

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 <i>Note 1</i>	0~20A
Ripple and Noise <i>Note 2</i>	≤240mV
	≤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

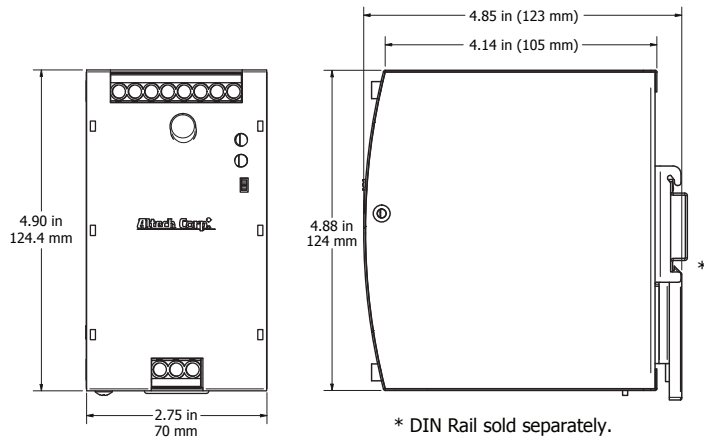
Terminal No.	Function	Specifications
1	PG	6.35mm, 3pin screw terminal blocks
2	N	
3	L	

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 ²
Strand Wire	0.5-4 mm ²
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

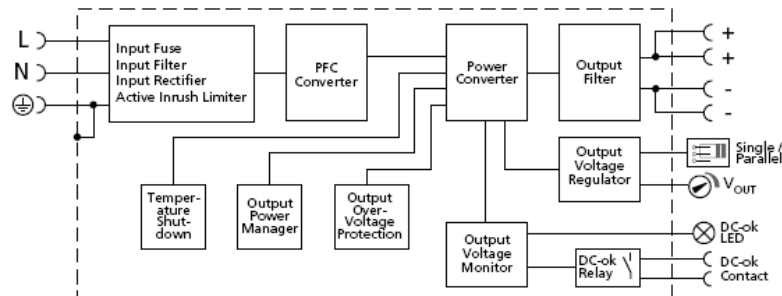


Additional Functions

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

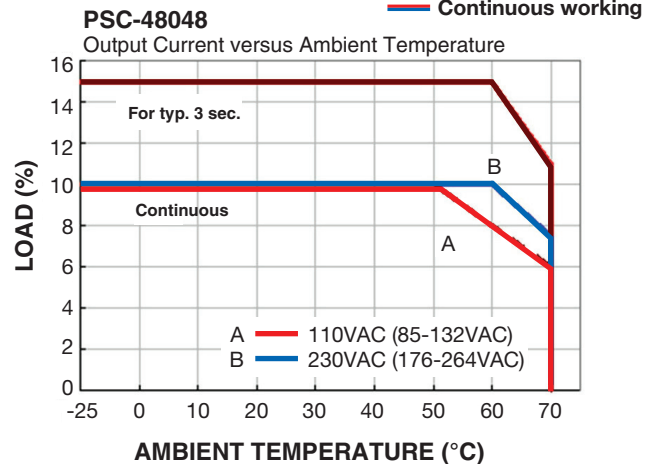
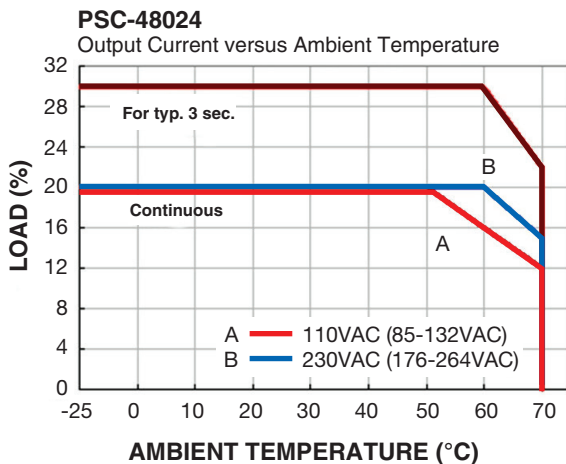
Functional Diagram



Peak Loading



Derating Curve



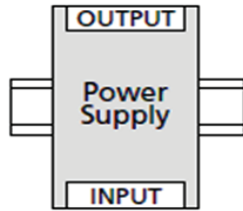
Mounting method instruction PSC-48024

A1 is recommended output current.

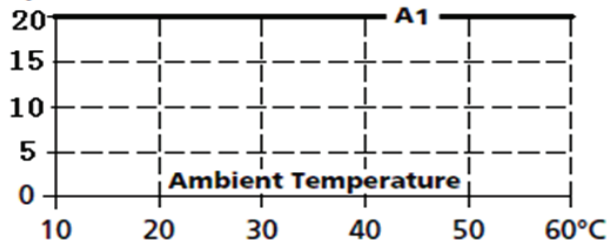
A2 is the allowed max output current (PSU lifetime is around half of A1).

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

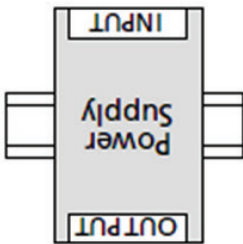
Mounting A



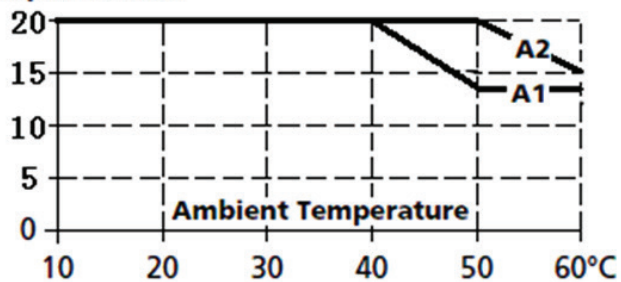
Output Current



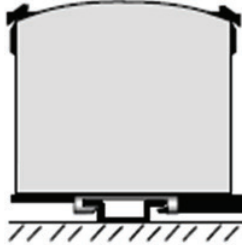
Mounting B



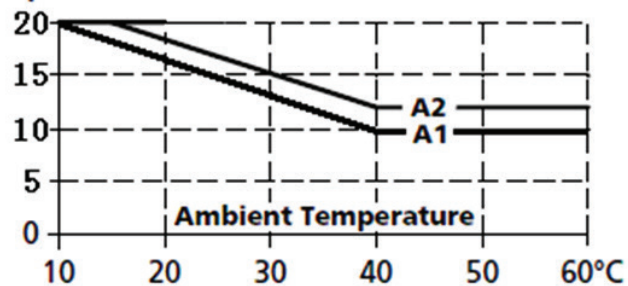
Output Current



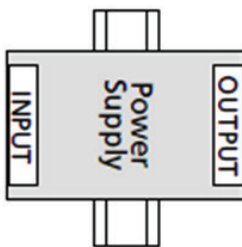
Mounting C



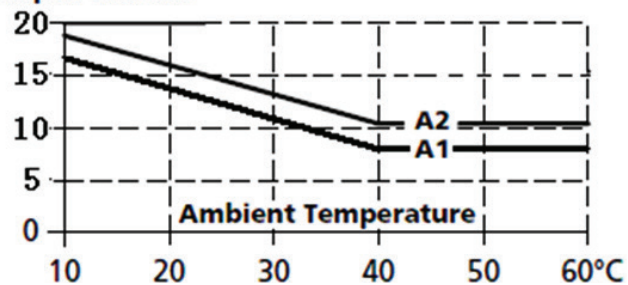
Output Current



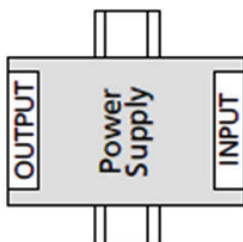
Mounting D



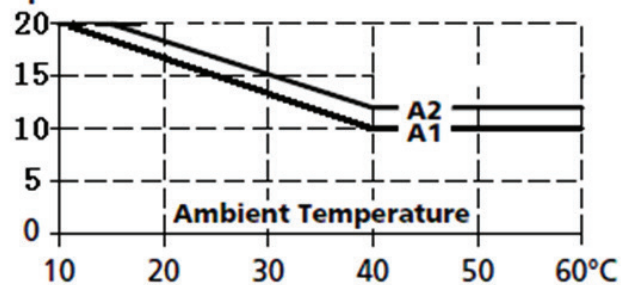
Output Current



Mounting E



Output Current



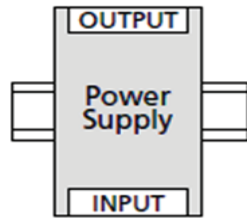
Mounting method instruction PSC-48048

A1 is recommended output current.

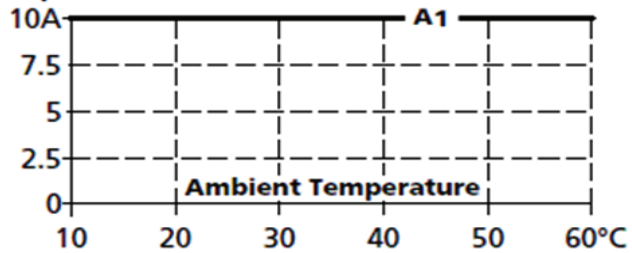
A2 is the allowed max output current (PSU lifetime is around half of A1).

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

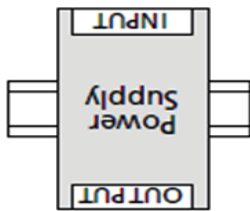
Mounting A



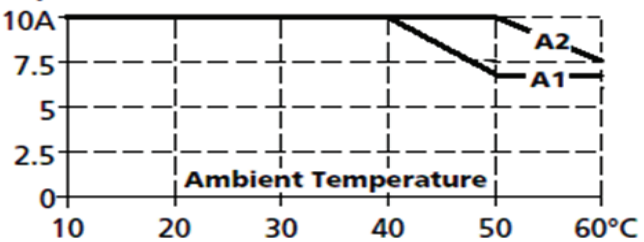
Output Current



Mounting B



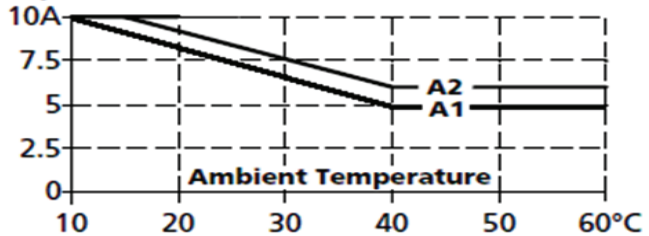
Output Current



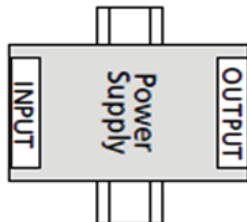
Mounting C



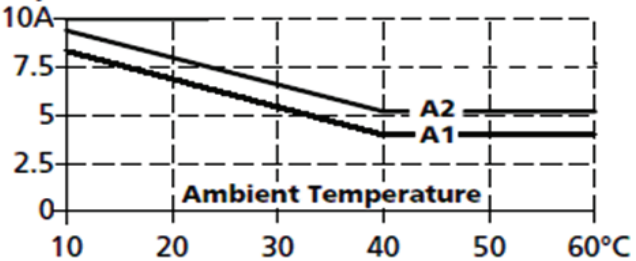
Output Current



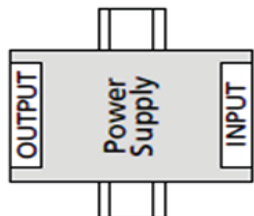
Mounting D



Output Current



Mounting E



Output Current

