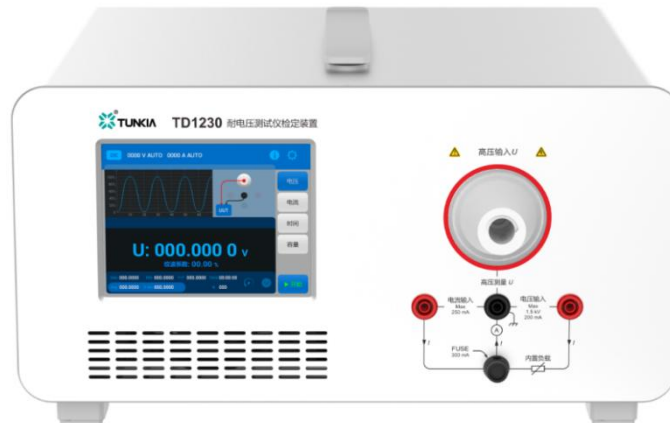


# TD1230 Verification Device for Withstanding Voltage Tester



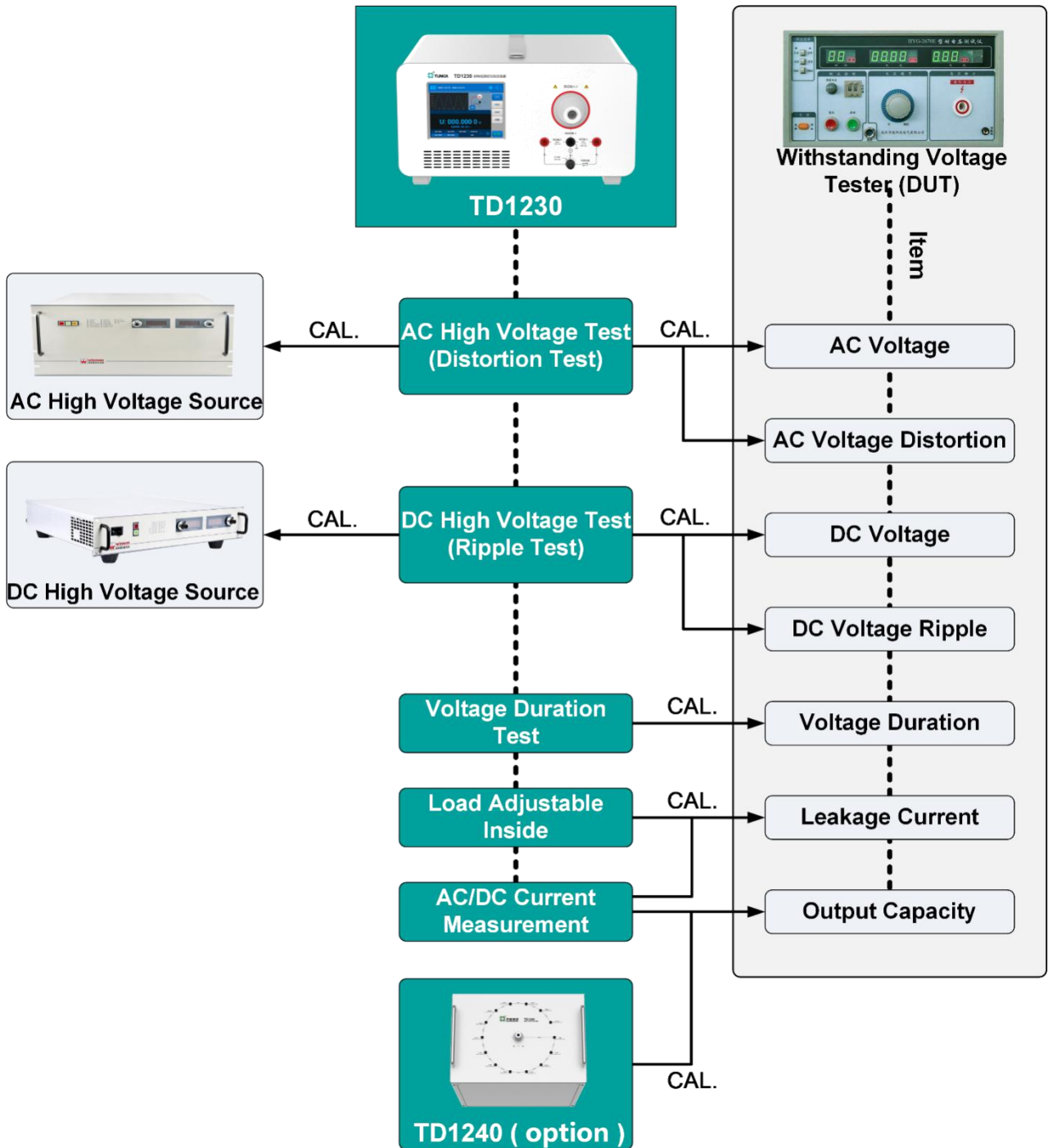
## 1. Summary

TD1230 applied to calibrate AC/DC withstanding voltage tester, withstanding voltage part of safety performance comprehensive tester, withstanding voltage part of insulation withstanding voltage tester and etc.

## 2. Features

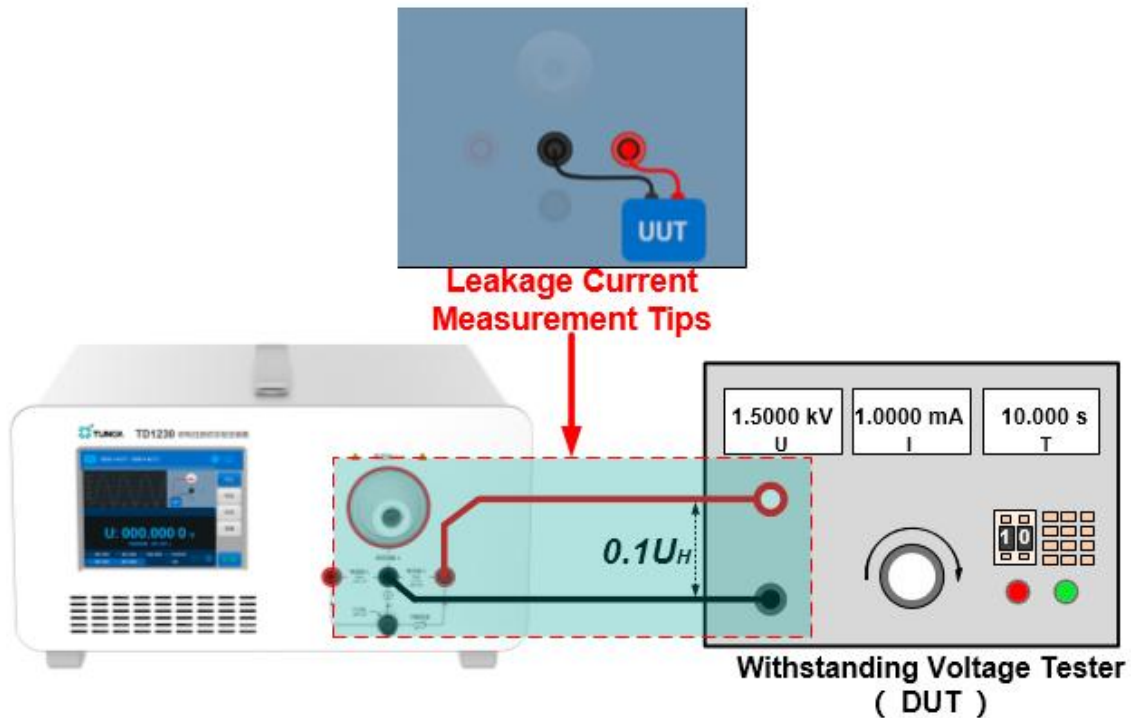
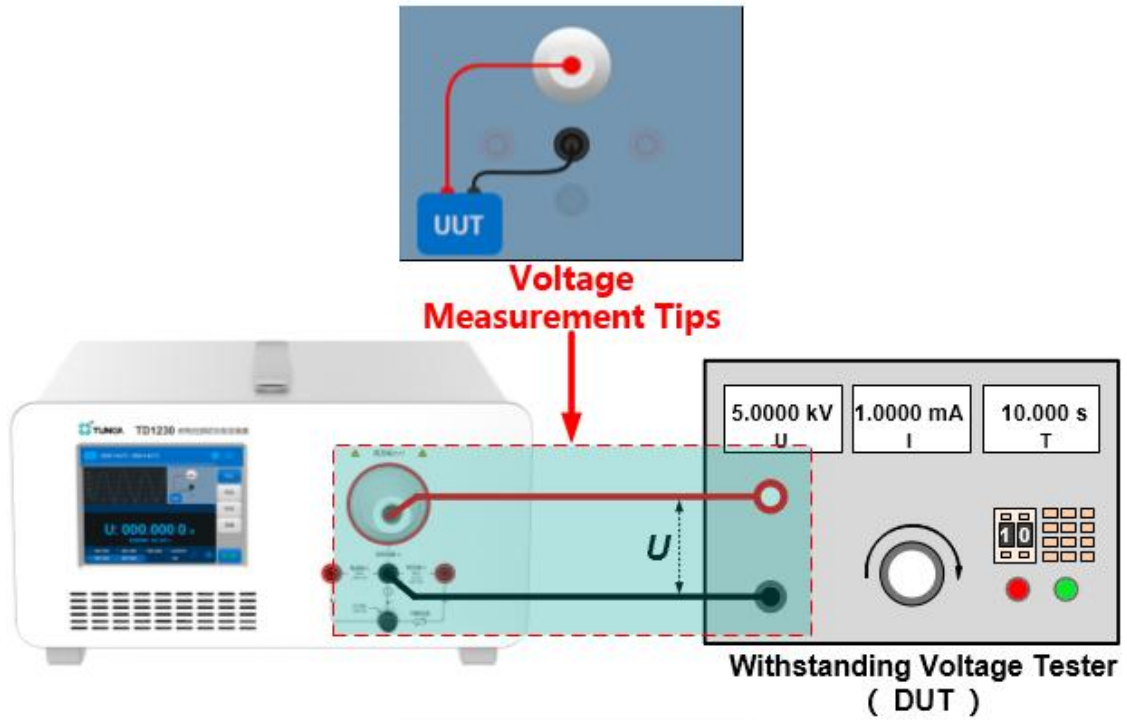
- AC/DC voltage measurement: 100 V~15 kV.
- AC/DC current measurement: 0.1 mA~250 mA.
- Distortion / Ripple function and voltage duration time test function.
- Built-in adjustable resistive load with fineness of 1 k $\Omega$ .
- Optional high power load box (TD1240) help calibrate the output capacity.
- Oscilloscope and data statistical analysis function.
- LCD touch screen.
- Setting output values by keys.
- Notification of wire connection.

### 3. Applications



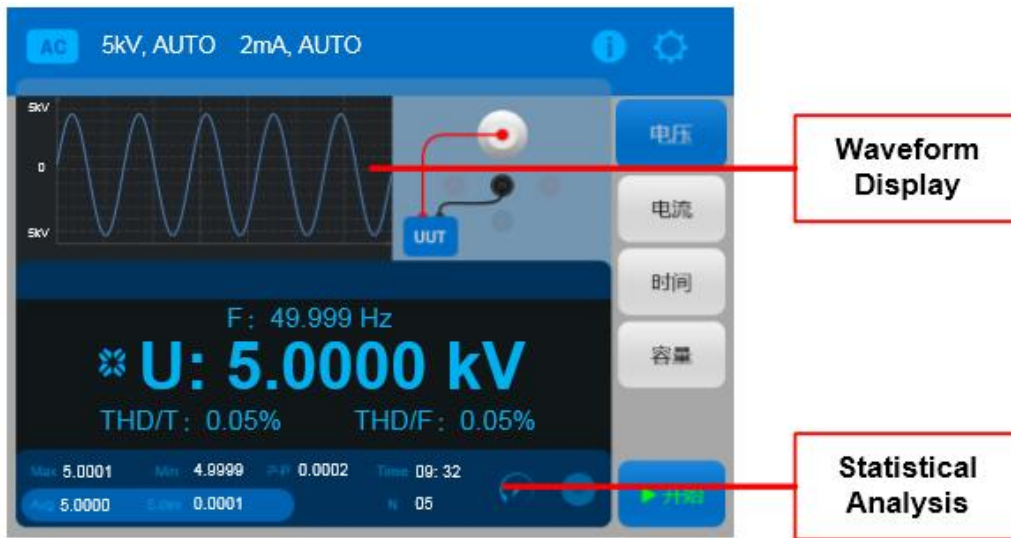
## 4. Characteristics

### ☆ Connection Tips



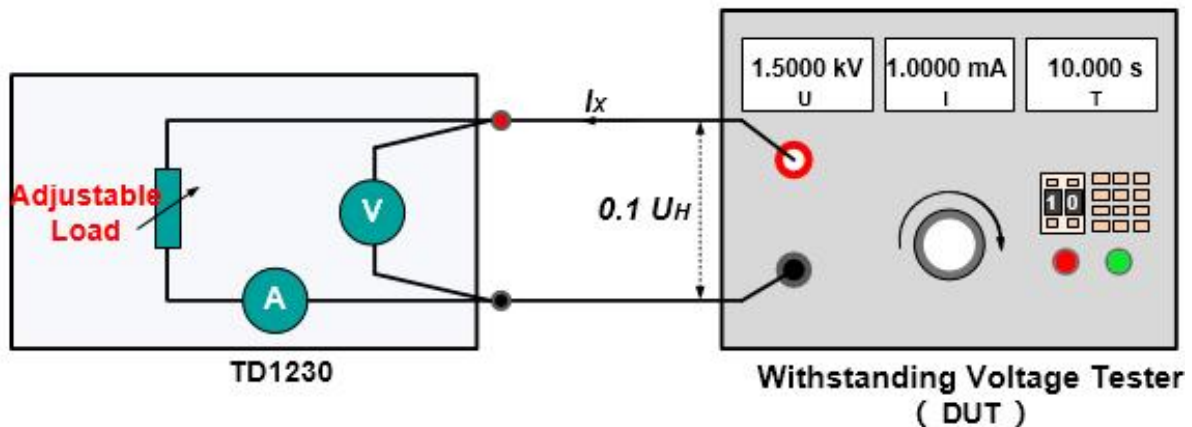
- Calibrating the voltage required high input voltage  $U_H$ ; but for current, only required  $0.1 U_H$ .
- Clear display connection tips to prevent failures or damage.

### ☆ Waveform Display and Statistical Analysis



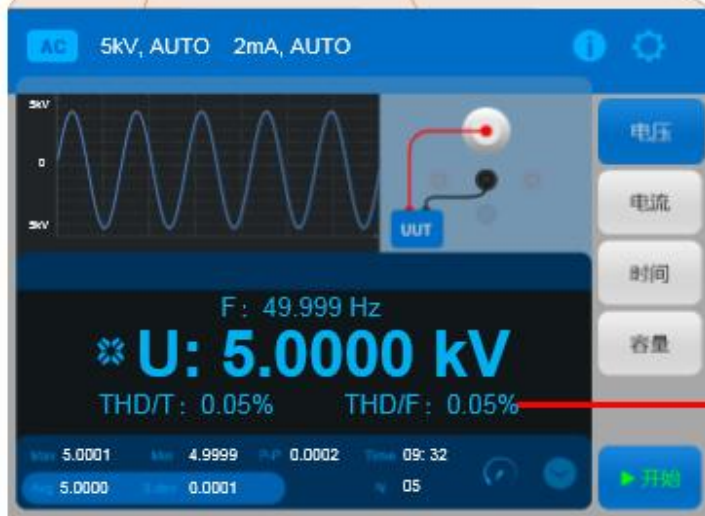
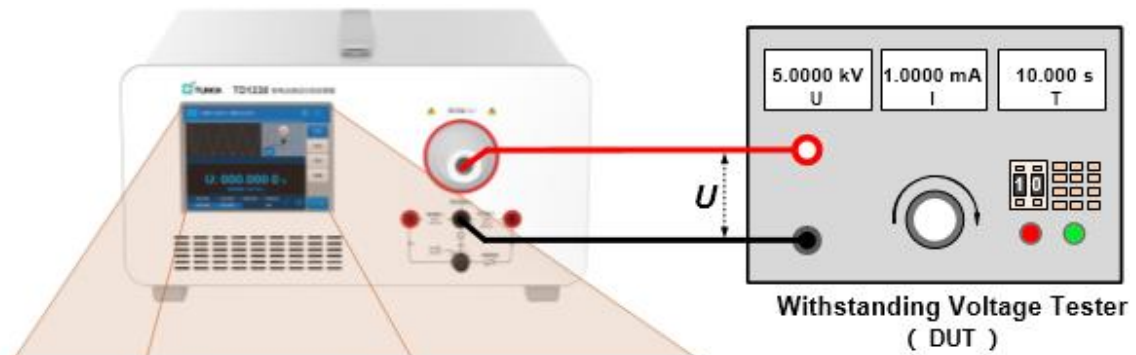
- Display waveform in real time, and analysis the waveform distortion.
- Analysis the max, min, average and standard deviation etc.

### ☆ Adjustable Resistors for the Verification of Current



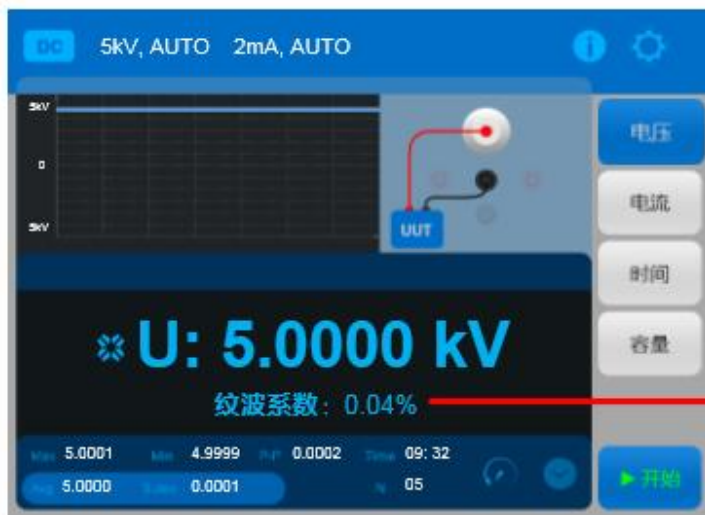
- Adjustable load of 6 kΩ~8MΩ with fineness of 1 kΩ, External load is also supported.
- The max input voltage at the current measurement terminal can reach 1500 V.

☆ Measurement of Distortion or Ripple



(a) AC Voltage Test Interface

AC Distortion

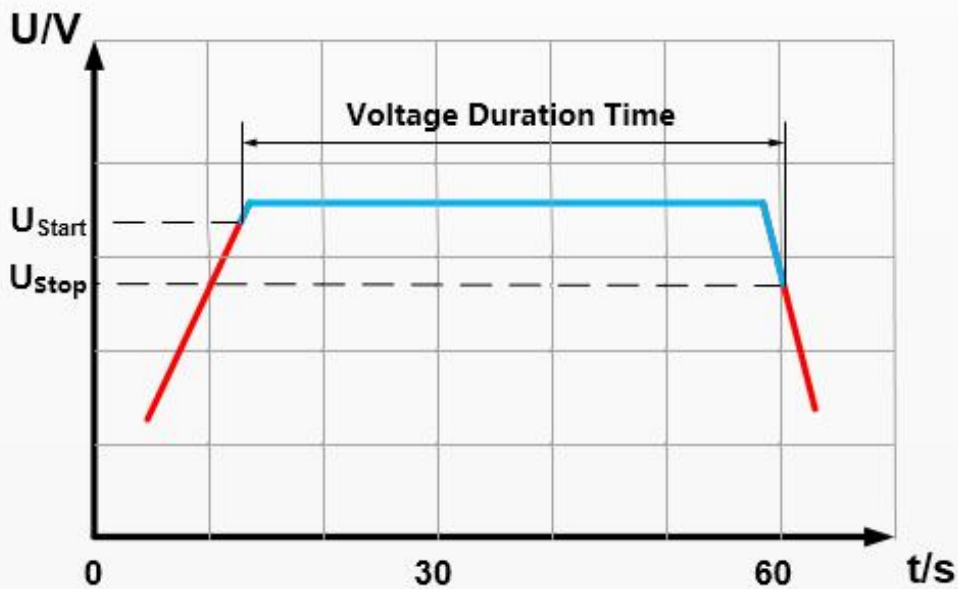
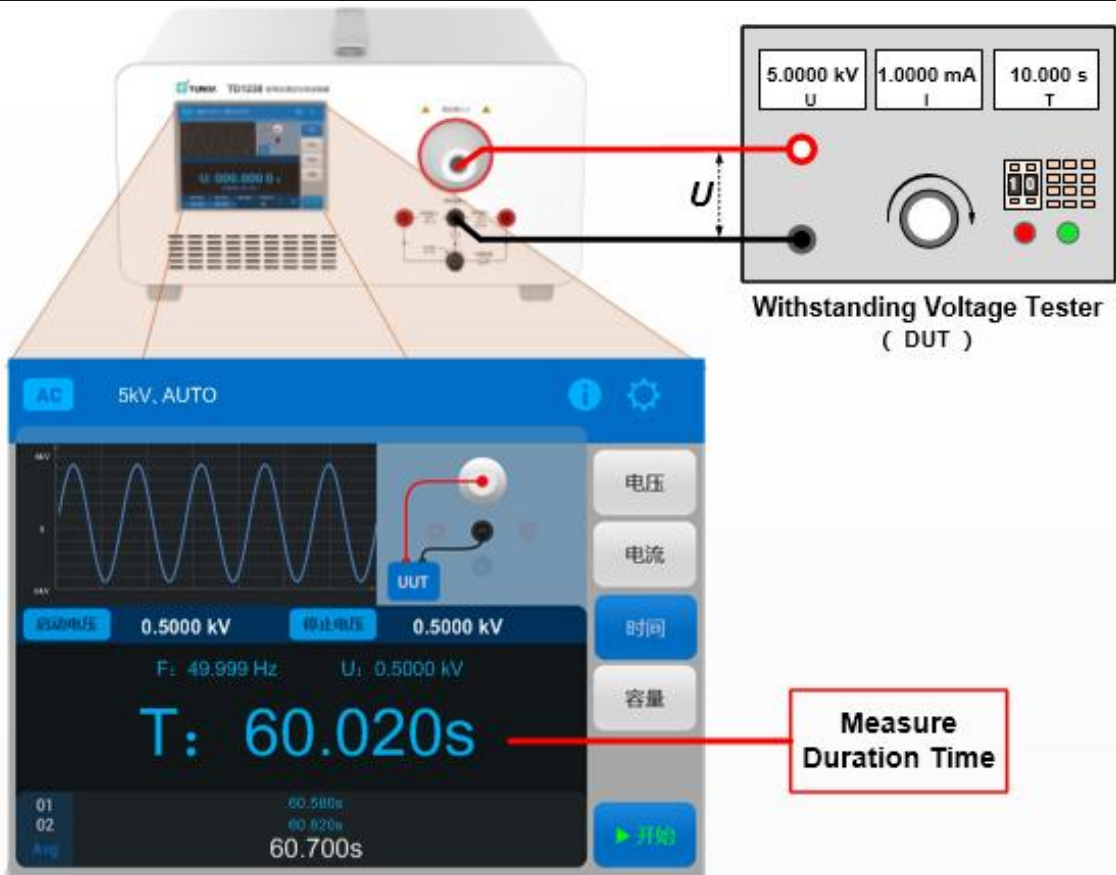


(b) DC Voltage Test Interface

DC Ripple

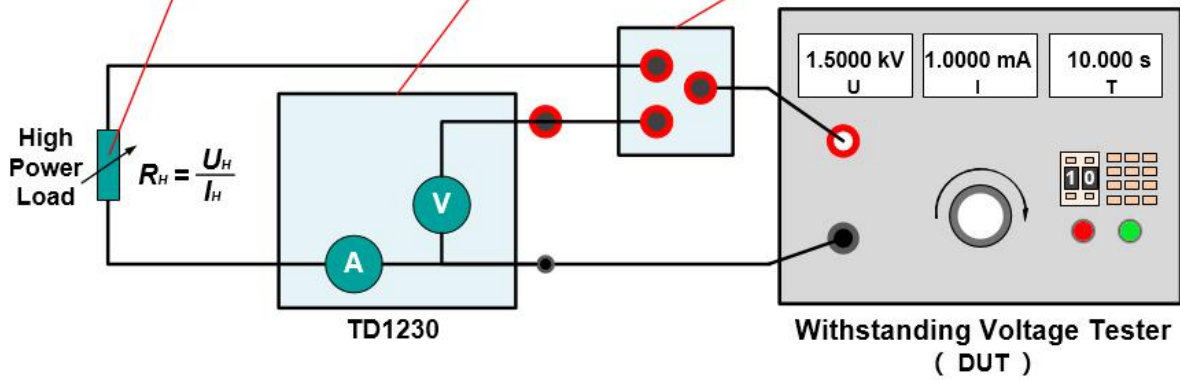
- Integrated distortion and ripple measurement functions can direct display.

☆ Voltage Duration Time Measurement



- Testing Voltage duration time, the device automatically detects the output voltage of the tester, record the time from  $U_{Start}$  to  $U_{Stop}$ .

☆ Optional High Power Load Box for Output Capacity



- Optional TD1240 load box for withstanding voltage tester (or load box with other specifications) to verify the actual output capacity.

## 5. Specifications

### 5.1 AC/DC Voltage Measurement

| Range                | Resolution | Accuracy  |            |
|----------------------|------------|---|------------|
|                      |            | ±(ppm of reading + ppm of range) <sup>[1]</sup> |            |
|                      |            | Class 0.5                                       | Class 0.2  |
| 5 kV                 | 0.1 V      | 4000 + 1000                                     | 1800 + 200 |
| 10 kV <sup>[2]</sup> | 1 V        | 4000 + 1000                                     | 1800 + 200 |
| 15 kV <sup>[2]</sup> | 1 V        | 4000 + 1000                                     | 1800 + 200 |

Note [1] : (ppm = parts per million) (e.g., 10ppm = 0.001%).

Note [2]: 10 kV, 15 kV ranges are selectable

- Measuring range: 100 V to 15 kV, 5-bit display, manual/automatic range switching
- Input impedance: 50 MΩ, true RMS response for AC, average response for DC

### 5.2 AC/DC Current Measurement

| Range  | Resolution | Accuracy  |            |
|--------|------------|---|------------|
|        |            | ±(ppm of reading + ppm of range) <sup>[1]</sup> |            |
|        |            | Class 0.5                                       | Class 0.2  |
| 2 mA   | 0.1 μA     | 4000 + 1000                                     | 1800 + 200 |
| 20 mA  | 1 μA       | 4000 + 1000                                     | 1800 + 200 |
| 200 mA | 10 μA      | 4000 + 1000                                     | 1800 + 200 |

- Measurement range: 0.1 mA to 250 mA, 5-digit display, manual/automatic range switching
- Built-in adjustable resistive load of 6 kΩ~8MΩ with fineness of 1 kΩ
- True RMS response for AC, average response for DC

### 5.3 Other Functions

| Parameters            | Range        | Resolution | Accuracy   |
|-----------------------|--------------|------------|--|
| AC Frequency          | 45 Hz~65 Hz  | 0.1 Hz     | ± 0.2%   |
| AC Voltage Distortion | 0.5%~10%     | 0.01%      | ± 0.5%   |
| DC Voltage Ripple     | 0.1%~30%     | 0.01%      | ± 0.2%   |
| Voltage Duration Time | 0.1 s~1000 s | 0.001 s    | AC: ± (0.2%*RD + 2 periods)<br>DC: ± (0.2%*RD + 40 ms) |



## 6. General Specifications

|                                |   |
|--------------------------------|---|
| <b>Power Supply</b>            | AC ( 220 ± 22 ) V, ( 50 ± 2 ) Hz  |
| <b>Temperature Performance</b> | Working temperature: 0°C~45°C;<br>Storage temperature: -20°C~70°C   |
| <b>Humidity Performance</b>    | Working humidity: < 80% @ 30°C, < 70% @ 40°C, < 40% @ 50°C<br>Storage humidity: (20%~80%) R·H, non-condensing |
| <b>Interface</b>               | RS232   |

## 7. Ordering Information

