

**SHENZHEN ATTEN TECHNOLOGY CO., LTD.**

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- Soldering Iron ●Soldering Station ●Hot Air Rework Station
- Multi-function Rework System ●BGA Rework System
- Regulated DC Power Supply ●Switching DC Power Supply
- Programmable Power Supply

# ATTEN

## TPR3003T/3005T

REGULATED DC POWER SUPPLY

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**User's Manual**

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CBN017908(E)

**SHENZHEN ATTEN TECHNOLOGY CO., LTD.**

**Thanks for using our products, please read this manual thoroughly before operation.**

## OVERVIEW

**MODEL: TPR3003T/TPR3005T** regulated DC power supply was design with high reliability which features both constant voltage and constant current function, current and voltage limiting, short circuit protection, overheating protection, over voltage protection and critical electronic component monitoring to keep this product with high performance for a long time. The power supply is suitable for the laboratories, electronic and communication equipment maintenance, production line, scientific research and education fields. The device will alarm, shut down output and back to preset state if over voltage protection triggered or it is out of control. This product have well designed protection in case of device's burning.

## SPECIFICATION

### 1. Rated working conditions and external dimension

#### • Input AC voltage

AC 220V  $\pm$  10%, Frequency 50Hz (default) (Customizable for 110V+10% 60Hz)

#### • The working conditions

Temperature range: 0°C~40°C

Relative humidity less than 80%

#### • Storage conditions

Temperature range: -20°C~80°C

Relative humidity less than 80%

#### • Dimension

(L) 270X (W) 125 X (H) 170mm

#### • Accessories

Manual 1 PCS

Main station 1 PCS

Power cable 1 PCS

### 2. Technical specification

• Output voltage from 0 to 30V, continuous adjustable.

• Output current from 0 to rated current, continuous adjustable.

#### • Line regulation:

CV less than 0.01 %+3 mV

CC less than 0.2%+1 mA

### Warranty

This product warranty period cover 24 months from the day this product purchased. We will make free maintenance for any quality problem itself if this warranty and receipt provided. We will repair and return your device within 2 workdays after receiving repairing-required device.

Note: please attach this warranty card if you want your device to be repaired without charge.

### Certificate of Product

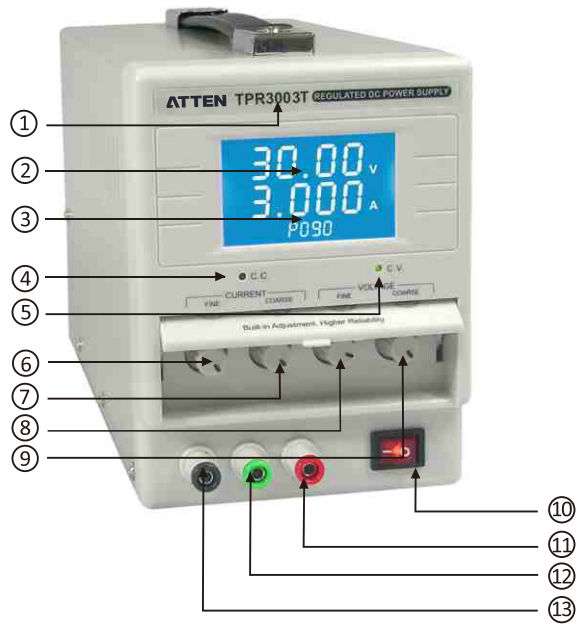
Model: \_\_\_\_\_ Product NO.: \_\_\_\_\_

QC: \_\_\_\_\_ Production date: \_\_\_\_\_

Sales clerk: \_\_\_\_\_ Sale date: \_\_\_\_\_

# PRODUCT PICTURES AND INSTRUCTIONS

## TPR3003T/TPR3005T overview



- |                              |                              |
|------------------------------|------------------------------|
| ① Product model              | ⑧ Voltage fine tuning knob   |
| ② Voltage display            | ⑨ Voltage coarse tuning knob |
| ③ Current display            | ⑩ The power switch           |
| ④ Constant current indicator | ⑪ anode terminal (+)         |
| ⑤ Constant voltage indicator | ⑫ Ground (GND) terminal      |
| ⑥ Current fine tuning knob   | ⑬ Negative terminals (-)     |
| ⑦ Current coarse tuning knob |                              |

- Load regulation:** CV less than 0.01 % + 5mV ( $I \leq 3A$ )  
 CC less than 0.2 % + 5mA ( $I \leq 3A$ )  
 CV less than 0.01 % + 7mV ( $I > 3A$ )  
 CC less than 0.2 % + 7mA ( $I > 3A$ )
- Ripple and noise:** CV  $\leq 0.5mVr.m.s$  ( $I \leq 3A$ )  
 CC  $\leq 3mAr.m.s$  ( $I \leq 3A$ )  
 (5Hz-1MHz) CV  $\leq 1mVr.m.s$  ( $I > 3A$ )  
 CC  $\leq 5mAr.m.s$  ( $I > 3A$ )

**Voltage accuracy:**  $\pm 0.5\%rdg + 2digits$

**Current accuracy:**  $\pm 0.5\%rdg + 2digits$

- **High voltage test:** Leakage current  $\leq 1mA$  (Test conditions: Input high AC voltage: 1700V, Time: 2 seconds).
- **Insulation resistance:** Insulation resistance more than 100M  $\Omega$  (Test conditions: Input high DC voltage: 500 VDC, Time: 5 seconds).

## INSTRUCTIONS

### 1. Note

#### (1) AC Input

AC 220V  $\pm 10\%$ , 50Hz

(110V + 10% 60Hz will be marked on the rear)

#### (2) Heat sink

Do not use this product as surrounding temperature over 40°C and Keep enough space for heating-sink fan in back end.

#### (3) Overheating protection

This product is well designed with over-heating protection to keep components inside from burning even in abnormal states. The device will shut down input automatically for transformer inside being over heated. The device will shut down output automatically to avoid power component inside being over heated. The device will back to preset state automatically after it has cooled down to normal working temperature.

### 2. Limiting Current Settings

- (1) Check maximum safe current for loads.
- (2) Make short circuit between output terminal (cathode and anode)
- (3) Rotate voltage control knob until CC indicator light up.
- (4) Adjust current knob to the current needed after the CC indicator light up.

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- (5) Do not change after the current knob current (overload protection) Setted.
  - (6) Take a short line off to enter working condition.

### 3.Constant voltage/current characteristics

This power supply features voltage/current auto-switching, it can do conversion between constant voltage and constant current continually according load changes.

For example, if the power load working in constant voltage mode, the device output constant output voltage. As the load increases, output voltage will remain constant until it reaches preset current limiting value. As current limiting value reached, the device will output constant current with output voltage decreased accordingly while LED indicator will indicate the switching process. Similarly, switching from constant current to constant voltage is triggered for load decreasing.CV LED indicator light up for constant voltage output and CC LED indicator light up for constant current output.

### 4. Operating methods

- Keep switch “OFF”.
- Ensure input voltage correct.
- Plug into outlet.
- Switch power on.
- Rotate “VOLTAGE” and “CURRENT” knob to the value required.
- Connects loads to output terminals.
- Connect grounding terminal for high voltage output required.which also can reduce ripples

## Maintenance

### Fuse replaced

For blown fuse, the device will stop working and constant current,constant voltage indicator light off. Do not open fuse box before find actual causes and replace the fuse.

## INSTALLATION AND USE AND MAINTENANCE INSTRUCTIONS

1. After opening package, please check carefully whether specifications complies with test report. Please contact us for inconformity to negotiate a proper solution.
2. Make sure outside casing is welled grounded before using it and never connect casing to neutral line.
3. Please check all connections before switching power on input and output terminal

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4. To achieve proper heat sink, please place the device in the environment of proper air convection and never put objects on this device.
  5. This power is applicable to resistant loads, make a special note in order if user need use it for capacity loads or resistant loads. please contact the sales for a proper solution if user miss-recognized the loads property.
  6. Please pay more attention to safety for high voltage situations and never touch dangerous parts of the device until 10 minutes after stop using the devices.
  7. Please contact us first for malfunctions and we will replace a new one or repair it for different conditions. Please do not disassemble, modify it which will make the causes finding process more difficult and bring more loss for you and our company.