120Watts Single Output Industrial DIN Rail Power Supply

IT-DIN-120 Series

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 91%
- Built-in current sharing function
- Built-in current limiting circuit
- Output protections: OVP/OLP/SCP/OTP
- Wide operating ambient temp (-25℃~70℃)
- 150% 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 TS-35/7.5 or TS-35/15
- 100% full load burn-in test
- Suitable for critical applications
- Ultra-slim,32mm width
- 3 years warranty

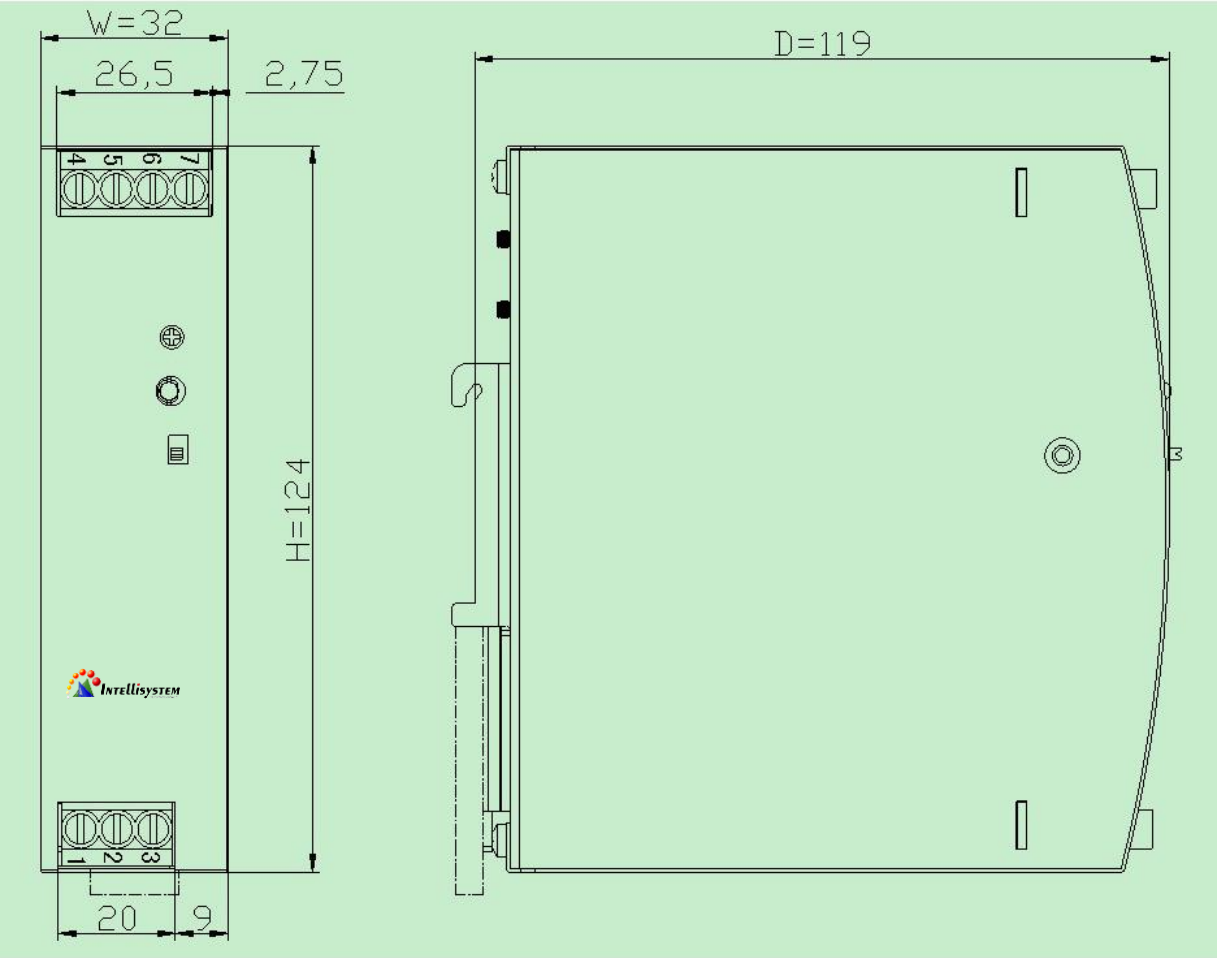
SPECIFICATION

MODEL			IT-DIN-120-12	IT-DIN-120-24	IT-DIN-120-48
OUTPUT	DC Output		12V	24V	48V
	Rated Current		10A (pls refer to derating curve）	5A	2.5A
	Current Range Note 1		0~10A	0~5A	0~2.5
	Ripple and Noise Note 2	0~70℃	≤100mV	≤120mV	≤240mV
		-25℃	≤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%/℃		
	Overshoot and Undershoot		<5.0%		
INPUT	Voltage Range		85Vac~264Vac, 127Vdc-360Vdc		
	Frequency Range		47Hz~63Hz		
	Power Factor (typical)		0.99/100Vac 0.95/230Vac		
	Efficiency (Typical)		89.5%	91%	92%
	AC Current (max.)		<1.5 A/100Vac <0.65A/230Vac		
	Inrush Current (Typical)		＜30A/100Vac ＜60A/230Vac Cold start		
	Leakage Current		Input—output:<0.25mA Input—PG:<3.5mA		
PROTECTION	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 voltage		15~18V	29~33V	58~65V
			Protection type: Hiccup mode, Auto recovery		
	Over temperature		100±5℃, detect on heat sink of power transistor; shut down O/P, auto recovery after temperature goes down.		
	Short Circuit		Long-term mode, auto recovery		
ENVIRONMENT	Operating amb. Temp. & Hum.		-25℃~70℃; 20%~90%RH No condensing		
	Storage Temp. & Hum.		-40℃~85℃; 5%~95%RH No condensing		
SAFETY &EMC Note 3	Safety Standards		meet UL508, UL60950, EN60950		
	Withstand Voltage		Primary-Secondary: 3.0KVac; ≤10mA .Primary-PG: 2.5KVac; ≤10mA. Secondary-PG: 0.5KVac≤10mA.		
	Isolation Resistance		≥100M 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 EN61000-4-2,3,4,5,6,8,11; heavy industry level		
OTHERS	MTBF (MIL-HDBK-217F)		More than 300,000Hrs (25℃, Full load)		
	Dimension (L*W*H)		124*119*32mm		
	Packing		28pcs/CTN,18.02Kgs, 0.04cbm		
	Cooling method		Cooling by free air convection		
Additional function	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
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.	

Mechanical Specification

Unit: mm



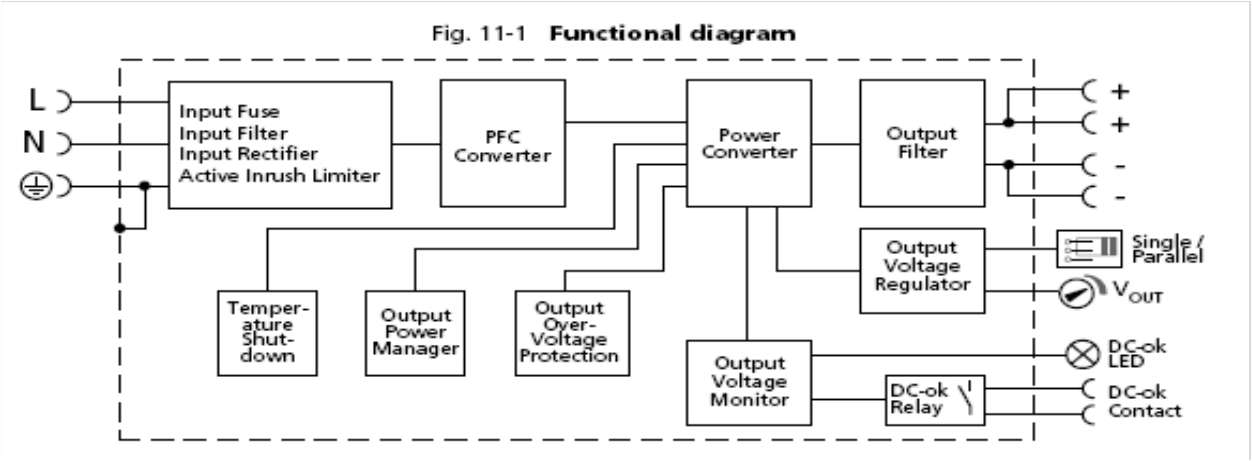
1.AC Screw terminal information			
No.	Function	Wire Specs	Recommended torque
1	L	20~10AWG	1Nm
2	N		
3	PG		

2.DC Screw terminal information			
No.	Function	Wire Specs	Recommended torque
4 & 5	DC OK Relay Contact	20~10AWG	1Nm
6	-V		
7	+V		

	AC/DC Terminal
Type	Screw terminal blocks
Solid Wire	0.5-6mm^2
Strand Wire	0.5-4mm^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

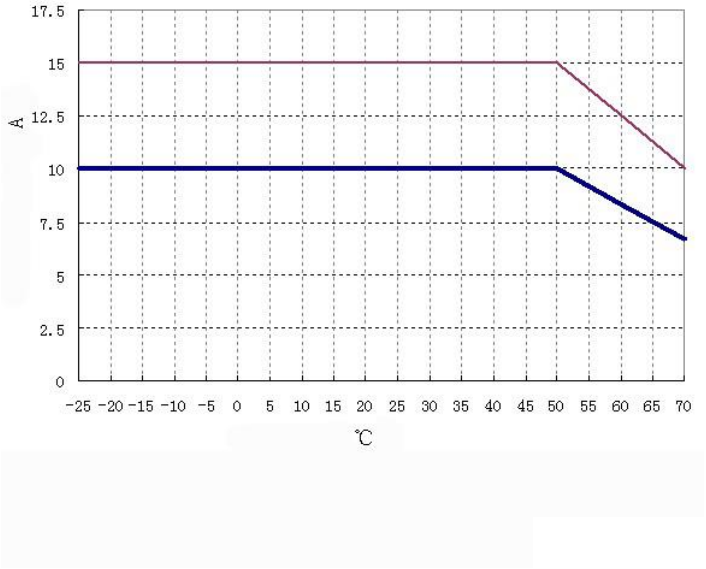
■ Block Diagram

Fig. 11-1 **Functional diagram**



■ Derating Curve

IT-DIN-120-12:



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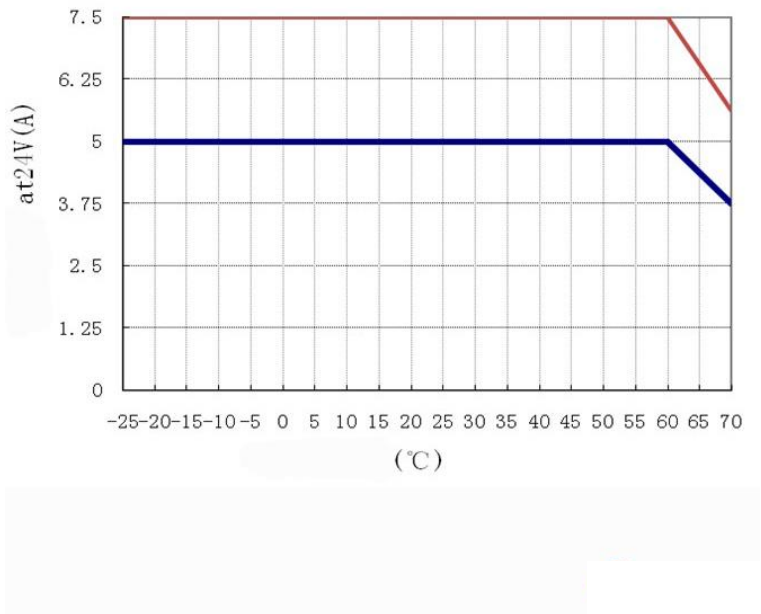

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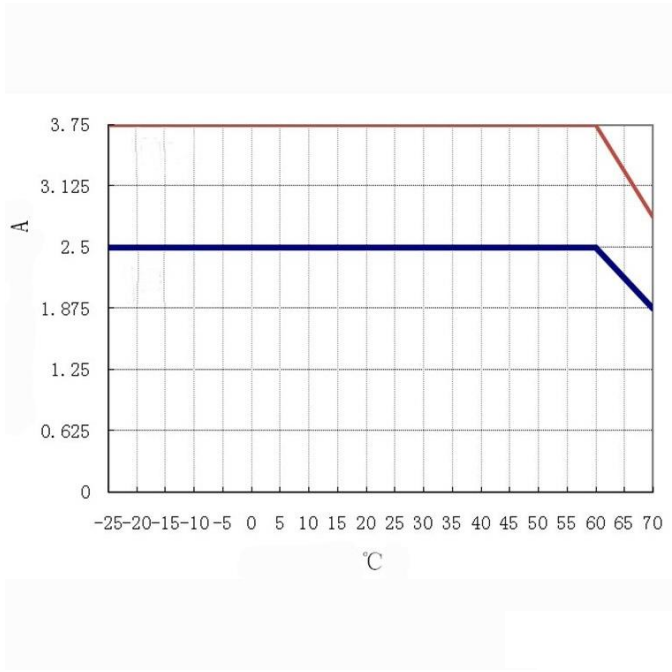


: short time working;

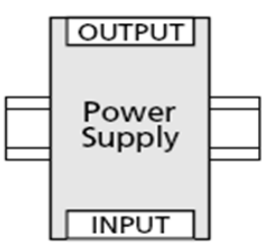
: continual working.

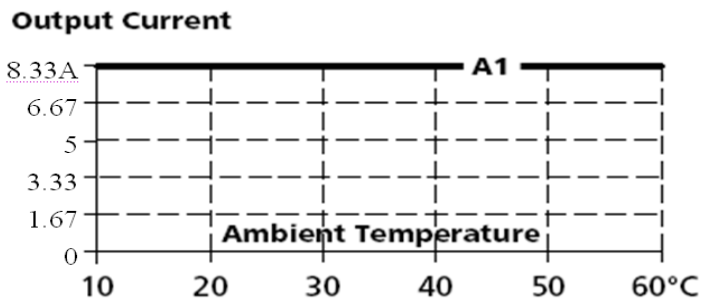
■ Mounting method instruction

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

IT-DIN-120-12:

Mounting A:





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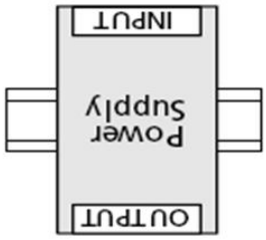

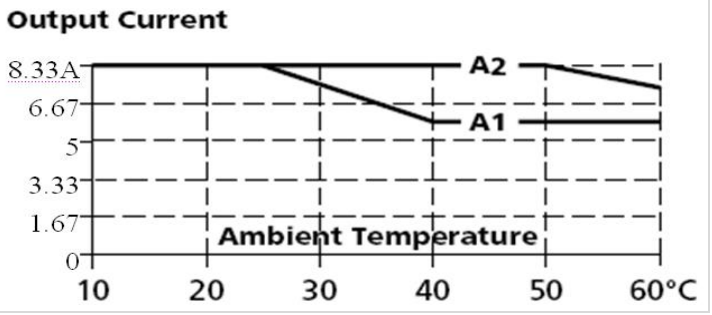

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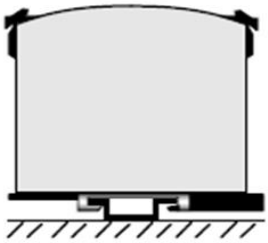

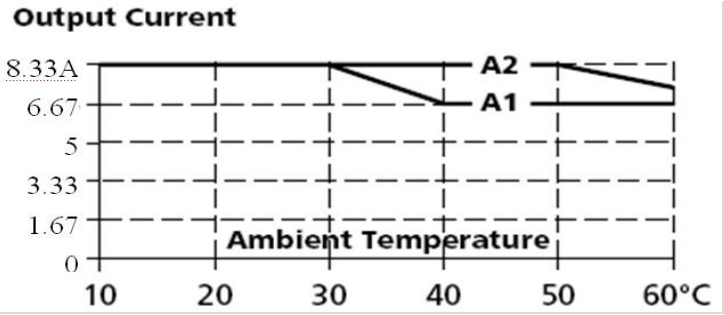

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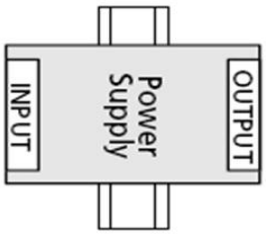

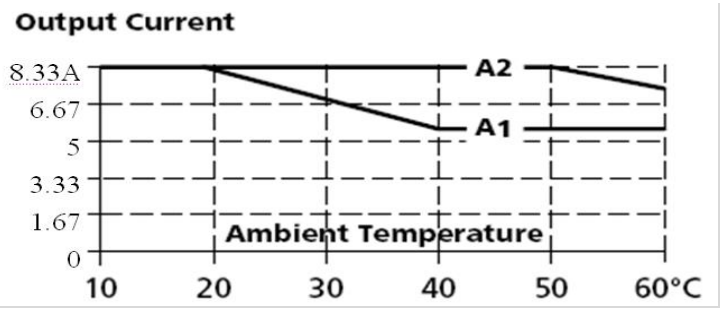

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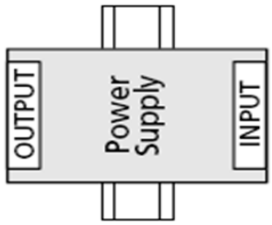

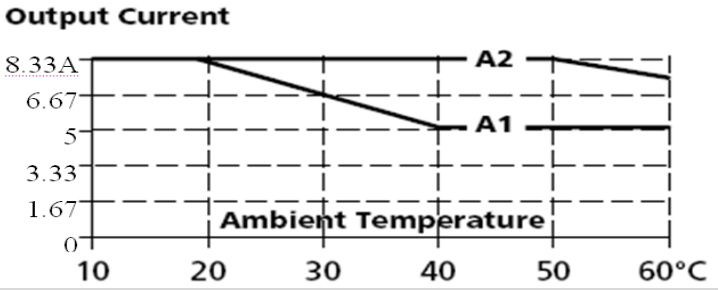

IT-DIN-120-24:

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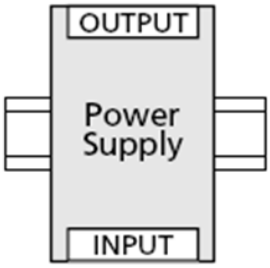

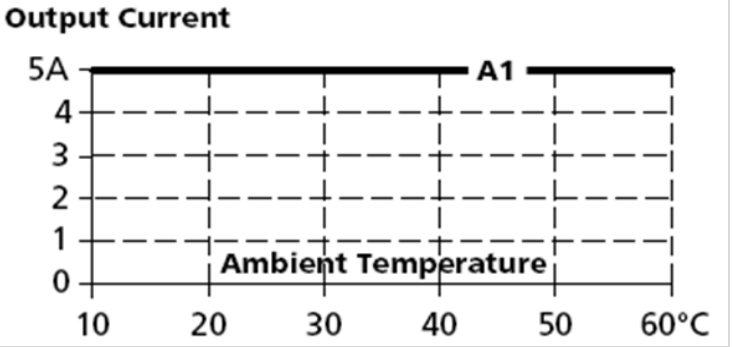

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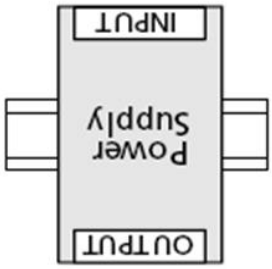

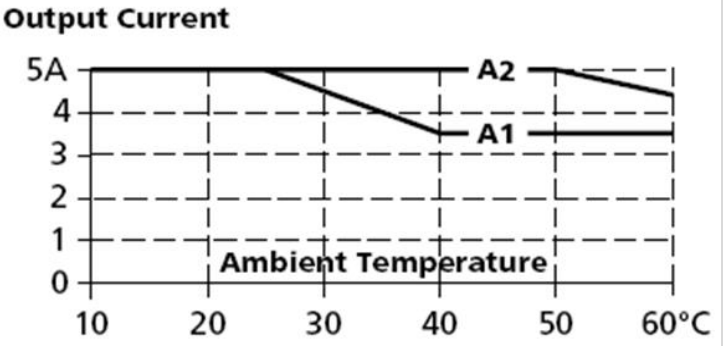

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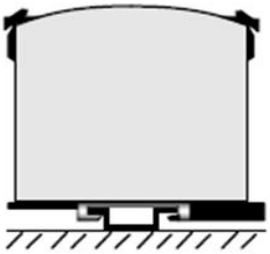

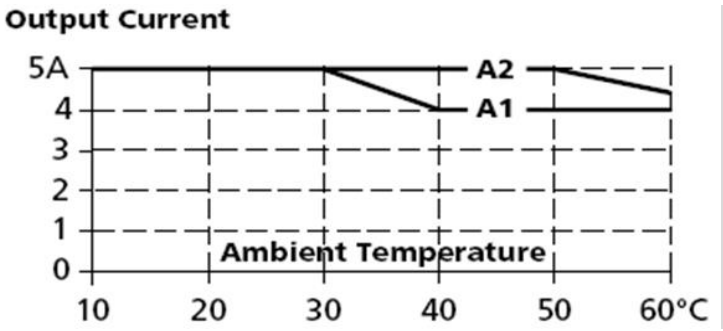

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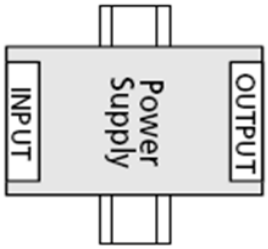

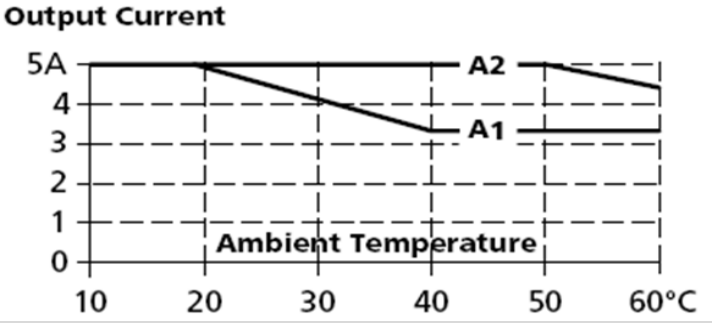

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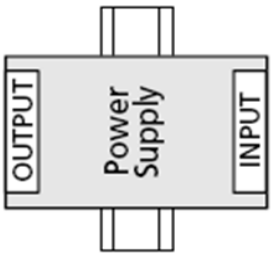

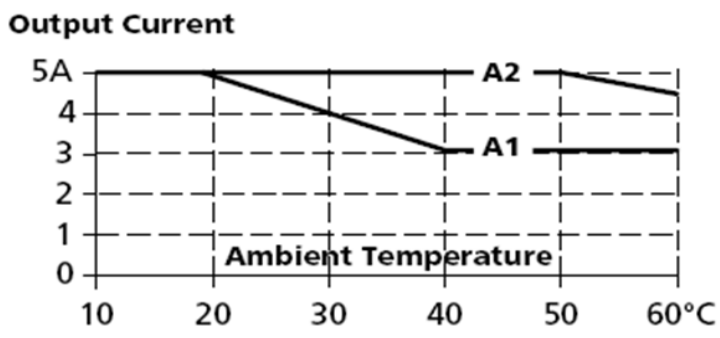

IT-DIN-120-24:

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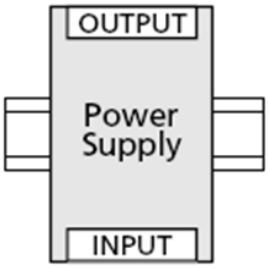

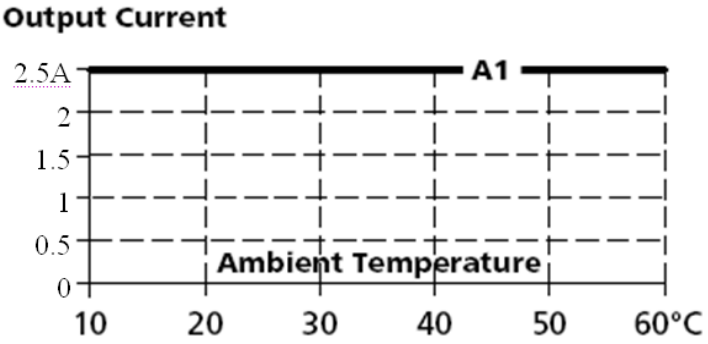

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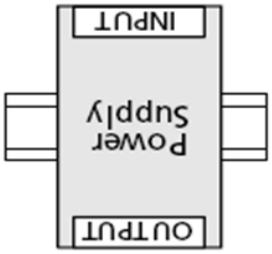

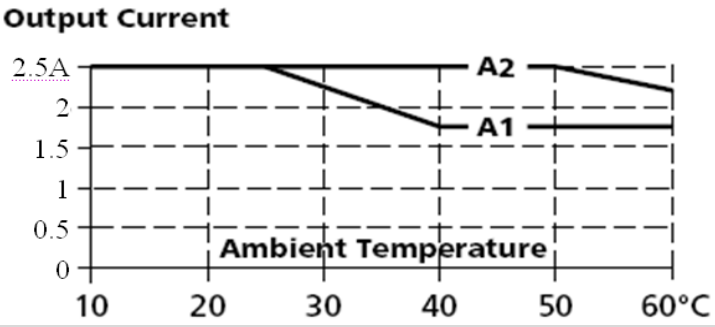

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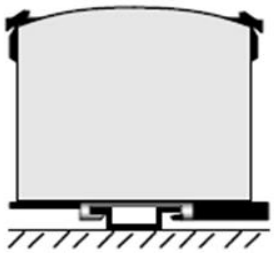

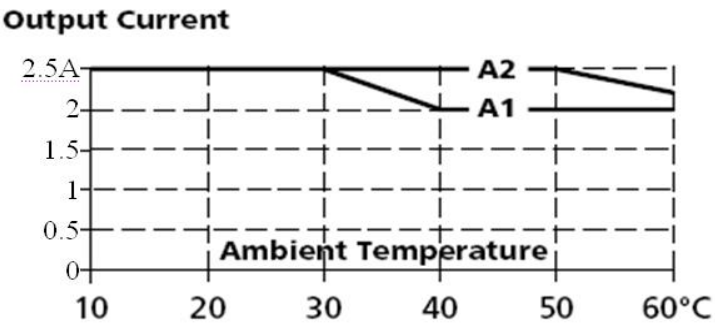

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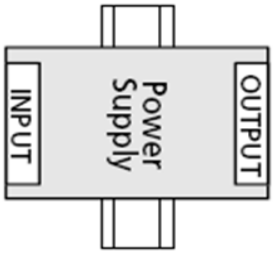

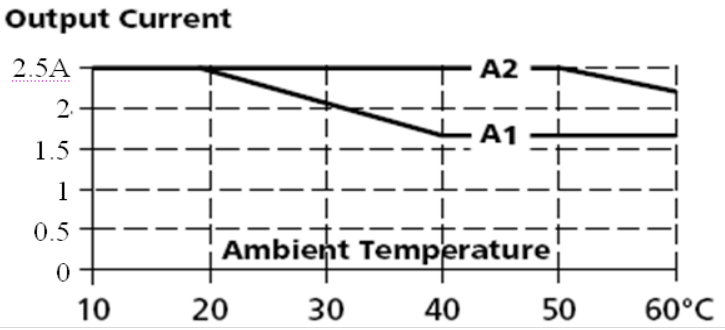

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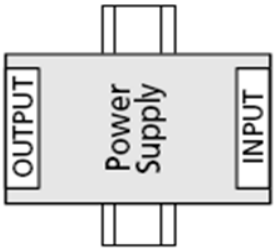

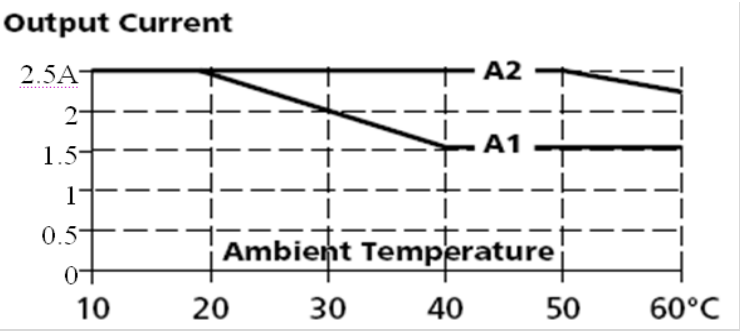

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