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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:

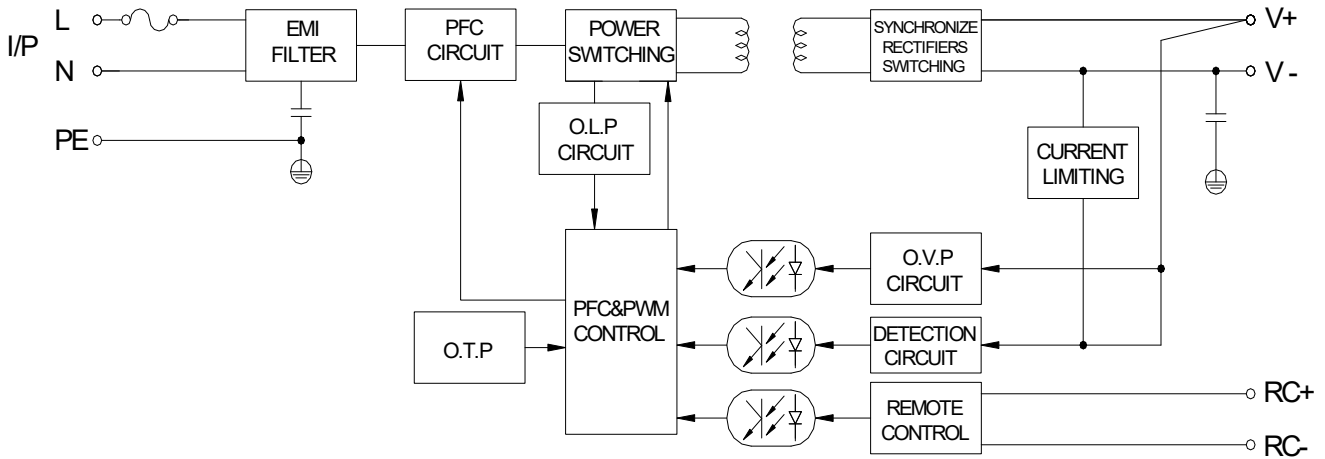
INPUT	<b>Voltage</b>	85V ~ 264VAC universal full range or 120V ~ 375VDC.			
	<b>Frequency</b>	47 ---- 63 Hz			
	<b>Current</b>	<2.2A @100V AC input, full load condition			
	<b>Inrush Current(TYP.)</b>	45A@230V AC input. Cold start at 25°C ambient			
	<b>Leakage Current</b>	<1.5mA@264V AC input			
		<b>Power Factor</b>	PF > 0.95		
OUTPUT	<b>MODEL No.</b>	<b>SPE-150-05</b>	<b>SPE-150-12</b>	<b>SPE-150-24</b>	<b>SPE-150-48</b>
	<b>Voltage</b>	5V	12V	24V	48V
	<b>Min Load</b>	0A	0A	0A	0A
	<b>Max Load</b>	30A	12.5A	6.3A	3.2A
	<b>Output Tolerance</b> ②	$\pm 2\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$
	<b>Ripple Noise MAX.</b> ③	100mV	100mV	150mV	200mV
	<b>Efficiency (TYP.)</b>	86%	88%	89%	90%
	<b>Output MAX.</b>	150W	150W	151W	154W
PROTECTIO N	<b>Over Voltage</b>	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.			
	<b>OverLoad &amp; ShortCircuit</b>	When power supply over 105%~ 150% max load or short circuit acted, power supply will be constant current limiting and recover automatically after the fault is removed.			
	<b>Over Temperature</b>	Shutdown output voltage, recovers automatically after fault condition has been removed.			
ELEC. CHAR.	<b>Rise time</b>	<20mS			
	<b>Hold up time</b>	>16mS@230V, full load condition			
	<b>Setup time</b>	<2.5S@100 ~ 240V AC			
	<b>Remote Control</b>	RC+/RC-: 0~0.7V= Power On; 4~10V= Power Off.			
ENVIRONMENT	<b>Temperature</b> ④	Operating: -30 ~ +70°C ; De-rating: 50 ~ 70°C : 2.5%/°C ; Storage: -40 ~ +85°C			
	<b>Humidity</b>	Operating: 20% ~ 90% RH (non condensing) ; Storage: 10% ~ 95% RH (non condensing)			
SAFETY	<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			
	<b>Safety standard</b>	UL 60950-1 2 <sup>nd</sup> ,CAN/CSA C22.2 No. 60950-1- 07 2 <sup>nd</sup> ,UL 62368-1 2 <sup>nd</sup> (edition dated 2014-12-01) , IEC60950-1:2005+A1+A2, IEC 62368-1:2014 (2 <sup>nd</sup> .Edition),TUV EN 62368-1:2014 approved			
EMC	<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 D, EN61000-3-3 EN 55024 : EN 61000-4-2,3,4,5,6,8,11			
OTHERS	<b>Cooling</b>	Natural cooling			
	<b>M.T.B.F.</b>	K hours			
	<b>Dimension</b>	188 x 99 x 30 mm (L*W*H)			
	<b>Packing</b>	N.W.: Kg / 1pc; pcs / 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.

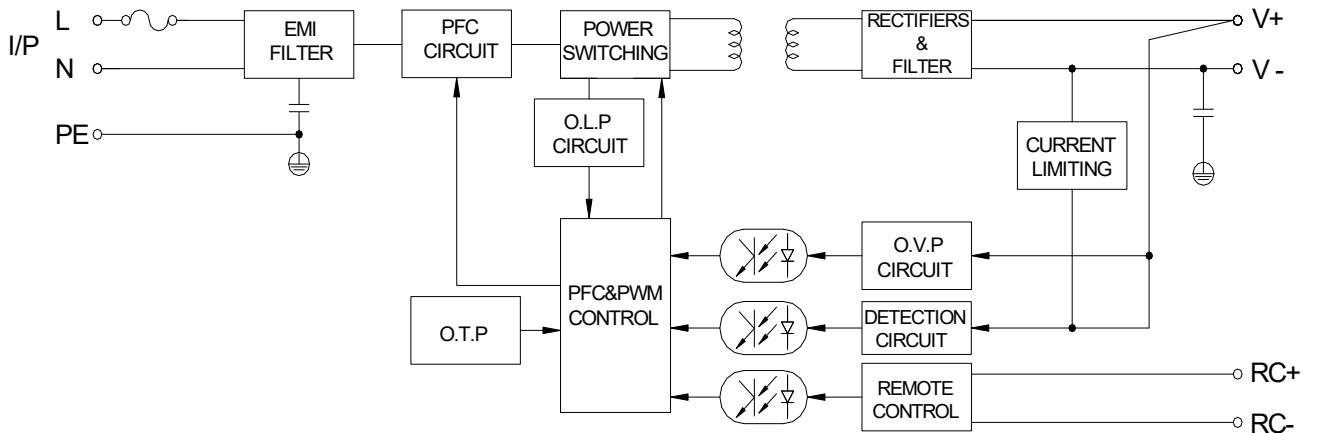
# SPE-150-xx Series

Block Diagram : PS33、PS33-1

SPE-150-05~12

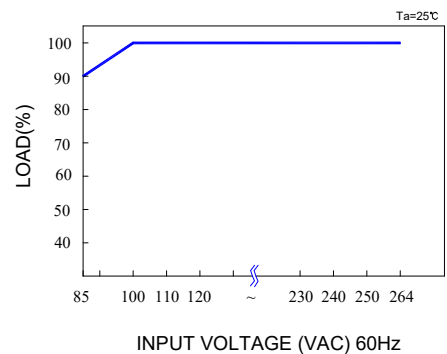
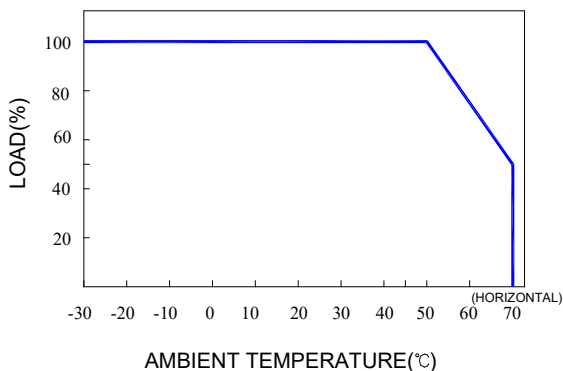


SPE-150-24~48



## De-rating Curve :

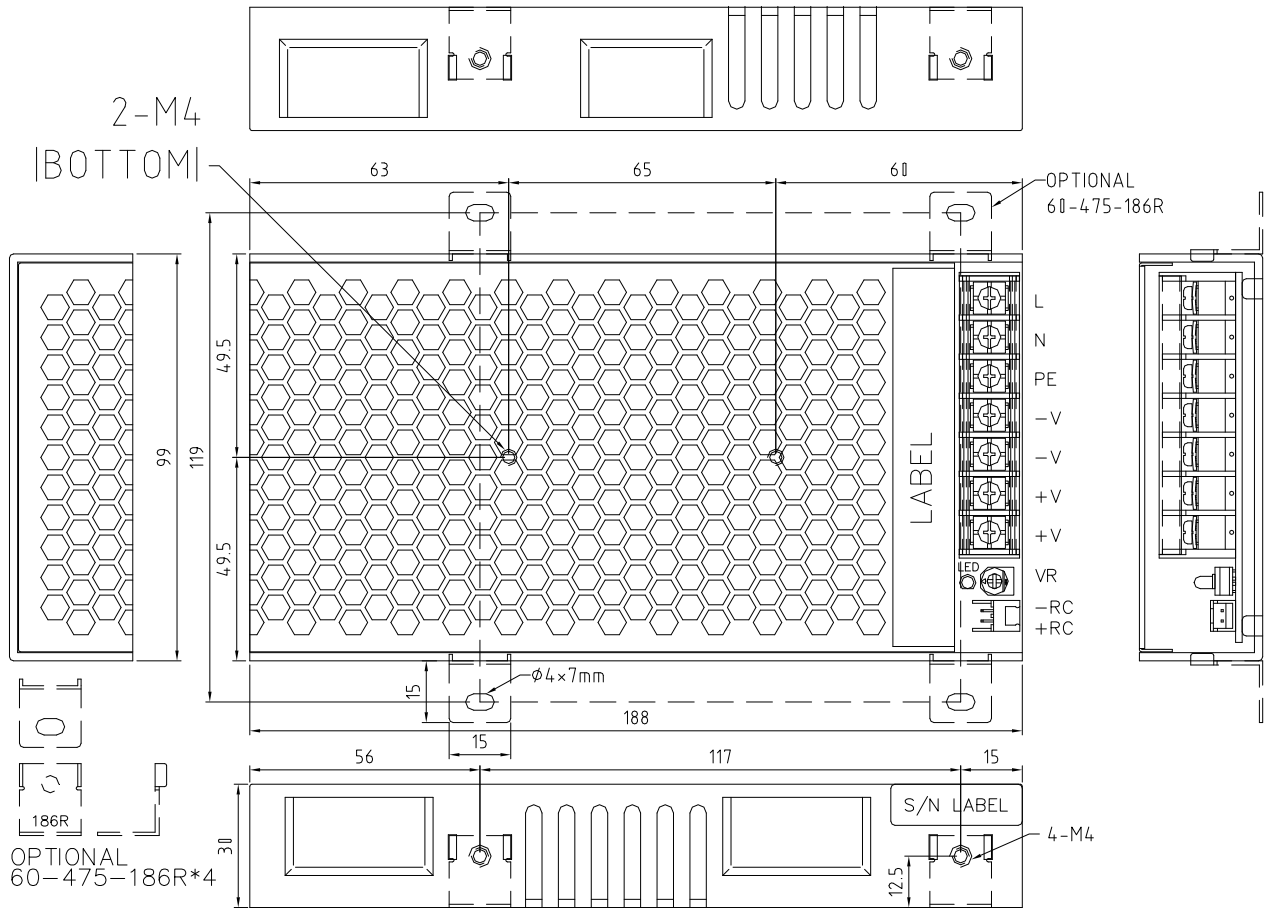
## Output De-rating Vs Input Voltage :



# 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	PE	-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

## SPE-150-xx Series

### 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	0~0.7V
	Power OFF	SW Close	4~10V

Fig 1 Examples of connecting remote control ON/OFF

