



SUNPOWER TECHNOLOGY CORP.  
 16F-1, No.150, Jian 1st Rd., Zhonghe Dist., New Taipei City 235, Taiwan (R.O.C.)  
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 http://www.sunpower.com.tw  
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# SPS-035-xx Series

Single Output

Green mode function



99 x 82 x 35 mm  
 3.90 x 3.23 x 1.38 inch

## Features:

- \* Green mode design, no load < 0.5W
- \* High efficiency and high reliability
- \* Built in EMI filter, low ripple noise
- \* Over voltage protection : Shutdown and latch off
- \* Over load & short circuit protection : Hiccup mode
- \* Output voltage  $\pm 10\%$  adjustment
- \* 100% full load burn-in test
- \*  $-20^{\circ}\text{C} \sim 70^{\circ}\text{C}$  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>	<1.0A@100V AC input, full load condition								
	<b>Inrush Current (TYP.)</b>	30A@115V , 50A@230V AC input, Cold start at 25°C ambient								
	<b>Leakage Current</b>	<1.0mA@264V AC input								
OUTPUT	<b>MODEL No.</b>	SPS-035-3.3	SPS-035-05	SPS-035-7.5	SPS-035-12	SPS-035-15	SPS-035-24	SPS-035-30	SPS-035-48	
	<b>Voltage</b>	3.3V	5V	7.5V	12V	15V	24V	30V	48V	
	<b>Min Load</b>	0A	0A	0A	0A	0A	0A	0A	0A	
	<b>Max Load</b>	9A	7A	4.7A	3A	2.4A	1.5A	1.2A	0.8A	
	<b>Output Tolerance</b> ②	$\pm 3\%$	$\pm 2\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$	$\pm 1\%$	
	<b>Ripple Noise MAX.</b> ③	70mV	70mV	80mV	120mV	150mV	150mV	200mV	200mV	
	<b>Efficiency (TYP.)</b>	74%	79%	80%	82%	84%	85%	85%	86%	
	<b>Output MAX.</b>	30W	35W	35W	36W	36W	36W	36W	38W	
PROTECTION	<b>Over Voltage</b>	3.8~4.6V	5.8~7.0V	8.6~10.5V	13.8~16.8V	17.3~21.0V	27.6~33.6V	34.5~42.0V	55.2~67.2V	
		Shutdown and latch off, recover after re-start up.								
	<b>Over Load &amp; Short Circuit</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.								
ELEC. CHAR.	<b>Rise time</b>	<20mS								
	<b>Hold up time</b>	>40mS@230V, full load condition								
	<b>Setup time</b>	<1 Sec@100 ~ 240V AC								
	<b>Green mode function</b>	Power consumption at no load < 0.5W								
ENVIRONMENT	<b>Temperature</b> ④	Operating: $-20 \sim +70^{\circ}\text{C}$ ; De-rating: $50 \sim 70^{\circ}\text{C}$ : $2.5\%/^{\circ}\text{C}$ ; Storage: $-40 \sim +85^{\circ}\text{C}$								
	<b>Humidity</b>	Operating: 20% ~ 90% RH (non condensing) ; Storage: 10% ~ 95% RH (non condensing)								
	<b>Altitude</b>	6562 ft ( $\approx$ 2000 m) operating								
SAFETY	<b>Withstand voltage</b>	I/P-O/P:3KVAC, I/P-FG:1.8KVAC, O/P-FG:0.5KVAC, 1minute								
	<b>Isolation resistance</b>	I/P-O/P, I/P-FG, O/P-FG > 100M $\Omega$ /500VDC at 25°C/ 70% RH								
	<b>Safety standard</b>	UL 62368-1 2 <sup>nd</sup> Edition, 2014-12-01, CAN/CSA C22.2 No. 62368-1-14, 2 <sup>nd</sup> Edition, 2014-12, TUV EN 62368-1:2014+A11, IEC 62368-1:2014 approved								
EMC	<b>EMI</b>	EN 55032 CLASS B, FCC CFR 47 PART 15 CLASS B								
	<b>EMS</b>	Compliance to EN61000-3-2 CLASS A, 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>	398 K hours								
	<b>Terminal pitch</b>	5P / 9.5mm with plastic cover, 90 deg terminal optional (with MOQ)								
	<b>Packing</b>	N.W.: 0.34Kg / 1pc; 46pcs/ 1.22 CUFT / 1 CTN								

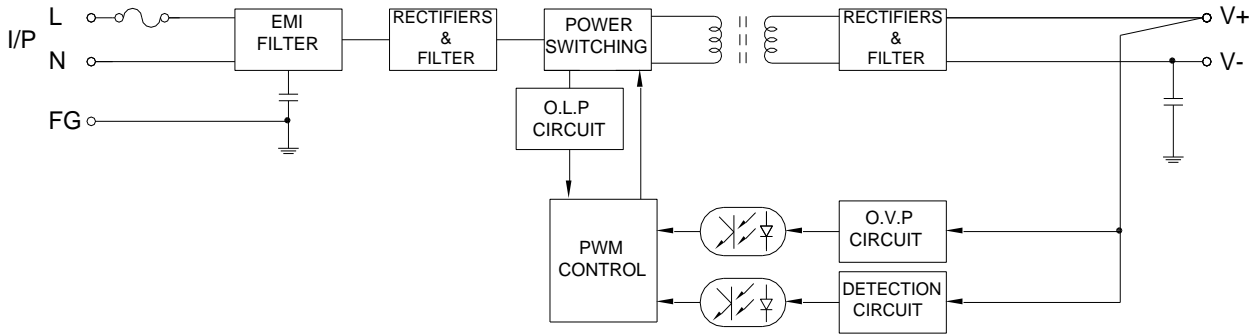
- NOTE
- ① All measurements which not mentioned are based on 230VAC input, **output Max** at ambient 25°C / 70%RH
  - ② Output tolerance included set up voltage, line regulation and load regulation.
  - ③ Ripple & noise are measured at 100~254VAC input with 10~50°C condition and 20MHz of bandwidth by 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.



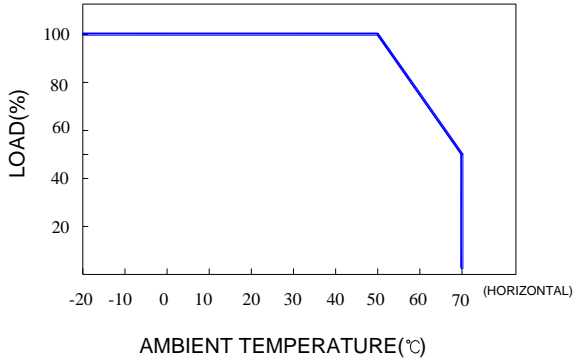
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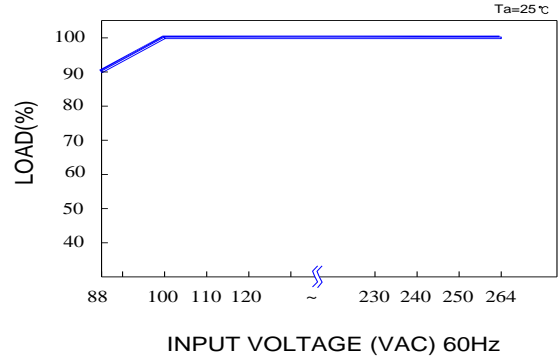
## Block Diagram : US2-1



## De-rating Curve :

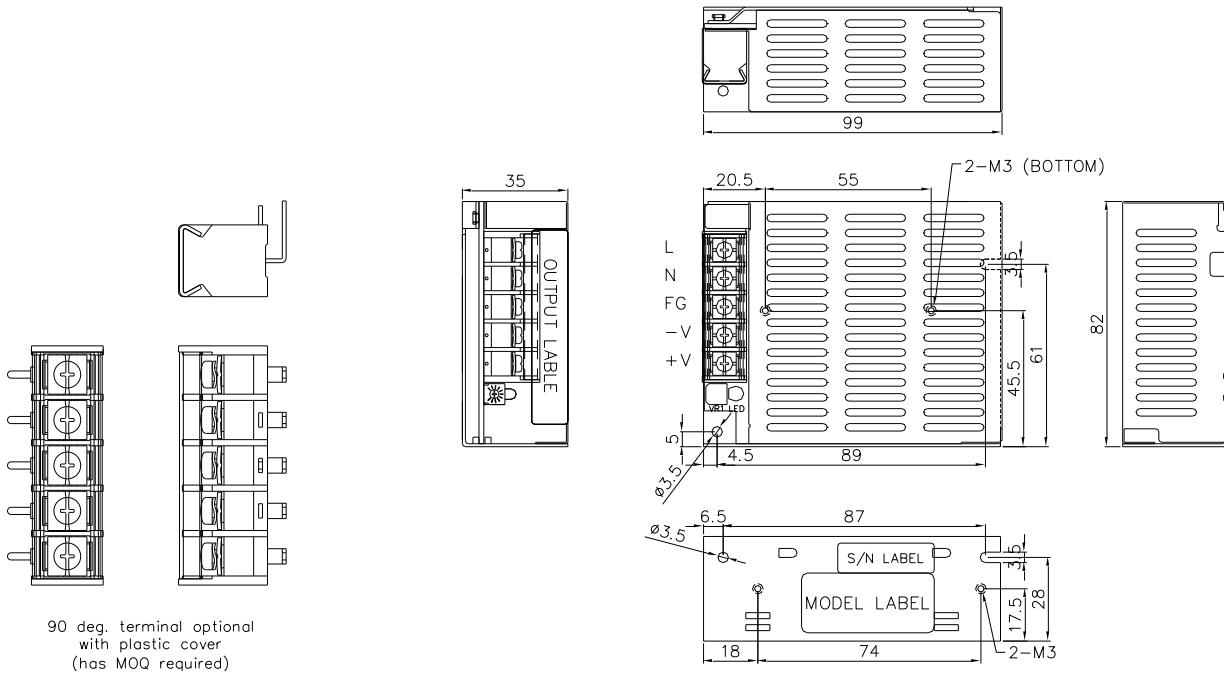


## Output De-rating Vs Input Voltage :



## Dimension:

(Unit: mm)



90 deg. terminal optional with plastic cover (has MOQ required)

Terminal Pin. No Assignment: 5P / 9.5mm with plastic cover

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4	DC OUTPUT -V
2	AC/N	5	DC OUTPUT +V
3	FG		