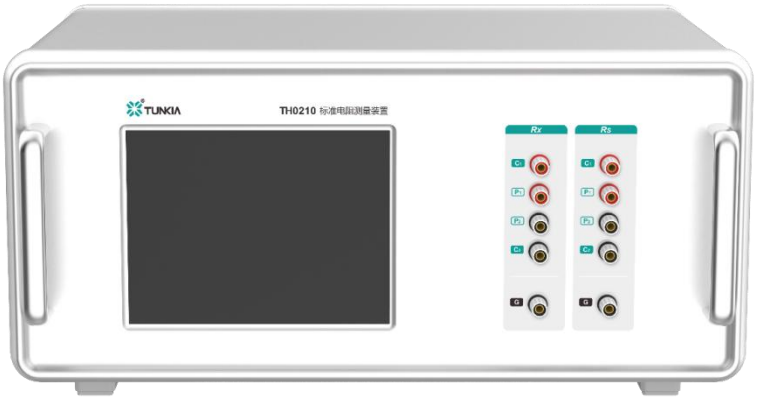
TH0210 Standard Resistance Measuring Device



1. Summary

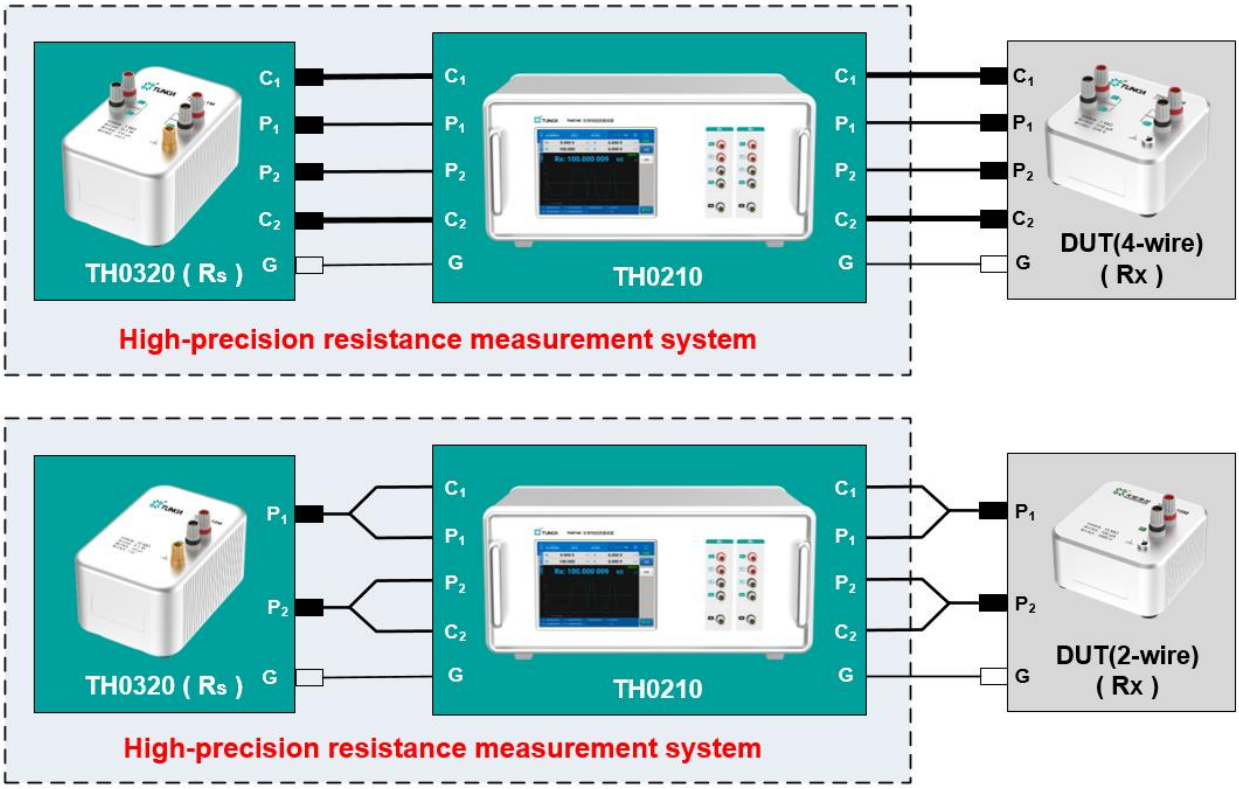
TH0210 is a DC comparator bridge designed for the automatic measurement and display of the ratio of two resistances to high accuracy. It's applied for the measurement, comparison, transmission, verification of standard resistance.

2. Features

- Current output: 100 μA ~ 3.2 A.
- Resistance measurement: 1 mΩ ~ 100 kΩ(customizable).
- Uncertainty : 0.5 ppm ~ 3 ppm(External Primary Standard Resistor)
- Typical value of test period: about 4.5 minutes.
- RS232 and LAN interfaces.
- LCD touch screen.
- Statistical analysis.
- Dedicated software(optional).

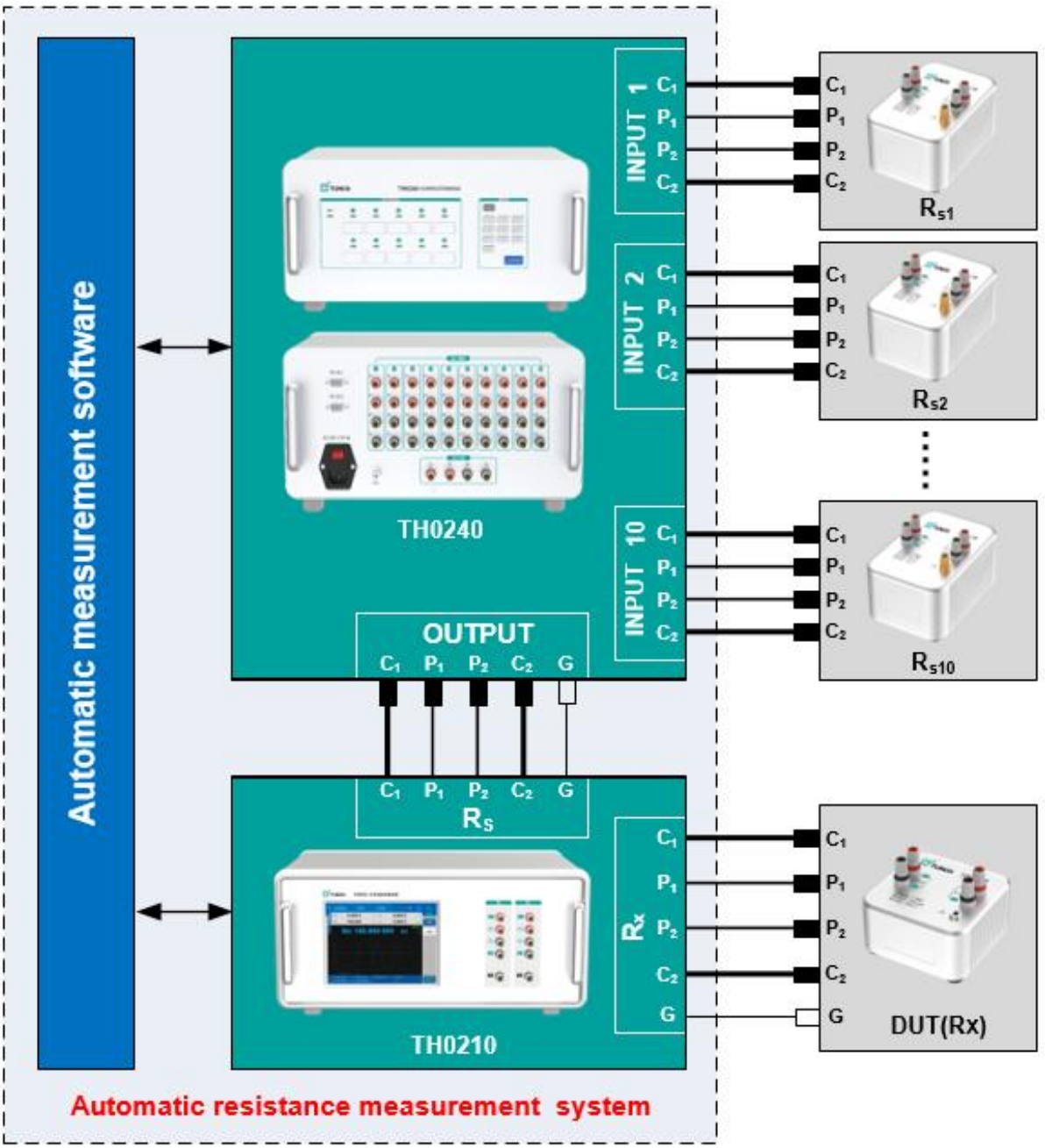
3. Applications

☆ Calibrate 2-wire/4-wire Resistor



- Recommend 4-wire mode when the value of resistor is ≤ 10 kΩ.

☆ Establish Automatic Resistance Measurement System



- Multiple (up to 10) standard resistors.
- The channel of reference standard resistance can be automatically switched according to the value of measured resistance.

☆ Statistical Analysis

Number	Description
1	The instrument adopts the measurement method of rough and precise measurement, to avoid the damage of mistake operation.
2	Display the trend of resistor measurements.
3	Automatically conduct comprehensive data analysis, and display the result value on the LCD screen.

4. Specifications

Resistor	Resolution	Reference Resistor	Nominal Ratio	Excitation Current	Test Power	Meas. Accuracy (k=2 ,± μΩ/Ω)
1 mΩ	10 pΩ	1 Ω	0.001:1	3.16 A	10 mW	5
10 mΩ	100 pΩ	1 Ω	0.01:1	1 A	10 mW	3
100 mΩ	1 nΩ	1 Ω	0.1:1	316 mA	10 mW	2
1 Ω	10 nΩ	1 Ω	1:1	100 mA	10 mW	0.5
		10 Ω	0.1:1			
10 Ω	100 nΩ	1 Ω	10:1	31.6 mA	10 mW	0.5
		10 Ω	1:1			
		100 Ω	1:10			
100 Ω	1 μΩ	10 Ω	10:1	10 mA	10 mW	0.5
		100 Ω	1:1			
		1 kΩ	1:10			
1 kΩ	10 μΩ	100 Ω	10:1	3.16 mA	10 mW	0.5
		1 kΩ	1:1			
		10 kΩ	1:10			
10 kΩ	100 μΩ	1 kΩ	10:1	1 mA	10 mW	1.5
		10 kΩ	1:1			
100 kΩ	1 mΩ	10 kΩ	10:1	0.1 mA	1 mW	2.5

5. General Specifications

Power Supply	AC (220 ± 22) V,(50 ± 2) Hz;
Warm Up Time	Twice the time since last warmed up, to a maximum of 60 minutes.
Maximum Power Consumption	100 VA
Temperature Performance	Operating temperature: 18 °C ~ 28 °C; Storage temperature: -20 °C ~ 60 °C;
Humidity Performance	Operating humidity: (20 % ~ 50%) R·H, non-condensing; Storage humidity: (15 % ~ 80%) R·H, non-condensing;
Weight	About 22.5 kg
Communication Interface	RS232、LAN
Dimensions	485 mm(W)*355 mm(D)*220 mm(H) (Excluding handles and feets）