



# Zhitao Group

ZHITAO GROUP

Industrial Power Supplies

## Product Specifications

# S-400

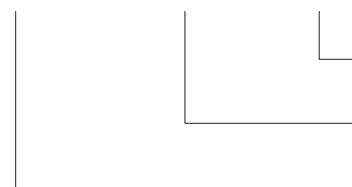
- Product Category: 400W Single Output Power Supply
- Version No.: ZTAO3.0
- Release date: 1st May 2025

### product overview

S-400-XX series products for a 400W 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, and a full range of protection, to ensure that this series of products of reliability and stability.

### Model encoding

S - 400 xx



Output Voltage

Rated wattage

Series Name



### 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



RoHS



### areas of application

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

01-01

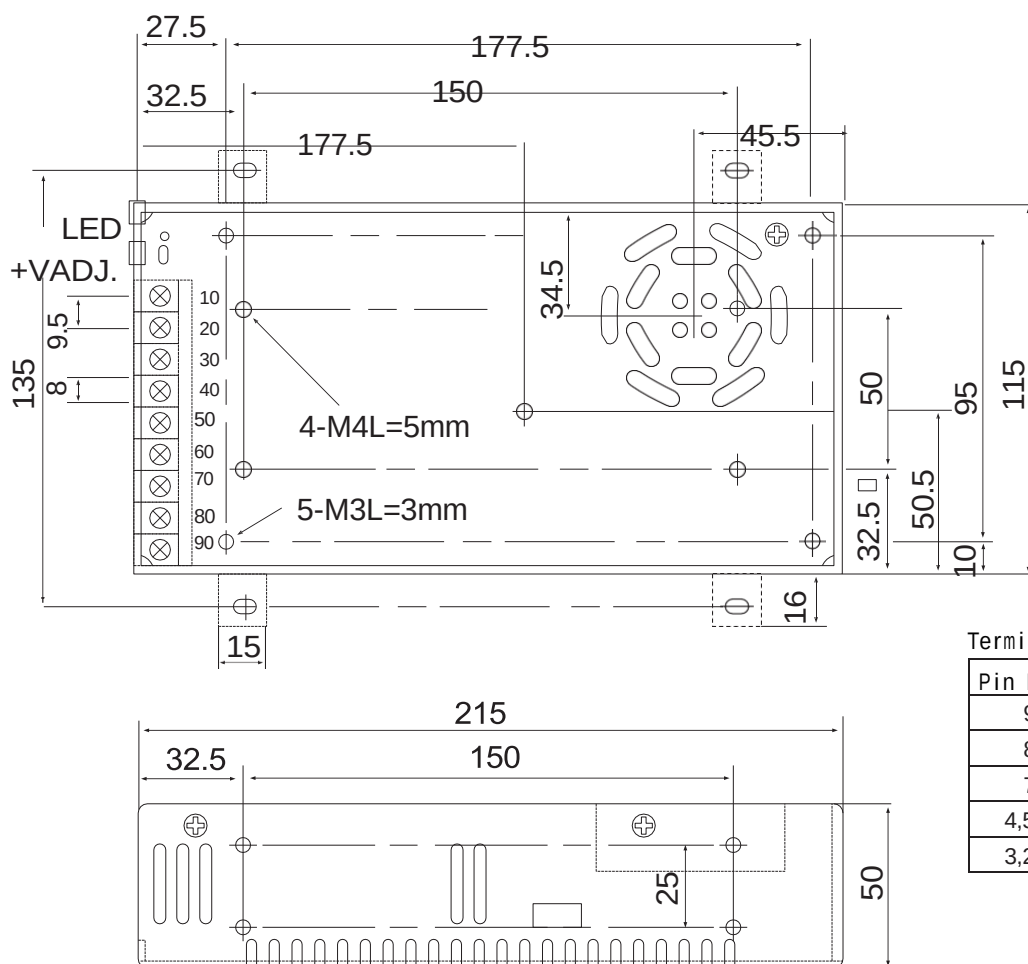
## electrical specifications

| Model                       |                              | S-400-12                                                                                                                                         | S-400-15   | S-400-24   | S-400-36   | S-400-48   |
|-----------------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|------------|------------|
| Output                      | DC output voltage            | 12V                                                                                                                                              | 15V        | 24V        | 36V        | 48V        |
|                             | Rated current                | 33A                                                                                                                                              | 26.5A      | 16.6A      | 11A        | 8.3A       |
|                             | Current range                | 0~33A                                                                                                                                            | 0~26.5A    | 0~16.6A    | 0~11A      | 0~8.3A     |
|                             | Rated power                  | 396W                                                                                                                                             | 397.5W     | 398.4W     | 396W       | 398.4W     |
|                             | Ripple & Noise(max)          | 150mVp-p                                                                                                                                         | 150mVp-p   | 200mVp-p   | 240mVp-p   | 240mVp-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         | 1500ms,30ms/230VAC 1500ms,30ms/115VAC (at full load)                                                                                             |            |            |            |            |
|                             | Holding time                 | 20mS/230VAC 15mS/115VAC (at full load)                                                                                                           |            |            |            |            |
| Input                       | Input Voltage                | 100~132 VAC/190~264 VAC selectable via switch 266~370VDC(switc on 230VAC)                                                                        |            |            |            |            |
|                             | Input frequency              | 50~60HZ                                                                                                                                          |            |            |            |            |
|                             | Efficiency                   | 85%                                                                                                                                              | 85%        | 87%        | 87%        | 88%        |
|                             | Input current                | 6.0A/115VAC 3.0A/230VAC                                                                                                                          |            |            |            |            |
|                             | Leakage current              | < 1mA/240VAC                                                                                                                                     |            |            |            |            |
| Protection                  | overload protection          | 105~135% of rated power<br>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 Characteristics | 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                                                                  |            |            |            |            |

|            |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Other<br>s | Product<br>dimensions | 215*115*50mm ( L*W*H )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|            | Packaging             | 1.0kg/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 0.1μ and 47μ 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> |

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) |
| -Vo    | DC output - |                                               |
| -Vo    | DC output - |                                               |
| -Vo    | DC output - |                                               |
| +Vo    | DC output + |                                               |
| +Vo    | DC output + |                                               |
| +Vo    | DC output + |                                               |

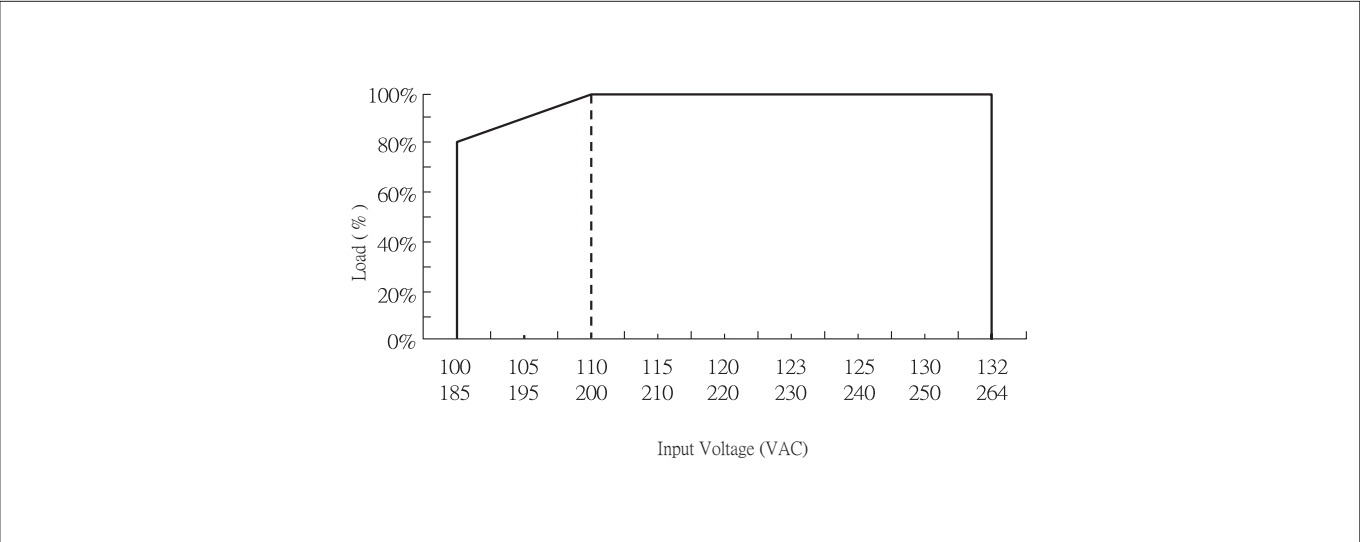
8-M4 Customer system  
mounting holes  
mounting screws: M4  
Installation torque: 8Kgf.cn  
(0.8N.m) screws into the  
housing is not more than  
3mm

Remarks:

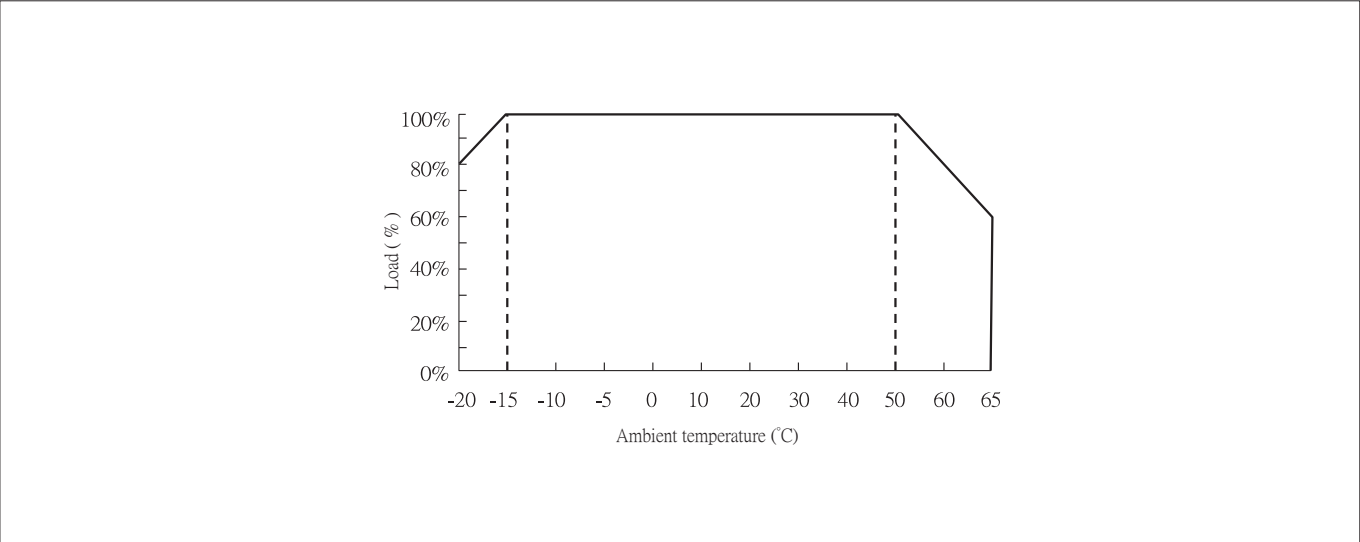
Unit: mm [inch]; unlabelled tolerance  $\pm 0.5$  [ $\pm 0.020$ ].

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.