

## Characteristics of NTC Bridge

### Model : SE-1012

**SINCOM SE-1012 Characteristics of NTC Bridge** is a versatile trainer designed for studying the conversion of temperature into an electrical signal using NTC Thermistor bridge. This trainer utilizes an NTC Thermistor in one arm of the bridge and fixed resistors in the other arms, combined with a Digital voltmeter. It allows users to explore and analyze the characteristics of the NTC Bridge in response to temperature changes.

### Features

- ❖ NTC Thermistor
- ❖ Resistive Bridge
- ❖ Wide Temperature Range
- ❖ Digital Volt Indicator
- ❖ 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
▪ Fixed Regulated DC Power Supply	: +12V /500mA
▪ Temperature Sensor	: NTC Thermistor
▪ Bridge	: Resistive Bridge with 3 fixed resistor & one NTC Thermistor
▪ Heating Source	: Electrical Heating system
▪ Temperature Range	: Upto 100°C
▪ Maximum Output Voltage	: 12V
▪ Total Digital Meters	: 01
▪ Digital Voltmeter	: DC 0-20V, Red Color 3 <sup>1/2</sup> Digit LED Display
▪ Digital Temperature Indicator	: 3 <sup>1/2</sup> 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 the characteristics of NTC Thermistor Wheatstone bridge as one of the element of the bridge.
- To Observe and note the change in balance condition of the bridge for the change in the temperature.
- To study measurement of Resistance using Wheatstone Bridge for the change in temperature.

### Other Instruments Required : Digital Multimeter

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