

# Temperature ON/OFF Controller using Thermistor

**Model : SE-1040**



**SINCOM SE-1040 Temperature ON/OFF Controller using Thermistor** is an exceptional user-friendly trainer designed for studying temperature measurement and ON/OFF control of heating loads. It utilizes Thermistor technology to ensure precise temperature readings and control. With its microcontroller-based system, this comprehensive trainer offers accurate temperature measurement and control capabilities. The LED seven segment display provides clear temperature readings, while users can fluently set the temperature cut-off and control the electrical heater load.

## Features

- ❖ Accurate Temperature measurement and ON/OFF control action
- ❖ Thermistor as a Temperature Sensor
- ❖ Microcontroller based system
- ❖ Wide Temperature Range
- ❖ 3<sup>1/2</sup> Digit LED Temperature Display
- ❖ Easy setting of Temperature Cut-Off by Push Switches.
- ❖ Heater Load control
- ❖ 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

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|-------------------------|-------------------------------------|
| ▪ AC Mains Power Supply | : 230V ±10%, 50Hz                   |
| ▪ DC Power Supply       | : Regulated ±12V /500mA ,+5V /500mA |
| ▪ Temperature Sensor    | : Thermistor                        |
| ▪ Controller            | : Micro controller based            |



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|------------------------------------|---|
| ▪ Heater Load Control By           | : Relay Driver                                    |
| ▪ Temperature Setting By           | : 03 Push Switches                                |
| ▪ Temperature Display              | : Red Color, 3 <sup>1/2</sup> Digit , LED Display |
| ▪ Temperature Measuring Range      | : Upto 100° C                                     |
| ▪ Temperature ON/OFF Setting 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 Thermistor.
- To observe and note the variation in temperature displayed w.r.t. change in Temperature.
- To Study ON/OFF Temperature Controller action.
- To observe & Note temperature shown by the temperature sensor and it's ON & OFF controlling of Heater Load w.r.t. Pre-decided Temperature.

**Other Instruments Required :** Digital Multimeter

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