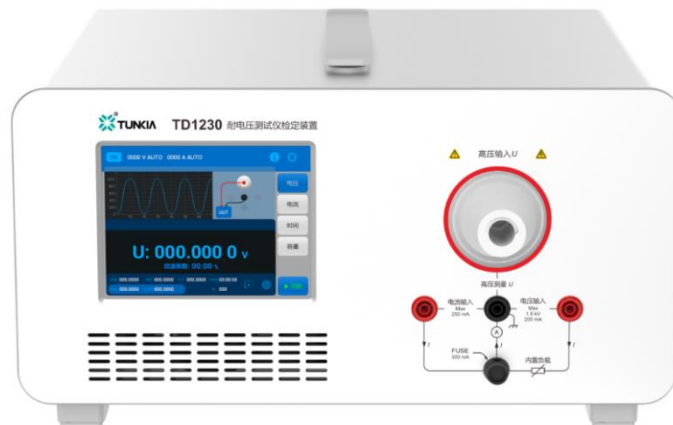


TD1230 Verification Device for Withstanding Voltage Tester



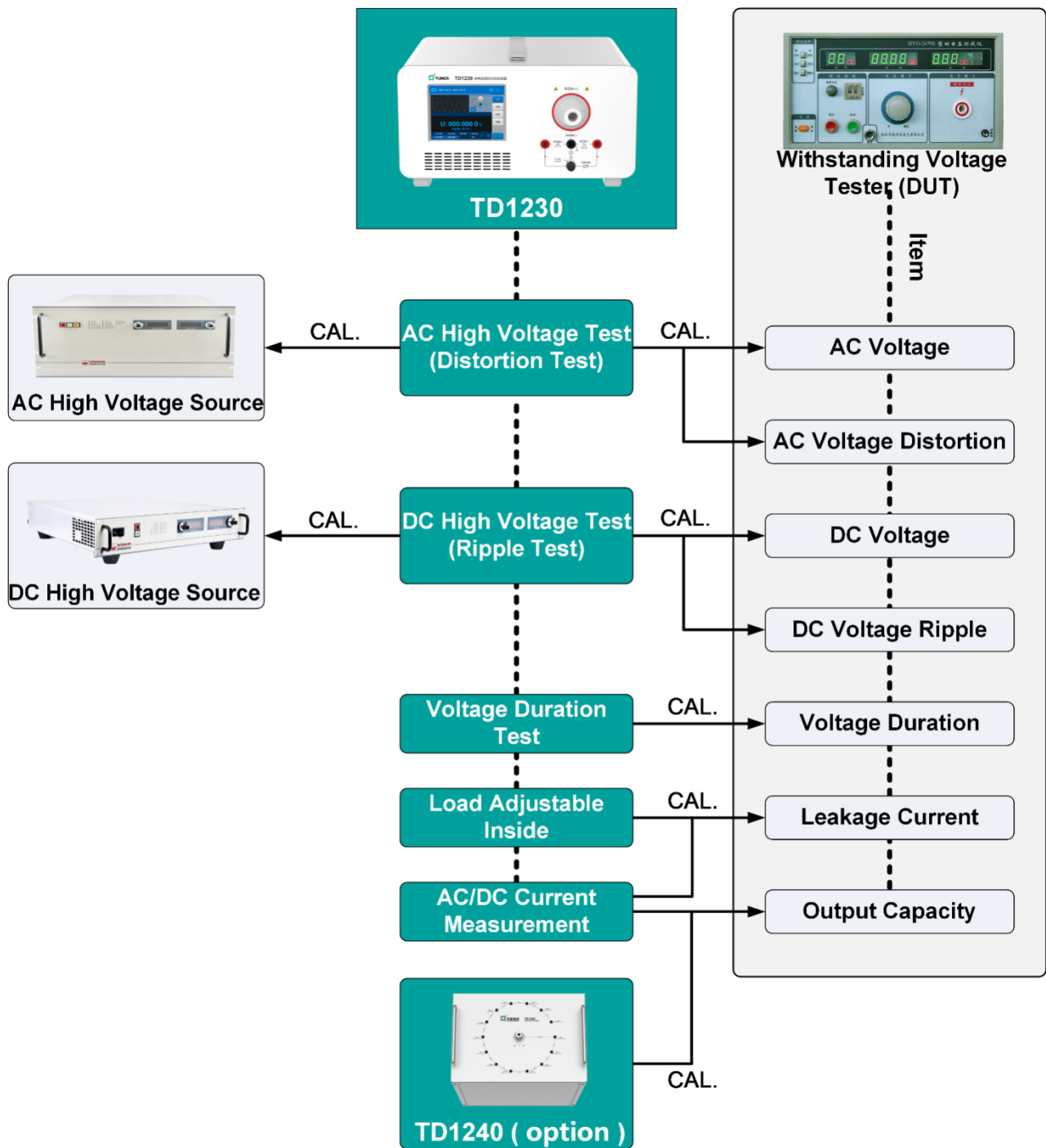
1. Summary

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

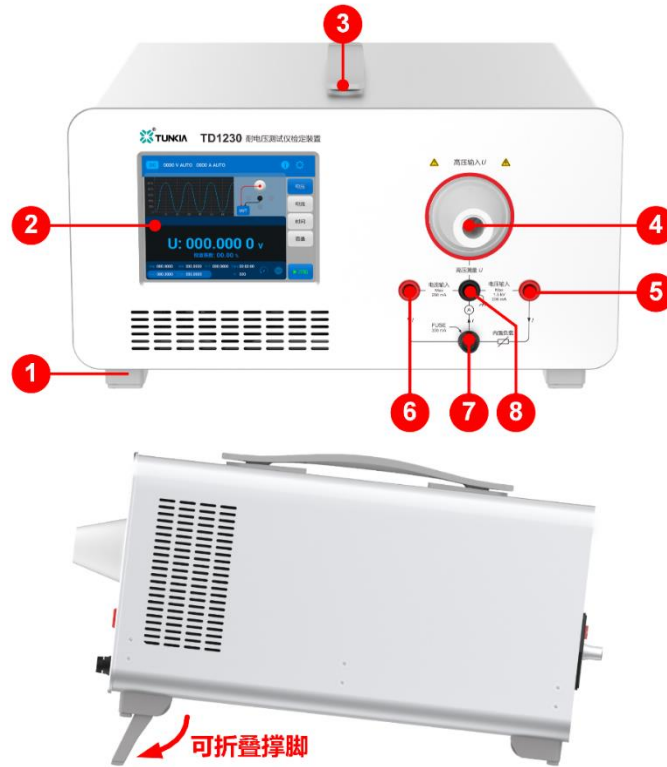
- AC/DC voltage measurement: 100 V~15 kV.
- AC/DC current measurement: 0.1 mA~250 mA.
- Distortion / Ripple function and voltage duration time test function.
- Built-in adjustable resistive load with fineness of 1 k Ω .
- Optional high power load box (TD1240) help calibrate the output capacity.
- Oscilloscope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

3. Applications



4. Appearance

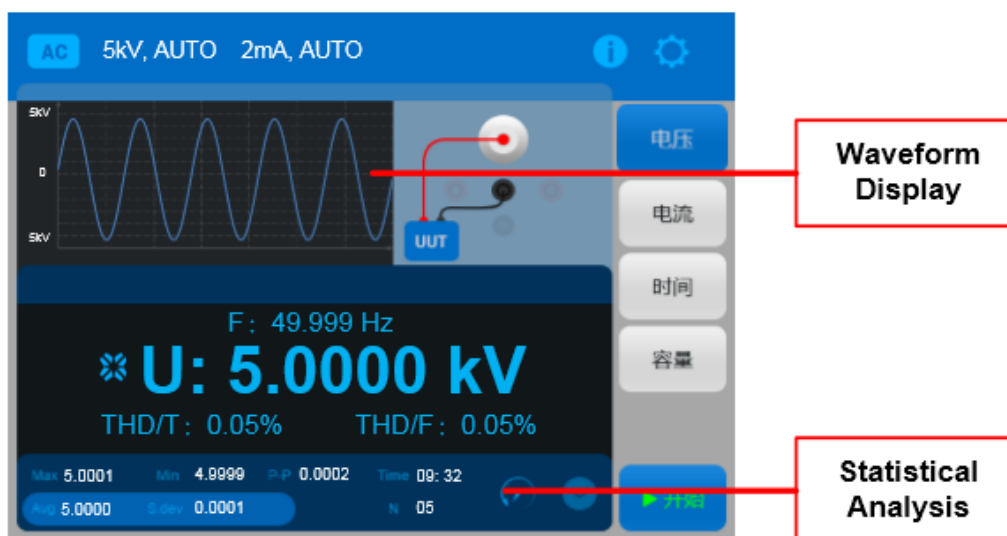
☆ Front Panel



S/N	Description
1	Foldable feet.
2	LCD touch color screen for easy operation.
3	Instrument handle for easy carrying and transportation.
4	Dedicated high-voltage input terminal, which can increase the creepage distance to ensure safety, supports up to 15kV AC and DC high voltage.
5	Voltage input terminal, used to monitor input voltage when calibrating current error, supports up to 1.5kV input.
6	Current input terminal, used when calibrating leakage or alarm current.
7	Fuse, to prevent instantaneous high current loss instrument.
8	Loop signal reference ground.

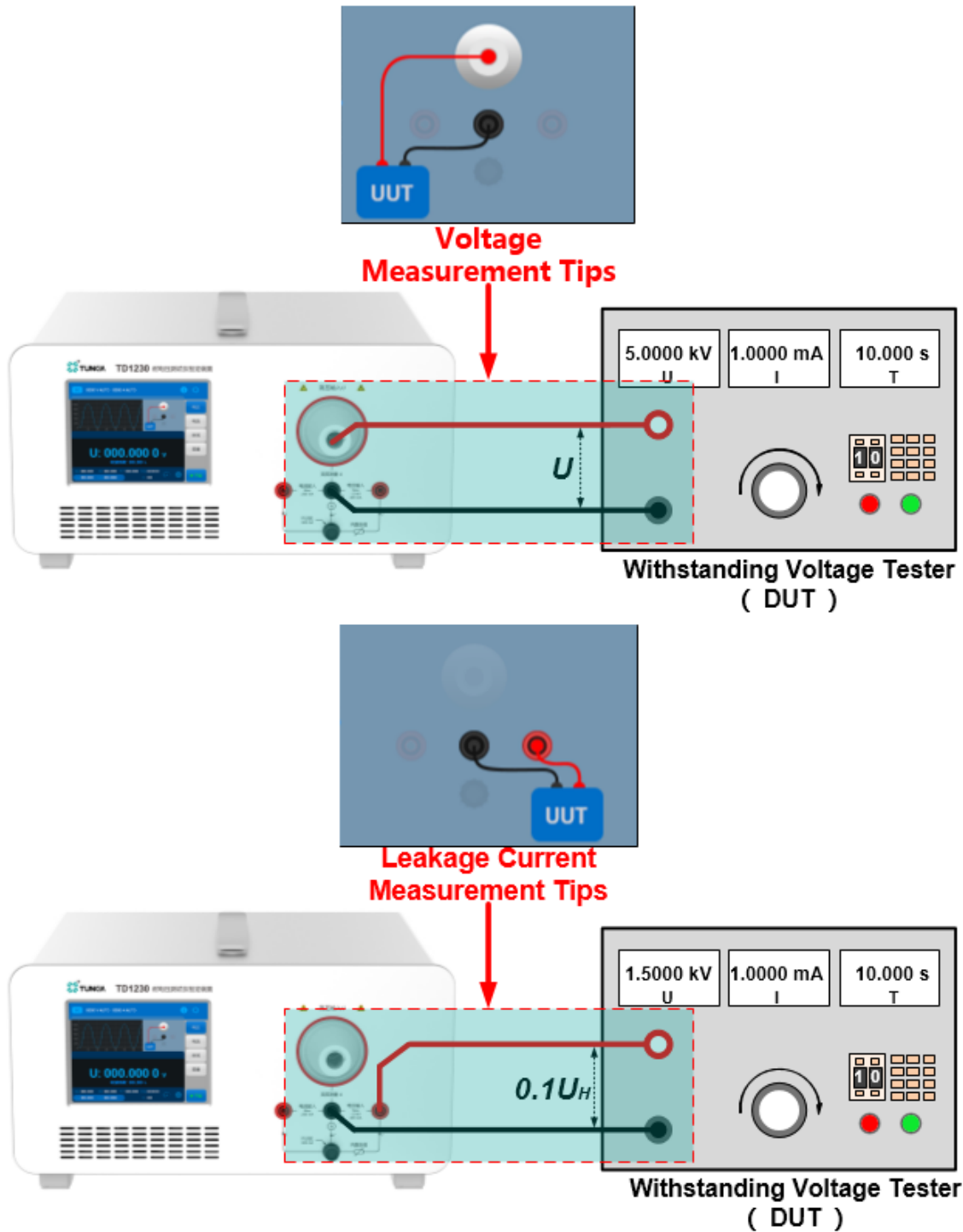
5. Characteristics

☆ Waveform Display and Statistical Analysis



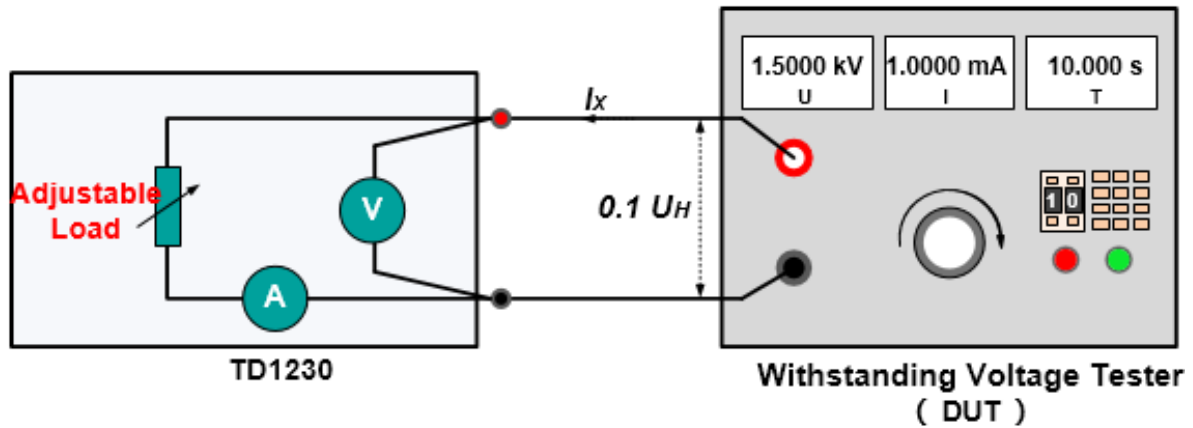
- Display waveform in real time, and analysis the waveform distortion.
- Analysis the max, min, average and standard deviation etc.

☆ Connection Tips



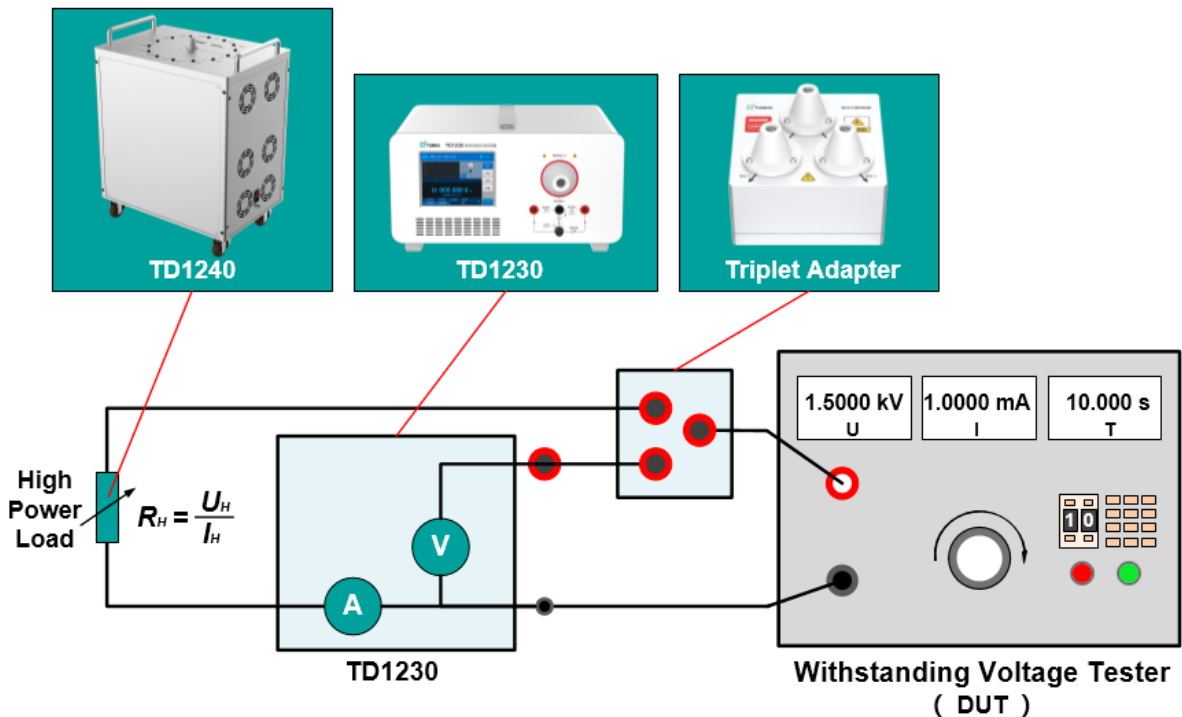
- Calibrating the voltage required high input voltage U_H ; but for current, only required $0.1 U_H$.
- Clear display connection tips to prevent failures or damage.

☆ Adjustable Resistors for the Verification of Current



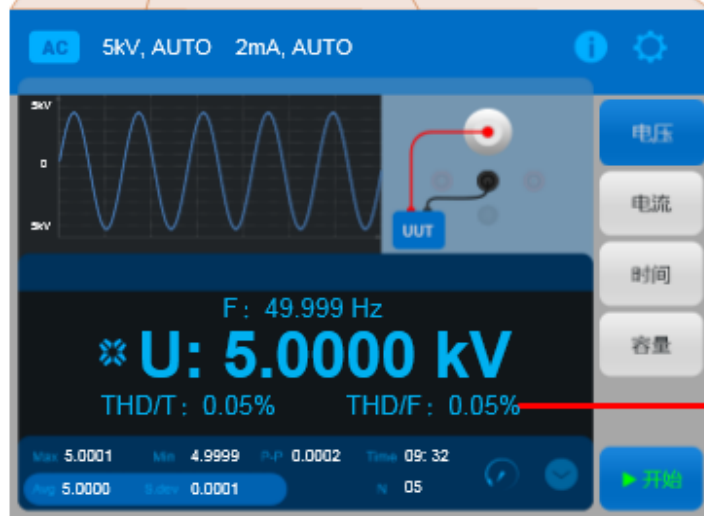
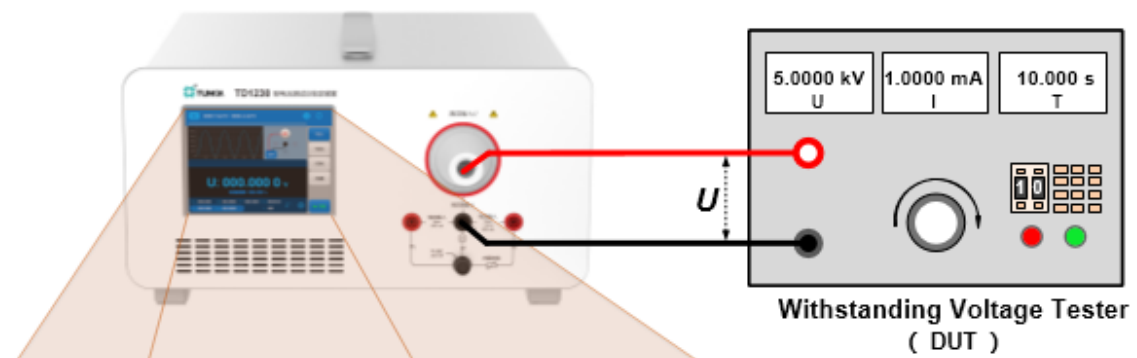
- Adjustable load of $6\text{ k}\Omega \sim 8\text{ M}\Omega$ with fineness of $1\text{ k}\Omega$, External load is also supported.
- The max input voltage at the current measurement terminal can reach 1500 V .

☆ Optional High Power Load Box for Output Capacity



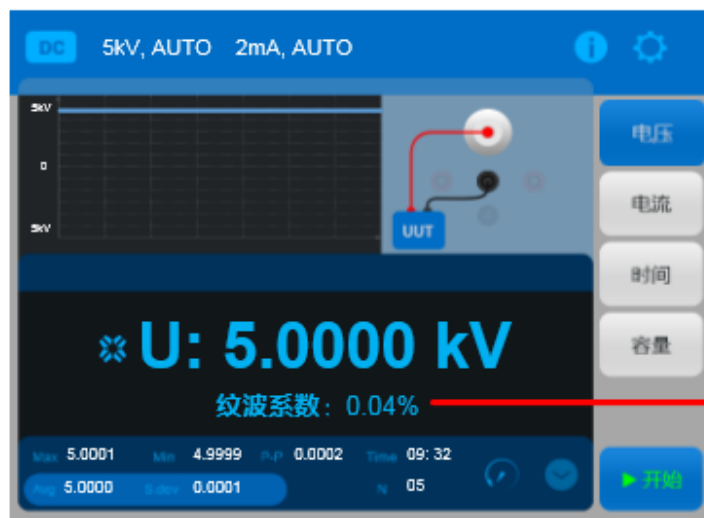
- Optional TD1240 load box for withstanding voltage tester (or load box with other specifications) to verify the actual output capacity.

☆ Measurement of Distortion or Ripple



(a) AC Voltage Test Interface

AC Distortion

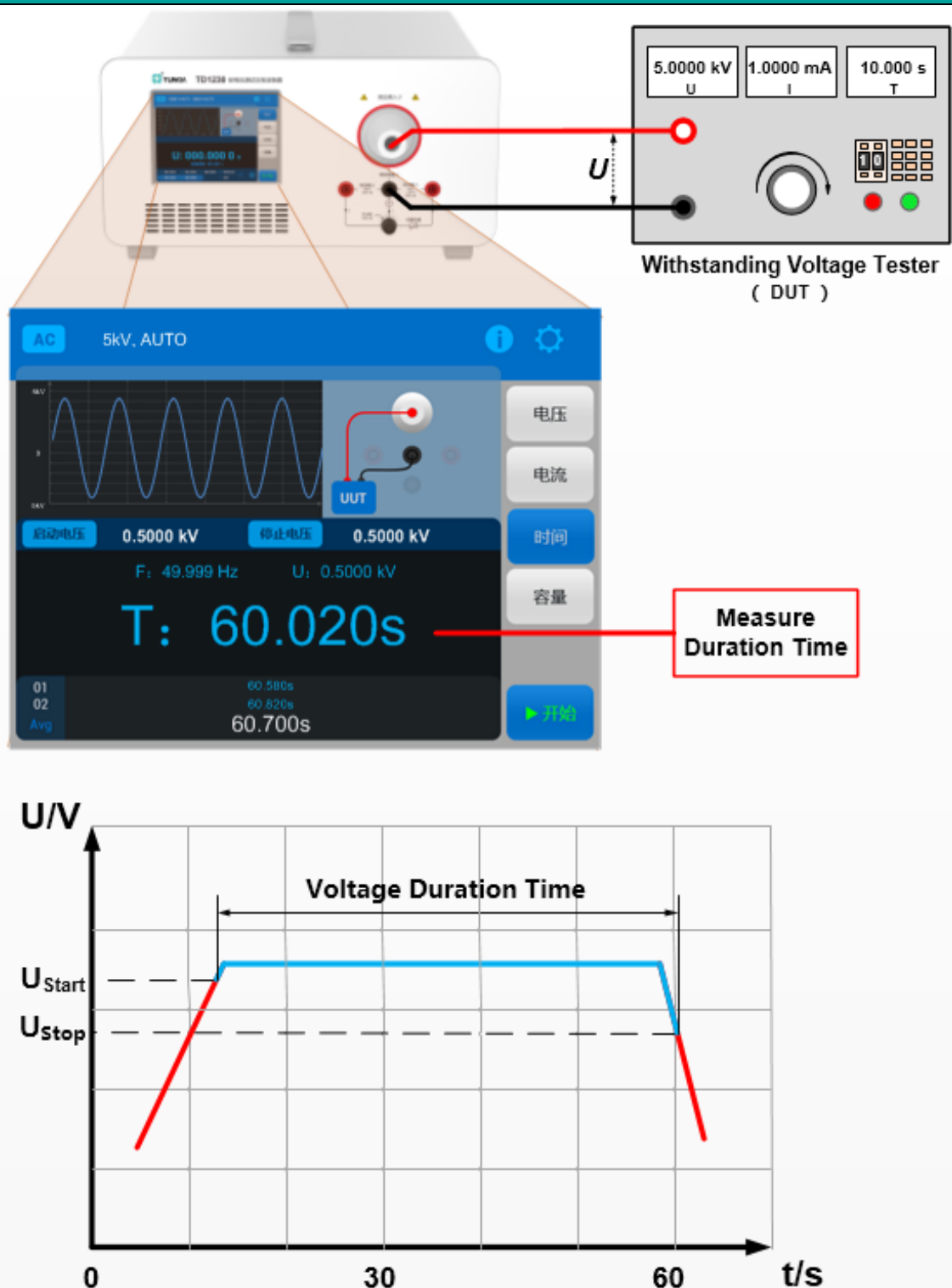


(b) DC Voltage Test Interface

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} .

6. Specifications

6.1 AC/DC Voltage Measurement

Range	Resolution	Measurement Uncertainty (k=2), (ppm*RD+ppm*RG)[1]	
		Class 0.5	Class 0.2
5 kV	0.1 V	4000 + 1000	1800 + 200
10 kV ^[2]	1 V	4000 + 1000	1800 + 200
15 kV ^[2]	1 V	4000 + 1000	1800 + 200

Note [1] : RD is the reading value, RG is the range value.

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

- 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

6.2 AC/DC Current Measurement

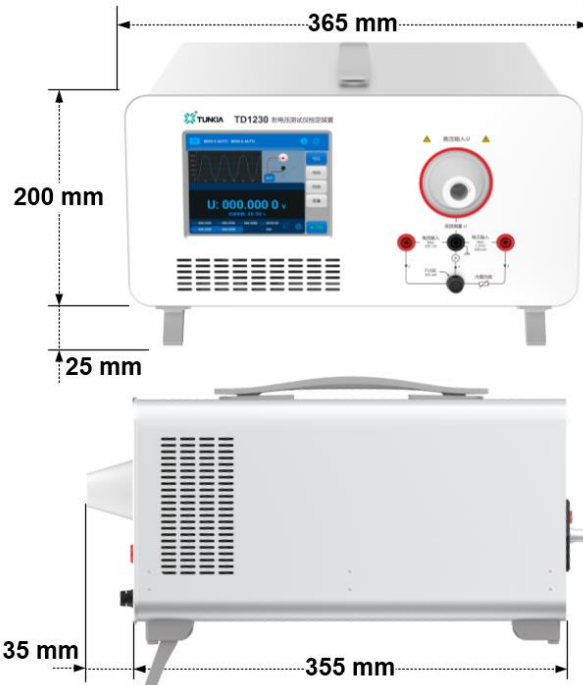
Range	Resolution	Measurement Uncertainty (k=2), (ppm*RD+ppm*RG)[1]	
		Class 0.5	Class 0.2
2 mA	0.1 μA	4000 + 1000	1800 + 200
20 mA	1 μA	4000 + 1000	1800 + 200
200 mA	10 μA	4000 + 1000	1800 + 200

- Measuring range: 0.1 mA ~ 250 mA, 5-digit display, manual/automatic switching range, margin: 125%*RG. Built-in adjustable resistive load of 6 kΩ~8MΩ with fineness of 1 kΩ
- True RMS response for AC, average response for DC

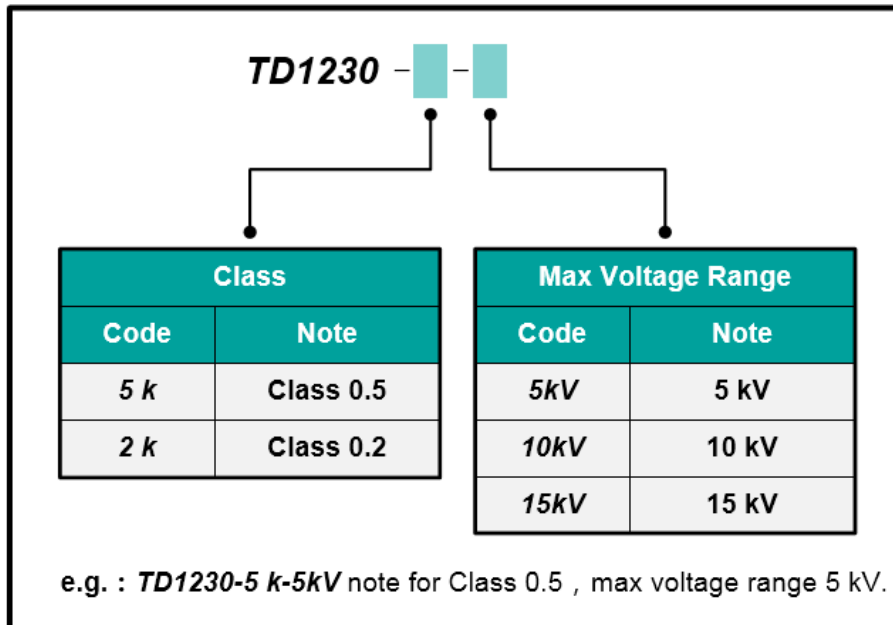
6.3 Other Functions

Test Items	Range	Resolution	Measurement Uncertainty (k=2)
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) DC: ± (0.2%*RD + 40 ms)

7. General Specifications

Power Supply	AC (220 ± 22) V, (50 ± 2) Hz
Warm-Up Time	30 minutes
Maximum Power Consumption	80 VA
Temperature Performance	Working temperature: 0° C~45° C; Storage temperature: -20° C~70° C
Humidity Performance	Working humidity: < 80% @ 30°C, < 70% @ 40°C, < 40% @ 50°C Storage humidity: (20%~80%) R • H, non-condensing
Altitude	< 3000 m
Weight	Approx. 11.7 kg
Communication Interface	RS 232
Dimensions	365 mm (W) × 390 mm (D) × 200 mm (H) (excluding handles and feet) 

8. Ordering Information



9. Accessory List

No.	Pic	Name	Specification	Qty	Remark
1		Test Lead	1.5m / 2.1mm ² / Φ4-Φ4 banana plug	Red 2 Black 2	Standard Accessory
2		High Voltage Test Lead	1.5m, ET-G15/ Φ4→ET-G29/ Φ4 high voltage plug	1	Standard Accessory
3		High Voltage Test Lead	1.5m, Φ4→Φ4 high voltage banana plug	Red 1 Black 1	Standard Accessory
4		Power Lead	AC 220V, 10A	1	Standard Accessory
5		Glass Fuse	F0.16A, 250V	2	Standard Accessory
6		Glass Fuse	F1A, 250V	3	Standard Accessory

No.	Pic	Name	Specification	Qty	Remark
1		Packing Box	Aluminum alloy box	1	Optional Accessory
2		Portable Storage Box	—	1	Optional Accessory
3		TD1240 Verification Load Bank for Withstanding Voltage Testers	14 groups of fixed resistance load boxes	1	Optional Accessory

Note: The above accessories need to be purchased separately and must be specified in the order contract.