120Watts Single Output Industrial DIN Rail Power Supply

RPS-U120 Series

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℃~70℃)
- Built-in DC OK function
- 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

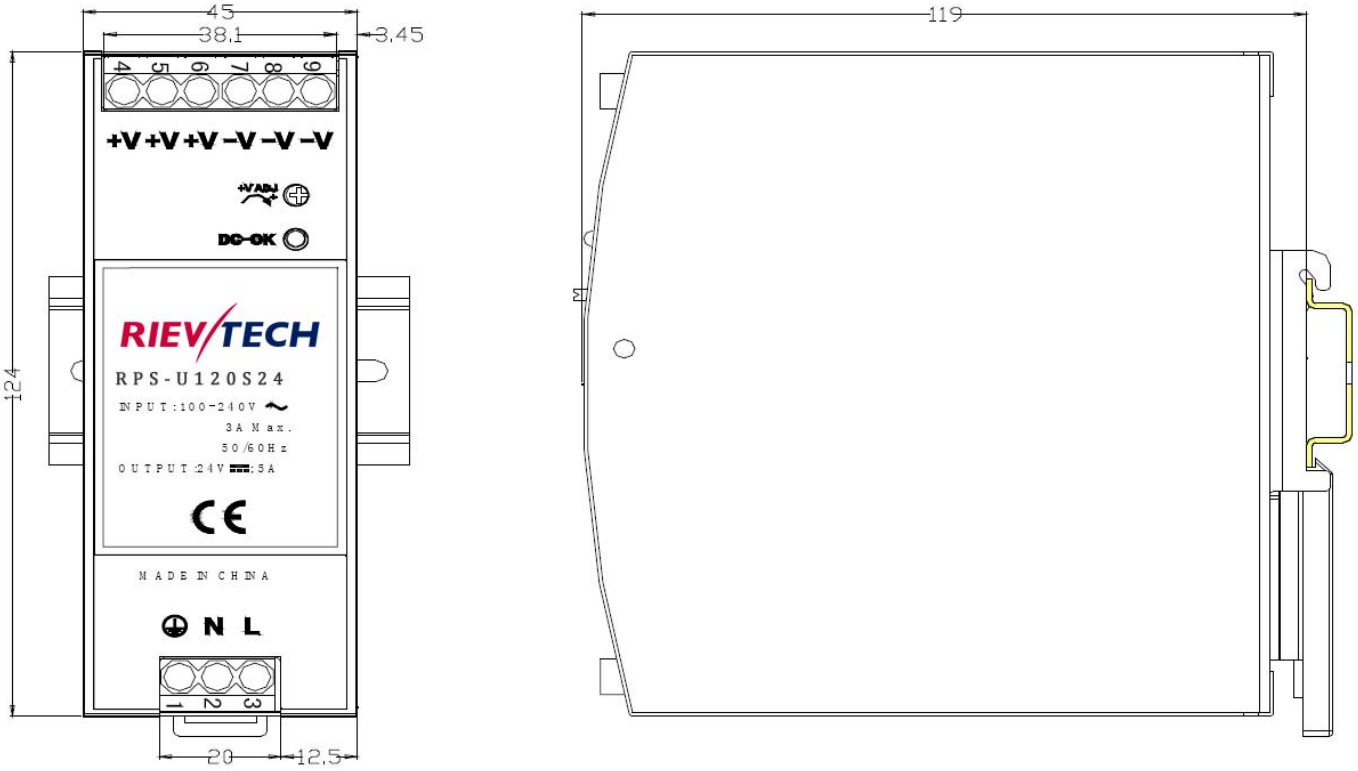
SPECIFICATION

MODEL			RPS-U120S12	RPS-U120S24	RPS-U120S48
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℃	≤120mV	≤120mV	≤240mV
	Note 2	-20℃~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%/℃		
	Overshoot and Undershoot		<5.0%		
INPUT	Voltage Range		90Vac~264Vac, 127Vdc-370Vdc		
	Frequency Range		47Hz~63Hz		
	Efficiency (Typical)		85%	88%	89%
	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)		
PROTECTION	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℃, detect on heat sink of power transistor; shut down O/P, re-power on.		
	Short Circuit		Long-term mode, auto recovery		
	Operating amb.Temp.&Hum.		-20℃~70℃; 20%~90%RH No condensing (pls refer to derating curve)		
ENVIRONMENT	Storage Temp. & Hum.		-40℃~85℃; 5%~95%RH No condensing		
	Safety Standards		UL508, UL60950, EN60950		
SAFETY &EMC Note 3	Withstand Voltage		Primary-Secondary:3.0KVac/10mA.		
			Primary-PG:1.5KVac/10mA.		
			Secondary-PG: 0.5KVac/10mA.		
	Isolation Resistance		10M ohms		
	EMC Emission		Compliance to EN55022, EN55024, FCC PART 15 Class B		
	Harmonic Current		Compliance to EN61000-3-2, CLASS A		
	EMC Immunity		Compliance to EN61000-4-2,3,4,5,6,11; heavy industry level		
	MTBF (MIL-HDBK-217F)		More than 500,000Hrs (25℃, Full load)		
OTHERS	Dimension (L*W*H)		124*119*45mm		
	Cooling method		Cooling by free air convection		

NOTE	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" on www.rievtech.com.

■ Mechanical Specification

Unit: mm

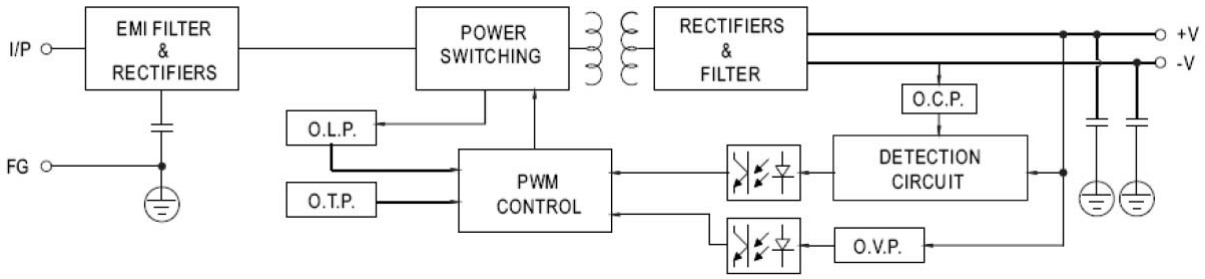


1.AC Screw terminal information			
No.	Function	Wire Specs	Recommended torque
1	PE	20-10AWG	5Nm
2	N		
3	L		

2.DC Screw terminal information			
No.	Function	Wire Specs	Recommended torque
4~6	V+	20-10AWG	5Nm
7~9	V-		

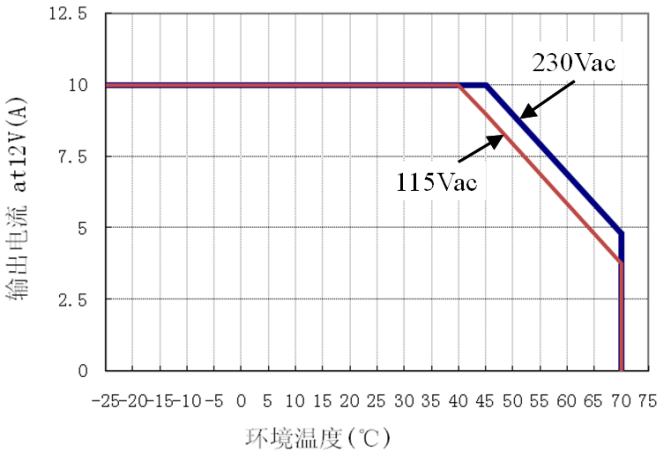
	AC/DC Terminal blocks
Type	Screw terminal blocks
Solid Wire	0.5-6mm^2
Strand Wire	0.5-4mm^2
Wire Spec	AWG20-10
Max Wire Diameter	2.8mm
Recommended stripping length	7mm
Screwdriver	3.5mm Straight or Cross Screwdriver
Recommended Torque	0.5NM

■ Block Diagram

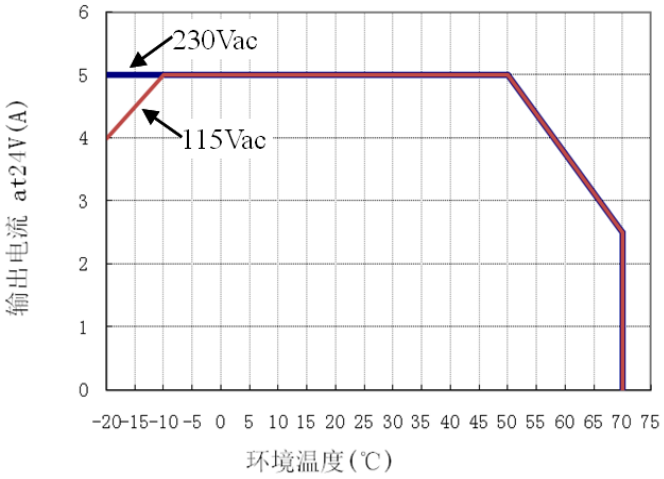


■ Derating Curve

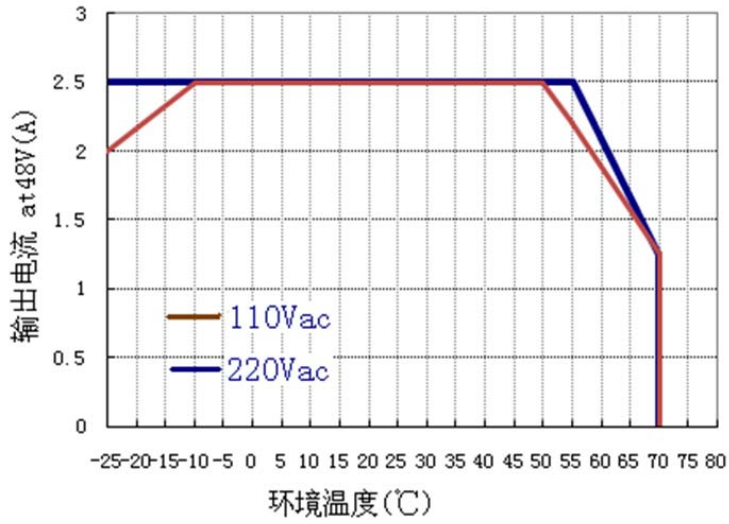
RPS-U120S12



RPS-U120S24



RPS-U120S48



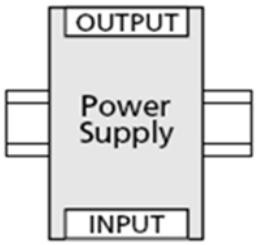
■ Mounting method instruction

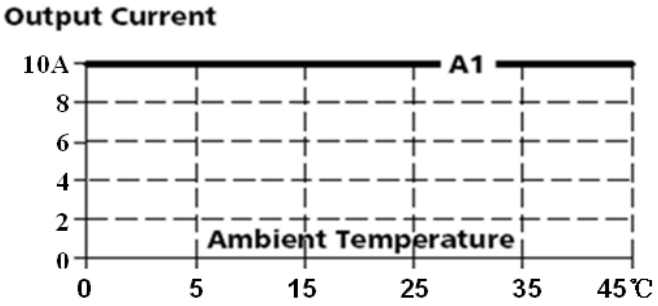
A1 is recommended output current

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

RPS-U120S12:

Mounting A:





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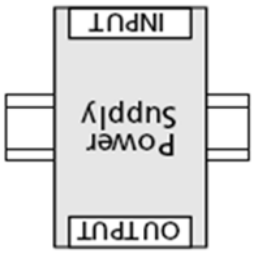

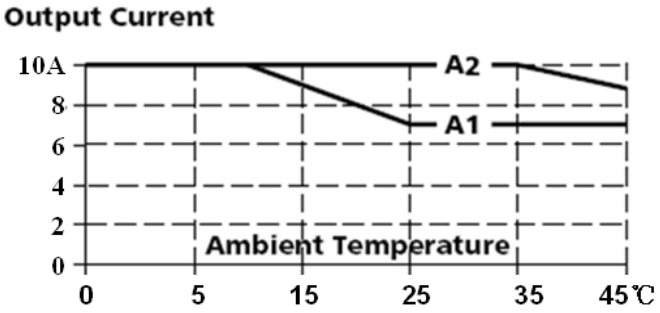

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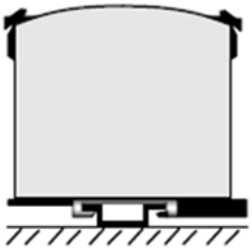

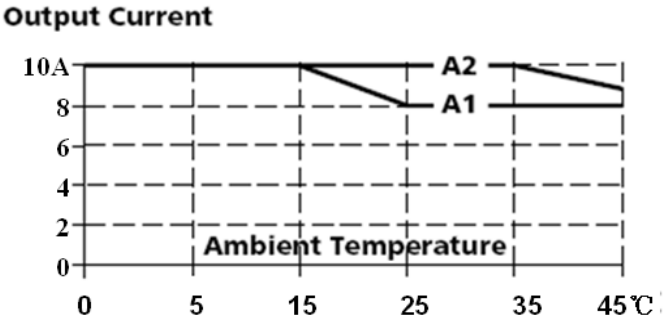

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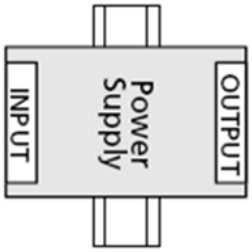

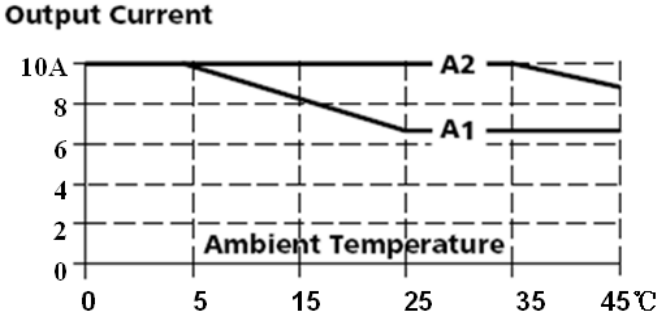

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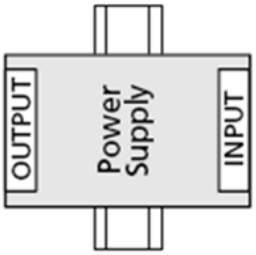

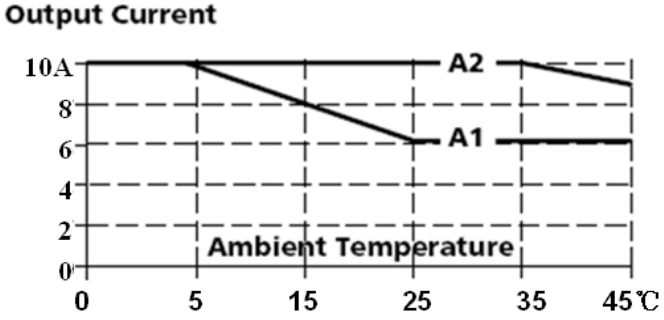

RPS-U120S24:

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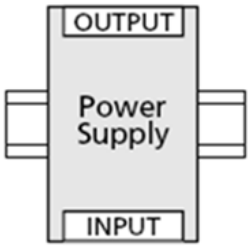

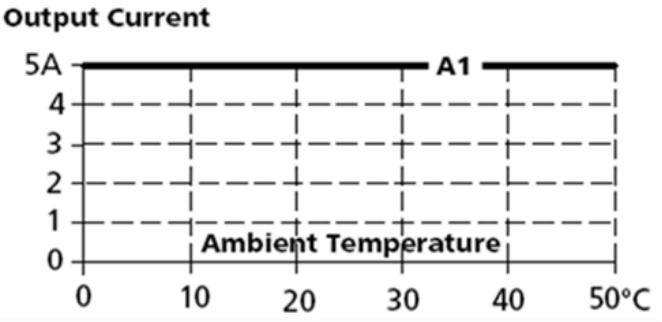

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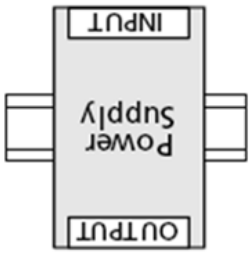

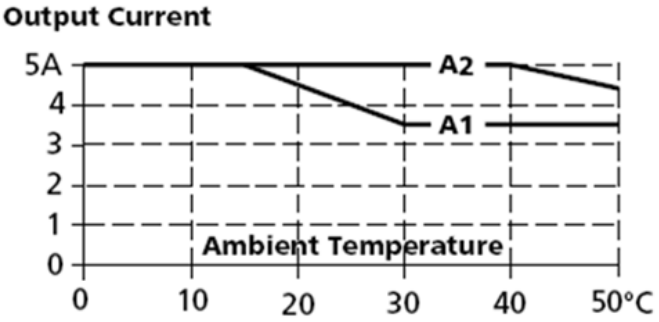

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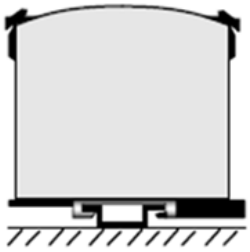

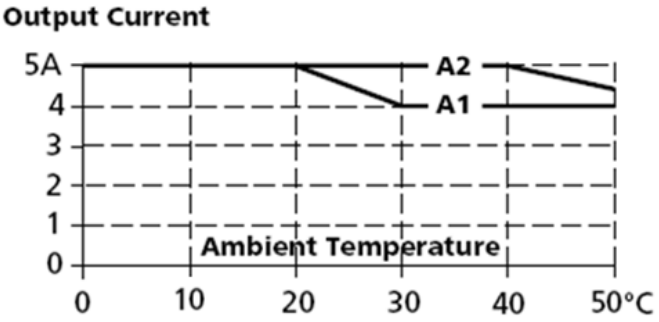

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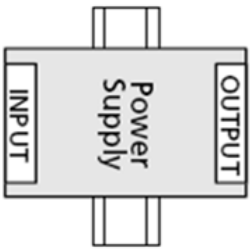

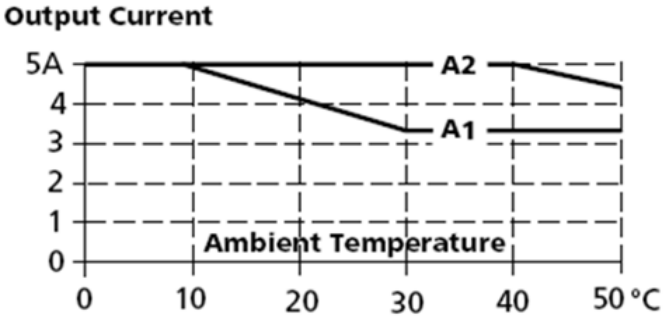

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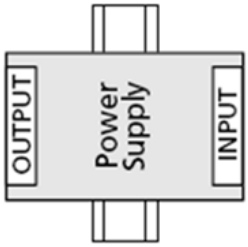
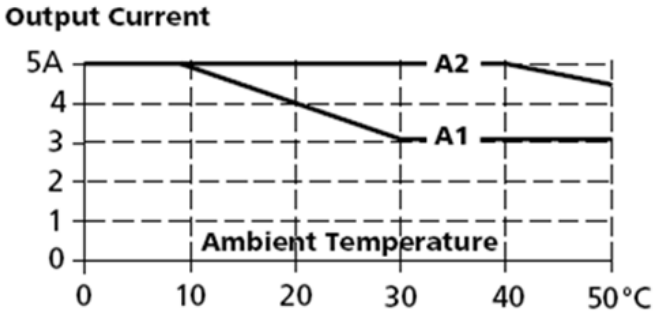
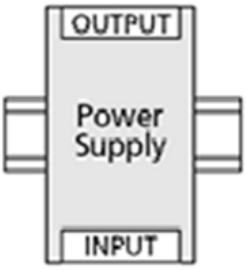
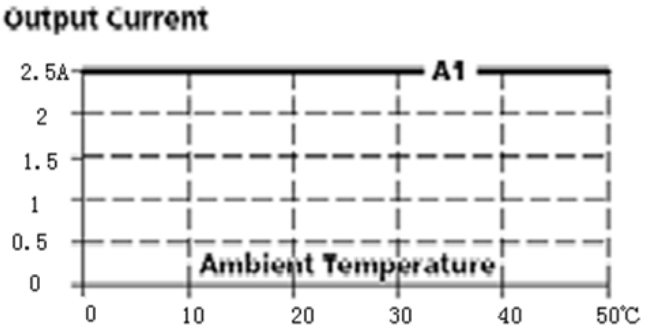




RPS-U120S48:

Mounting A:





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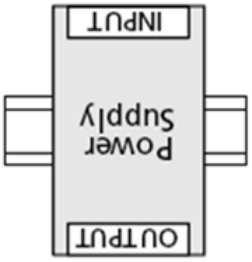

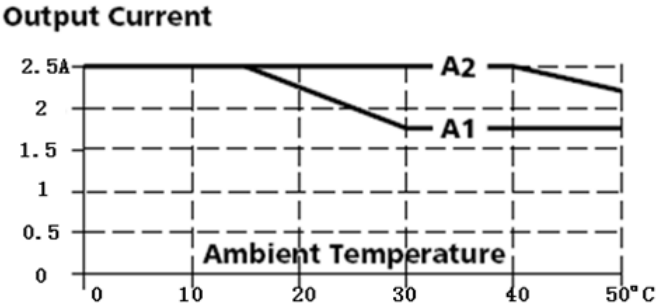

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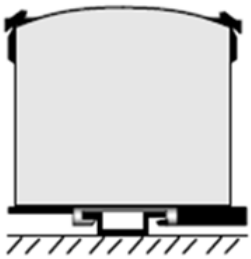
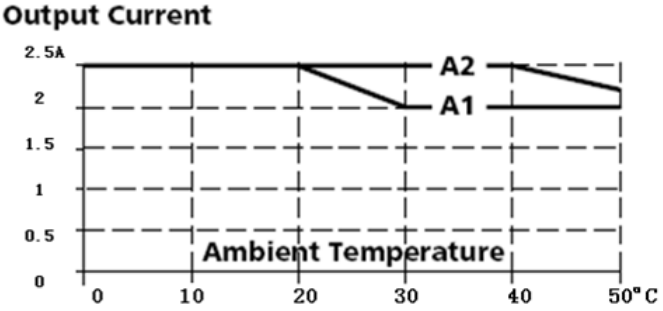
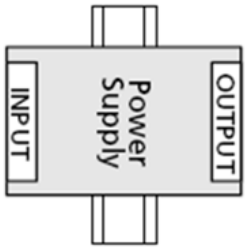
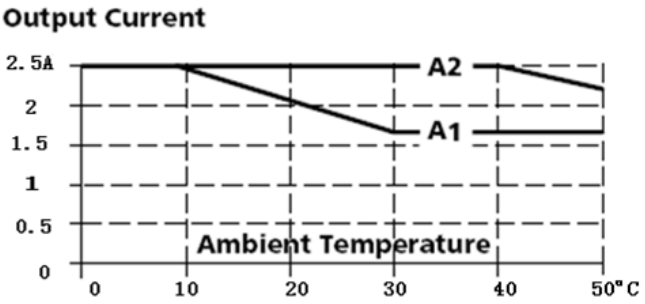




Mounting D:





Mounting E: