Temperature Measurement Trainer

Technology Integration

Curriculum Coverage

- Thermocouple Characteristics
- RTD Characteristics
- Thermistor Characteristics
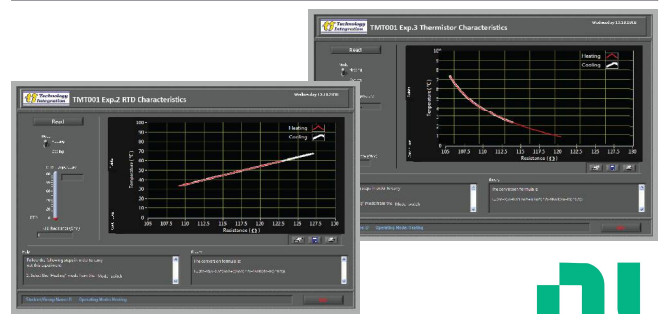- Comparison between Temperature Sensing Devices

Features

- Computer based Temperature Measurement Trainer used to teach temperature sensing technologies
- Comprises all required sensors to measure temperature in a chamber
- For use with NI's Data Acquisition & Control hardware

Description

TMT001 is a bench-mount trainer that is used to teach students how to measure temperature using different types of sensing devices; Thermocouple (TC), Resistive Temperature Device (RTD) and Thermistor.

Developed for use with a wide variety of NI's data acquisition and control platforms - easy-to-use, highly expandable programmable automation controllers, intelligent communication interfaces, and rugged I/O mod-ules.

The curriculum covered includes understanding the characteristics of the different temperature measuring devices and comparing between their different behaviors and characteristics.

Components

- Thermocouple
- RTD
- Thermistor
- Heater
- Fan
- Temperature Controller

NI[1] Compatible Platforms

- Compact RIO
- Others[2]

[1] NI

[2] Please check with us about compatibility of other NI Platforms

Required NI Modules

- cRIO: NI-9219, NI-9474

Software

- User friendly with easy to use interface
- Developed using NI LabVIEW package
- Built-in safety features & limitations, and designed for students' use

Ordering Information
Temperature Measurement Trainer

TMT001 - A - B

NI* Platform

1... cRIO

Power

1... 220 VAC

*Purchase NI Hardware Separately

and Images are subject to change at anytime without prior notice.

Technical Specifications

Temperature Measurement Trainer Specifications:

Dimensions:

- Dimensions (LxWxH): 30 x 20 x 25 mm

Safety Considerations:

- Maximum Allowable Temperature: 90 °C

Thermocouple:

- J-Type
- Probe Length: 10 cm

Thermistor:

- Resistance @ 25 °C 6000 ohms
- Probe Length: 10 cm

RTD:

- PT100
- Class B
- Probe Length: 10 cm

Glass Thermometer:

- Mercury
- 0-200 °C

Heater:

- Dimensions: 15 x 10 cm
- Power: 150 Watt
- 220 Volt 50 Hz

Temperature Controller:

- Set point: 30 °C
- On/off control