



# Zhitao Group

ZHITAO GROUP

Industrial Power Supplies

## Product Specifications

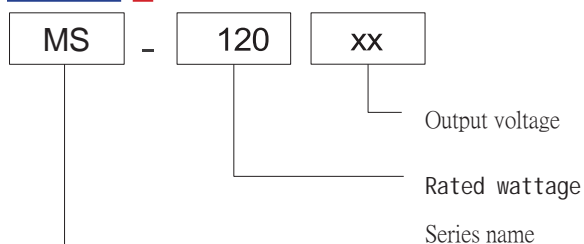
# MS-120

- Product Category: 120W single output power supply
- Version number: ztao3.0
- Release date: 1st May 2025

### Product Overview

MS-120-XX SERIES PRODUCTS FOR A 120W CHASSIS-TYPE INDUSTRIAL POWER SUPPLY, THE OUTPUT VOLTAGE INCLUDING 12V/24V/36V/48V, ETC., CAN BE ADAPTED TO DIFFERENT LOAD APPLICATION REQUIREMENTS TO MEET THE NEEDS OF MOST INDUSTRIAL APPLICATIONS, SELF-COOLING COOLING, 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 input range is switched via
- Type of protection: short circuit/overload/overvoltage
- Cooling by free convection
- led indicator for Power on
- 100% full load burn-in test
- 3-year warranty

### Areas of Application

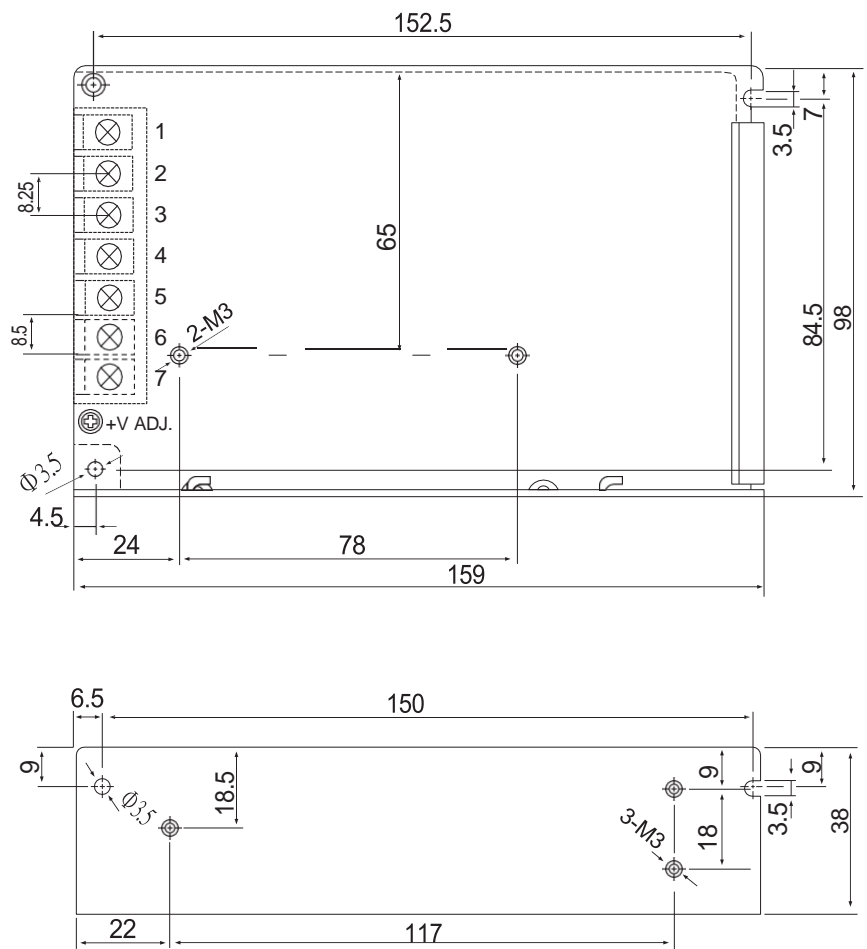
Industrial control, mechanical and electrical, electronic instruments, industrial automation, electronic equipment, semiconductor equipment, etc. (except information technology equipment)



electrical specifications

Model		MS-120-12	MS-120-15	MS-120-24	MS-120-36	MS-120-48
Output	DC output voltage	12V	15V	24V	36V	48V
	Rated current	10A	8A	5A	3.4A	2.5A
	Current range	0~10A	0~8A	0~5A	0~3.4A	0~2.5A
	Rated power	120W	120W	120W	122.4W	120W
	Ripple & Noise (Max)	240mVp-p	240mVp-p	320mVp-p	360mVp-p	360mVp-p
	voltage adjustment range	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%
	Linear adjustment rate	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	Load Adjustment Ratio	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	start-up & rise time	1800ms,55ms/230VAC 2000ms,60ms/115VAC (at full load)				
	Holding time	25ms/230VAC 20ms/115VAC (at full load)				
Input	Input Voltage	90~264 VAC 126~370VDC				
	Input frequency	50~60HZ				
	Efficiency	86%	86%	89%	90%	90%
	Input current	2.6A/115VAC 1.3A/230VAC				
	Leakage current	< 2mA/240VAC				
Protect ion	Overload protection	120~140% of rated power Protection mode: hiccup protection, automatic recovery after removal of abnormal conditions				
	Overvoltage protection	13.8~16.2V	18.7~21.7V	28.8~33.6V	41.4~48.6V	55.2~64.8V
		Protect mode: shut down the output voltage, restart to recover				
Enviro nment	Operating temperature	-20℃ ~+65℃				
	Operating humidity	20~90%rh No condensation				
	Storage temperature/humidity	-40~+80℃ 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℃ /70%RH				
Others	Product dimensions	159*98*38mm (L*W*H)				
	Packaging	0.6kg/pcs				
Remarks		<ol style="list-style-type: none"> <li>1. All parameters are measured at 230vac input, rated load and 25℃ when not specified.</li> <li>2. Ripple and noise voltages were measured on a 20MHz bandwidth oscilloscope with 0.1 <math>\mu</math> and 47 <math>\mu</math> capacitors at the end of a 12-inch twisted pair cable, measured at 20MHZ bandwidth.</li> <li>3. Accuracy: Includes setting error, linear adjustment ratio and load adjustment ratio.</li> <li>4. Linear Adjustment Ratio Measurement Method: Test from low voltage to high voltage at rated load</li> <li>5. Load Adjustment Ratio Measurement Method: From 0% to 100% of rated load</li> <li>6. Start-up time is measured at cold start, fast and frequent switching on and off may increase the start-up time.</li> <li>7. When operating at altitudes higher than 2000 metres (6500ft): the operating environment needs to be reduced by 5℃ / 1000 metres</li> </ol>				

Outline and Mounting Dimensions (mm)



Terminal Pin No. Assignment

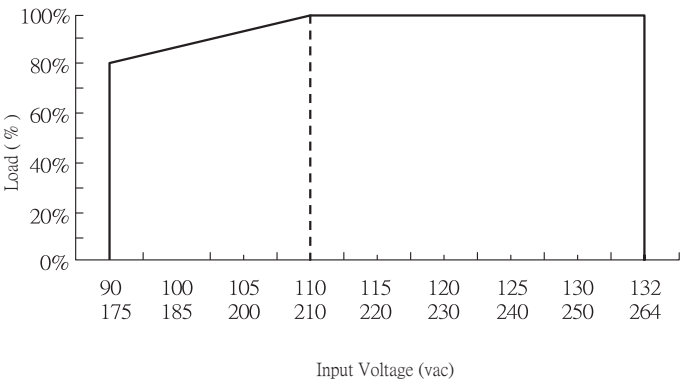
pin No	Assignment
1	AC/L(DC-)
2	AC/N(DC+)
3	FG (⊕)
4	DC OUTPUT -V
5	DC OUTPUT -V
6	DC OUTPUT +V
7	DC OUTPUT +V

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 +	

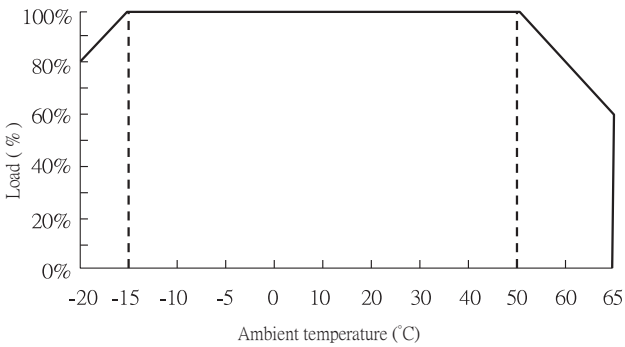
8-m3 Customer system  
mounting holes mounting  
screws:m3  
Installation torque: 8Kgf.cn (0.8N.m)  
screws into the housing not more than  
3mm  
Remarks:  
Unit: mm [inch]; unlabelled tolerances are  $\pm 0.5$  [ $\pm 0.020$ ].

Characteristic Curve

Input Voltage Vs Output Load



Ambient temperature vs. output load



Remarks:

- 1.If you need to know 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.