

TH0320 Reference Resistance Standard



1. Summary

TH0320 is a series of precision standard resistors, suitable for measuring a wide range of precision current, it can also be applied for calibrating multifunction calibrators, high precision digital multi-meter, etc.

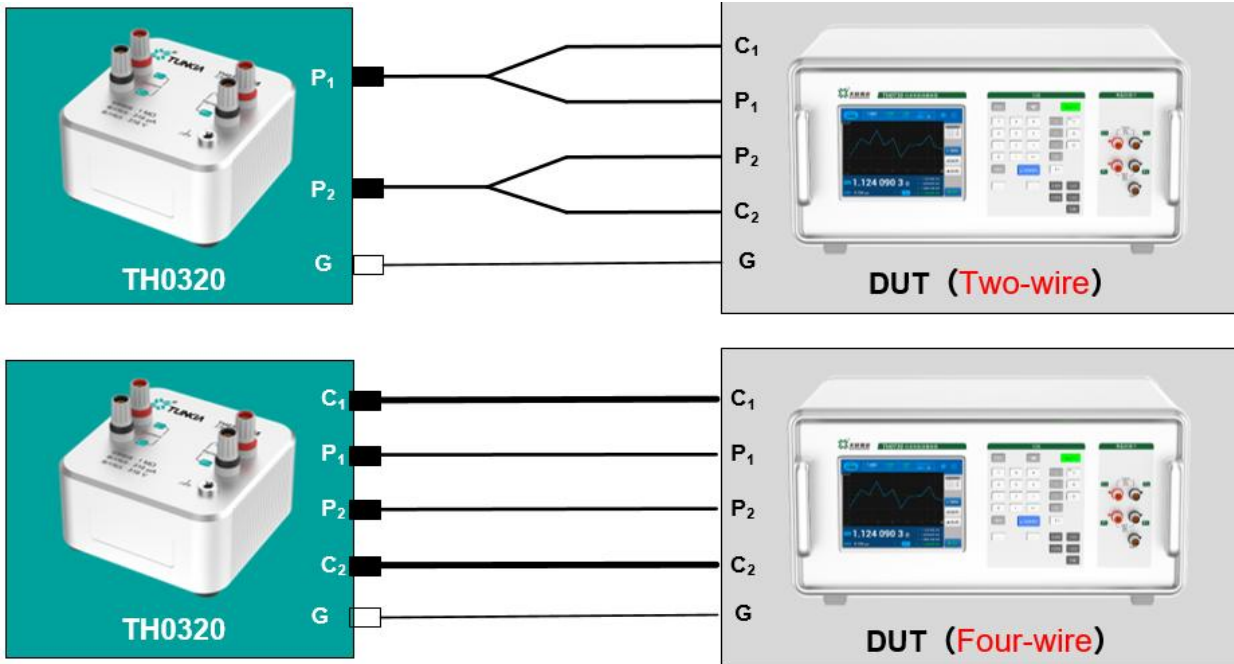
2. Features

- Long-term stability: 3 ppm/year (typical)
- Temperature coefficient: 0.2 ppm/°C
- Nominal resistance: 1 Ω ~ 10 MΩ
- Low thermal potential terminal
- No oil or air baths required
- 18°C ~ 28°C operating range
- Small and rugged

3. Applications

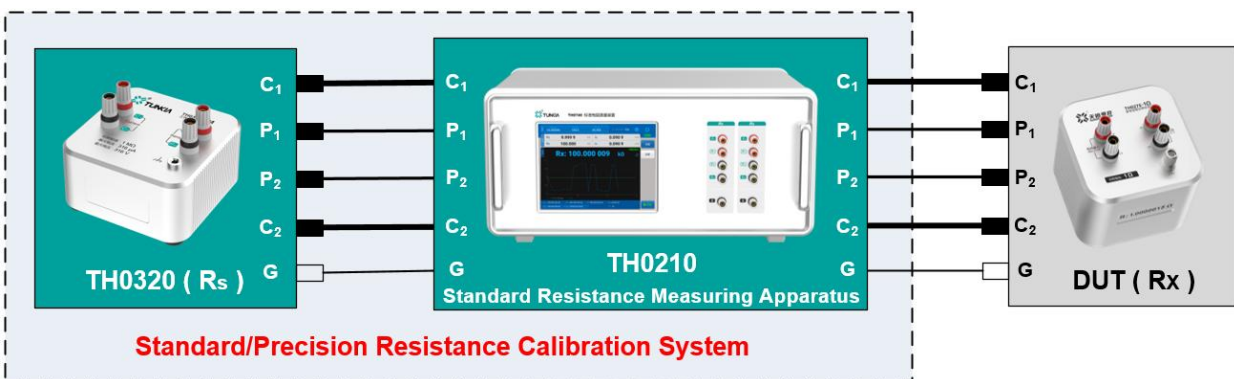
- Calibrate high precision resistance meter
- Calibrate standard resistance/precision resistance
- Establish high precision current measurement system

☆ Calibrate Resistance Meter



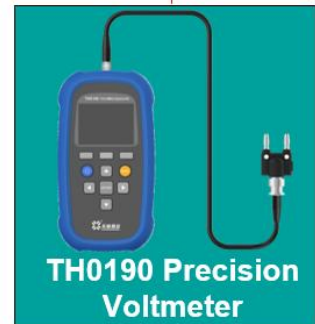
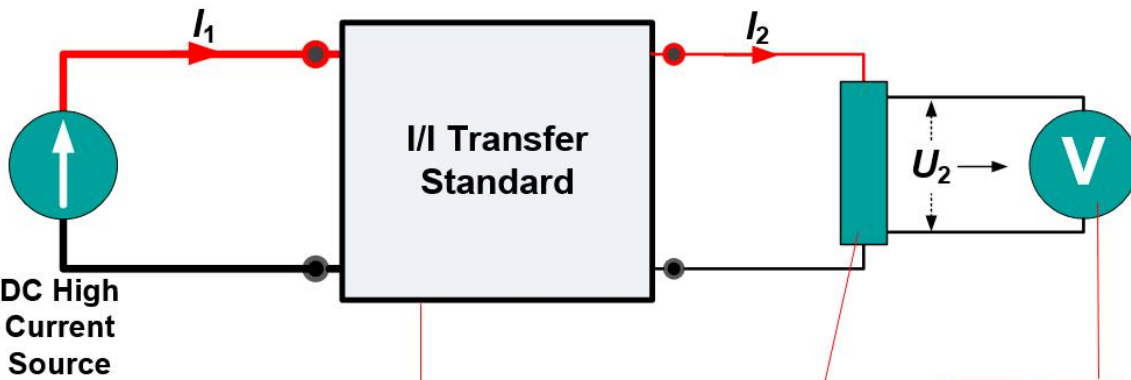
- Calibrate two-wire ($\geq 10\text{ M}\Omega$) or four-wire ($\leq 1\text{ M}\Omega$) resistance meters as standard resistors.
- It can be used directly without placing in constant temperature oil tank or air tank.

☆ Calibrate Standard/Precision Resistance



- Calibrate precision resistance with precision resistance bridge (such as TH0210).

☆ Establish High Precision DC Measurement System



- Establish the current measurement system with I/I transfer standard and precision voltmeter.

4. Specifications

Model	Nominal Resistance @ 23°C	Initial Deviation (±ppm)	Accuracy (±ppm)	Annual Stability (±ppm)	Temperature Coefficient (±ppm/°C)	Wiring
TH0320-1R	1 Ω	5	2.5	3	0.2	4W
TH0320-10R	10 Ω	5	2.5	3	0.2	4W
TH0320-100R	100 Ω	5	2.5	3	0.2	4W
TH0320-1kR	1 kΩ	5	2.5	3	0.2	4W
TH0320-10kR	10 kΩ	5	2.5	3	0.2	4W
TH0320-100kR	100 kΩ	5	2.5	3	0.2	2W
TH0320-1MR	1 MΩ	5	2.5	3	0.2	2W
TH0320-10MR	10 MΩ	10	5	6	0.2	2W

Model	Nominal Power(W)	Power Factor (±ppm/W)	Maximum Current (A)	Maximum Voltage (V)
TH0320-1R	0.5	10	707	0.707
TH0320-10R	0.1	10	100	1.00
TH0320-100R	0.1	10	31.6	3.16
TH0320-1kR	0.1	10	10	10
TH0320-10kR	0.1	10	3.16	31.6
TH0320-100kR	0.1	10	1	100
TH0320-1MR	0.1	10	0.316	316
TH0320-10MR	0.1	10	0.1	1000

5. General Specifications

Power supply	—
Temperature performance	Operating temperature: 18 °C ~ 28 °C; Storage temperature: -10 °C ~ 60 °C;
Humidity performance	Working humidity :(40%-60%) R·H, no condensation; Storage humidity: < 95% R·H, no condensation;
Weight	About 1 kg
Dimensions	100 mm(W) × 150 mm(D) × 70 mm (H) (excluding terminals and footpads)
	