty

Specification:

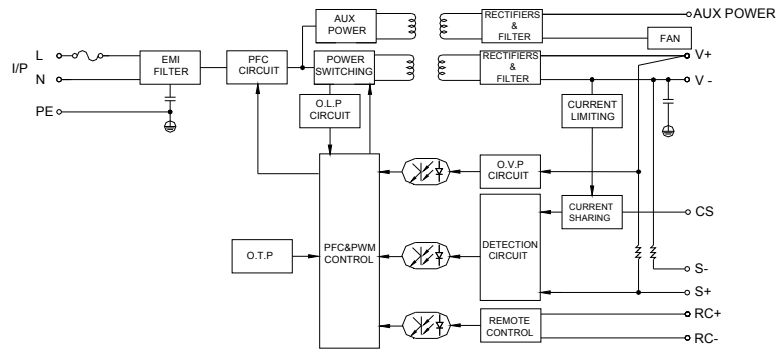
INPUT	Voltage	90V ~ 264VAC universal full range or 127V ~ 375VDC.				
	Frequency	47 ----- 63 Hz				
	Current	<9.5A@100VAC input, full load condition				
	Inrush Current	<50A@115V , <90A@230V AC input, Cold start at 25°C ambient				
	Leakage Current	<1.5mA@264V AC input				
	Power Factor	PF > 0.95				
OUTPUT	MODEL No.	SPS-750P-05	SPS-750P-12	SPS-750P-15	SPS-750P-24	SPS-750P-48
	Voltage	5V	12V	15V	24V	48V
	Min Load	0A	0A	0A	0A	0A
	Max Load	120A	62.5A	50A	31.3A	15.8A
	Output Tolerance ②	$\pm 2\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$
	Ripple Noise MAX. ③	120mV	120mV	120mV	200mV	240mV
	Efficiency (TYP.)	80%	85%	86%	89%	90%
	Output MAX.	600W	750W	750W	751W	758W
PROTECTION	Over Voltage	5.8~7.0V	13.8~16.8V	17.3~21.0V	27.6 ~ 33.6V	55.2~67.2V
		Shutdown and latch off, recover after re-start up.				
	Over Load & Short Circuit	When power supply over 105%~ 135% max load or short circuit acted, power supply will be shutdown and recover automatically after the fault is removed.				
ELEC. CHAR.	Over Temperature	Over 95°C ± 5 °C Shutdown, recovers automatically after fault condition has been removed.				
	Rise time	<40mS				
	Hold up time	$\geq 16mS@230V$, full load condition				
	Remote Control	Please see the application manual				
	Remote sensing	(RS+, RS-).				
	Power good signal	High level TTL signal release, Please see the application manual				
ENVIRONMENT	Auxiliary power	12V / 0.1A (Only for remote control ON/OFF)				
	Temperature ④	Operating: -20 ~ +70°C ; De-rating: 50 ~ 70°C : 2.5%/°C ; Storage: -40 ~ +85°C				
SAFETY	Humidity	Operating: 20% ~ 90% RH (non condensing) ; Storage: 10% ~ 95% RH (non condensing)				
	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 > 100M Ω /500VDC at 25°C/ 70% RH				
EMC	Safety standard	UL 60950-1 2 nd , CSA C22.2 No. 60950-1- 07 1 st , TUV EN 60950-1:2006, IEC 60950-1:2005, standard				
	EMI	EN 55022 CLASS B				
	EMS	Compliance to EN61000-3-2 CLASS D, EN61000-3-3				
OTHERS	EMS	EN 55024 : EN 61000-4-2,3,4,5,6,8,11				
	Cooling	Forced airflow cooling with DC fan.				
	M.T.B.F.	107 K hours				
	Dimension	275x125x63 mm (L*W*H)				
NOTE	Packing	N.W.:3.5 Kg / 1pc; 3pcs / 1.22 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 100~254VAC input with 0~50°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.					



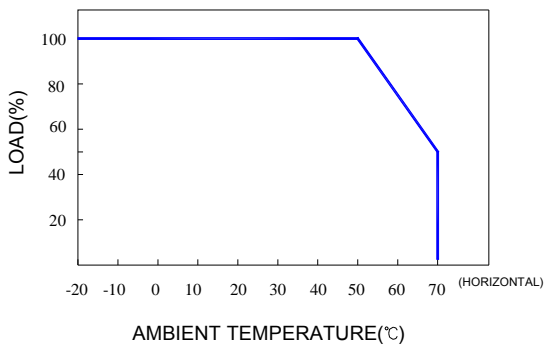
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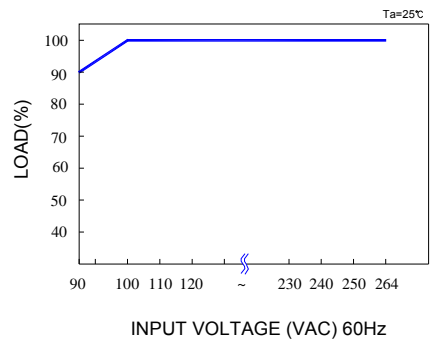
Block Diagram : PS9



De-rating Curve :

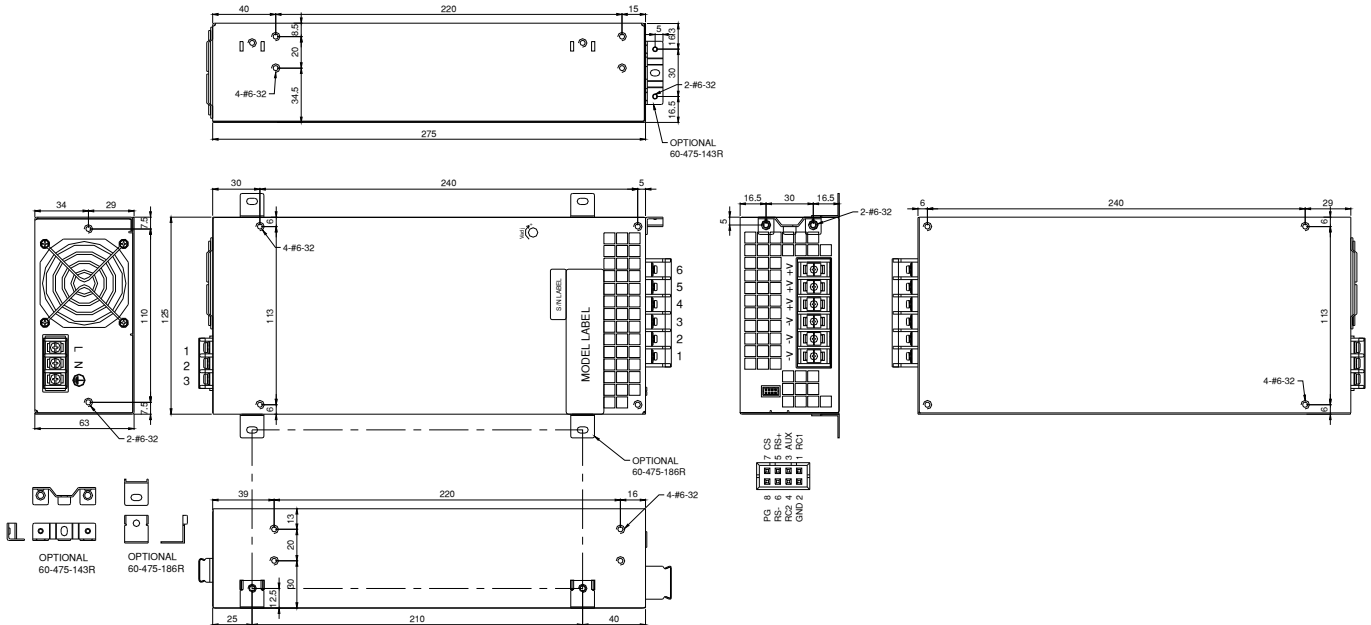


Output De-rating Vs Input Voltage :



Dimension:

(Unit: mm)



NOTES:

TERMINAL BLOCK : I/P 3P, PITCH 10mm SWITCH PC COVER

MODEL No.	1	2	3
SPS-750P-xx	L	N	PE

O/P 6P, PITCH 11mm

1	2	3	4	5	6
-V	-V	-V	+V	+V	+V

Signal connector CN3 : HRS DH21-08DP-2DSA or equivalent

Pin No.	1	2	3	4	5	6	7	8	Mating Housing	Terminal
Assignme	RC1	GND	AUX	RC2	RS+	RS-	CS	PG	HRS DF11-08DS-2C or equivalent	HRS DF11-EP22SCB or equivalent

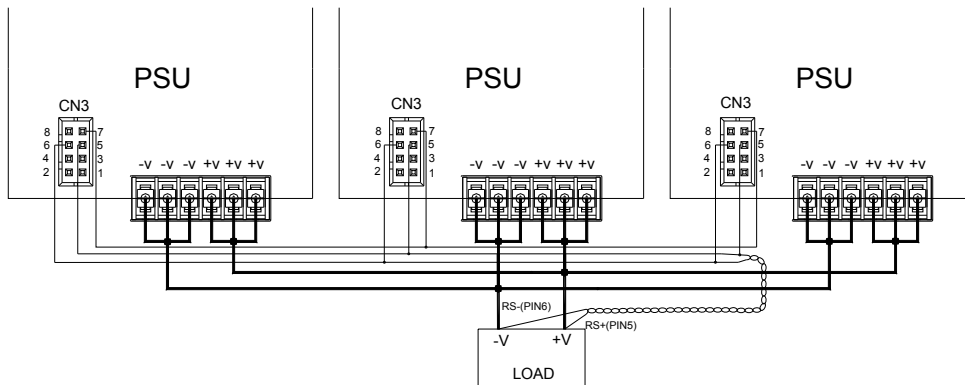
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Application Manual

Current sharing with remote sensing:

- ❶ Parallel operation is available by RS+ and RS- are connected mutually in parallel.
- ❷ Difference of output voltages among parallel units should be less than 100 mV.
- ❸ In parallel operation 3 units is the maximum, please consult the manufacturer for applications of more connecting in parallel.
- ❹ The power supplies should be paralleled using short and large diameter wiring and then connected to the load.
- ❺ Each output could work within **max load** but must under total **output Max.**

$$(\text{Total output Max. at parallel operating}) = (\text{max load per units}) \times (\text{Number of units}) \times 0.9$$
- ❻ In parallel connection, maybe only one unit (master) operate if the total **output Max.** is less than 10% of **max load** condition. The other PSUs (slaves) may go into standby mode and their output LEDs will not turn on.



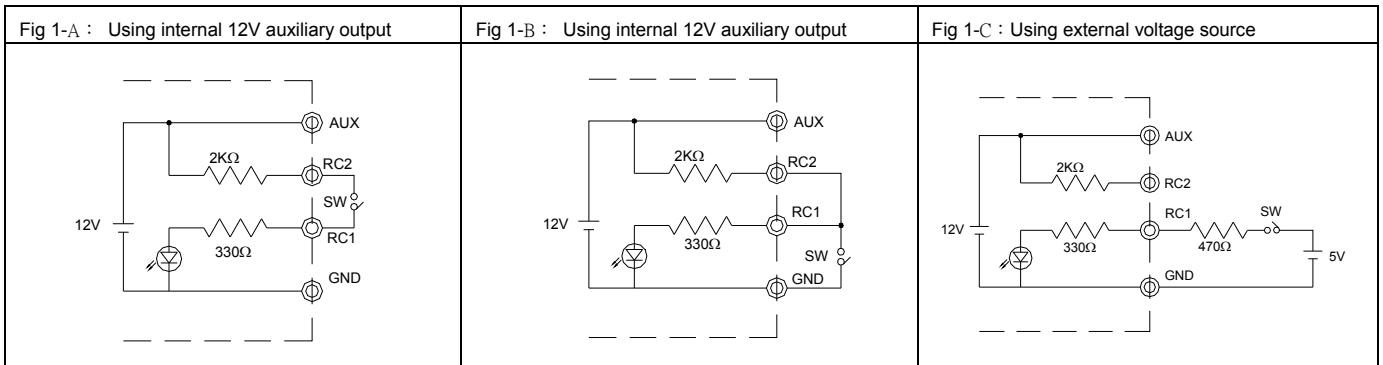
Remote control ON/OFF:

- ❶ Remote control ON/OFF becomes available by applying voltage in CN3
- 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	SW Logic	Fig 1-A	Fig 1-B	Fig 1-C
		Output ON	SW Open	SW Close
Output OFF	Output OFF	SW Close	SW Open	SW Close

Fig 1 Examples of connecting remote control ON/OFF





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Power good signal :

Function	Description	Output
Power good signal	The signal is "High" when the power supply is above 65% of the rated output voltage- Power OK	High
	The signal turns to be "Low" when the power supply is Under 65% of the rated output voltage- Power Fail	Low