PSC-U120 Series

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

c UL us LISTED
IND. CONT. EQ.
UL 508
E205412

c US
UL 60950-1
E521519

UK CA CE

CB RoHS Parallel PFC ENERGY SAVER

Ultra Compact

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

FEATURES

- Universal AC input range (90~264Vac)
- High efficiency up to 89%
- Built-in current limiting circuit
- Output protections: OVP/OLP/SCP/OTP
- Wide operating ambient temp (-20°C~70°C)
- Built-in DC OK function (indication only)
- Can be installed on TS-35/7.5 or TS-35/15
- 100% full load burn-in test
- Suitable for critical applications
- Operating altitude up to 6000m
- PCB with conformal coating
- Ultra-slim,45mm width
- 3 years warranty

CATALOG NUMBER		PSC-U12012	PSC-U12024	PSC-U12048
INPUT				
Voltage Range		90Vac~264Vac, 127Vdc-370Vdc		
Frequency Range		47Hz~63Hz		
AC Current (max.)		<2.7 A/115VAC ; <1.35A/230VAC		
Inrush Current (Typical)		20A/115Vac ; 35A/230Vac Cold start		
Leakage Current		Input—output: ≤0.25mA Input—PG: ≤3.5mA (264Vac input, 63Hz)		
Efficiency (Typical)		85%	88%	89%
OUTPUT				
DC Output		12V	24V	48V
Rated Current		10A	5A	2.5A
Current Range	*Note 1*	0~10A	0~5A	0~2.5A
Ripple and Noise	0~70°C	≤120mV	≤120mV	≤240mV
	Note 2 -20°C~0	≤240mV	≤240mV	≤480mV
Voltage ADJ. Range		12~14V	24~28V	48~56V
Voltage Accuracy		±1.0%		
Line Regulation		±0.5%		
Load Regulation		±1.0%		
Set-up Time		<1.2S@230Vac ; <3.0mS@115Vac		
Hold up Time		≥10mS@115Vac; ≥20mS@230Vac Full load		
Temperature Coefficient		±0.03%/°C		
Overshoot		<5.0%		
ENVIRONMENTAL				
Operating amb. Temp. & Hum.		-20°C~70°C; 20%~90%RH No condensing (pls refer to derating curve)		
Storage Temp. & Hum.		-40°C~85°C; 5%~95%RH No condensing		
PROTECTIONS				
Over Load		10.5~13A	5.25~6.5A	2.75~3.25A
		Protection type: Constant current		
Over voltage		15~18V	29~33V	58~63V
		Protection type: Shut down, re-power on.		
Over temperature		100±5°C, detect on heat sink of power transistor; shut down O/P, re-power on.		
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: 2KVac/10mA. Secondary-PG: 0.5KVac/10mA.		
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 500,000Hrs (25°C Full load)		
Dimension (L*W*H)		124*119*45mm		
Packing		24pcs/CTN,15.0Kg, 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".

PSC-120 Series

Altech Corp.®

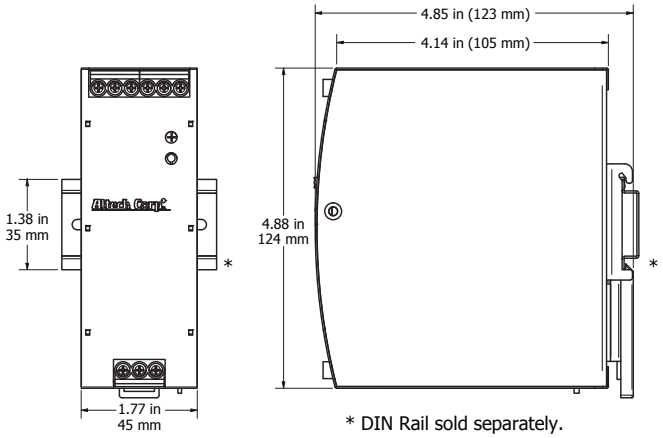
Mechanical Specification

1.AC Screw terminal information

Terminal No.	Function	Wire Spec	Recommended Torque
1	PE	20~10AWG	5Nm
2	N		
3	L		

2.DC Screw terminal information

Terminal No.	Function	Wire Spec	Recommended Torque
4 -6	V+	20~10AWG	5Nm
7-9	V–		



* DIN Rail sold separately.

AC/DC Terminal

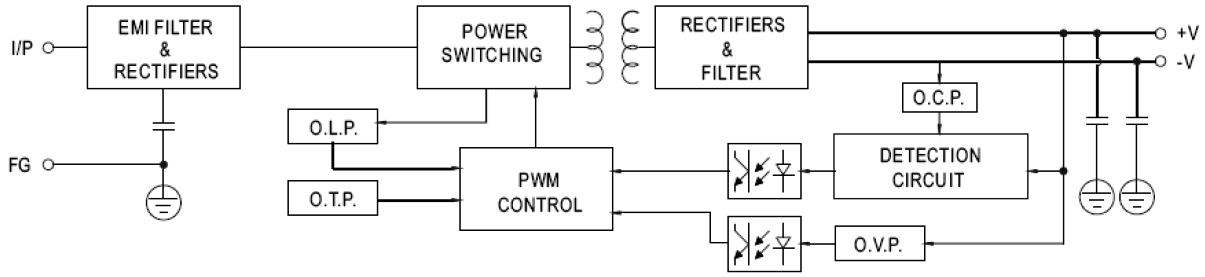
Type	Screw terminal blocks
Solid Wire	0.5-6mm2
Strand Wire	0.5-4mm2
Wire Spec	AWG20-10
Max Wire Diameter	2.8mm
Recommended stripping length	7mm
Screwdriver	3.5mm Straight or Cross Screwdriver
Recommended Torque	0.5NM

Additional Functions

DC OK	LED V On: when output voltage is up to 90% of rated output voltage
	LED V Off: when output voltage is down to 80% of rated output voltage

Block Diagram

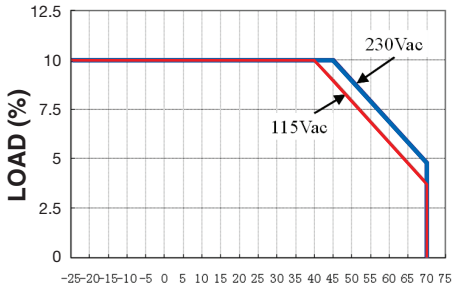
Functional Diagram



Derating Curve

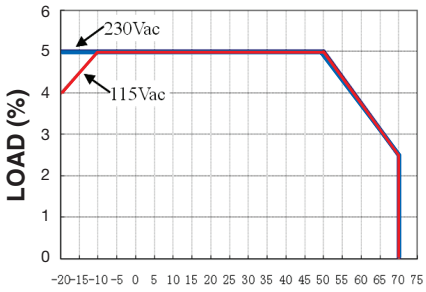
Continual working

PSC-U12012



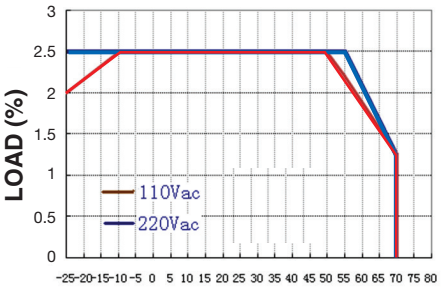
AMBIENT TEMPERATURE (°C)

PSC-U12024



AMBIENT TEMPERATURE (°C)

PSC-U12048

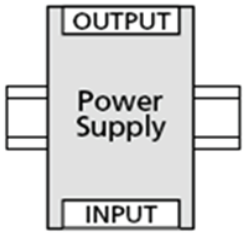


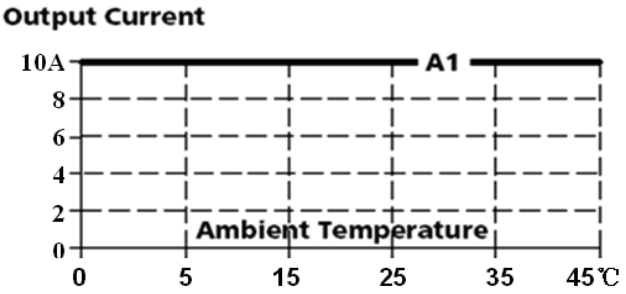
AMBIENT TEMPERATURE (°C)

Mounting method instruction PSC-U12012

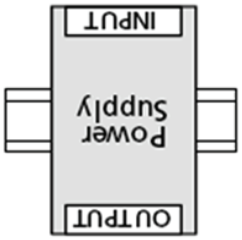
A1 is recommended output current.
A2 is the allowed max output current (PSU lifetime is around half of A1).

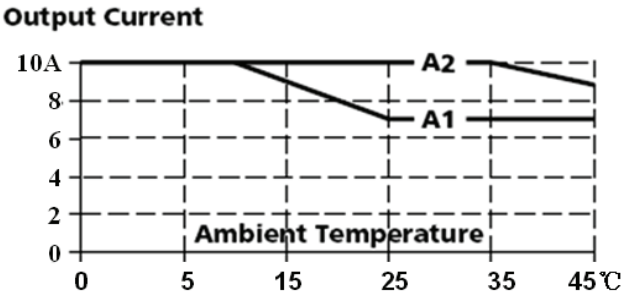
Mounting A



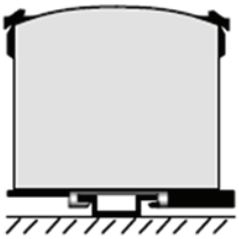


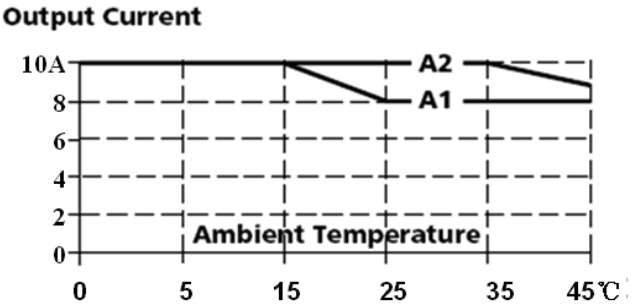
Mounting B



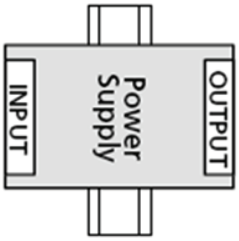


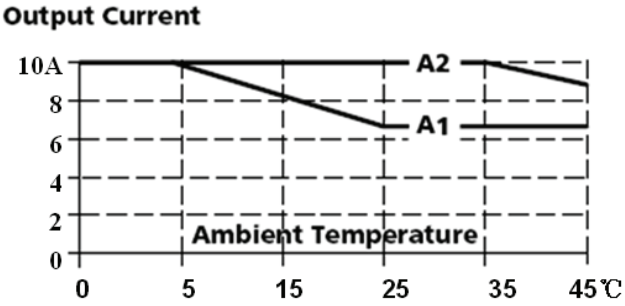
Mounting C



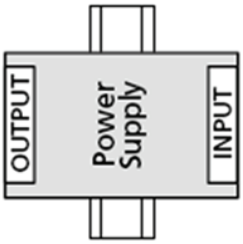


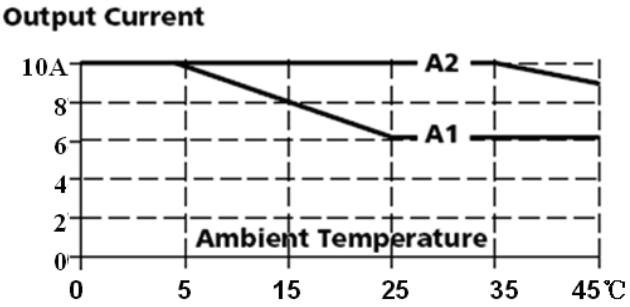
Mounting D





Mounting E

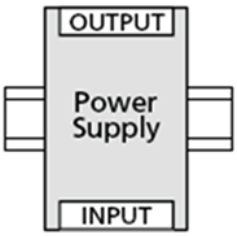


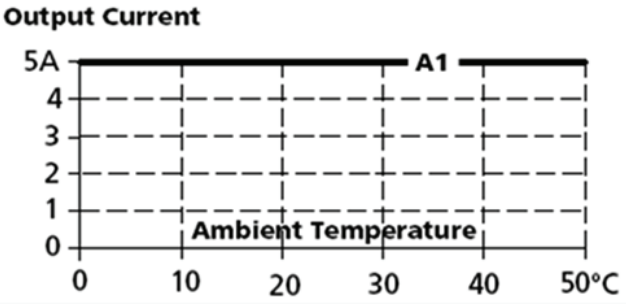


Mounting method instruction PSC-U12024

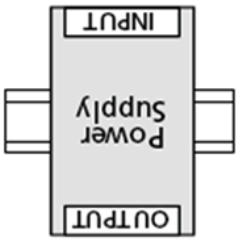
A1 is recommended output current.
A2 is the allowed max output current (PSU lifetime is around half of A1).

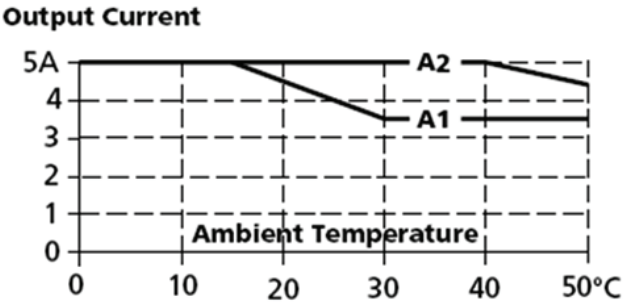
Mounting A



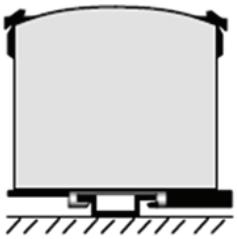


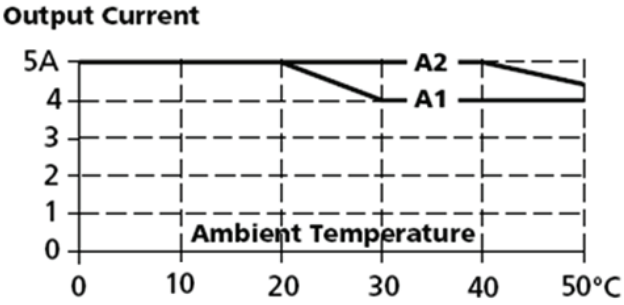
Mounting B



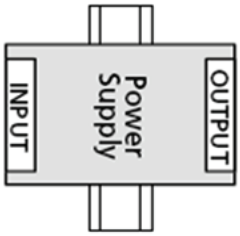


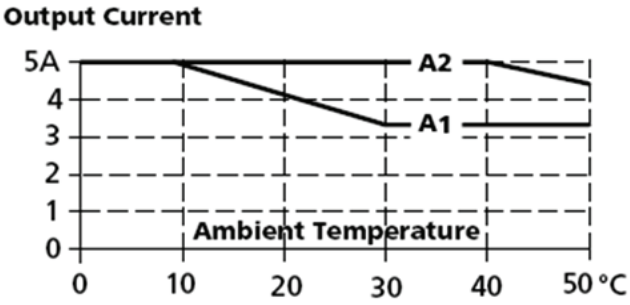
Mounting C



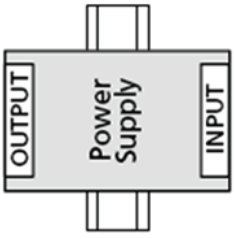


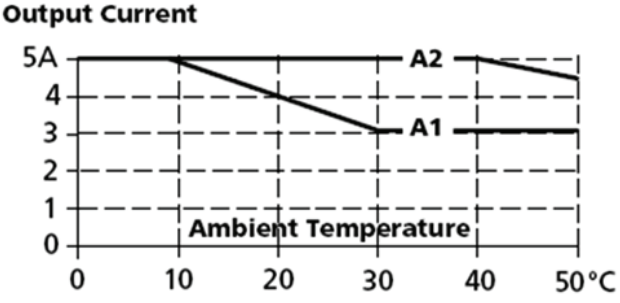
Mounting D





Mounting E

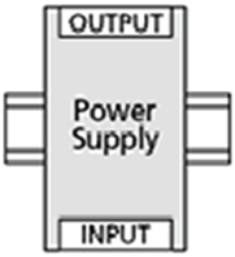


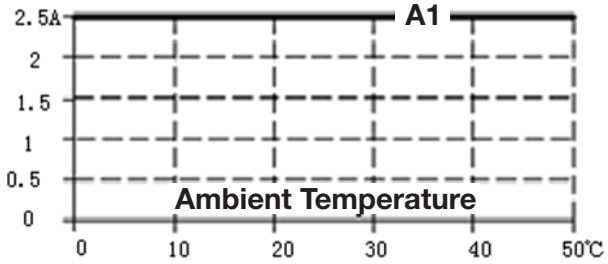


Mounting method instruction PSC-U12048

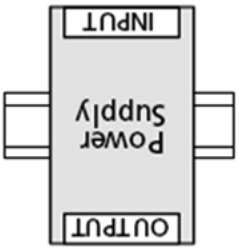
A1 is recommended output current.
A2 is the allowed max output current (PSU lifetime is around half of A1).

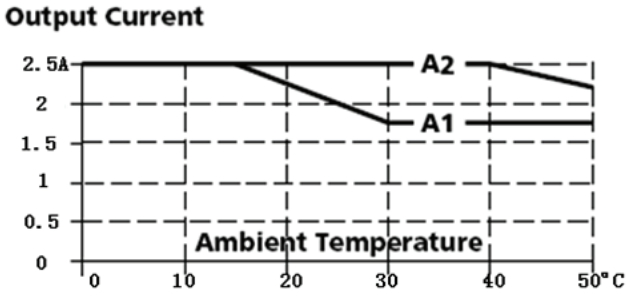
Mounting A



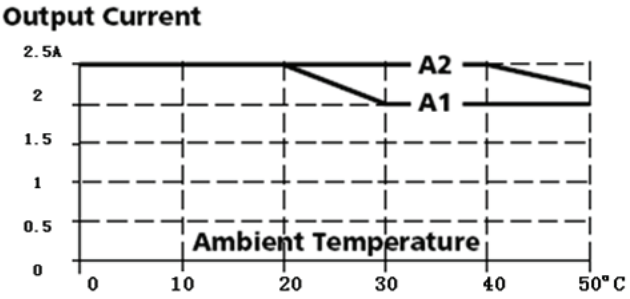


Mounting B

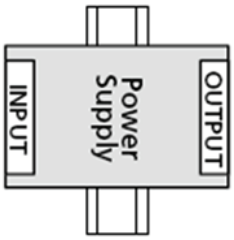


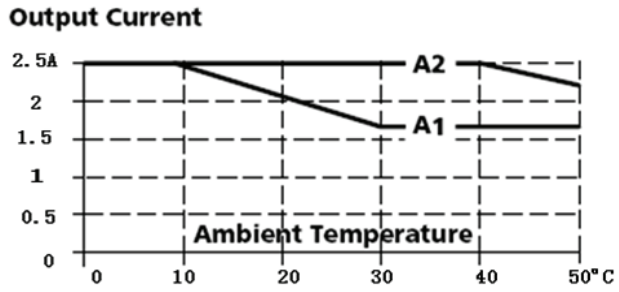


Mounting C



Mounting D





Mounting E