OMEGA®

A SIGN OF QUALITY PRODUCT

TEMPERATURE TRANSDUCERS TRAINER

OMEGA TYPE ICT-905

OMEGA TYPE ICT-905 Measurement of temperature is an important task in a large number of physical processes. A transducer is a device which converts the temperature information into an electrical signal, usually voltage, for an automated processing. A very wide variety of temperature transducers are commonly available which differ from each other with regards to these: Range of operation, Sensitivity, linearity, Accuracy, Stability, Repeatability and Speed of response

The present experiments have been designed to study the input-output characteristics of some common transducers like, thermistors (PTC and NTC), thermocouple, semiconductor sensors and may be extended to also study the temperature coefficients of resistance.

OBJECT

Temperature-output voltage characteristics of the following transducers in the temperature range from room temperature to 150º and determination of their parameters

01 Gain and CMRR of the Instrumentation Amplifier
02 Characteristics of a Negative Temperature Coefficient Thermistor (NTC).
03 Characteristics of a Positive Temperature Coefficient Thermistor (PTC).
04 Characteristics of semiconductor Sensor, AD590 up-to 90 ºC only.
05 Characteristics of Thermocouple-Chromel/Alumel (K type).
06 Characteristics of Platinum RTD.

FEATURES

01 Built-in DC Power Supply
02 Functional blocks indicated on-board Mimics
03 Exhaustive Learning Material
04 On board signal conditioning circuitry

TECHNICAL SPECIFICATION

01 Temperature transducers	: K type T/C
	: NTC
	: PTC
	: AD 590
	: Platinum RTD
02 Oven	: Temperature Controlled up-to 120 °C with digital display
03 Voltmeter	: Digital Voltmeter (0-2V)
04 Instrumentation Amplifier	: Built in with selectable gain
05 Power Supply	: 230V+5%, 50Hz
06 Interconnections	: 4mm banana sockets
07 Power Consumption	: 32 VA (approximately)
08 Dimension	: W 340 x H 125 x D210
09 Weight	: 3.5Kg (approximately)
10 Operating Conditions	: 0-40 °C, 85% RH

LIST OF ACCESSORIES:

01 Patch Cord 4mm length 50cm Red&Black...4P.
02 Oven.....1P.

We are committed to the continuous development of our products, and therefore reserve the right to amend specifications without prior notice.

OMEGA ELECTRONICS

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