



# Zhitao Group

ZHITAO GROUP

Industrial Power Supply

## Product Specifications

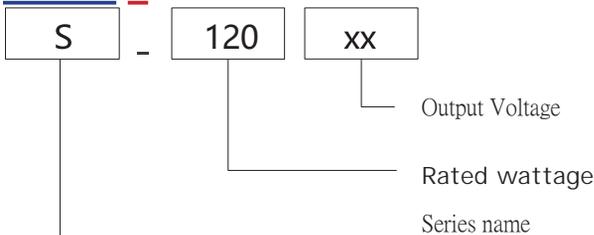
# S-120

- Product Category: 120W Single Output Power Supply
- Version No.: ZTAO3.0
- Release date: 1st May 2025

### product overview

S-120-XX series of products for a 120W chassis-type industrial power supply, the output voltage including 5V/12V/24V/36V/48V, etc., can be adapted to different load application requirements to meet the majority of industrial applications, self-cooling heat dissipation, as well as a full range of protections, to ensure that this series of products of high reliability and high stability.

### Model encoding



### product characteristics

- The AC range input is switched via the switch
- Type of protection: short circuit/overload/overvoltage
- Cooling by free air convection
- LED indicator for power on
- 100% full load burn-in test
- 3-year warranty



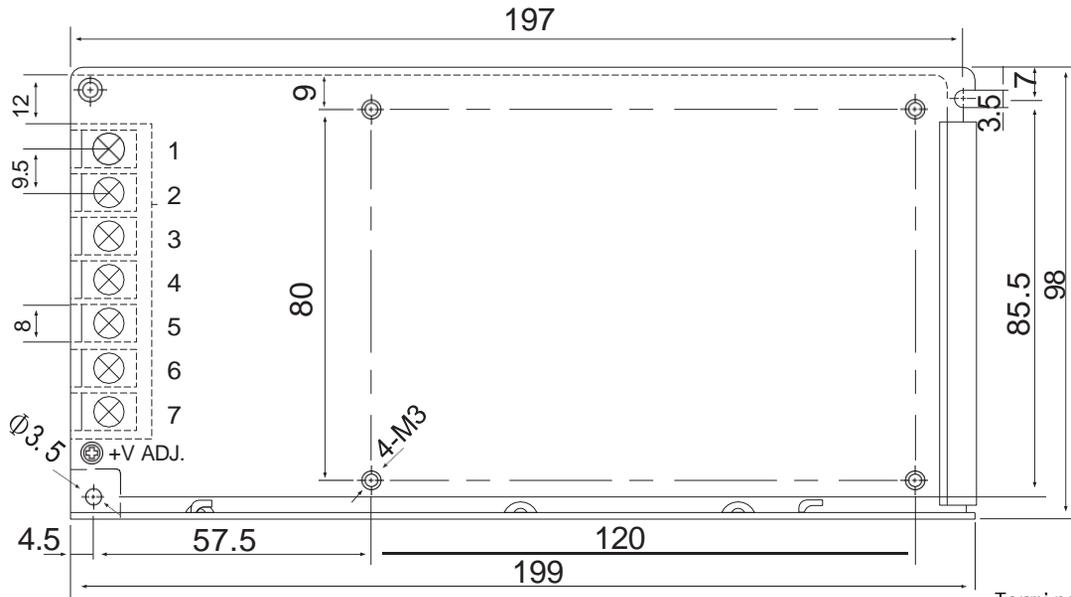
### areas of application

Industrial control, mechanical and electrical, electronic instruments, industrial automation, electronic equipment, semiconductor equipment, etc. (except information technology equipment)

electrical specifications

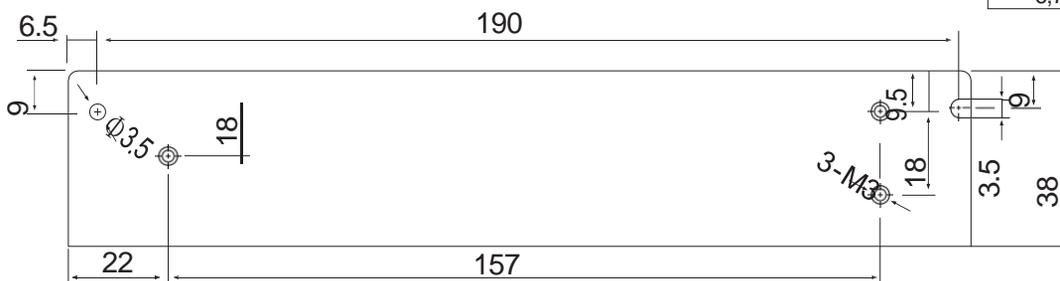
Model		S-120-5	S-120-12	S-120-15	S-120-24	S-120-36	S-120-48
Output	DC output voltage	5V	12V	15V	24V	36V	48V
	Rated current	24A	10A	8A	5A	3.4A	2.5A
	Current range	0~24A	0~10A	0~8A	0~5A	0~3.4A	0~2.5A
	Rated power	120W	120W	120W	120W	122.4W	120W
	Ripple & Noise (Max)	100mV <sub>p-p</sub>	100mV <sub>p-p</sub>	120mV <sub>p-p</sub>	120mV <sub>p-p</sub>	150mV <sub>p-p</sub>	150mV <sub>p-p</sub>
	voltage adjustment range	4.5~5.5V	10.2~13.8V	13.5~16.5V	21.6~26.4V	32.4~39.6V	43.2~52.8V
	voltage accuracy	±1%	±1%	±1%	±1%	±1%	±1%
	Linear adjustment rate	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	Load Adjustment Ratio	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	start-up & rise time	1000ms,35ms/230VAC      1200ms,40ms/115VAC(at full load)					
	Holding time	60mS/230VAC;20mS/115VAC (at full load)					
Input	Input Voltage	85~132VAC/ 170~264VAC selectable by switch			240~370VDC(switc on 230VAC)		
	Input frequency	50~60HZ					
	Efficiency	77%	86%	86%	88.5%	89%	90%
	Input current	2.1A/115VAC    1.1A/230VAC					
	Leakage current	< 1mA/240VAC					
Protection	overload protection	125~150% of rated power Protection mode: hiccup protection, automatic recovery after removal of abnormal conditions					
	Overvoltage protection	5.9~7.3V	13.8~16.2V	18.7~21.7V	28.8~33.6V	41.4~48.6V	55.2~64.8V
Environment	Operating temperature	-20°C ~+65°C					
	Operating humidity	20~90%RH No condensation					
	Storage temperature/humidity	-40~+80°C 10~95%RH, no condensation					
	Resistant to vibration	10~500HZ, 5G 10 min/cycle, X, Y, Z 60 min each					
Security	pressure resistance	Input to Output :1.5KVAC; Input to Ground :1.5KVAC; Output to Ground :500VAC					
	Insulation impedance	Input to Output, Input to Ground, Output to Ground :100 Ohms/500VDC/25°C /70%RH					
Others	Product dimensions	199*98*38mm (L*W*H)					
	Packaging	0.5kg/pcs					
Remarks	<p>1. All parameters are measured at 230VAC input, rated load and 25°C when not otherwise specified.</p> <p>2. Ripple and noise voltages were measured on a 20MHz bandwidth oscilloscope with 0.1 μ and 47 μ capacitors at the end of a 12-inch twisted pair cable, measured at 20MHZ bandwidth.</p> <p>3. Accuracy: Includes setting error, linear adjustment ratio and load adjustment ratio.</p> <p>4. Linear Adjustment Ratio Measurement Method: Test from low voltage to high voltage at rated load</p> <p>5. Load Adjustment Ratio Measurement Method: From 0% to 100% of rated load</p> <p>6. Start-up time is measured at cold start, fast and frequent switching on and off may increase the start-up time.</p> <p>7. When operating at altitudes higher than 2000 metres (6500ft): the operating environment needs to be reduced by 5°C / 1000 metres</p>						

Outline and mounting dimensions (mm)



Terminal Pin No. Assignment

Pin No	Assignment
1	AC/N(DC+)
2	AC/L(DC-)
3	FG ⊕
4,5	DC OUTPUT -V
6,7	DC OUTPUT +V



Pinout	Function	
L	AC LINE	Screw:M4*9.5 Torque:22Kgf.cn( 2..... 2N.m)
N	AC NETURAL	
⊕	EARTH	
-V	DC output -	Screw:M4*9.5 Torque:22Kgf.cn( 2..... 2N.m)
-V	DC output -	
+V	DC output +	
+V	DC output +	

8-M3 Customer system

mounting holes mounting

screws:M3

Installation torque: 8Kgf.cn (0.8N.m)

screws into the housing is not more

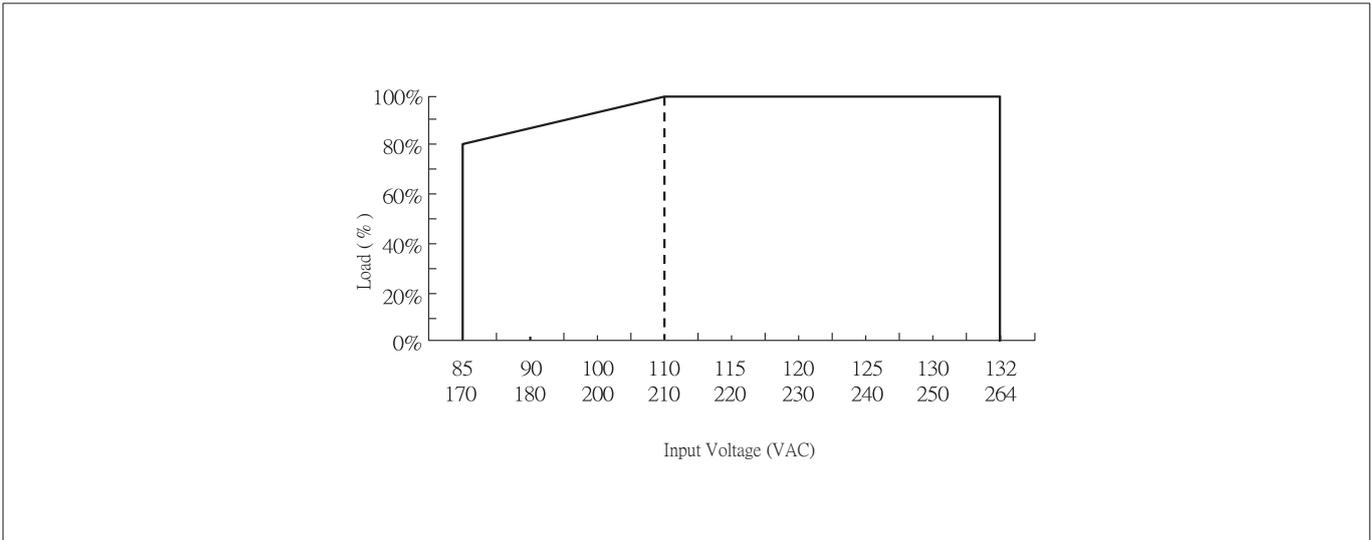
than 3mm

Remarks:

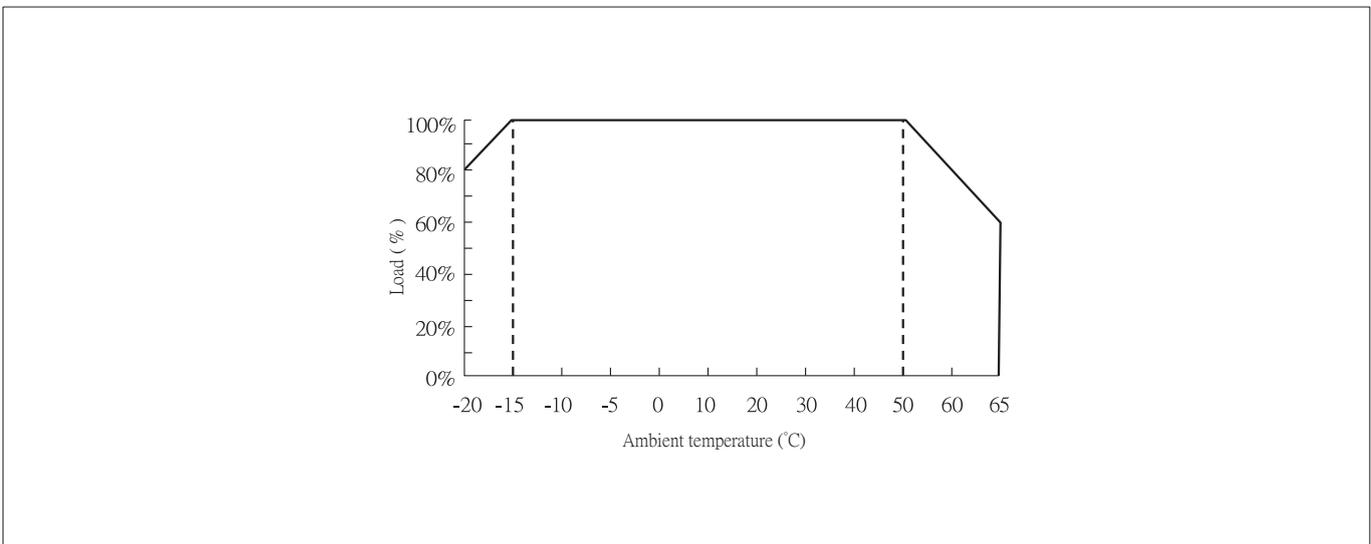
Unit: mm [inch]; unlabelled tolerances are ±0.5 [±0.020].

### Characteristic Curve

#### Input Voltage VS Output Load



#### Ambient Temperature VS Output Load



Note

- 1.If you need more detailed test data, please contact our technical support to get the application notes of the corresponding products.
- 2.This product is suitable for use in a natural air convection environment, if used in a closed environment, please contact our technical support staff.