

# PSC-480 Series



Input: 85-264VAC 47/63Hz  
Output Voltage: 24 & 48 V DC  
Rated Power: 480W 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 94%
- Built-in current sharing function
- Built-in current limiting circuit
- Output protections: OVP/OLP/SCP/OTP
- Wide operating ambient temp (-25°C~70°C)
- 150% (720W) peak load capacity
- Easy Fuse Tripping due to High Overload Current
- 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, 70mm width
- Free air convection
- 3 years warranty

## CATALOG NUMBER

### INPUT

### PSC-48024

### PSC-48048

Voltage Range	85Vac~264Vac, 120Vdc-375Vdc
Frequency Range	47Hz~63Hz
Power Factor (typical)	0.99/110Vac 0.95/230Vac
AC Current (max.)	<7.0 A/100Vac <3.5A/230Vac
Inrush Current (Typical)	<20A/110Vac <40A/230Vac Cold start
Leakage Current	Input—output: ≤0.25mA Input—PG: ≤3.5mA
Efficiency ( Typical)	93.8%

93.5%

### OUTPUT

DC Output	24V
Rated Current	20A
Current Range	0~20A
Ripple and Noise	0~70°C ≤240mV
	-25°C~0 ≤480mV
Voltage ADJ. Range	24~28V
Voltage Accuracy	±3.0%
Line Regulation	±0.5%
Load Regulation	±1.0%
Set-up Time	<3S@230Vac
Hold up Time	≥20mS(230Vac input, Full load)
Temperature Coefficient	±0.03%/°C
Overshoot	<5.0%

48V
10A
0~10A
≤480mV
≤480mV
48~56V

## 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	28.8~33V, constant voltage, Auto recovery	58~63V, constant voltage, Auto recovery
Over Load	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	115±5°C, detect on temperature controller; 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°C, Full load)
Dimension (L*W*H)	70 x 124 x 127mm
Packing	10pcs/CTN, 13Kgs/CTN, 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°C 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".

## Mechanical Specification

### 1.AC terminal blocks installation information

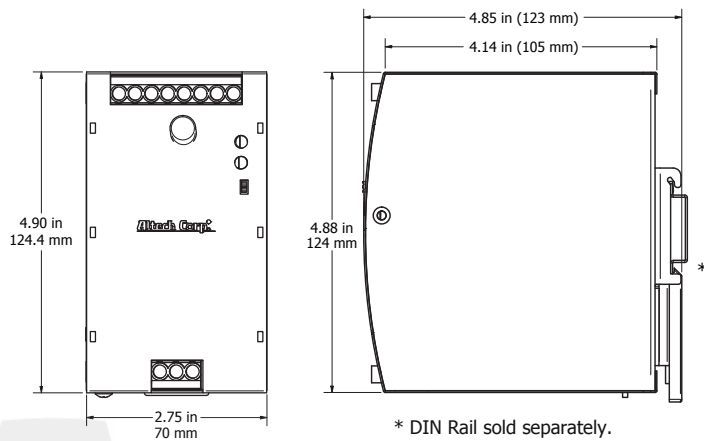
Terminal No.	Function	Specifications
1	PG	6.35mm, 3pin screw terminal blocks
2	N	
3	L	

### 2.DC terminal blocks installation information

Terminal No.	Function	Specifications
1	DC	6.35mm, 3pin screw terminal blocks
2	OK	
3-5	+V	
6-8	-V	

### AC/DC Terminal

Type	Screw terminal blocks
Solid Wire	0.5-6 mm <sup>2</sup>
Strand Wire	0.5-4 mm <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

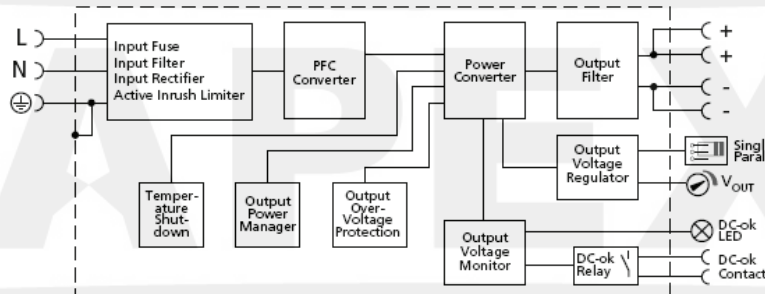


### Additional Functions

Power boost	150% of rated current
Parallel function	support
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

## Block Diagram

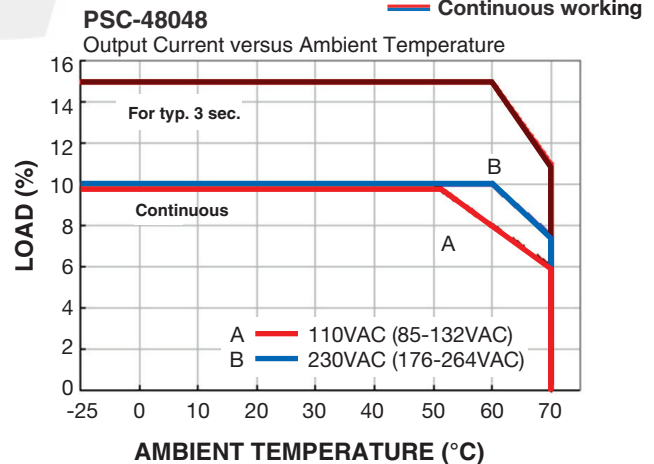
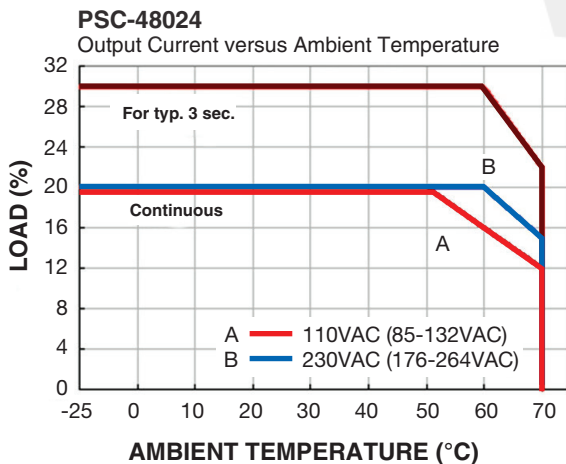
### Functional Diagram



## Peak Loading



## Derating Curve



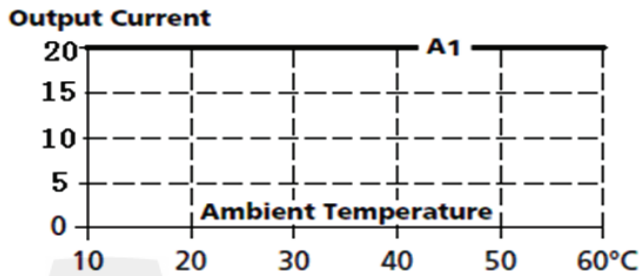
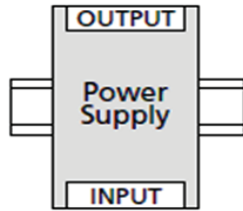
## Mounting method instruction PSC-48024

A1 is recommended output current.

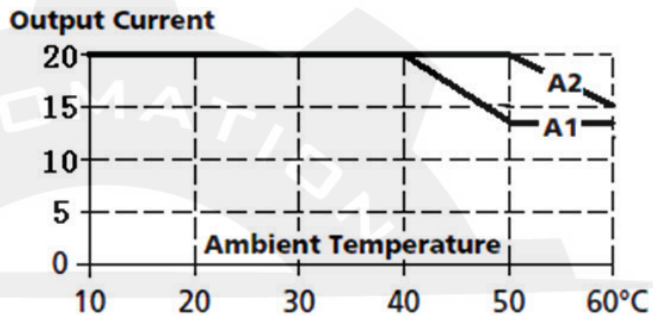
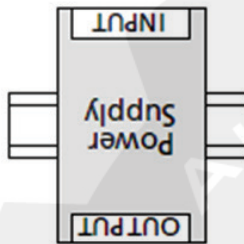
A2 is the allowed max output current (PSU lifetime is around half of A1).

Below curves are tested under 230Vac(179~264Vac), when 110Vac input(85~175Vac), all derating points drops 10°C.

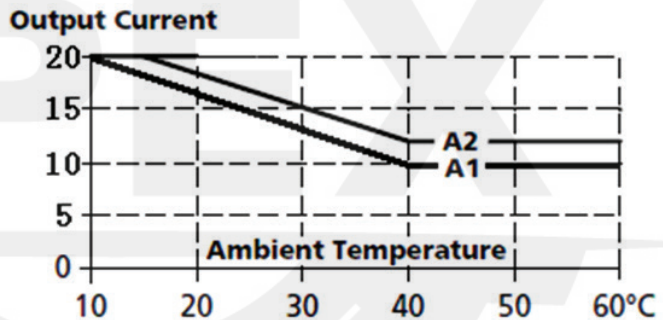
**Mounting A**



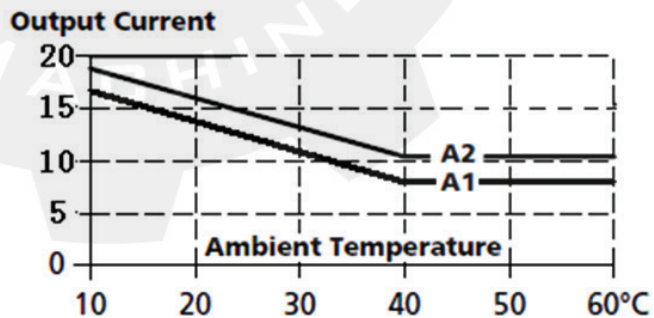
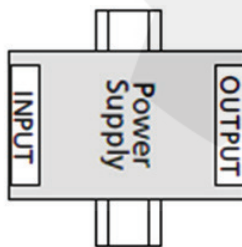
**Mounting B**



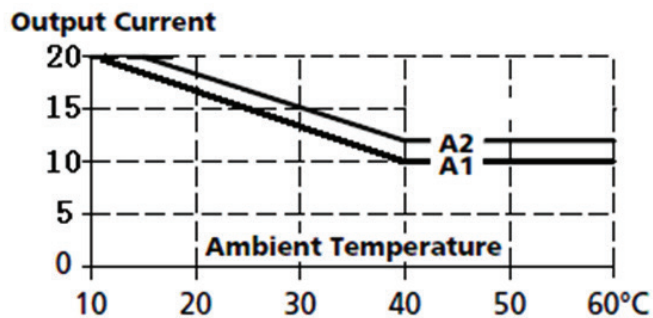
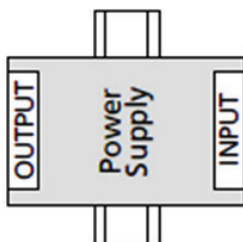
**Mounting C**



**Mounting D**



**Mounting E**



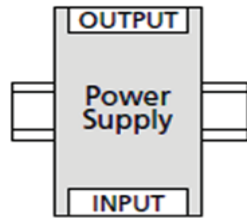
## Mounting method instruction PSC-48048

A1 is recommended output current.

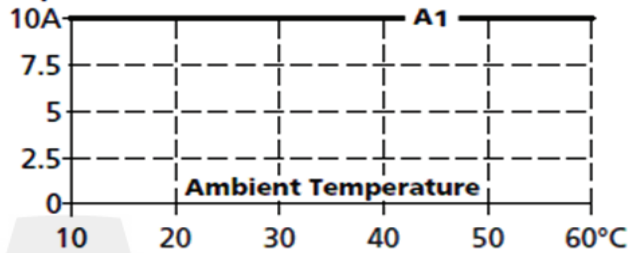
A2 is the allowed max output current (PSU lifetime is around half of A1).

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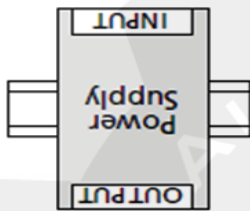
### Mounting A



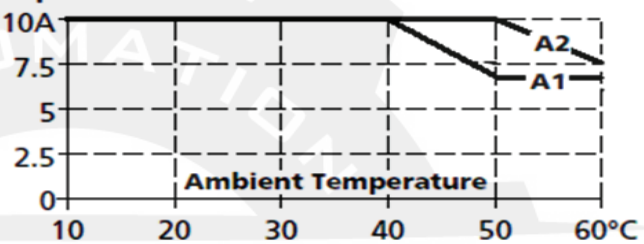
Output Current



### Mounting B



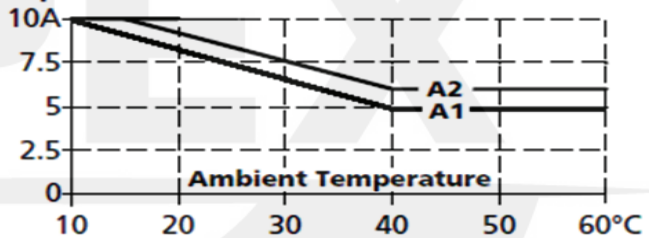
Output Current



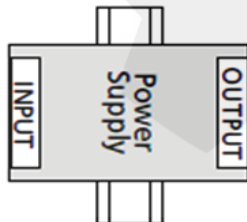
### Mounting C



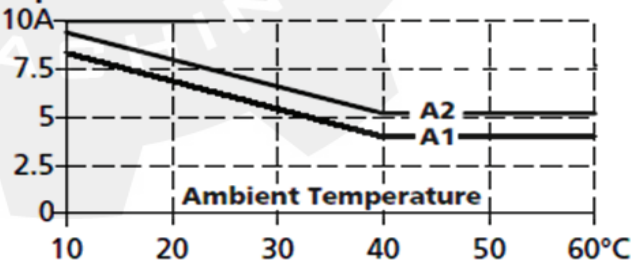
Output Current



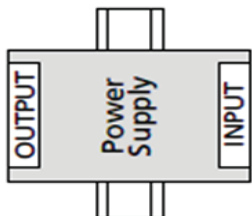
### Mounting D



Output Current



### Mounting E



Output Current

