



SUNPOWER TECHNOLOGY CORP.  
 16F.-1, No.150, Jian 1st Rd., Zhonghe Dist., New Taipei City 235, Taiwan (R.O.C.).  
 TEL: 886-2-8226-3100 FAX: 886-2-8226-3111  
 http://www.sunpower.com.tw  
 E-mail: sunpower@sunpower.com.tw

# SPS-060 -Qx Series

# SPS-060P-Qx Series

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



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

### Features:

- \* 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, 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 (TYP.)</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>	<b>SPS-060 -Q1 / SPS-060P-Q1</b>			
	<b>Output</b>	V1	V2	V3	V4
	<b>Voltage</b>	5V	12V	-5V	-12V
	<b>Min Load</b>	0.5A	0.2A	0A	0A
	<b>Max Load</b>	7A	3A	1A	1A
	<b>Output Tolerance ②</b>	± 3%	± 5%	± 8%	± 8%
	<b>Ripple Noise MAX. ③</b>	70mV	120mV	100mV	240mV
	<b>Efficiency (TYP.)</b>	78%			
PROTECTION	<b>Output MAX.</b>	60W			
	<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 ④</b>	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)			
	<b>Altitude</b>	6562 ft ( ≒ 2000 m) operating			
SAFETY	<b>Withstand voltage</b>	I/P-O/P:3KVAC, I/P-FG:1.5KVAC, O/P-FG:0.5KVAC, 1minute			
	<b>Isolation resistance</b>	I/P-O/P, I/P-FG, O/P-FG >100MΩ/500VDC at 25°C / 70% RH			
	<b>Safety standard</b>	UL 60950-1 2 <sup>nd</sup> , CSA C22.2 No. 60950-1- 07 2 <sup>nd</sup> , IEC 60950-1:2005+A1+A2, approved			
EMC	<b>EMI</b>	EN 55032 CLASS B 、 FCC CFR 47 PART 15 CLASS B Compliance to EN61000-3-2 CLASS A, EN61000-3-3, SPS-060P-Qx 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>	298K hours at 25°C			
	<b>Terminal pitch</b>	8P / 8.25mm 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 at the condition : when any of outputs is with 20% ~ 100% <b>max load</b> and the rest of each outputs are with 60% <b>max load</b> , Each output could work within <b>max load</b> but must under total <b>output max</b> .				
	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.				

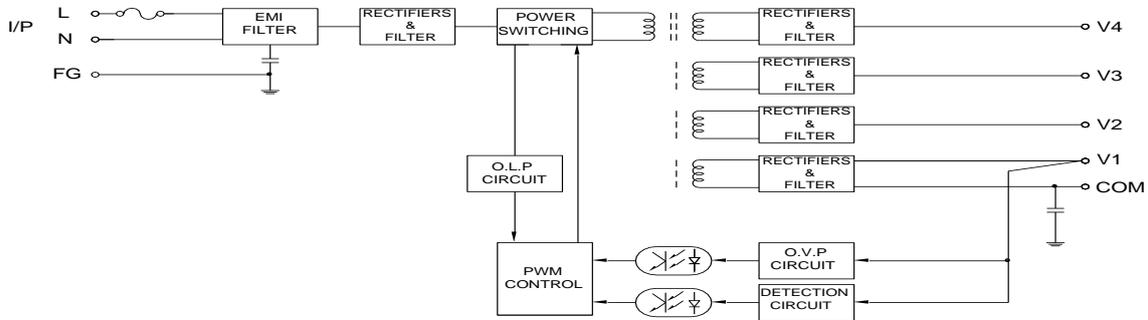


SUNPOWER TECHNOLOGY CORP.  
 16F-1, No.150, Jian 1st Rd., Zhonghe Dist., New Taipei City 235, Taiwan (R.O.C.).  
 TEL: 886-2-8226-3100 FAX: 886-2-8226-3111  
 http://www.sunpower.com.tw  
 E-mail: sunpower@sunpower.com.tw

# SPS-060 -Qx Series

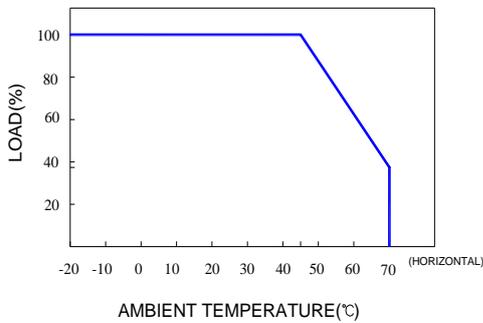
# SPS-060P-Qx Series

### Block Diagram : UQ1-1

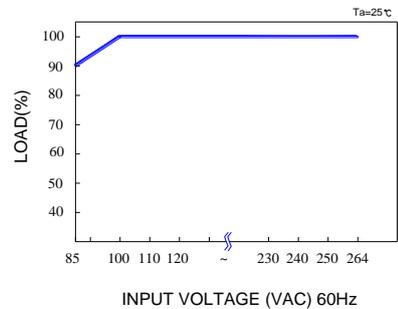


### SPS-060 -Qx series without PFC choke

### De-rating Curve :

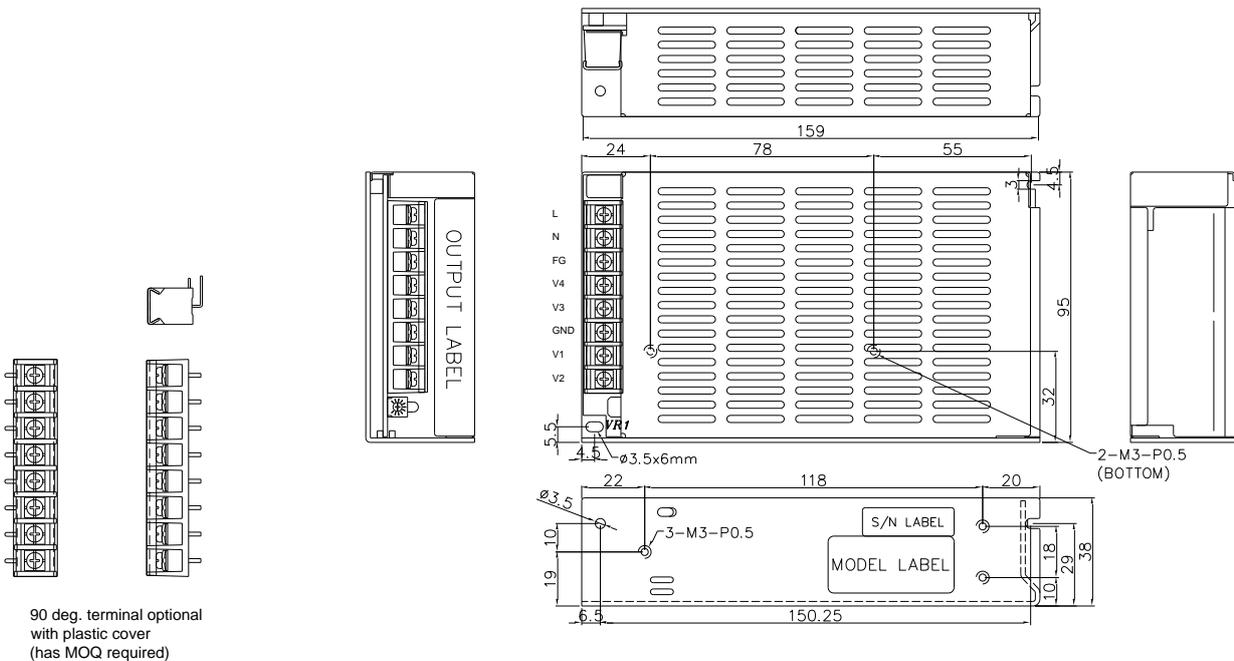


### Output De-rating Vs Input Voltage :



### Dimension:

(Unit: mm)



### NOTES:

TERMINAL BLOCK: 8P, PITCH 8.25mm WITH PLASTIC COVER.

MODEL No.	1	2	3	4	5	6	7	8
SPS-060 -Qx	L	N	FG	V4	V3	GND	V1	V2
SPS-060P-Qx	L	N	FG	V4	V3	GND	V1	V2