

### ■ Features

- Single output: 120W(Convection cooling)
- Single output: 180W(Forced Air Cooling)
- Input voltage range: 90-264V
- Output current(1940mA-15000mA)
- 4"x2" form factor
- Efficiency to 92%
- Protections: SCP, OCP, and OVP
- Class 1 & Class 2 options
- Cover kit accessory available



\*Product images are for illustrative purposes only and may vary from actual design.

### ■ Applications

- Network system, telecommunication system, storage system, industrial equipment, and consumer electronics

### ■ Model List\*(See part number scheme for model number details)

Model Number	Input Voltage	Output Power	Output Voltage	Output Current Max (Convection) @50°C/40°C	Output Current Max. (Forced Air Cooling)	Efficiency	Certificates
SPJ180-120-XY	90-264Vac	120/180W*	12V	9.37/10A	15A	88%	UL/cUL
SPJ180-150-XY	90-264Vac	120/180W*	15V	7.5/8A	12A	88%	UL/cUL
SPJ180-240-XY	90-264Vac	120/180W*	24V	4.68A/5A	7.5A	90%	UL/cUL
SPJ180-300-XY	90-264Vac	120/180W*	30V	3.75A/4A	6A	90%	UL/cUL
SPJ180-480-XY	90-264Vac	120/180W*	48V	2.34A/2.5A	3.75A	92%	UL/cUL
SPJ180-580-XY	90-264Vac	120/180W*	58V	1.94A/2.07A	3.1A	92%	UL/cUL

\*120W for Convection cooling; 180W for Forced Air Cooling

### ■ Technical Data

AC Input	90-264Vac
Input Frequency	47-63Hz
Input Current	115Vac: 2.2A max 230Vac: 1.1A max
No load Power	< 0.5W Class 1; <0.85 Class 2
Inrush Current	115Vac: 25A, 230Vac: 45A, 264Vac: 75A
Leakage Current	300µA, Typical, (N.A. for Class 2 option) Touch current <100µA
Hold-up Time	180W:10ms; 120W:16ms
Power Factor	>0.95@115Vac and 0.9@230Vac
Output Power	Forced cooling: 180W with 13CFM Convection cooling: 120W
Output Voltage Adjustability	±3%
Line Regulation	±0.5%
Load Regulation	±1%

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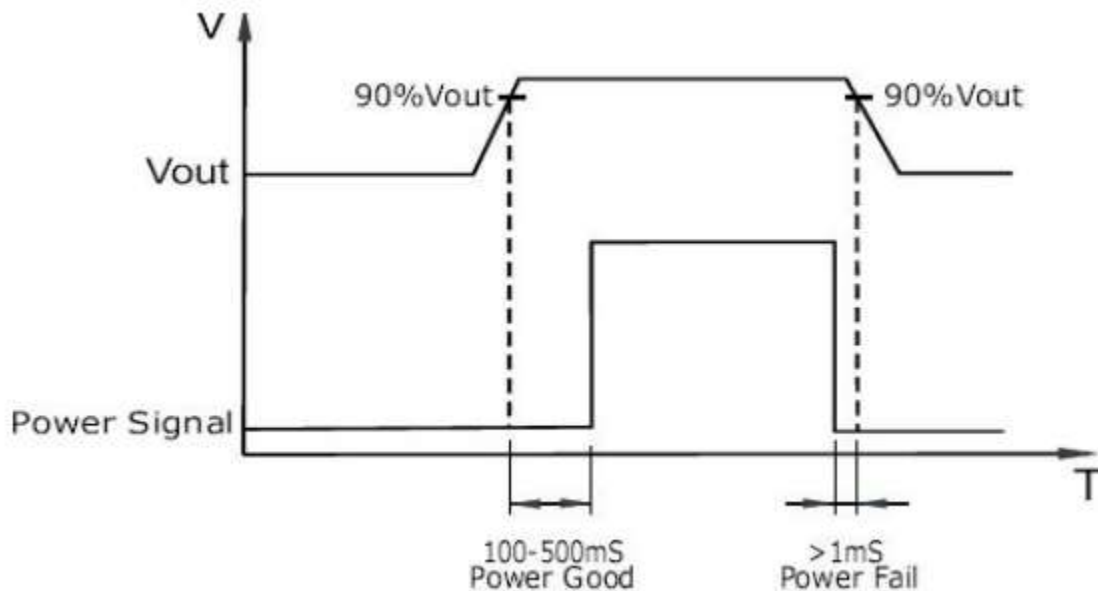
■ Technical Data(cont.)

Transient Response	25% step load change, at 0.1A/uS slew rate, 50% duty cycle, 50Hz=4% recovery time <5ms
Ripple <sup>1</sup>	2%(12V, 15V); 1%(24V, 30V, 48V, 58V)
Rise Time	55ms typical
Set Point Tolerance	±1%
Over Current Protection	>110%
Over Voltage Protection	110% to 140%, Latch type(AC recycling required)
Short Circuit Protection	Hiccup mode
Switching Frequency	PFC-70 to 130KHz, PWM-50-80KHz
Operating Temperature	-40-+70°C
Storage Temperature	-40-+85°C
Relative Humidity	5%-95% Rh, noncondensing
Altitude	Operating: 16,000ft.; Nonoperating: 40,000 ft.
MTBF	3.37m Hours, Telcordia-SR332-issue 3
Isolation Voltage	Input to output -3000Vac for ITE application Input to GND – 1500Vac(Not applicable for Class 2 option)
Cooling	180W with 13CFM forced air cooling(refer to mechanical drawing) 120W with natural convection cooling (refer derating curve)

Notes

1. Ripple is peak to peak with 20MHz bandwidth and 10µF (Tantalum capacitor) in parallel with a 0.1µF capacitor at rated line voltage and load ranges.
2. Class 2 means without input Earth pin.
3. Combined out power of main output, fan supply shall not exceed max. power rating.
4. Fan Supply output voltage tolerance including set pint accuracy, line and load regulation is ±10% and Ripple and noise is less than 10%.
5. Specifications are for nominal input voltage, 25°C unless otherwise stated.
6. 180W with 13CFM forced air cooling and 120W with natural convection cooling at 100 to264Vac
7. Output ripple can be more than 10% of the output voltage.
8. Fusing on neutral for ITE model is optional.
9. Adjustment potentiometer is located on the SMT side of the PCB.
10. When used in Cover Kit, de-rate output power to 70% under all operating conditions.
11. A TTL signal is available at pin 2 of J4 which goes high 100-500mS after output voltage reaches 90% of set value. It goes low to a minimum of 1mS before output falls below 90% of the set value, when input AC is switched off.

■ Power Good/AC fail signal specs



■ Safety and EMC Approval

Conducted Emissions	EN55022-B, CISPR22-B, FCC Par15-B
Radiated Emissions	EN55032 A Level B radiated with external core (King core K5B RC 25x12x15-M in input cable with 5 turns)
Input Current Harmonics	EN61000-3-2 Class D
Voltage Fluctuation and Flicker	EN61000-3-3 Pass
ESD Immunity	EN61000-4-2, Level-3
Radiated Field Immunity	EN61000-4-3, Level-3
Electrical Fast Transient Immunity	EN61000-4-4, Level-3
Surge Immunity	EN61000-4-5, Level-3
Conducted Immunity	EN61000-4-6, Level-3
Magnetic Field Immunity	EN61000-4-8, Level-3
Voltage dips, interruptions	EN61000-4-11, Level-3
CE Mark	Complies with LVD Directive
Approval Agency	Nemko, UL, cUL
Safety Standards	EN60950-1, IEC60950-1 (ed. 2), UL 60950(ed. 2), CSA C22.2 No.60950-1 (ed. 2), Class 1 SELV
Safety File Numbers	UL:20161121-E150565, Nemko: Certificate No: P16221546, CB Test Certificate No: N094842

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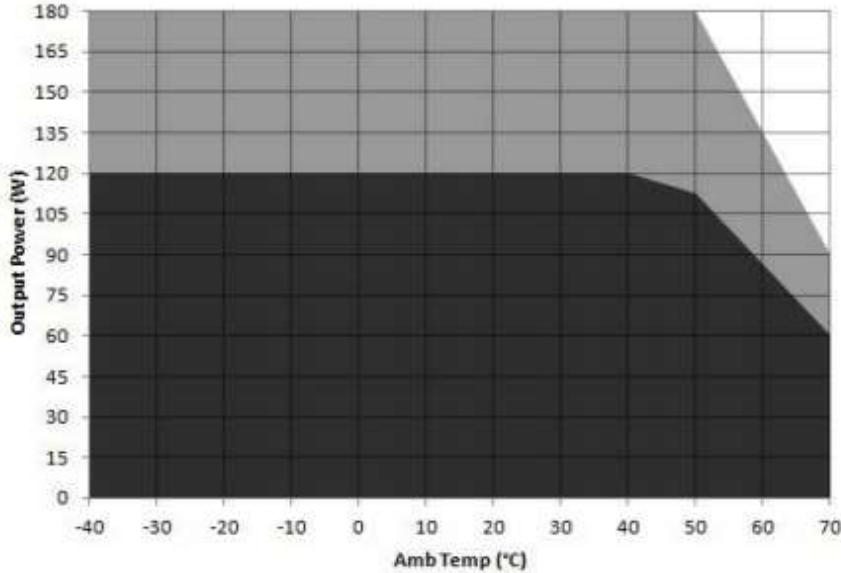
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**Derating Curve**

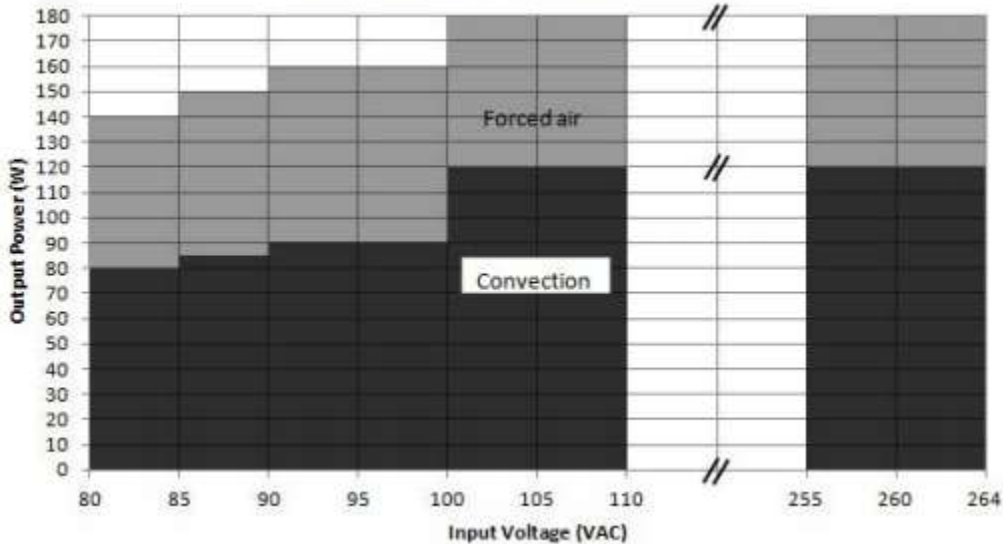
**Power de-rating**



Convection load: 120W UP TO 40 °C  
 De-rate between 40-50 °C @ 0.625% per °C  
 De-rate above 50 °C @ 2.33% per °C

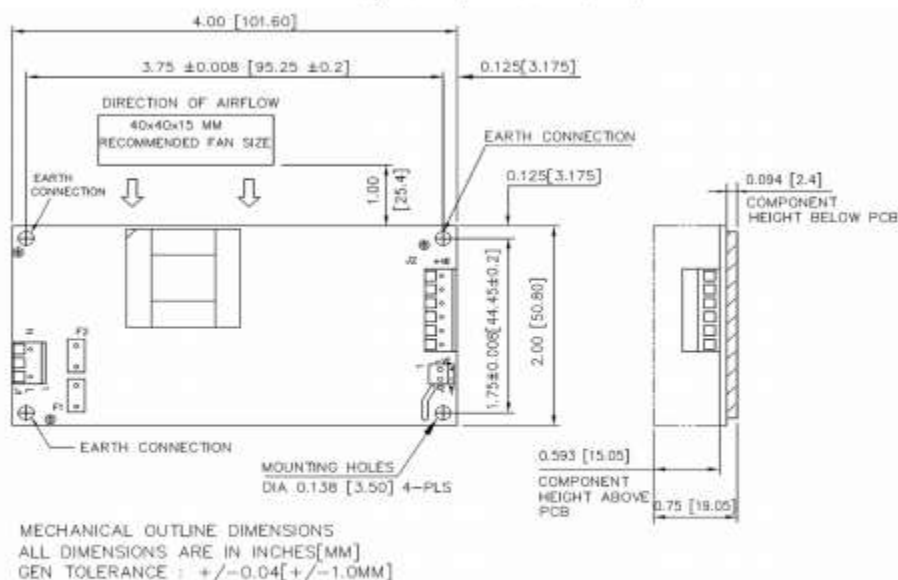
Forced air cooled load : 180W up to 50°C  
 De-rate above 50 °C @ 2.5% per °C

**Power de-rating : w.r.t. Input**



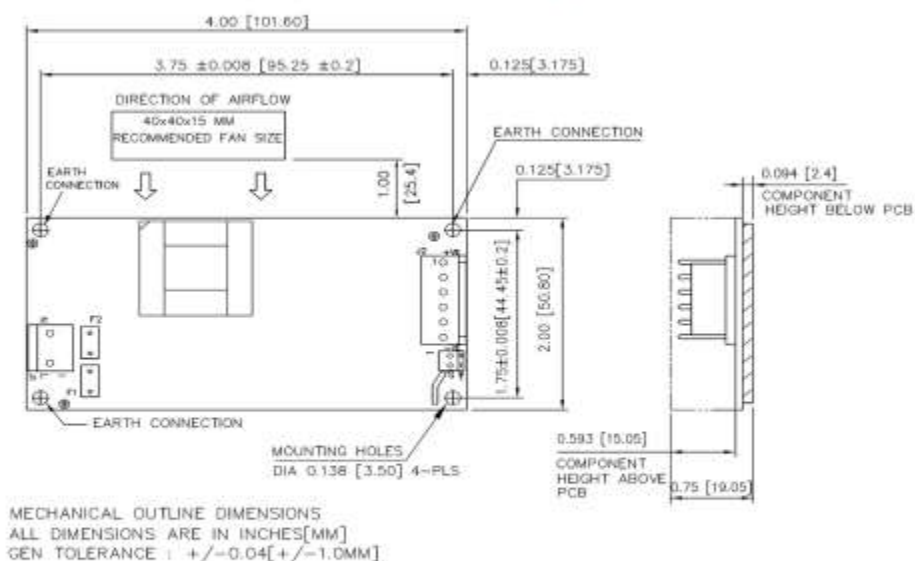
■ Mechanical Diagram

Option 1 (Without PGPF)



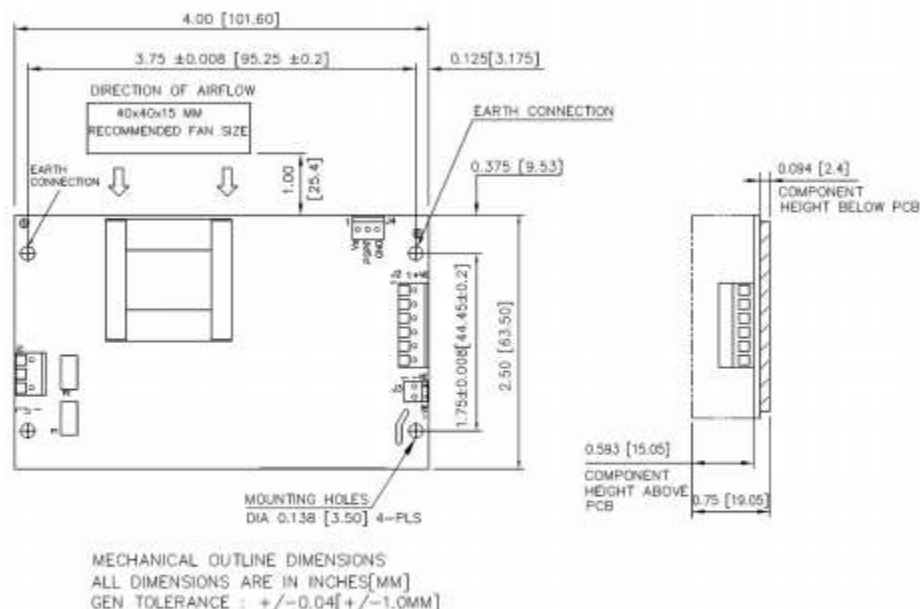
- Notes: In case the PCB is mounted in a metal enclosure, using metal hardware ensure the following
1. Stand off, used to mount PCB has OD of 5.4 mm max.
  2. Screws, used to fix PCB on stand off, have head dia of 6.0 mm max.
  3. Washer, if used, to have dia of 6.5 mm max.

Option 2 (Without PGPF)



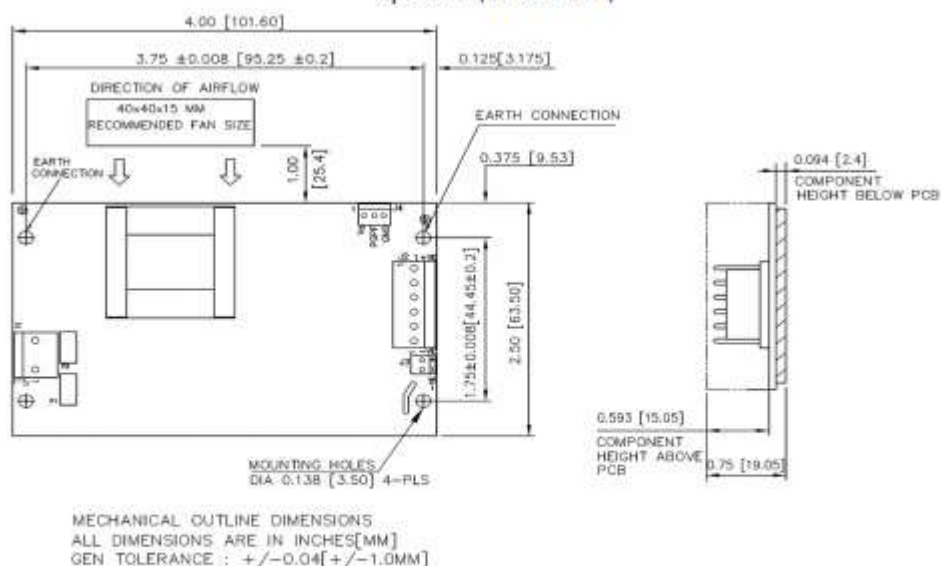
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  3. Washer, if used, to have dia of 6.5 mm max.

120W-180W, 90-264Vac Input, Single Output, Industrial Open-frame PSU  
Option 3 (With PGPF)



- Notes: In case the PCB is mounted in a metal enclosure, using metal hardware ensure the following
1. Stand off, used to mount PCB has OD of 5.4 mm max.
  2. Screws, used to fix PCB on stand off, have head dia of 6.0 mm max.
  3. Washer, if used, to have dia of 6.5 mm max.

Option 4 (With PGPF)

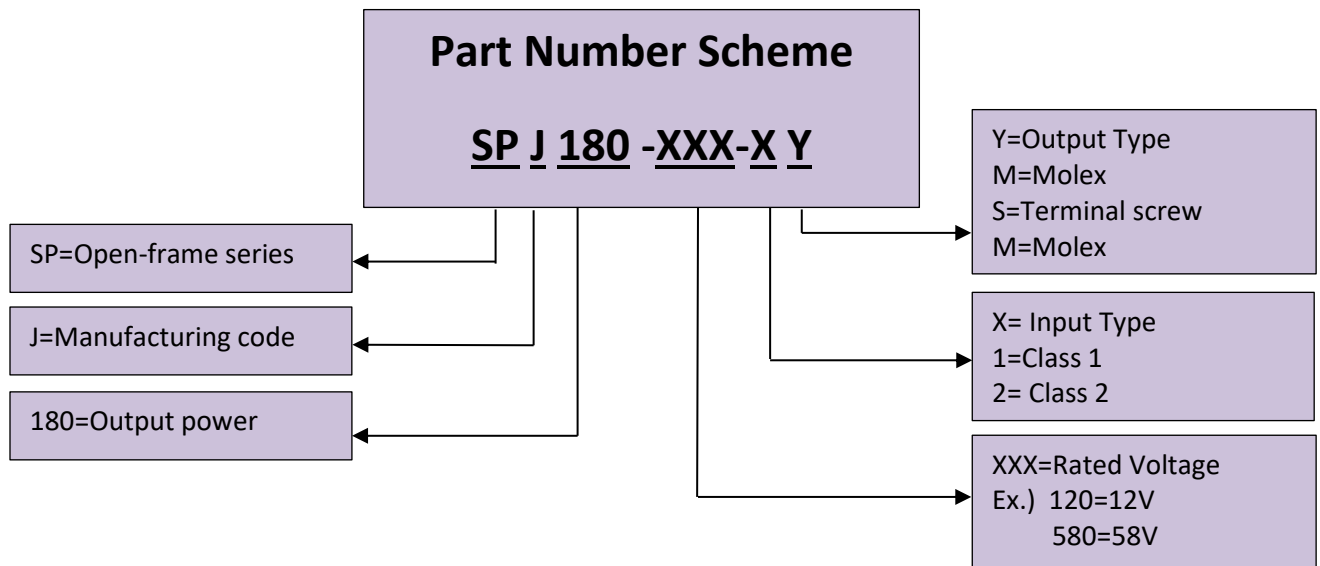


- Notes: In case the PCB is mounted in a metal enclosure, using metal hardware ensure the following
1. Stand off, used to mount PCB has OD of 5.4 mm max.
  2. Screws, used to fix PCB on stand off, have head dia of 6.0 mm max.
  3. Washer, if used, to have dia of 6.5 mm max.

**120W-180W, 90-264Vac Input, Single Output, Industrial Open-frame PSU**

Connectors		
J1	Pin 1	AC Line
	Pin 2	Not Fitted
	Pin 3	AC Neutral
J2 Option 1 & 2	Pin 1, 2, 3	V1 +VE
	Pin 3, 4, 6	V1 -VE
J3	Pin 1	FAN +VE
	Pin 2	FAN -VE
J4 (For PGPF Options Only)	Pin 1	Vs
	Pin 2	PGPF
	Pin 3	GND

Mechanical Specifications	
AC Input Connector (J1)	Molex: 26-60-4030 Mating:09-50-3031; Pins: 08-50-0106
DC Output Connector (Screw Terminal) (J2)	Molex: 39357 Series or equivalent
DC Output Connector (Molex Connector) (J2)	Molex: 26-60-4060 Mating:09-50-3061; Pins: 08-50-0106
Aux (Fan) Output (J3)	AMP:640456-2 Mating:640440-2
Signal Output (J4)	AMP:640456-3 Mating:640440-3
Dimensions	4x2x0.75 inches (101.60x50.8x19.05mm)
Weight	200g



\*Product images are for illustrative purposes only and may vary from actual design.

\*Specifications are subject to change without notice. Autec is not responsible for issues arising from errors or omissions.