

Characteristics of RTD & Thermistor

Model : SE-1004



SINCOM SE-1004 Characteristics of RTD and Thermistor is a versatile and all-inclusive trainer designed for studying the characteristics of RTD (Resistance Temperature Detector) and Thermistor. It offers the convenience of adjusting the DC supply voltage and includes on-board digital instruments such as a DC voltmeter, DC ammeter, and temperature indicator. Additionally, it features an electrical heating system for practical experimentation. This comprehensive trainer provides a complete learning experience for understanding the behaviour and properties of RTD and Thermistor.

Features

- ❖ Platinum RTD and NTC Thermistor
- ❖ Wide Temperature Range
- ❖ 3^{1/2} Digit LED Digital DC Volt and Current Indicator
- ❖ Digital Temperature Indicator
- ❖ External Electrical Heating System
- ❖ Current controlling resistor in series
- ❖ In-Built Fixed and Variable regulated DC Power Supply
- ❖ Presents a multi-color Circuit Diagram printed on the front panel of the white board
- ❖ Enclosed in an attractive, light weight, High Quality, Poly Coated Imported Pine Wooden cabinet
- ❖ Interconnections by 2mm high quality banana sockets and pins.

Technical Specifications

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| ▪ AC Mains Power Supply | : 230V ±10%, 50Hz |
| ▪ Fixed Regulated DC Power Supply | : +5V /500mA |
| ▪ Variable DC Power Supply | : Variable 0 to +12V |
| ▪ Temperature Sensor | : RTD PT 100 and NTC Thermistor |
| ▪ Heating Source | : Electrical Heating system |
| ▪ Temperature Range | : Upto 100° C |
| ▪ Current Controlling Resistor | : MFR 100Ω, ±5% in series |



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- Maximum Forward Current : 100mA
- Maximum Output Voltage : 12V
- Total Digital Meters : 03 (1 Voltmeter, 1 Milliammeter and 1 Temperature)
- Digital Voltmeter : DC 0-20V, Red Color 3^{1/2} Digit LED Display
- Digital Milliammeter : DC 0-100mA, Red Color 3^{1/2} Digit LED Display
- Digital Temperature Indicator : 3^{1/2} Digit LED Temperature Display upto 100°C with sensor
- Weight : 3.0 kg (approx)
- Dimensions (mm) : L 245 x W 320 x H 115
- Interconnections : 2mm Banana sockets
- Operating Temperature : 0-100°C, 80% RH

Learning Scope

- To study construction of RTD and (NTC) Thermistor
- To study the change in Resistance w.r.t. change in Temperature for RTD and Thermistor.
- To Observe and note the change in Voltage (V) and Current (I) w.r.t. change in Temperature.
- To Plot Temperature Vs Resistance characteristics for RTD and Thermistor.

Other Instruments Required : Digital Multimeter

Accessories Included : Electrical Heating System, Digital Temperature Indicator with sensor, RTD, Thermistor, Set of Patch Cords, Detail Instruction Manual