Measurements International
Metrology is Our Science, Accuracy is Our Business™

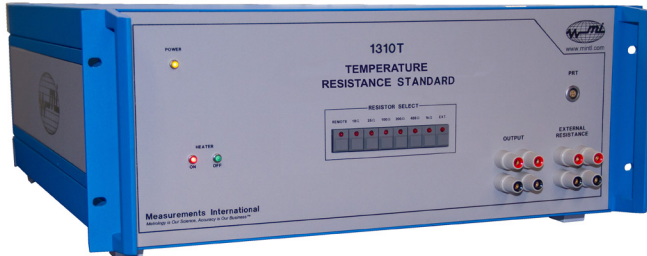# 1310T TEMPERATURE RESISTANCE STANDARD
Designed & developed for temperature laboratories

Featuring

► Exceptional Stability

► Cost-effectiveness

► Performance-based Results

► 10 Ω, 25 Ω, 100 Ω, 200 Ω, 400 Ω and 1000 Ω Internal Standards

► Built-in Temperature Chamber for Optimal Performance

Overview

Measurements International's new Temperature Resistance Standard 1310T is an easy-to-use automated resistance standard for temperature laboratories. The 1310T consists of 6 resistors and a connection for an external resistor, housed in a temperature-controlled chamber that utilizes a built-in 4-terminal scanner for optimal performance. The six resistor values 10 Ω, 25 Ω, 100 Ω, 200 Ω, 400 Ω and 1000 Ω, cover all of your temperature laboratory requirements. For customers who require even more, additional resistors can be added as a customized feature. Customers can now eliminate sources of error due to changing connections. Resistors are all housed in a temperature-controlled internal chamber eliminating the need for external temperature control.

Feature	Benefit
6 resistors values 10 Ω, 25 Ω, 100 Ω, 200 Ω, 400 Ω and 1000 Ω.	One box covers all of your temperature measurement requirements.
One box for all temperature lab application.	Customers only need to buy one piece of equipment that contains all required standards.
Unit has internal temperature chamber.	No external temperature chamber required, no external scanner required.
Easy connection and change for resistors.	Customers do not need to re-wire connections as the unit has a built-in scanner board for automation and ease of use.
Resistors based on proven resistor design with 24-hour stability of better than ± 0.01 µΩ/Ω.	Customers can achieve world-leading specifications in one cost-efficient solution.
Built-in 4-terminal scanner.	Combining two instruments into one simple-to-use instrument.
External extra channel.	Connect to the resistance value of your choice.
Front panel or GPIB controlled.	Simplifies operation for the user.
Internally mounted temperature sensor PT100.	Users can connect to the front panel and monitor the internal oven.

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Specifications: Rev 0

Nominal Resistance (Ω)	Tolerance (± μΩ/Ω) (± ppm)	24-Hour Stability (± μΩ/Ω) (± ppm)	12-Month Stability (± μΩ/Ω) (± ppm)	Temperature Coefficient (± μΩ/Ω/°C) (± ppm/°C)	Max. Voltage (V)
10	10	0.01	2.5	0.005	1.0
25	10	0.01	2.5	0.005	1.58
100	10	0.01	2.5	0.005	3.16
200	10	0.01	2.5	0.005	4.47
400	10	0.01	2.5	0.005	6.32
1000	10	0.01	2.5	0.005	10.0
Internal Temperature Stability		± 0.1 °C Over a 1-Year Period			
Ambient Temperature Range		23 °C ± 5 °C			
Ambient Humidity Range		20 to 70 % RH			
Warranty		Standard 2-Year Parts & Labour			

Scanner Specifications

Operation	Four-Terminal Matrix
Error Contribution	< 20 nV
Contact Configuration	Relay – Two Coil Latching
Max Carrying/Switching Current	4/2 A @ < 30 V (DC)
Maximum Working/Switching Voltage	1000/220 V @ < 100 mA (DC)
Contact Resistance	< 0.05 Ω
Expected Relay Life	10^8 Operations
Insulation Resistance	> 10^{12} Ω

Dimensions (L × W × H):
572 × 445 × 203 (mm)

Weight:
9 kg

Shipping Weight:
13 kg

Mains Power:
85 to 264 V_{AC} – 47 to 440 Hz

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