

Temperature Measurement using Thermocouple

Model : SE-1007



SINCOM SE-1007 Temperature Measurement using Thermocouple is an exceptional trainer for studying temperature measurement and control using Thermocouple temperature sensors. This comprehensive trainer features an instrumentation amplifier wired with a microcontroller-based system, allowing for accurate temperature measurement and control. The LED seven segment display provides clear temperature readings, and users can easily set the temperature cut-off. Additionally, the trainer includes an electrical heating system for practical application and experimentation.

Features

- ❖ Accurate Temperature measurement
- ❖ Thermocouple as a Temperature Sensor
- ❖ Microcontroller based system
- ❖ Wide Temperature Range measurement
- ❖ $3^{1/2}$ Digit LED Temperature Display
- ❖ Heater Load control
- ❖ Temperature Cut-off setting
- ❖ External Electrical Heating System
- ❖ In-Built Fixed 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

- AC Mains Power Supply : 230V \pm 10%, 50Hz
- DC Power Supply : Regulated +12V /500mA ,+5V /500mA



An ISO 9001:2015 Co.

- Maximum Operating Voltage : 12V
- Temperature Sensor : Thermocouple CRAL K type
- Controller : Micro controller based
- Heater Load Control By : SPDT Relay 5A
- Temperature Setting By : 03 Push Switches
- Temperature Display : Red Color, 3^{1/2} Digit , LED Display
- Temperature Range : Upto 100° C
- Heating Source : Electrical water Heating system
- Weight : 3.0 kg (approx)
- Dimensions (mm) : L 270 x W 390 x H 130
- Interconnections : 2mm Banana sockets
- Operating Temperature : 0-100°C, 80% RH

Learning Scope

- To study Temperature measurement using Thermocouple.
- To observe and note the variation in temperature displayed w.r.t. change in Temperature.
- To Study ON/OFF Temperature Controller action using Thermocouple. To observe & Note temperature shown by the Thermocouple sensor and it's ON & OFF controlling of Load w.r.t. Pre decided Temperature.

Other Instruments Required : Digital Multimeter

Accessories Included : Electrical Heating System, Set of Patch Cords, Detail Instruction Manual.