

# PSC-120 Series



Input: 85-264VAC 47/63Hz  
 Output Voltage: 12, 24 & 48 V DC  
 Rated Power: 120W max.



**Ultra Compact**

- Ultra Slim size
- Conformal coated PCB
- Parallel option available
- Universal input
- Three-year Warranty

## FEATURES

- Universal AC input range(85~264Vac)
- Support 1+1 or N+1 redundant system (suggest to use redundancy modules.)
- Built-in active PFC, PF>0.95
- High efficiency up to 92%
- Built-in current sharing circuit
- Built-in current limiting circuit
- Output protections: OVP/OLP/SCP/OTP
- Wide operating ambient temp (-25°C~70°C)
- 150%(180W) peak load capacity
- Easy Fuse Tripping due to High Overload Current
- Excellent Partial Load Efficiency
- Built-in DC OK relay contact
- Can be installed on 35 mm DIN rail
- 100% full load burn-in test
- PCB with conformal coating
- Suitable for critical applications
- Ultra-slim,32mm width
- 3 years warranty

## CATALOG NUMBER

**PSC-12012**

**PSC-12024**

**PSC-12048**

### INPUT

Voltage Range	85Vac~264Vac, 127Vdc-360Vdc		
Frequency Range	47Hz~63Hz		
Power Factor (typical)	0.99/100Vac	0.95/230Vac	
AC Current (max.)	<1.3 A/100Vac	<0.55A/230Vac	
Inrush Current (Typical)	<30A/100Vac	<60A/230Vac	Cold start
Leakage Current	Input—output: ≤0.25mA	Input—PG: ≤3.5mA	
Efficiency ( Typical) @230Vac	89.5%	91%	92%

### OUTPUT

DC Output	12V	24V	48V
Rated Current	8.33A	5A	2.5A
Current Range <i>Note 1</i>	0~8.33A	0~5A	0~2.5
Ripple and Noise	0~70°C ≤100mV	≤120mV	≤240mV
	<i>Note 2</i> -25°C~0 ≤200mV	≤240mV	≤240mV
Voltage ADJ. Range	12~14V	24~28V	48~56V
Voltage Accuracy	±1.0%		
Line Regulation	±0.5%		
Load Regulation	±1.0%		
Set-up Time	<250mS@230Vac ; <500mS@100Vac		
Hold up Time	≥20mS(230Vac input, Full load)		
Temperature Coefficient	±0.03%/°C		
Overshoot	<5.0%		

### ENVIRONMENTAL

Operating amb. Temp. & Hum.	-25°C~70°C; 20%~90%RH No condensing
Storage Temp. & Hum.	-40°C~85°C; 5%~95%RH No condensing

### PROTECTIONS

Over voltage	15~18V	29~33V	58~65V
Over Load	Protection type: Hiccup mode, Auto recovery 110%~150% of rated current, Constant current limiting for some time(150% of rated current, last 3S) then PS stop working for 7S,after 7S,if the load ≤rated current, PS will work normally, auto recovery		
Over temperature	100±5°C, detect on heat sink of power transistor; shut down O/P, auto recovery after temperature goes down.		
Short Circuit	Long-term mode, auto recovery		

### SAFETY & EMC

*Note 3*

Safety Standards	UL508, UL60950-1, EN62368-1
Withstand Voltage	Primary-Secondary:3.0KVac/10mA .Primary-PG:2.5KVac/10mA. Secondary-PG:0.5KVac/20mA.
Isolation Resistance	10M ohms
EMC Emission	Compliance to EN55032 Class B
Harmonic Current	Compliance to EN61000-3-2, Class A
EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,11;

### OTHER

MTBF (MIL-HDBK-217F)	More than 300,000Hrs (25°, Full load)
Dimension (L*W*H)	124 x 119 x 32mm
Packing	28pcs/CTN,18.02Kgs, 0.04cbm
Cooling method	Cooling by free air convection

### NOTES

1. All parameters NOT specially mentioned are measured at rated input, rated load and 25° of ambient temperature.
2. Measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 uF & 10uF parallel capacitor.
3. The power supply is considered as a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies".

# PSC-120 Series

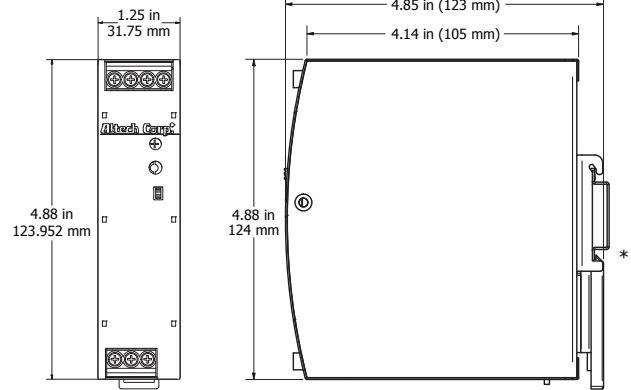
## Mechanical Specification

### 1.AC terminal blocks installation information

Terminal No.	Function	Wire Spec	Recommended Torque
1	L	20~10AWG	1Nm
2	N		
3	PG		

### 2.DC terminal blocks installation information

Terminal No.	Function	Wire Spec	Recommended Torque
4 & 5	DC OK Relay Contact	20~10AWG	1Nm
6	-V		
7	+V		



\* DIN Rail sold separately.

### AC/DC Terminal

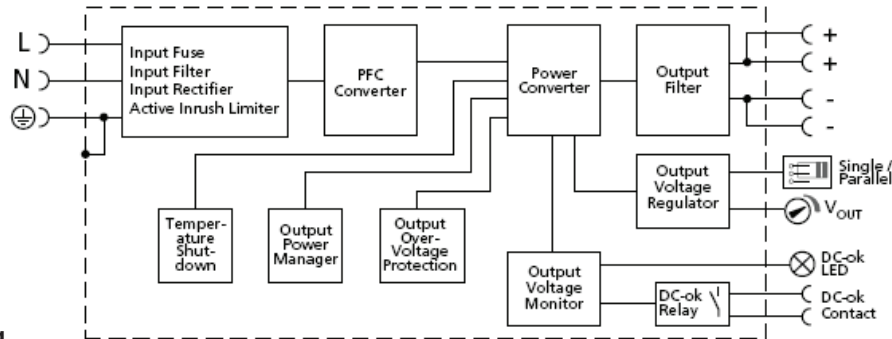
Type	Screw terminal blocks
Solid Wire	0.5-6mm <sup>2</sup>
Strand Wire	0.5-4mm <sup>2</sup>
Wire Spec	AWG20-10 (PG wire >18AWG)
Max Wire Diameter	2.8mm
Recommended stripping length	7mm
Screwdriver	3.5mm Straight or Cross Screwdriver
Recommended Torque	1NM

### Additional Functions

Power boost	150% of rated current
DC OK	V On: when output voltage is up to 90% of rated output voltage
	V Off: when output voltage is down to 80% of rated output voltage
DC OK relay contact rating	Max 30V/1A or 60V/0.3A or 30Vac/0.3A Resistive load
Parallel function	support

## Block Diagram

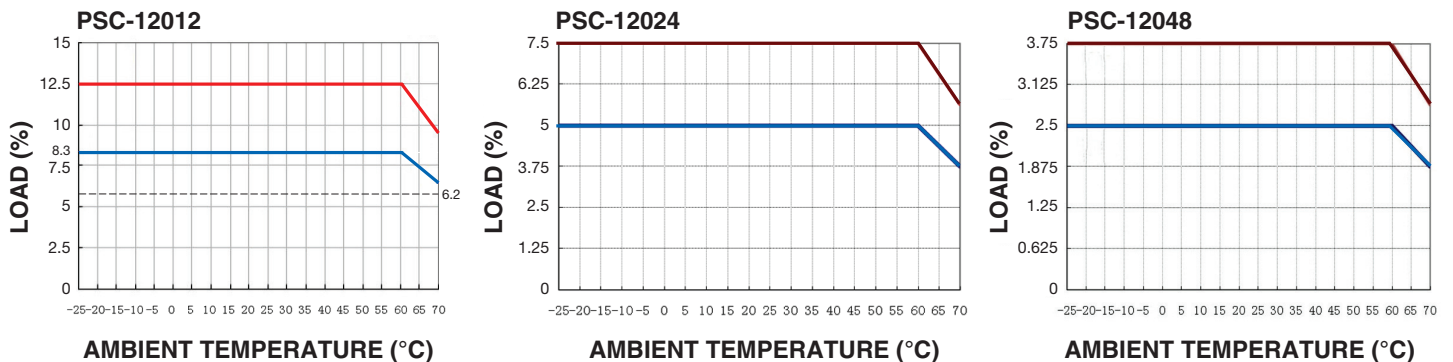
## Functional Diagram



## Peak Loading



## Derating Curve

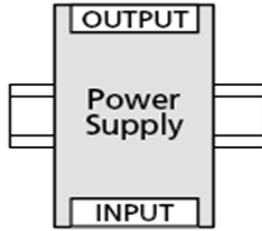


## Mounting method instruction PSC-12012

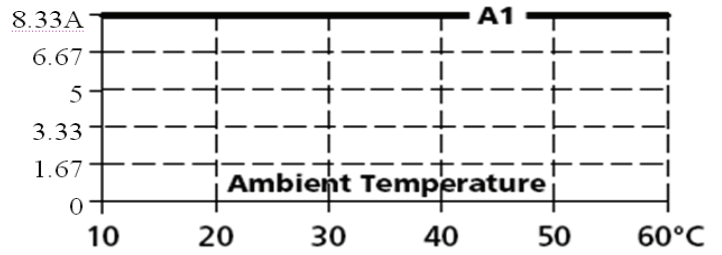
A1 is recommended output current.

A2 is the allowed max output current (PSU lifetime is around half of A1).

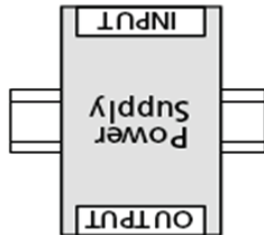
**Mounting A**



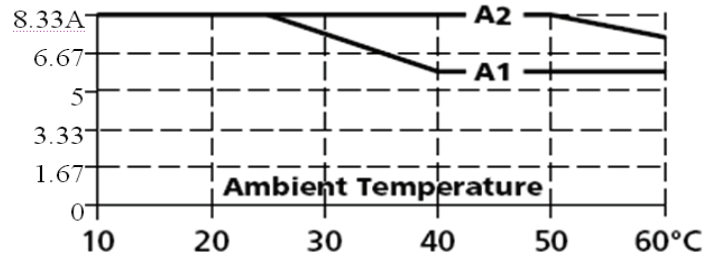
**Output Current**



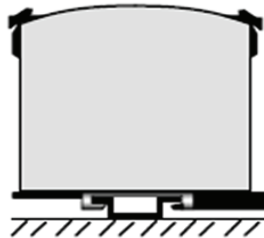
**Mounting B**



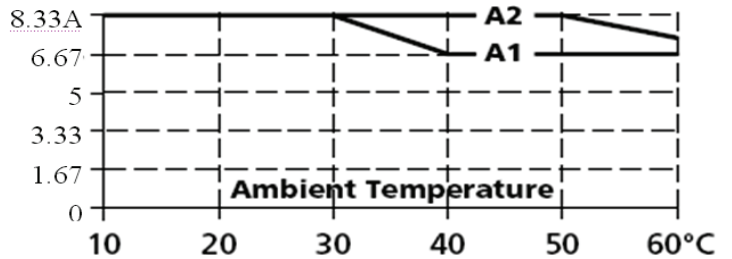
**Output Current**



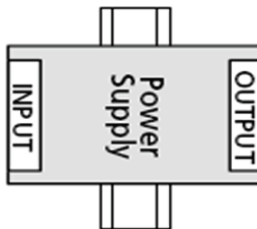
**Mounting C**



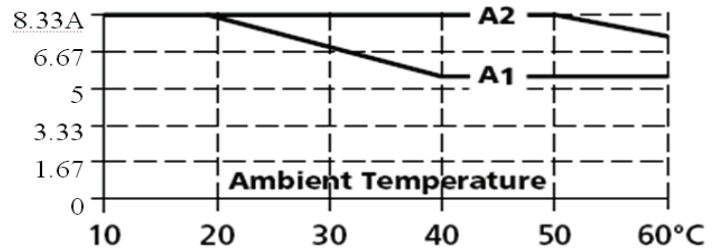
**Output Current**



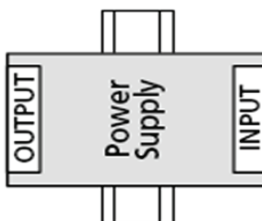
**Mounting D**



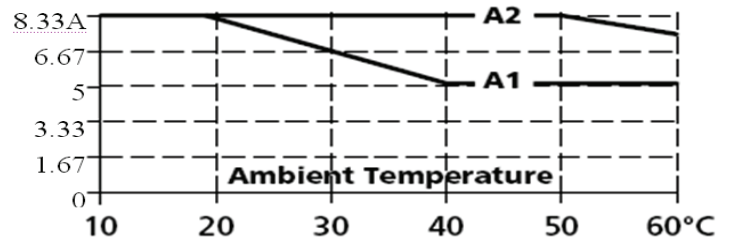
**Output Current**



**Mounting E**



**Output Current**

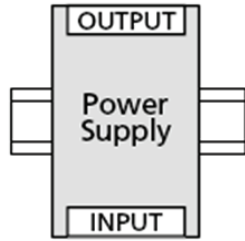


## Mounting method instruction PSC-12024

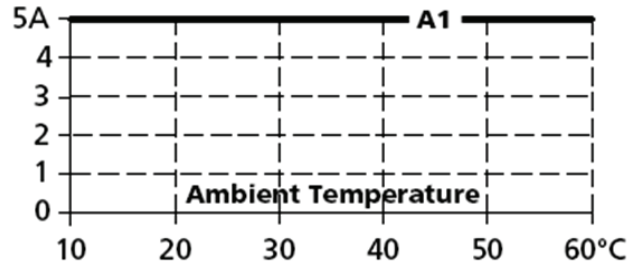
A1 is recommended output current.

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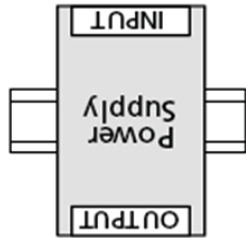
**Mounting A**



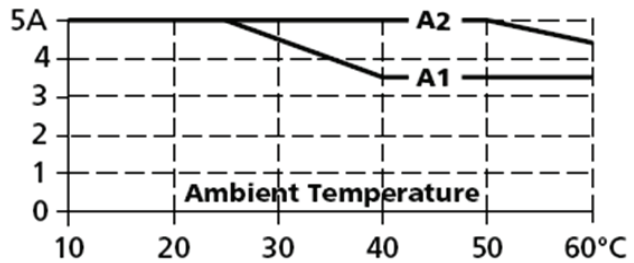
**Output Current**



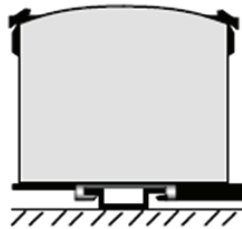
**Mounting B**



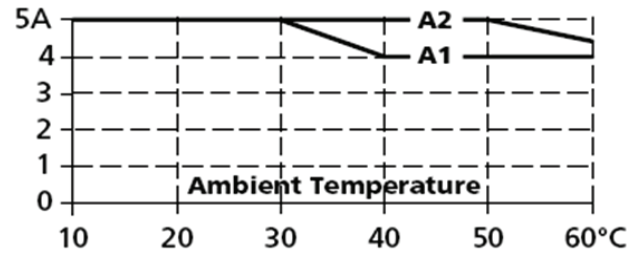
**Output Current**



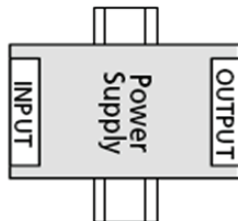
**Mounting C**



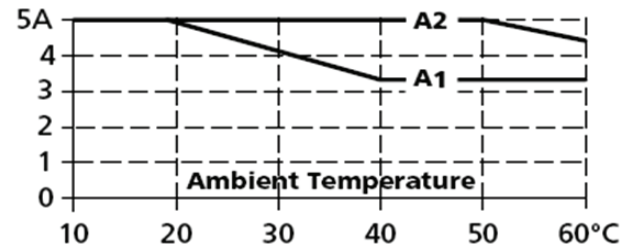
**Output Current**



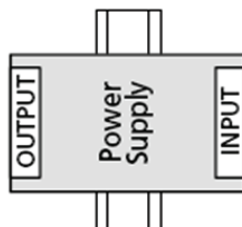
**Mounting D**



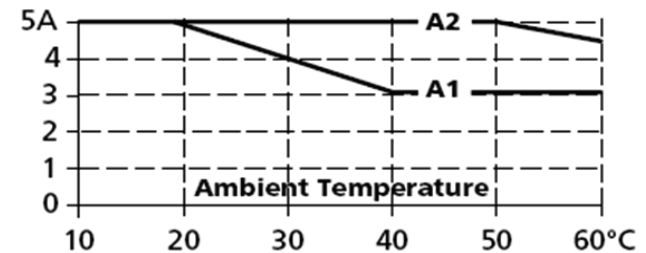
**Output Current**



**Mounting E**



**Output Current**

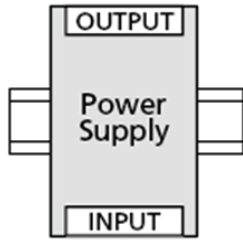


## Mounting method instruction PSC-12048

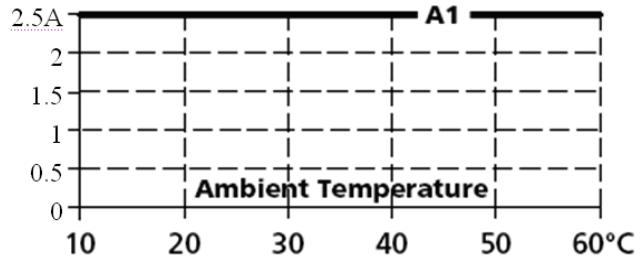
A1 is recommended output current.

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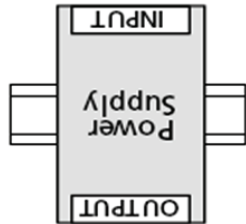
**Mounting A**



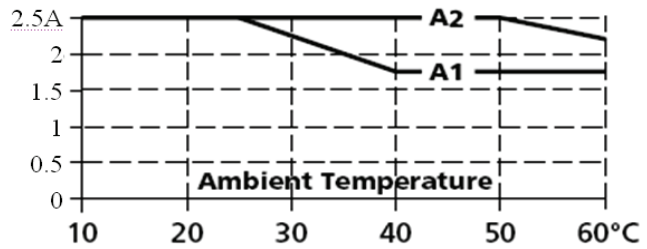
**Output Current**



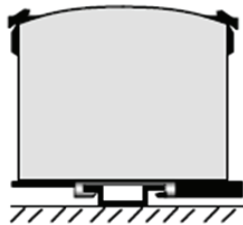
**Mounting B**



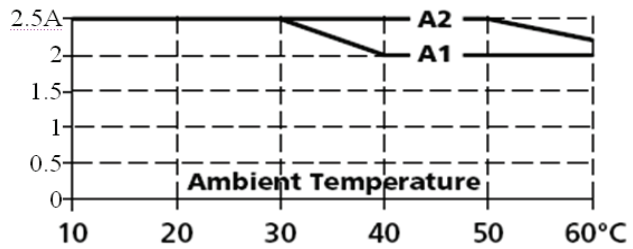
**Output Current**



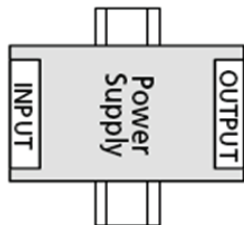
**Mounting C**



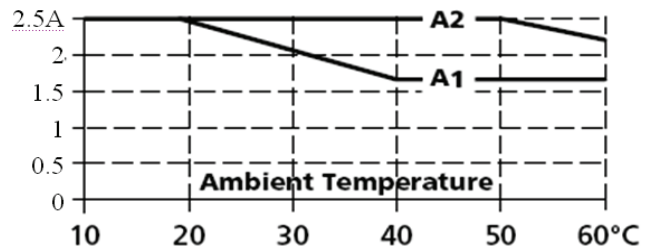
**Output Current**



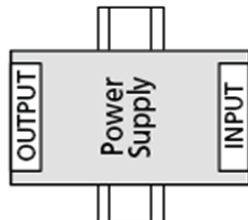
**Mounting D**



**Output Current**



**Mounting E**



**Output Current**

