



Zhitao Group

ZHITAO GROUP

Industrial Power Supplies

Product Specifications

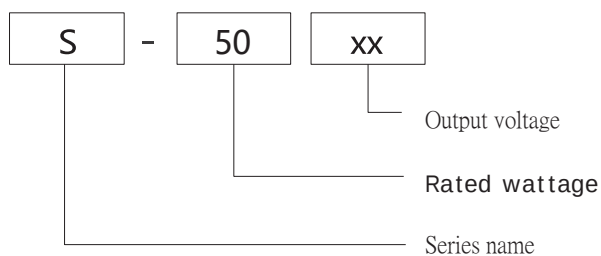
S-50

- Product Category: 50W Single Output Power Supply
- Version No.: ZTAO3.0
- Release date: 1st May 2025

Product Overview

S-50-XX series products for a 50W 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 most of the industrial applications, self-cooling heat dissipation, as well as a full range of protection, to ensure that this series of products of reliability and stability.

Product Naming



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



RoHS



Areas of Application

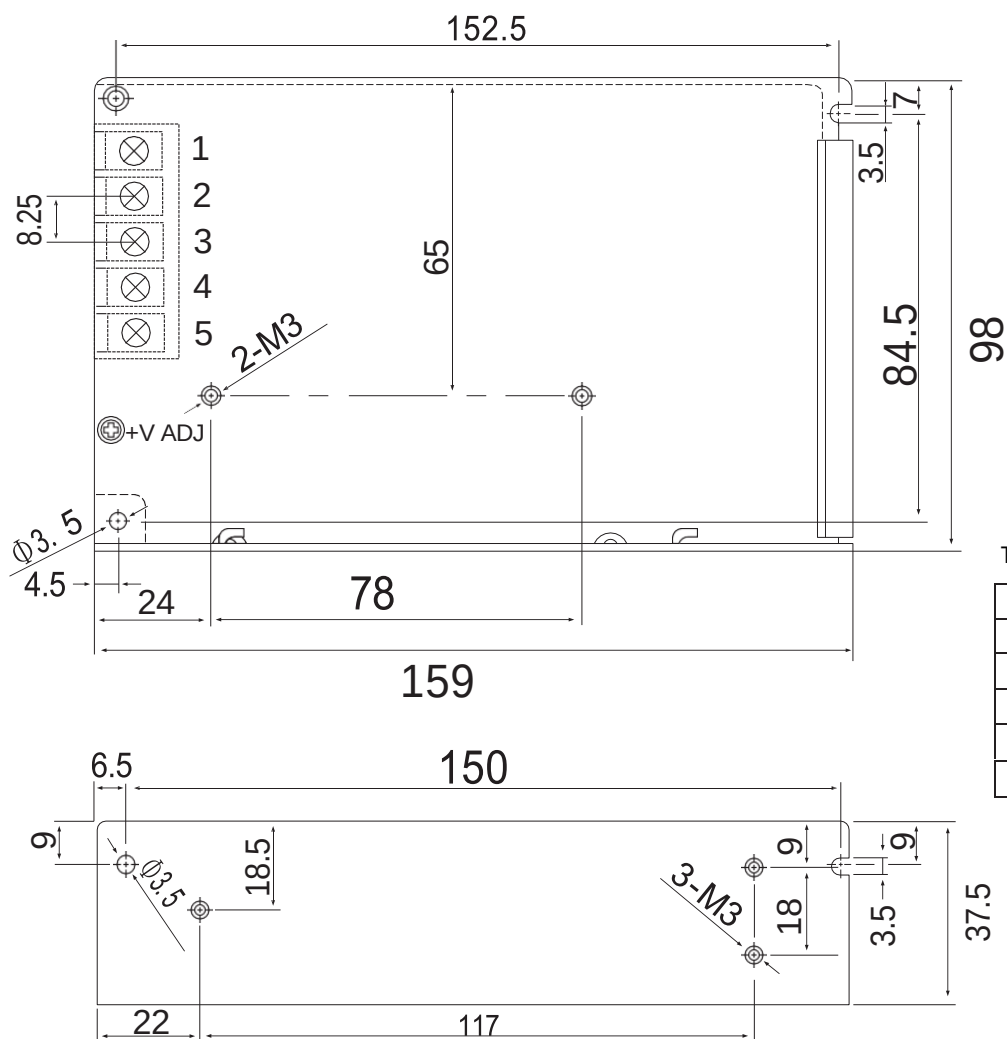
Industrial control, mechanical and electrical, electronic instruments, industrial automation, electronic equipment, semiconductor equipment, etc. (except information technology equipment)

01-01

electrical specifications

Model		S-50-5	S-50-12	S-50-15	S-50-24	S-50-36	S-50-48
Output	DC output voltage	5V	12V	15V	24V	36V	48V
	Rated current	10A	4.2A	3.4A	2.1A	1.4A	1.1A
	Current range	0~10A	0~4.2A	0~3.4A	0~2.1A	0~1.4A	0~1.1A
	Rated power	50W	50.4W	51W	50.4W	50.4W	52.8W
	Ripple & Noise (Max)	80mVp-p	80mVp-p	100mVp-p	100mVp-p	120mVp-p	120mVp-p
	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,30ms/230VAC 1200ms,30ms/115VAC(at full load)					
	Holding time	60mS/230VAC;14mS/115VAC (at full load)					
Input	Input Voltage	85~264VAC 120~370VDC					
	Input frequency	50~60HZ					
	Efficiency	80%	83%	83%	85%	86%	87%
	Input current	1.0A/115VAC 0.6A/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	Protect mode: shut down the output voltage, restart to recover						
	Operating temperature	-20℃ ~+65℃					
	Operating humidity	20~90%RH No condensation					
	Storage temperature/humidity	-40~+80℃ 10~95%RH, no condensation					
Security	Resistant to vibration	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℃ /70%RH					
Others	Product dimensions	159*98*38mm (L*W*H)					
	Packaging	0.38kg/pcs					
Remarks		1. All parameters are measured at 230VAC input, rated load and 25℃ when not otherwise specified. 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. 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℃ / 1000 metres					

Outline and Mounting Dimensions (mm)



Terminal Pin No.Assignment

Pin No	Assignment
1	AC/N(DC+)
2	AC/L(DC-)
3	FG $\oplus$
4	DC OUTPUT -V
5	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 +	

8-M3 Customer system

mounting holes mounting

screws:M3

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

screws into the housing is not more

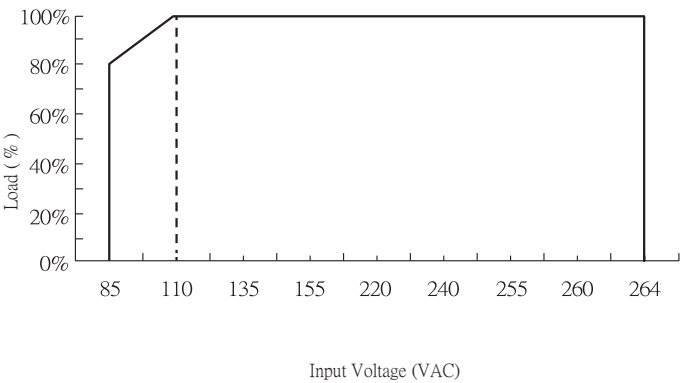
than 3mm

Remarks:

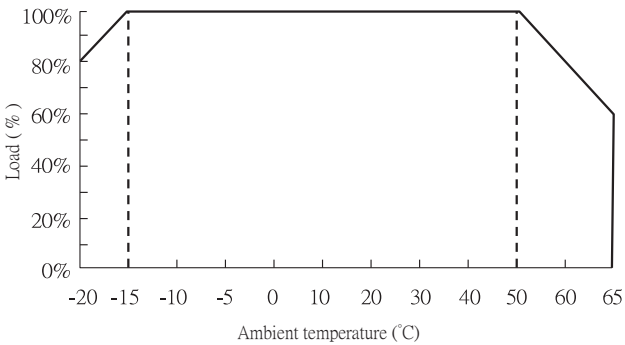
Unit: mm [inch]; unlabelled tolerance ± 0.5 [± 0.020]

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.