



# Zhitao Group

ZHITAO GROUP

Industrial Power Supplies

## Product Specifications

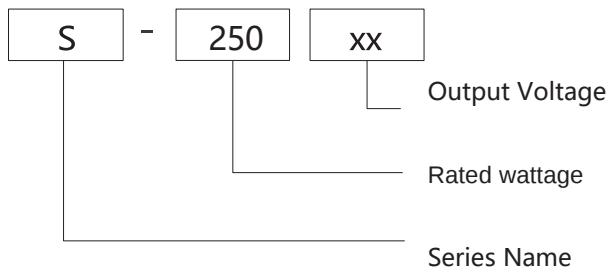
# S-250

- Product Category: 250W Single Output Power Supply
- Version No.: ZTAO3.0
- Release date: 1st May 2025

### Product Overview

S-250-XX series of products for a 250W 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, fan cooling, and a full range of protection, to ensure that this series of products of reliability and 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)



RoHS



01-01

Zhitao Power Supply - is not just a full power supply

400-888-6287

250W Single Output Power Supply  
S-250 Series



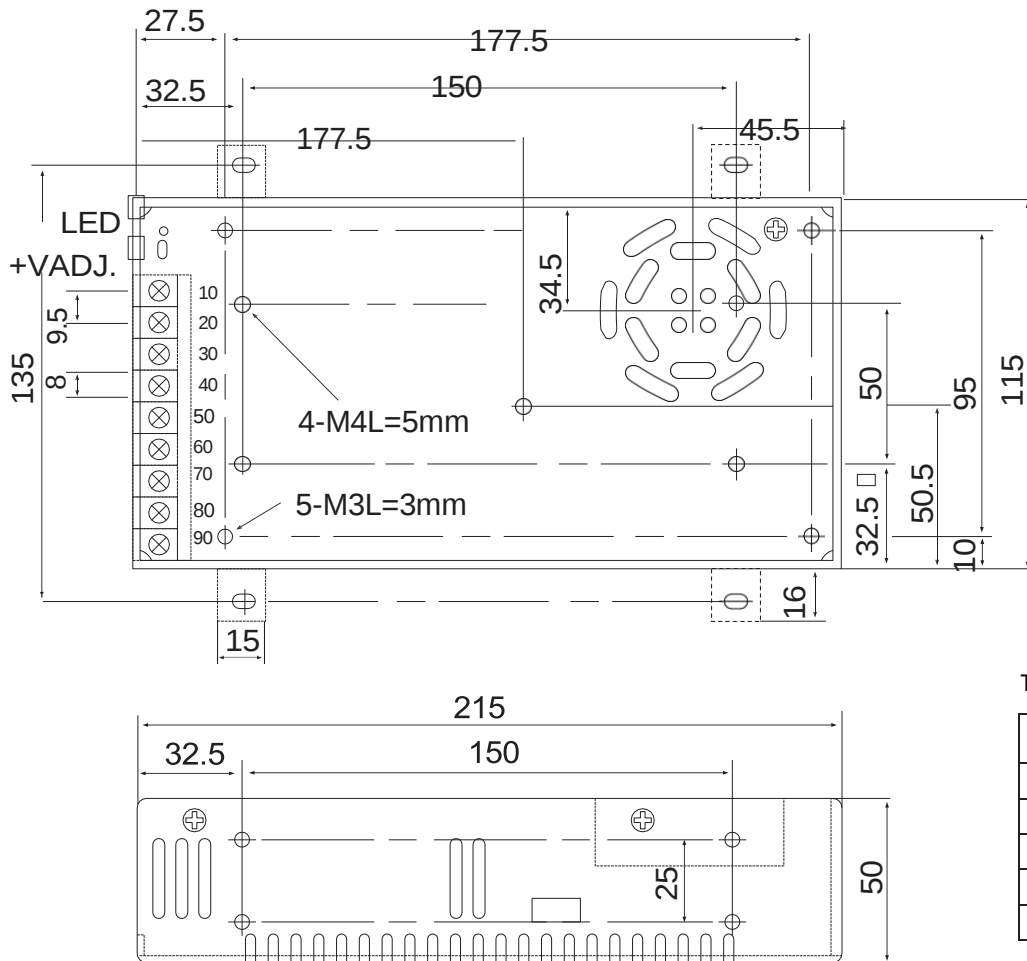
electrical specifications

| Model            |                                                | S-250-5                                                                                                               | S-250-12   | S-250-15   | S-250-24   | S-250-36                    | S-250-48   |
|------------------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|------------|------------|------------|-----------------------------|------------|
| Output           | DC output voltage                              | 5V                                                                                                                    | 12V        | 15V        | 24V        | 36V                         | 48V        |
|                  | Rated current                                  | 50A                                                                                                                   | 20A        | 16.6A      | 10A        | 7A                          | 5.3A       |
|                  | Current range                                  | 0~50A                                                                                                                 | 0~20A      | 0~16.6A    | 0~10A      | 0~7A                        | 0~5.3A     |
|                  | Rated power                                    | 250W                                                                                                                  | 240W       | 249W       | 240W       | 252W                        | 254.4W     |
|                  | Ripple & Noise (Max)                           | 120mVp-p                                                                                                              | 150mVp-p   | 150mVp-p   | 200mVp-p   | 240mVp-p                    | 240mVp-p   |
|                  | voltage adj 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,50ms/230VAC      1000ms,50ms/115VAC(at full load)                                                              |            |            |            |                             |            |
|                  | Holding time                                   | 20mS/230VAC;16mS/115VAC (at full load)                                                                                |            |            |            |                             |            |
| Input            | Input Voltage                                  | 95~132VAC/ 185~264VAC selectable by switch                                                                            |            |            |            | 260~370VDC(switc on 230VAC) |            |
|                  | Input frequency                                | 50~60HZ                                                                                                               |            |            |            |                             |            |
|                  | Efficiency                                     | 78%                                                                                                                   | 86%        | 86%        | 88.5%      | 89%                         | 90%        |
|                  | Input current                                  | 5.0A/115VAC    2.0A/230VAC                                                                                            |            |            |            |                             |            |
|                  | Leakage current                                | < 1mA/240VAC                                                                                                          |            |            |            |                             |            |
| Protection       | overload protection                            | 125~150% of rated power                                                                                               |            |            |            |                             |            |
|                  |                                                | Protection mode: +VO drops to the undervoltage point, and automatically recovers when abnormal conditions are removed |            |            |            |                             |            |
|                  | 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 |
|                  |                                                | 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.)                      | RTH3 ≥ 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                                                                                   |            |            |            |                             |            |
|                  | Vibration-resistant                            | 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 | 215*115*50mm ( L*W*H )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|         | Packaging          | 1.0kg/pcs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Remarks |                    | <ol style="list-style-type: none"> <li>1. All parameters are measured at 230VAC input, rated load and 25°C when not otherwise specified.</li> <li>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.</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 (6500 ft): the operating environment needs to be reduced by 5°C/1000 metres</li> </ol> |

01-02

## Outline and Mounting Dimensions (mm)



Terminal Pin No.Assignment

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

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

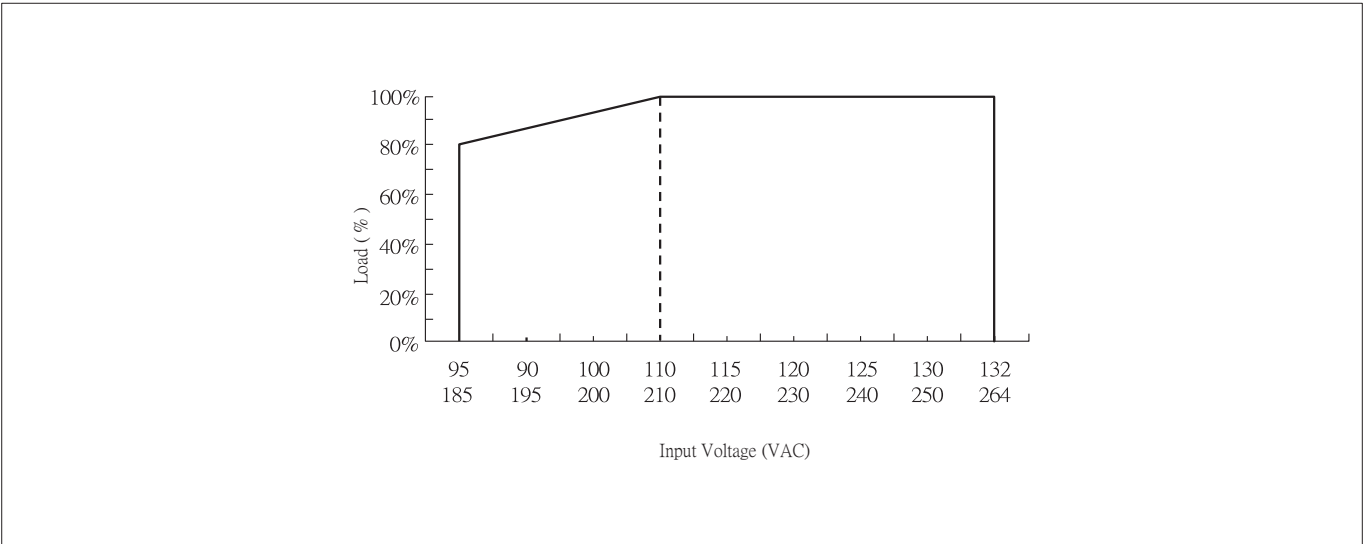
Remarks:

Unit: mm [inch]; unlabelled tolerance  $\pm 0.5$  [ $\pm 0.020$ ].

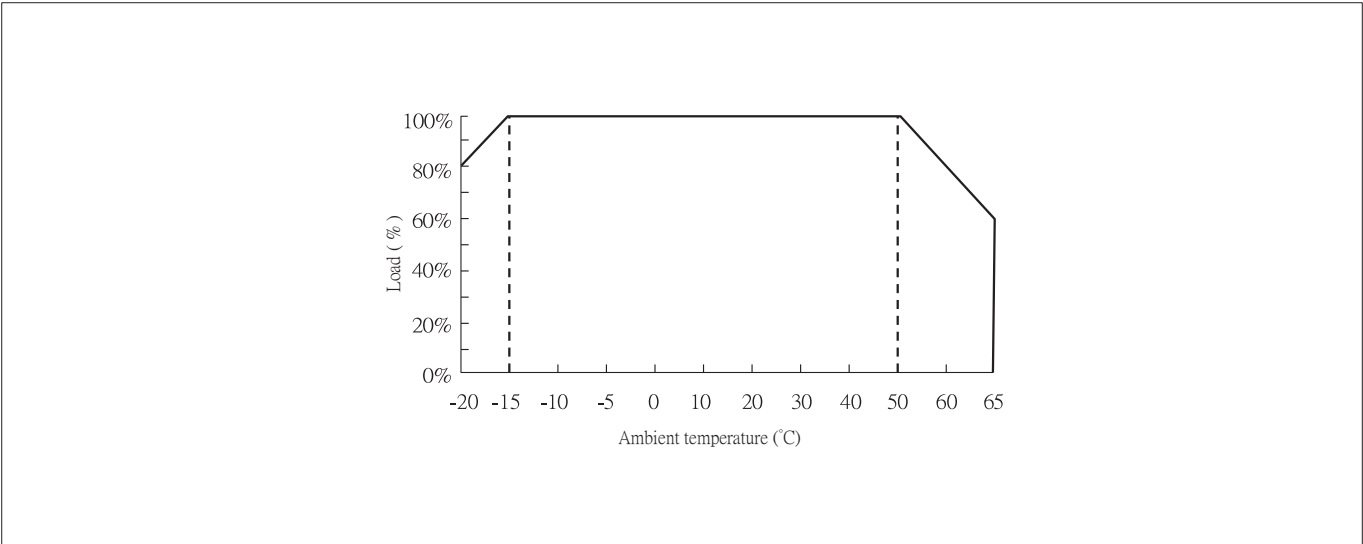


Characteristic Curve

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.