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

- ∗ Altitude during operation up to 13124ft (≒ **4000m**)
- ∗ Universal AC input with active power factor correction, P.F.>0.95
- ∗ Constant current design suits for inductive load and capacitive load.
- ∗ Inrush current limit soft start function
- ∗ Over voltage、over load ＆ short circuit protection
- ∗ Over temperature protection
- ∗ Output voltage ±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/0.3A auxiliary output
- ∗ UL, cUL, CB, CE approved
- ∗ 3 years warranty

Specification:

INPUT	**Voltage**	90V ~ 264VAC universal full range or 127V ~ 375VDC.				
	Frequency	47 ----- 63 Hz				
	Current	<9.8A@100VAC input, full load condition				
	Inrush Current (TYP.)	50A@115V , 90A@230V AC input, Cold start at 25℃ ambient				
	Leakage Current	<1.5mA@264V AC input				
	Power Factor	PF ＞ 0.95				
OUTPUT	**MODEL No.**	SPS-750P-12	SPS-750P-15	SPS-750P-24	SPS-750P-27	SPS-750P-48
	Voltage	12V	15V	24V	27V	48V
	Min Load	0A	0A	0A	0A	0A
	Max Load	62.5A	50A	31.3A	28A	15.8A
	Output Tolerance ②	± 1%	± 1%	± 1%	± 1%	± 1%
	Ripple Noise MAX. ③	120mV	120mV	200mV	240mV	240mV
	Efficiency (TYP.)	88%	88%	88%	89%	90%
	Output MAX.	750W	750W	751W	756W	758W
PROTECTION	**Over Voltage**	13.8~16.8V	17.3~21.0V	27.6 ~ 33.6V	31.1 ~ 37.8V	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.				
	Over Temperature	Over 95℃± 5℃ Shutdown, recovers automatically after fault condition has been removed.				
ELEC. CHAR.	**Rise time**	<40mS				
	Hold up time	≧16mS@230V, full load condition				
	Setup time	<2.0S@230V AC				
	Remote Control	Please see the application manual				
	Remote sensing	(RS+, RS-).				
	Power good signal	High level TTL signal release, Please see the application manual				
	Auxiliary power	12V / 0.3A (Only for remote control ON/OFF)				
ENVIRONMENT	**Temperature** ④	Operating: -20 ~ +70℃ ; De-rating: 50 ~ 70℃: 2.5%/℃ ; Storage: -40 ~ +85℃				
	Humidity	Operating: 20% ~ 90% RH (non condensing) ; Storage: 10% ~ 95% RH (non condensing)				
	Altitude	13124ft (≒ 4000m) operating				
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℃/ 70% RH				
	Safety standard	UL 62368-1 2nd,CSA C22.2 No. 62368-1-14 2nd,IEC 62368-1:2014(Second Edition)				

EMC		Test Items	Standard	Test Level
	EMI	Conducted	EN 55032	Class B
		Radiated	EN 55032	Class B
		Harmonic	EN 61000-3-2	Class A
		Voltage Flicker	EN 61000-3-3	---
	EMS	ESD	EN 61000-4-2	Level 3, 8KV air ; Level 2, 4KV contact
		Radiated	EN 61000-4-3	Level 3, 10V/m
		EFT / Burst	EN 61000-4-4	Level 3
		Surge	EN 61000-6-2	Level 4, 2KV/Line-Line , 4KV/Line-Earth
		Conducted	EN 61000-4-6	Level 3
		Magnetic Field	EN 61000-4-8	Level 3
		Voltage Dips and Interruptions	EN 61000-4-11	>95% dip 0.5 period, 30% dip 25 periods >95% interruptions 250 periods

OTHERS	**Cooling**	Forced airflow cooling with DC fan.
	M.T.B.F.	107 K hours
	Dimension	275x125x63 ㎜ (L*W*H)
	Packing	N.W.:2.5 Kg / 1pc; 3pcs / 1.22 CUFT / 1 CTN

NOTE

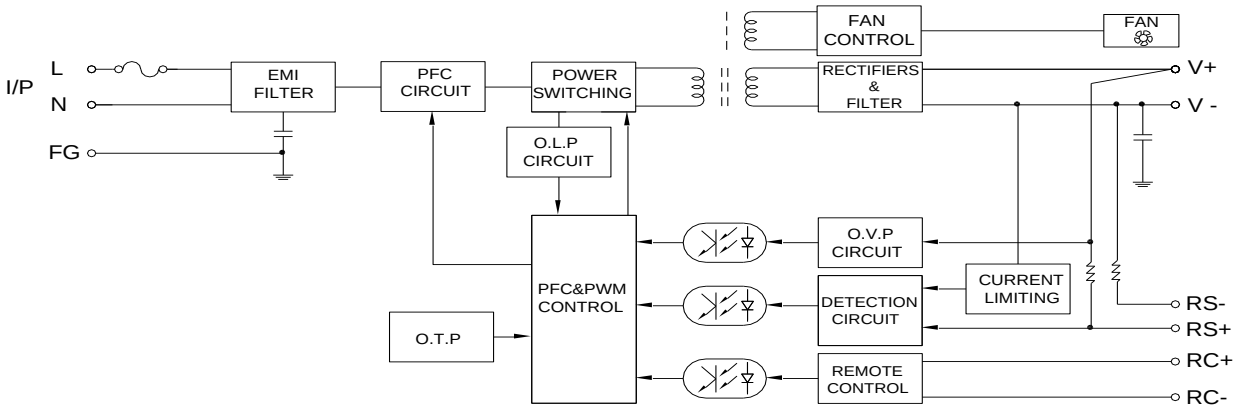
① All measurements which not mentioned are based on 230VAC input, **output Max** at ambient 25℃ / 70%RH
② Output tolerance included set up voltage, line regulation and load regulation.
③ Ripple & noise are measured at 10～50℃ condition and 20MHz of bandwidth by using a 10″ ～15″ twisted pair-wire terminated 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℃/1000m, when operating altitude higher than 2000m (6500 ft)

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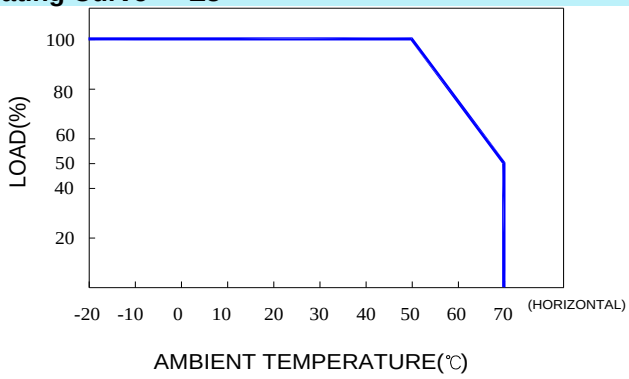
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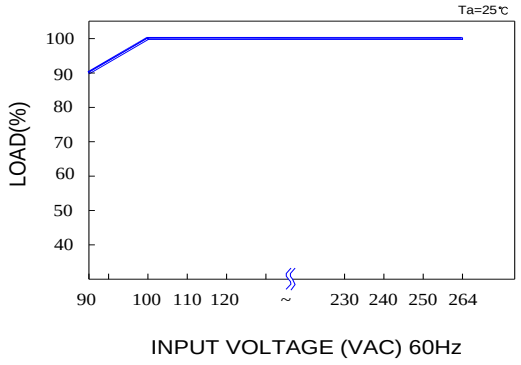
Block Diagram：PS50-1



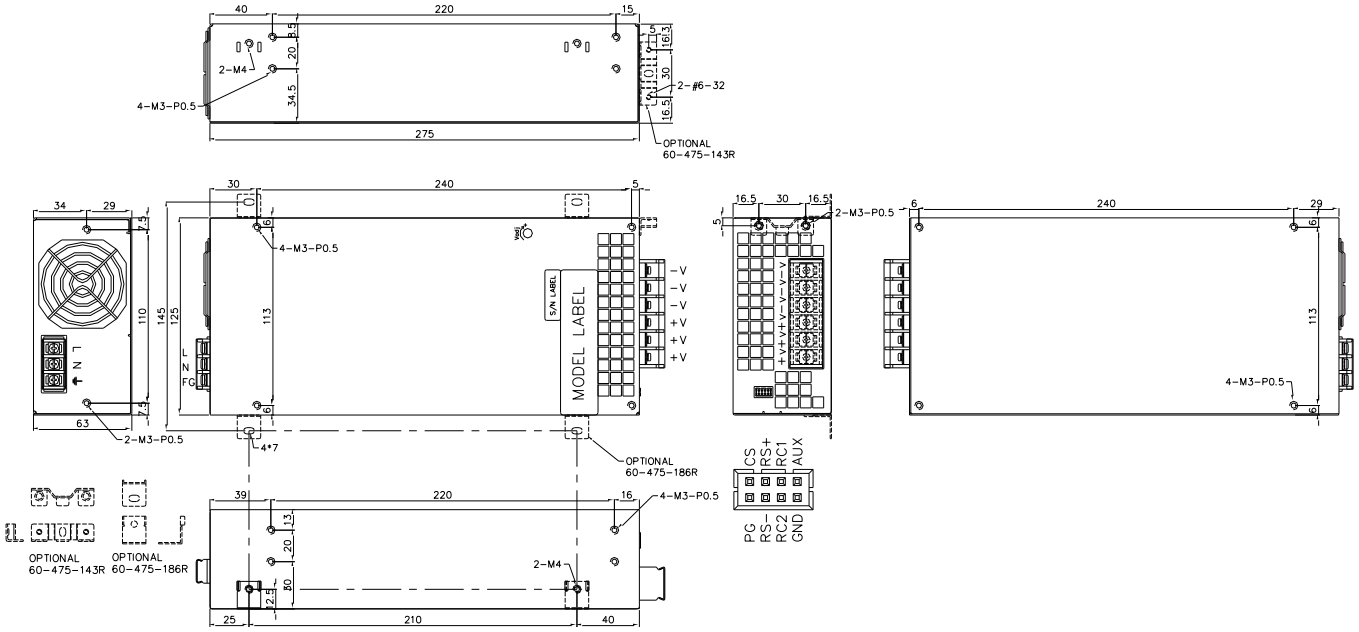
De-rating Curve： E3



Output De-rating Vs Input Voltage：



Dimension: (Unit: mm)



NOTES:

TERMINAL BLOCK CN1：I/P 3P, PITCH 10mm WITCH PC COVER

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

CN11 O/P 6P, PITCH 11mm

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

Signal connector CN3：HRS DF11-8DP-2DSA (Straight Pin Header or equivalent)

Pin No.	1	2	3	4	5	6	7	8	Crimping Socket	Crimping Contact for Socket
Assignme	CS	PG	RS+	RS-	RC1	RC2	AUX	GND	HRS DF11- 8DS-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.

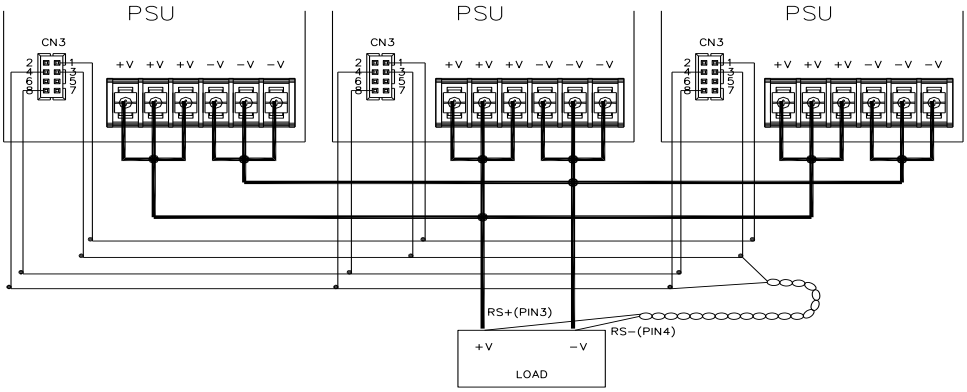
❹ The power supplies should be paralleled using short and large diameter wiring and then connected to the load.

❺ Each output could work within **max load** but must under total **output Max.**

(Total **output Max.**. at parallel operating **)** ＝ **(max load** per units) X (Number of units) X 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

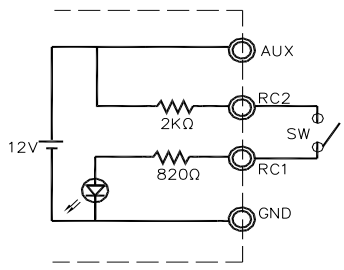
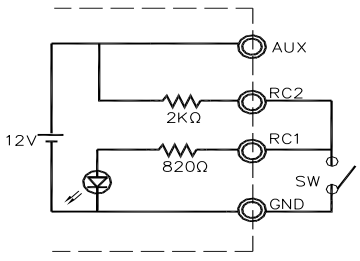
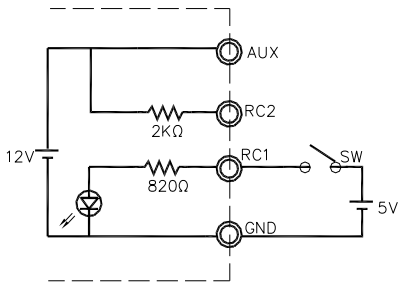
❷ Table A shows the specification of remote control ON/OFF function

❸ Fig 1 slows the example to connect remote control ON/OFF function

Table Ａ： Specification of remote control ON/OFF

Connection Method		Fig 1-A	Fig 1-B	Fig 1-C
SW Logic	Output ON	SW Open	SW Close	SW Open
	Output OFF	SW Close	SW Open	SW Close

Fig 1 Examples of connecting remote control ON/OFF

Fig 1-Ａ： Using internal 12V auxiliary output	Fig 1-Ｂ： Using internal 12V auxiliary output	Fig 1-Ｃ：Using external voltage source
		

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Power good signal：

Function	Description	Output
Power good signal	The signal is 〝High〞 when the power supply is above 20% of the rated output voltage, Power OK	High
	The signal turns to be 〝Low〞 when the power supply is Under 20% of the rated output voltage, Power Fail	Low

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