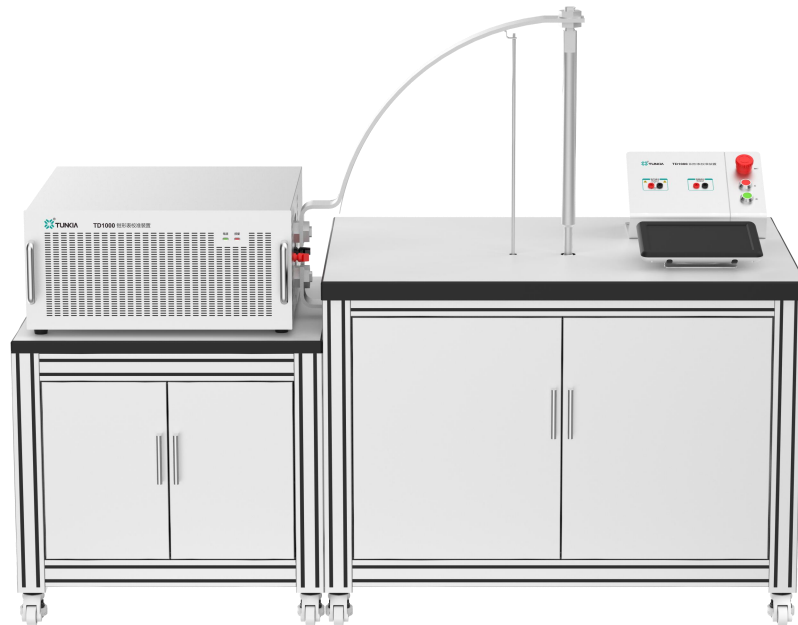


TD1000 Clamp Meters Calibration Device



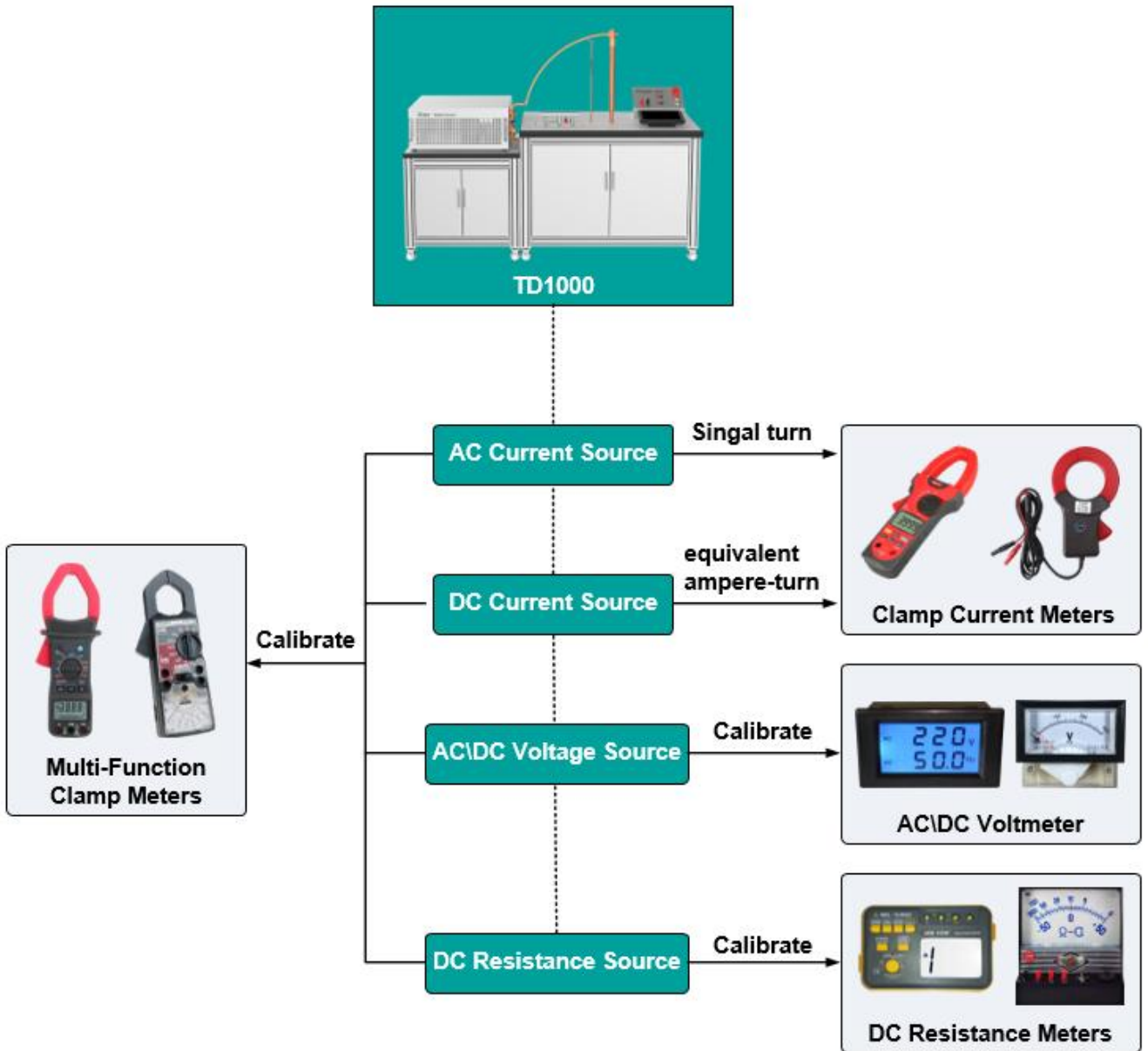
1. Summary

TD1000 is a calibration device for multifunctional clamp meters, which integrates functions such as AC/DC high current standard source, AC/DC voltage standard source, and resistance standard source, which can meet the calibration needs of multifunctional clamp meters with different accuracy levels.

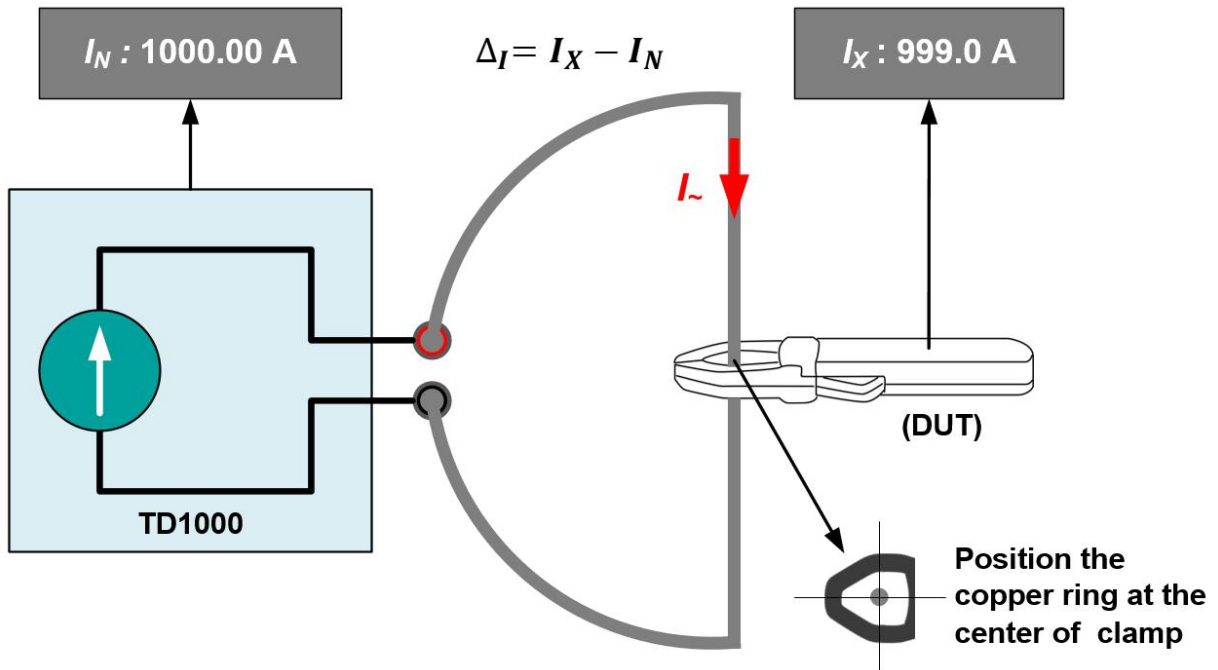
2. Features

- Accuracy: class 0.05, class 0.1 available
- AC current output: 20 mA ~ 1100 A
- AC voltage output: 1 V ~ 825 V
- DC current output(optional): 20 mA ~ 22A
- DC voltage output(optional): 20 mV ~ 1100V
- DC resistance output: 10 Ω ~ 11 M Ω
- Two thickness copper rings
- Remote adjustment(optional)

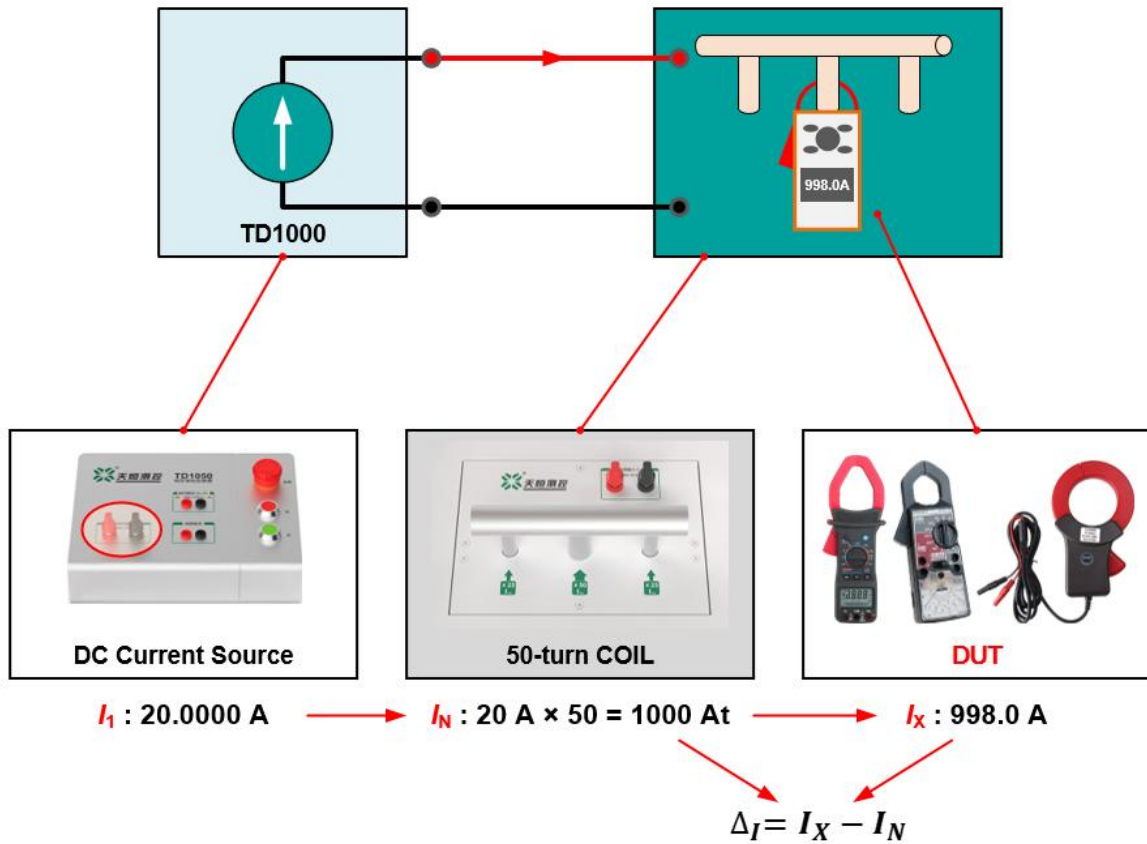
3. Application



☆ Calibrate AC Clamp Meter by Single-turn Method

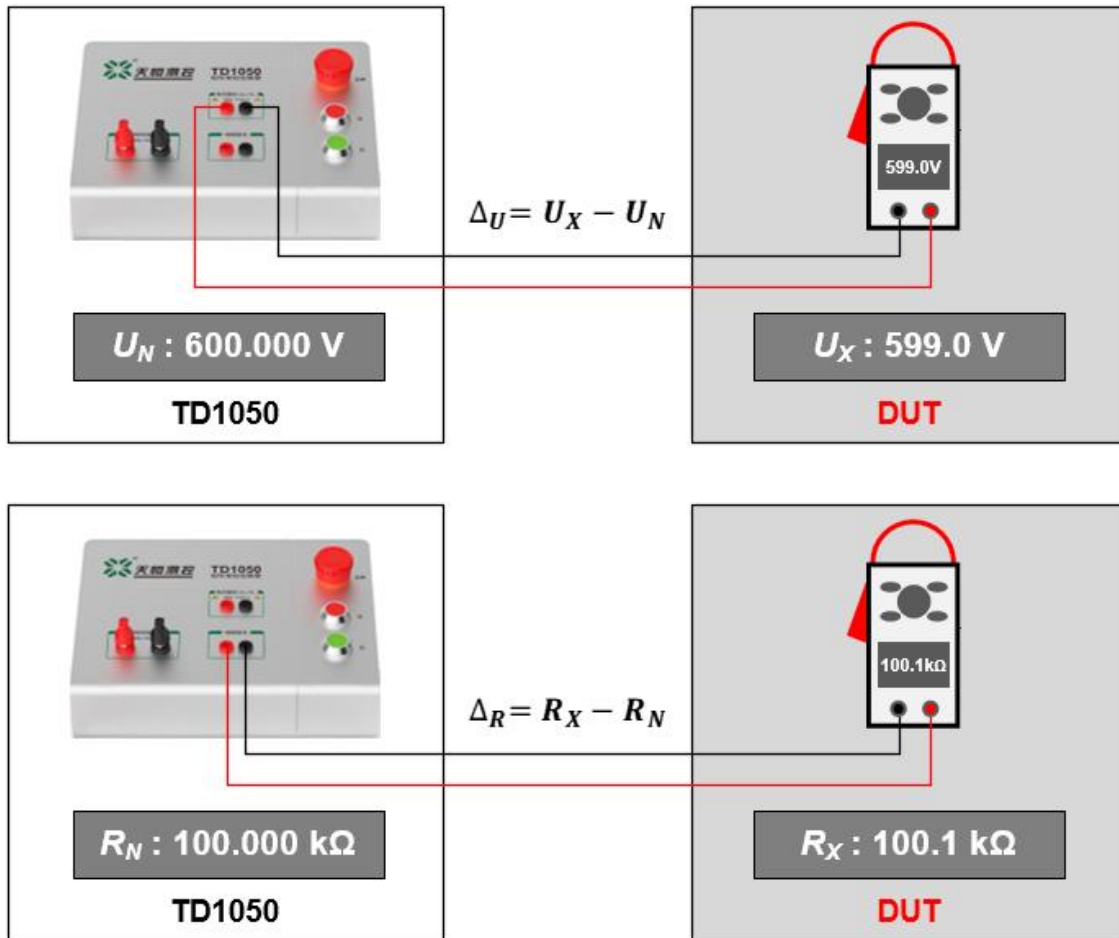


- **ACI** output: 20 mA ~ 1100 A, 45 Hz ~ 65 Hz
- Two thickness copper rings.

☆ Calibrate DC Clamp Meters by Equivalent Ampere-turn Method(optional)


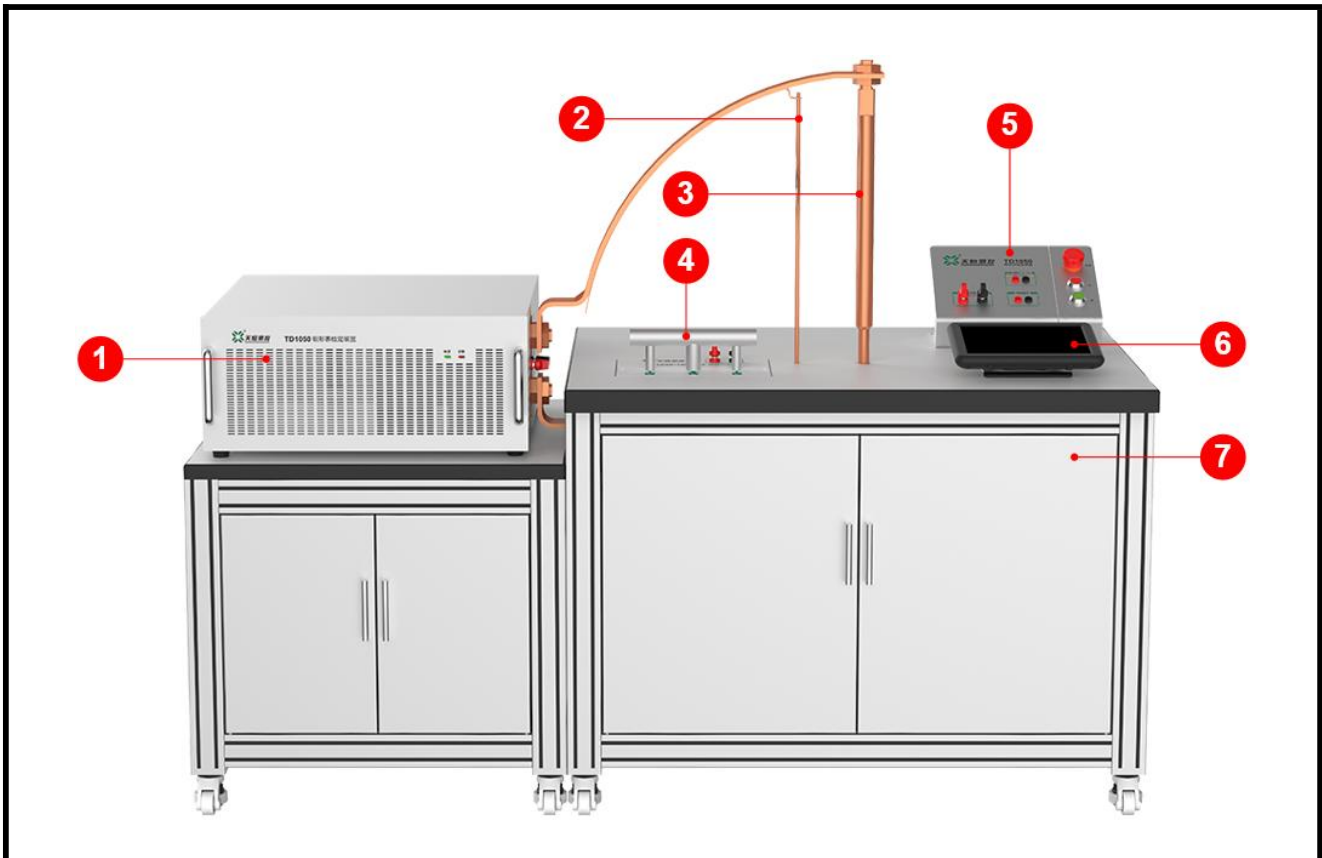
- **DCI** output: 20 mA ~ 22 A
- **Coil**: 50 T, accuracy $\pm 0.3\%$
- Equivalent to 1000AT current through input 20A current to the 50T Coil, which is suitable for calibrating DC clamp meters.

☆ Calibrate Multi-function Clamp Meters



- **ACV** output: 1 V ~ 825 V, 45 Hz ~ 65 Hz
- **DCV** output: 20 mV ~ 1100V
- **RES** output: 10 Ω ~ 11 MΩ
- Calibrate AC/DC Voltmeters and DC Resistance Meters

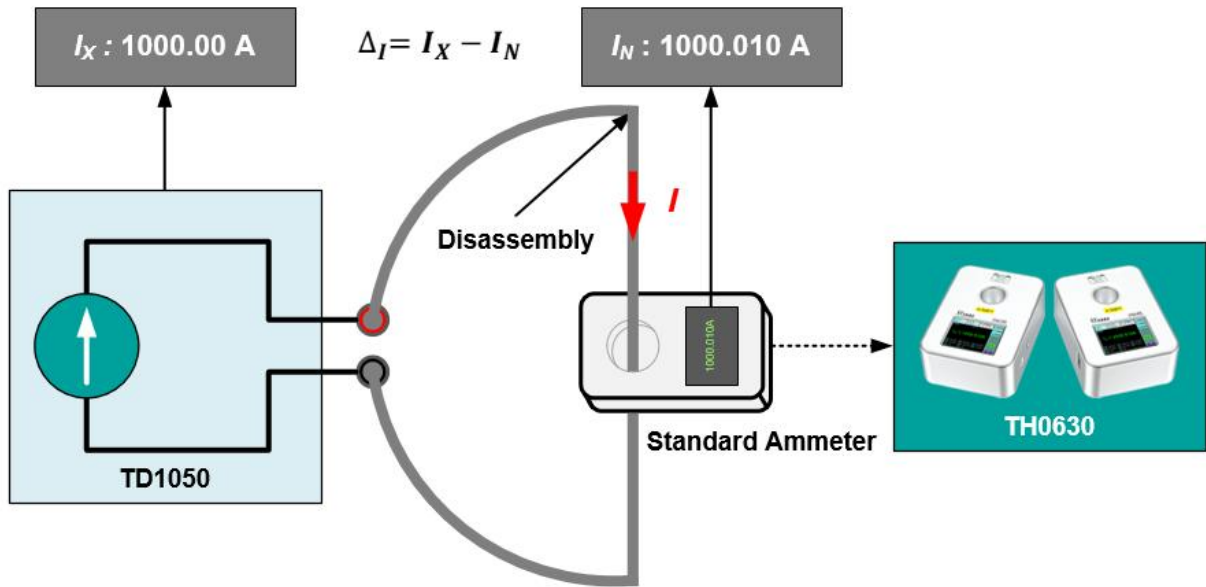
4. Panel Features



Number	Description
1	Current Source , Output AC\DC current.
2	Copper Ring 1 , $I \leq 100$ A(AC).
3	Copper Ring 2 , $I > 100$ A(AC).
4	50T Coil , used to calibrate the DC Clamp meters by amplifying the DC current.
5	Wiring Panel , integrates the output terminals, power switches and e-stop.
6	Operate Panel , adjust electric parameter of the device.
7	Workbench , Used to settle the device.

5. Characteristics

☆ Convenient Traceability

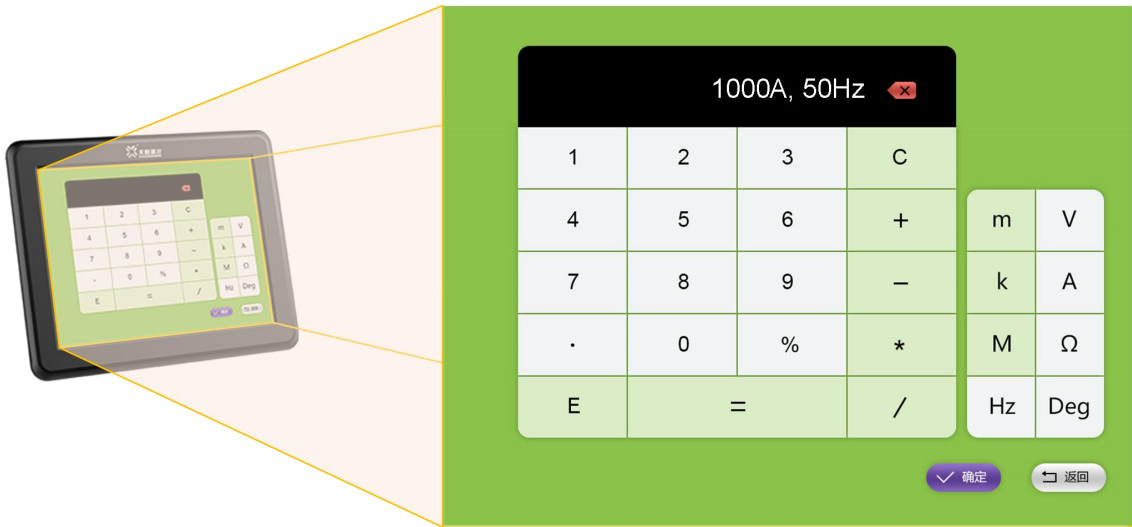


- Calibrate the AC current source through accessing the standard ammeter(TH0630 Precision Through Core AC Ammeter)to the current loop.

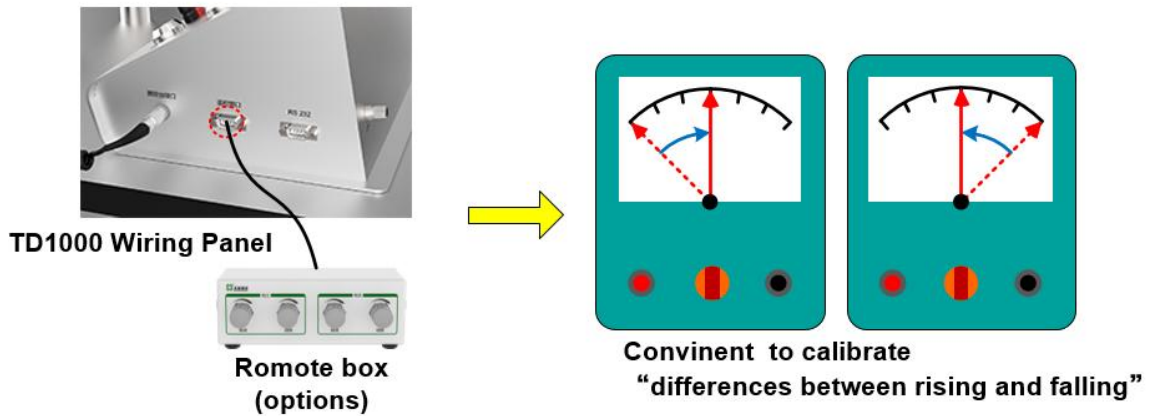
☆ Wide Output Range

	1m	1	1k	1M	1G
ACI	20 mA 1100 A				
DCI	10 mA 22 A (1100 At)				
ACV	1 V 825 V				
DCV	20 mV 1100 V				
RES	10 Ω 11 MΩ				
F~	45 Hz 65 Hz				

☆ Output and Adjustment



- “**Direct output**” mode: the value output can be set directly by clicking the touch panel.



- Calibration of the analog pointer meter usually needs to test scale by scale, especially "differences between rising and falling" (the change caused by the rise and fall of the calibration point).

6. Specifications

6.1 AC Current

Range	Resolution	Output Range	Frequency	Max Compliance Voltage(rms)
200 mA	1 μ A	10.000 mA ~ 110.000 mA	45 Hz ~ 65 Hz	50 V
1 A	10 μ A	0.10000 A ~ 1.10000 A	45 Hz ~ 65 Hz	15 V
5 A	10 μ A	0.50000 A ~ 5.50000 A	45 Hz ~ 65 Hz	8 V
20 A	100 μ A	2.0000 A ~ 22.0000 A	45 Hz ~ 65 Hz	2 V
50 A	100 μ A	5.0000 A ~ 55.0000 A	45 Hz ~ 65 Hz	1 V
100 A	1 mA	10.000 A ~ 110.000 A	45 Hz ~ 65 Hz	0.7 V
250 A	1 mA	25.000 A ~ 275.000 A	45 Hz ~ 65 Hz	0.7 V
500 A	1 mA	50.000 A ~ 550.000 A	45 Hz ~ 65 Hz	0.7 V
1000 A	10 mA	100.00 A ~ 1100.00 A	45 Hz ~ 65 Hz	0.7 V

Range	Stability ($\pm\%/min$)		Accuracy $\pm(ppm*RD+ppm*RG)$		Distortion (%)
	Class 0.05	Class 0.1	Class 0.05	Class 0.1	
200 mA	0.01	0.02	250 + 150	600 + 400	<0.5
1 A	0.01	0.02	250 + 150	600 + 400	< 0.5
5 A	0.01	0.02	250 + 150	600 + 400	< 0.5
20 A	0.01	0.02	250 + 150	600 + 400	< 0.5
50 A	0.01	0.02	250 + 150	600 + 400	< 0.5
100 A	0.01	0.02	250 + 150	600 + 400	< 0.5
250 A	0.01	0.02	250 + 150	600 + 400	< 0.5
500 A	0.01	0.02	250 + 150	600 + 400	< 0.5
1000 A	0.01	0.02	250 + 150	600 + 400	< 0.5

Note[1]: RD=Reading, RG=Range, unless otherwise noted;

- Output range: 20 mA ~ 1100 A
- Adjustment fineness: 0.002%*RG, 6 digits display
- Protections: open-circuit protection, overload protection, over-heat protection

6.2 AC Voltage

Range	Resolution	Output Range	Frequency	Max Burden(rms)
10 V	100 μ V	1.0000 V ~ 11.0000 V	45 Hz ~ 65 Hz	800 mA
30 V	100 μ V	3.0000 V ~ 33.0000 V	45 Hz ~ 65 Hz	700 mA
100 V	1 mV	10.000 V ~ 110.000 V	45 Hz ~ 65 Hz	200 mA
300 V	1 mV	30.000 V ~ 330.000 V	45 Hz ~ 65 Hz	70 mA
750 V	1 mV	75.000 V ~ 825.000 V	45 Hz ~ 65 Hz	30 mA

Range	Stability ($\pm\%/min$)		Accuracy $\pm(ppm*RD+ppm*RG)$		Distortion (%)
	Class 0.05	Class 0.1	Class 0.05	Class 0.1	
10 V	0.01	0.02	300 + 200	600 + 400	<0.5
30 V	0.01	0.02	300 + 200	600 + 400	< 0.5
100 V	0.01	0.02	300 + 200	600 + 400	< 0.5
300 V	0.01	0.02	300 + 200	600 + 400	< 0.5
750 V	0.01	0.02	300 + 200	600 + 400	< 0.5

- Output range: 1 V ~ 825 V
- Adjustment fineness: 0.002%*RG
- 6 digits display
- Protections: short-circuit protection, overload protection, over-heat protection

6.3 DC Current(optional)

Range	Resolution	Output Range	Max Compliance Voltage
200 mA	1 μ A	20.000 mA ~ 220.000 mA	10 V
1 A	10 μ A	0.10000 A ~ 1.10000 A	10 V
5 A	10 μ A	0.50000 A ~ 5.50000 A	10 V
20 A	100 μ A	2.0000 A ~ 22.0000 A	10 V

Range	Stability ($\pm\%/min$)		Accuracy $\pm(ppm*RD+ppm*RG)^{[2]}$		Ripple Factor (%)
	Class 0.05	Class 0.1	Class 0.05	Class 0.1	
200 mA	0.01	0.02	250 + 150	600 + 400	<0.5
1 A	0.01	0.02	250 + 150	600 + 400	<0.5
5 A	0.01	0.02	250 + 150	600 + 400	<0.5
20 A	0.01	0.02	250 + 150	600 + 400	<0.5

- Output range: 20 mA ~ 22 A (1000 At)
- Adjustment fineness: 0.002%*RG
- Display digits: 6 digits display
- Protections: open-circuit protection, overload protection, over-heat protection

6.4 DC Voltage(optional)

Range	Resolution	Output Range	Max Burden
200 mV	1 μ V	20.000 mV ~ 220.000 mV	100 mA
1 V	10 μ V	0.10000 V ~ 1.00000 V	100 mA
10 V	100 μ V	1.0000 V ~ 11.0000 V	100 mA
30 V	100 μ V	3.0000 V ~ 33.0000 V	800 mA
100 V	1 mV	10.000 V ~ 110.000 V	200 mA
300 V	1 mV	30.000 V ~ 330.000 V	70 mA
600 V	1 mV	60.000 V ~ 660.000 V	25 mA
1000 V	10 mV	100.00 V ~ 1100.00 V	20 mA

Range	Stability ($\pm\%/min$)		Accuracy $\pm(ppm*RD+ppm*RG)$		Ripple Factor (%)
	Class 0.05	Class 0.1	Class 0.05	Class 0.1	
200 mV	0.01	0.02	300 + 200	600 + 400	<0.5
1 V	0.01	0.02	300 + 200	600 + 400	< 0.5
10 V	0.01	0.02	300 + 200	600 + 400	< 0.5
30 V	0.01	0.02	300 + 200	600 + 400	< 0.5
100 V	0.01	0.02	300 + 200	600 + 400	< 0.5
300 V	0.01	0.02	300 + 200	600 + 400	< 0.5
600 V	0.01	0.02	300 + 200	600 + 400	< 0.5
1000 V	0.01	0.02	300 + 200	600 + 400	< 0.5

- Output range: 20 mV ~ 1100 V
- Adjustment fineness: 0.002%*RG
- 6 digits display
- Protections: short-circuit protection, overload protection, over-heat protection

6.5 DC Resistance

Range	Resolution	Output Range	Accuracy $\pm(\text{ppm} \cdot \text{RD} + \text{ppm} \cdot \text{RG})$	Allowable Current
100 Ω	1 m Ω	10.000 Ω ~ 110.000 Ω	600 + 400	1 mA ~ 15 mA
1 k Ω	10 m Ω	0.10000 k Ω ~ 1.10000 k Ω	600 + 400	100 μ A ~ 1.5 mA
10 k Ω	100 m Ω	1.0000 k Ω ~ 11.0000 k Ω	600 + 400	10 μ A ~ 150 μ A
100 k Ω	1 Ω	10.000 k Ω ~ 110.000 k Ω	600 + 400	10 μ A ~ 150 μ A
1 M Ω	10 Ω	0.10000 M Ω ~ 1.10000 M Ω	600 + 400	1 μ A ~ 15 μ A
10 M Ω	100 Ω	1.0000 M Ω ~ 11.0000 M Ω	600 + 400	100 nA ~ 2 nA

- Output range: 10 Ω ~ 11 M Ω
- Adjustment fineness: 0.002%*RG
- 6 digits display

7. Ordering Information

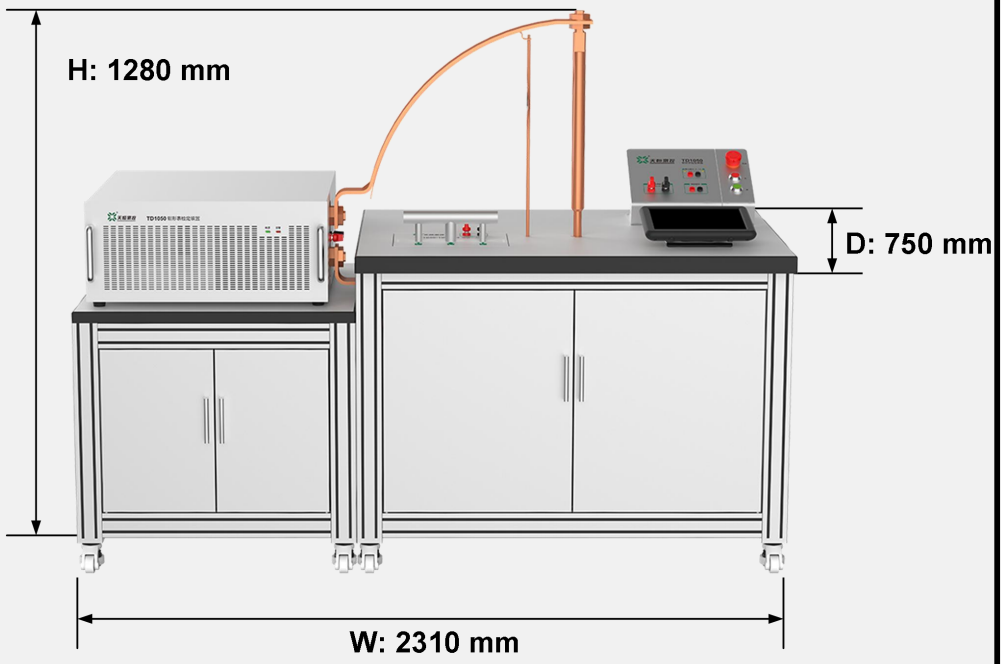
TD1000 -

Accuracy	
Code	Note
500	Class 0.05
1k	Class 0.1

Function	
Code	Note
Empty	AC Output
T	AC\DC Output

e.g. : TD1000-500 notes for class 0.05, with the function of AC Output.

8. General Specifications

Power Supply	AC (220±22) V, (50±2) Hz
Max Power Consumption	2.5 kVA
Operating Condition	0°C ~ 40°C, (20% ~ 85%) R·H, non-condensing
Storage Condition	-20°C ~ 70°C, (10% ~ 95%) R·H, non-condensing
Standard Interfaces	RS 232
Dimensions	2310 mm (W)× 750 mm (D) × 1280 mm (H)
	 <p>The diagram illustrates the physical dimensions of the TD1000 calibration device. It is a large, industrial-grade unit with a control panel on the right side. The overall height is 1280 mm, the depth is 750 mm, and the width is 2310 mm. The device is mounted on a stand with four casters for mobility.</p>