



Zhitao Group

ZHITAO GROUP

Industrial Power Supplies

Product Specifications

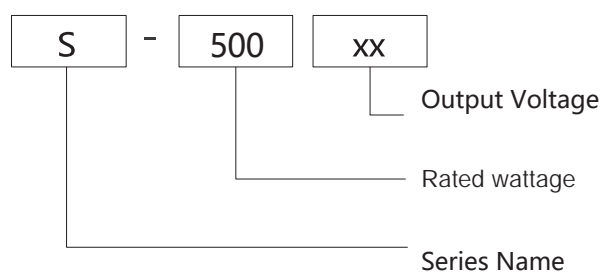
S-500

- Product Category: 500W Single Output Power Supply
- Version No.: ZTAO3.0
- Release date: 1st May 2025

Product Overview

S-500-XX series products for a 500W 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, fan cooling, as well as a full range of protection, 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
- fan cooling
- 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)



01-01

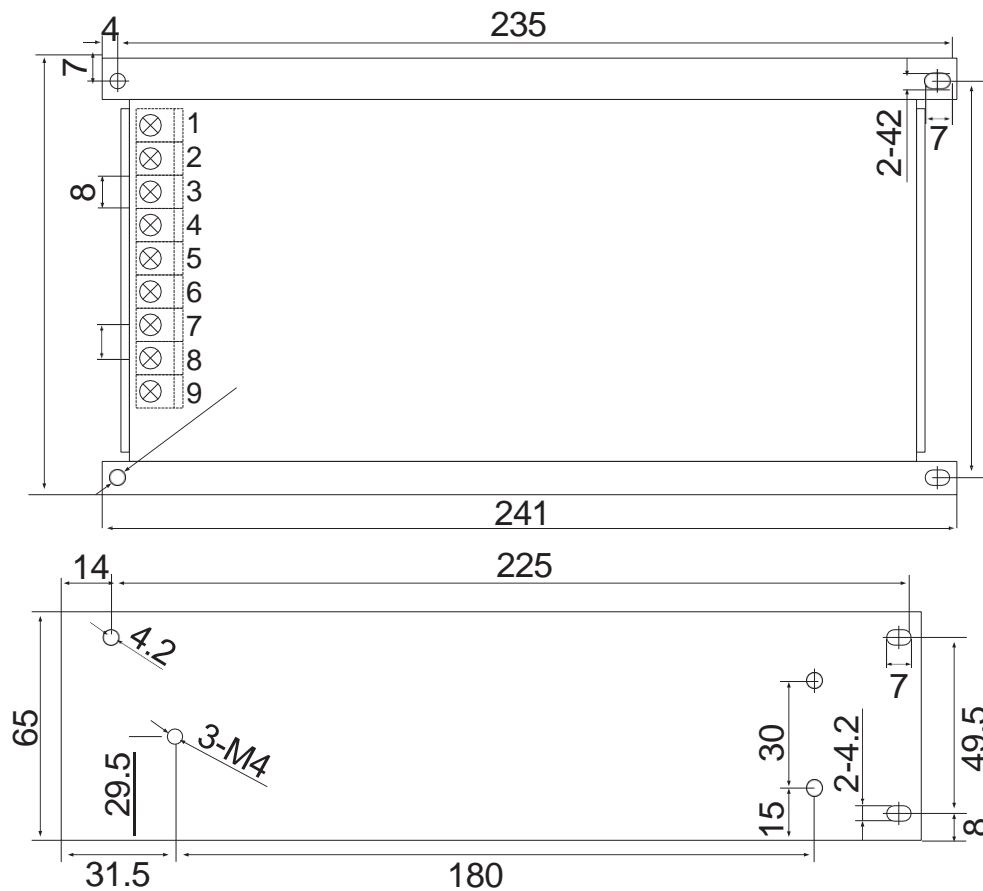
electrical specifications

Model		S-500-12	S-500-15	S-500-24	S-500-36	S-500-48
Output	DC output voltage	12V	15V	24V	36V	48V
	Rated current	40A	33A	20A	13.8A	10A
	Current range	0~40A	0~33A	0~20A	0~13.8A	0~10A
	Rated power	480W	495W	480W	496.8W	480W
	Ripple & Noise(max)	200mVp-p	200mVp-p	240mVp-p	300mVp-p	300mVp-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	1000ms,50ms/230VAC 1000ms,50ms/115VAC (at full load)				
	Holding time	20mS/230VAC 16mS/115VAC (at full load)				
Input	Input Voltage	95~132 VAC/180~264 VAC selectable via switch 254~370VDC(switc on 230VAC)				
	Input frequency	50~60HZ				
	Efficiency	85%	85%	87.5%	88%	89%
	Input current	5.2A/115VAC 2.6A/230VAC				
	Leakage current	< 1mA/240VAC				
Protection	overload protection	105~135% of rated power Protection mode: +VO drops to the undervoltage point, and automatically recovers when abnormal conditions are removed				
	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				
	Over temperature	Turn off the output voltage, reboot to restore				
Function	Fan On/Off Control (Typ.)	TH3 ≥ 50 °C fan on, ≤ 40 °C fan off				
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				
Security	Vibration-resistant	10~500HZ, 5G 10 min/cycle, X, Y, Z 60 min each				
	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	241*124*65mm (L*W*H)
	Packaging	1.35kg/pcs
Remarks		<ol style="list-style-type: none"> 1. All parameters are measured at 230VAC input, rated load and 25°C when not otherwise specified. 2. Ripple and noise voltages were measured on a 20MHz bandwidth oscilloscope with 0.1μ and 47μ capacitors at the end of a 12-inch twisted pair cable, measured at 20MHZ bandwidth. 3. Accuracy: Includes setting error, linear adjustment ratio and load adjustment ratio. 4. Linear Adjustment Ratio Measurement Method: Test from low voltage to high voltage at rated load 5. Load Adjustment Ratio Measurement Method: From 0% to 100% of rated load 6. Start-up time is measured at cold start, fast and frequent switching on and off may increase the start-up time. 7. When operating at altitudes higher than 2000 metres (6500ft): the operating environment needs to be reduced by 5°C / 1000 metres

01-02

Outline and Mounting Dimensions (mm)



Terminal Pin No. Assignment

Pin No	Assignment
1	AC/N(DC+)
2	AC/L(DC-)
3	FG \oplus
4,5,6	DC OUTPUT -V
7,8,9	DC OUTPUT +V

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

8-M4 Customer system

mounting holes

mounting screws: M4

Installation torque: 8Kgf.cn

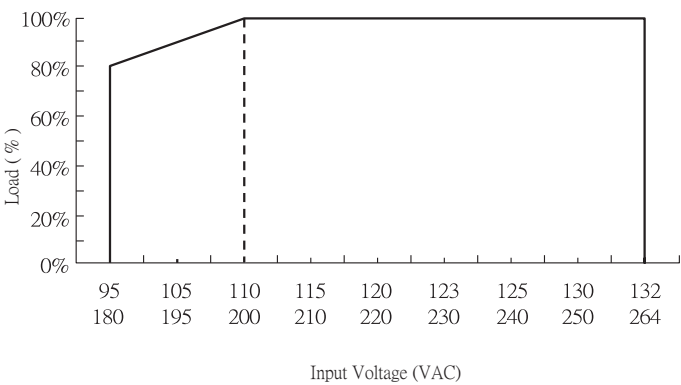
(0.8N.m) screws into the
housing is not more than
3mm

Remarks:

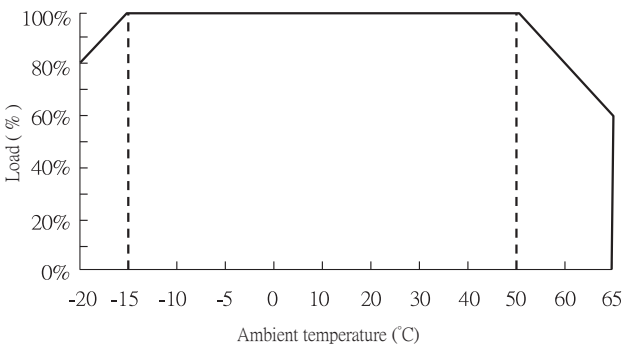
Unit: mm [inch]; unlabelled tolerance ± 0.5 [± 0.020].

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.