



SUNPOWER TECHNOLOGY CORP.  
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# SPS-060 -ITx Series

# SPS-060P-ITx Series



60W, Triple Output  
 P.F.C Function Optional

159 x 95 x 38 mm  
 6.26 x 3.74 x 1.50 inch

### Features:

- \* All outputs are isolated , V2 & V3 polarity option (+ or -)
- \* High reliability and high efficiency
- \* Power ON with LED indicator
- \* Built-in EMI filter, low ripple noise
- \* Over voltage protection
- \* Over load & short circuit protection
- \* 100% full load burn-in test
- \* -20°C to 70°C operating temperature
- \* 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>	<1.8A @100V AC input, full load condition											
	<b>Inrush Current</b>	<30A@115V , <60A@230V AC input. Cold start at 25°C ambient											
	<b>Leakage Current</b>	<1.0mA@264V AC input											
OUTPUT	<b>MODEL No.</b>	SPS-060 -IT1 SPS-060P-IT1			SPS-060 -IT2 SPS-060P-IT2			SPS-060 -IT3 SPS-060P-IT3			SPS-060 -IT4 SPS-060P-IT4		
	<b>Output</b>	V1	V2	V3	V1	V2	V3	V1	V2	V3	V1	V2	V3
	<b>Voltage</b>	5V	12V	-5V	5V	12V	-12V	5V	15V	-15V	5V	12V	24V
	<b>Min Load</b>	0.5A	0A	0A	0.5A	0A	0A	0.5A	0A	0A	0.5A	0A	0A
	<b>Max Load</b>	8A	3.5A	1A	7A	3.5A	1A	7A	3A	1A	6A	1.5A	1.2A
	<b>Output Tolerance</b> ②	± 3%	± 5%	± 5%	± 3%	± 5%	± 5%	± 3%	± 5%	± 5%	± 3%	± 5%	± 5%
	<b>Ripple Noise MAX.</b> ③	70mV	120mV	100mV	70mV	120mV	150mV	70mV	150mV	200mV	70mV	120mV	200mV
	<b>Efficiency (TYP.)</b>	75%			76%			76%			78%		
<b>Output MAX.</b>	60W			60W			60W			60W			
PROTECTION	<b>Over Voltage</b>	5.8~7.0V : 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>	>60mS@230V, full load condition											
	<b>Setup time</b>	<1 Sec@100 ~ 240V AC											
ENVIRONMENT	<b>Temperature</b> ④	Operating: -20 ~ +70°C ; De-rating: 45 ~ 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:0.5KVDC, 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 1 <sup>st</sup> , CSA C22.2 No. 60950-1- 03 1 <sup>st</sup> , TUV EN 60950-1:2001+A11, IEC 60950-1, approved											
EMC	<b>EMI</b>	EN 55022 CLASS B · FCC CFR 47 PART 15 CLASS B · CNS 13438 CLASS B. Compliance to EN61000-3-2 CLASS A, EN61000-3-3, SPS-060P-ITx models are built-in PFC choke to lower 25% THD (Total Harmonic Distortion) performance,											
	<b>EMS</b>	EN 55024 : EN 61000-4-2,3,4,5,6,8,11											
OTHERS	<b>Cooling</b>	Natural cooling.											
	<b>M.T.B.F.</b>	258K hours at 25°C											
	<b>Terminal pitch</b>	9P / 7.62mm with plastic cover, 90 deg terminal optional (with MOQ)											
	<b>Packing</b>	N.W.:0.6Kg / 1pc; 30pcs / 1.2 CUFT / 1 CTN											
NOTE	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. The regulation is measured between 20%-80% <b>max load</b> of each output, Total output t must under <b>output Max</b> .											
	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.											

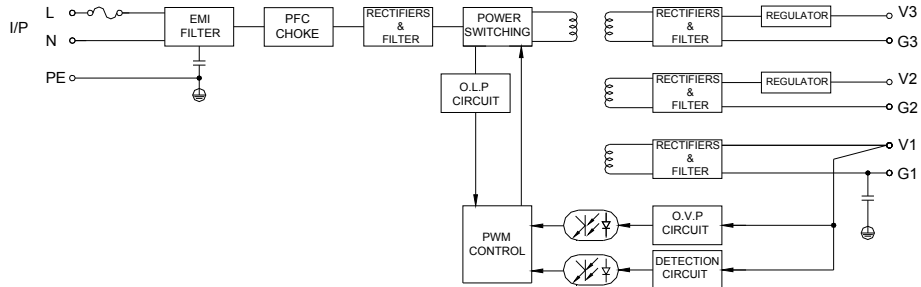


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# SPS-060 -ITx Series

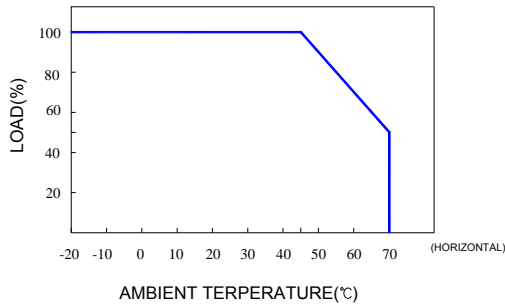
# SPS-060P-ITx Series

## Block Diagram : UT9

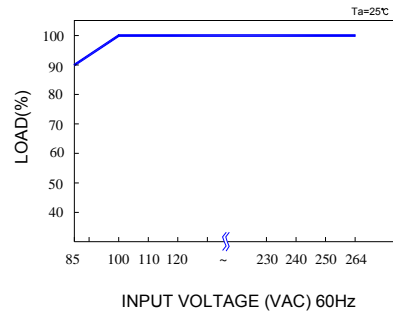


## SPS-060 -ITx series without PFC choke

### De-rating Curve :

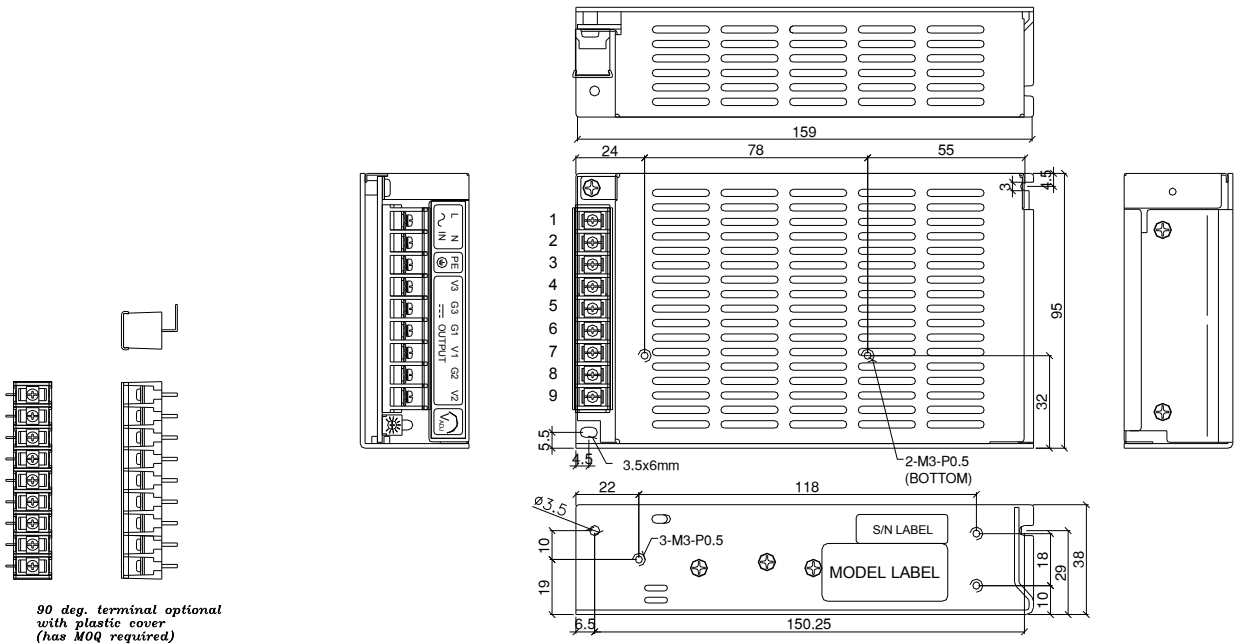


### Output De-rating Vs Input Voltage :



### Dimension:

(Unit: mm)



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

#### NOTES:

TERMINAL BLOCK: 9P, PITCH 7.62mm WITH OLASTIC COVER.

MODEL No.	1	2	3	4	5	6	7	8	9
SPS-060(P)-IT1/2/3	L	N	PE	V3	G3	G1	V1	G2	V2
SPS-060(P)-IT4	L	N	PE	G3	V3	G1	V1	G2	V2