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Product Name :	**Product Code :**
Transducers Kit	CE174

Description :

Transducers Kit

Technical Specification :

Transducers Kit
Many engineering applications and systems depend on accurate measurements and monitoring. Transducers are fundamental to the measurement process, consequently the study of different types of transducers, how they operate and how their output signals can be processed, is essential knowledge for engineers. The Transducers Kit introduces students to the concepts and understanding of common transducer devices and standard signal conditioning methods via 28 excellent practical assignments. It comprises the Measurements Package, the Electro-mechanical Transducers Kit, the Heat Transducers Kit, the Light Transducers Kit, the Power Supply and includes all leads, accessories and courseware. The measurements package is an instrumentation module with signal conditioning circuitry and includes a Wheatstone bridge, oscillator, operational amplifier, discriminator and power amplifier. The electro-mechanical kit includes 6 linear displacement transducers, namely a linear variable resistor, variable inductor, variable area capacitor, linear variable differential transducer (LVDT), variable distance capacitor and a strain gauge. The heat transducers kit includes 4 thermal devices and a heat bar assembly with temperature gradient. It includes a thermistor, platinum resistance, a bi-metallic strip and thermocouple. The light transducers kit comprises a light source, photoconductive cell, photodiode and phototransistor. A power supply, leads and theory and experiment manual with 28 comprehensive assignments completes transducers teaching kit.
Curriculum Coverage
Electro-mechanical transducers utilising variation in resistance
Wheatstone bridge
Amplifiers

Liquid depth & resistivity
Displacement
Strain
Electro-mechanical transducers utilising variation in capacitance
Wheatstone bridge
Variable area & distance
Use of an oscillator & discriminator in FM systems
Electro-mechanical transducers utilising variation in inductance
Electromagnetic inductance
Variable inductance transducer
Mutual inductance transistor
Linear variable differential transformer
Transducer circuits
Light transducers
The nature of light
Photoconductive cell
Semiconductor photodiode
Phototransistor
Spectral response
Heat transducers
Heat distribution
Thermocouples
Thermistors
Resistance thermometers
Temperature control

Features:
Bench-top study of transducers
Comprehensive manual includes theory, 28 practical assignments and industrial applications
Uses 14 industrial transducers
Includes A.C. & D.C. instrumentation schemes
Minimal set-up times ensure experimentation time
Comprehensive experiment manual

Technical data:
Dimensions (net): Instrumentation module: width 295 mm x depth 220 mm x height 72 mm,
power amplifier: width 107 mm x depth 107 mm x height 76 mm • Weight (net): Instrumentation module 1.0 kg, power amplifier 0.45 kg
Additionally supplied as a complete package:
Function Generator
Timer Counter
Oscilloscope
Capacitance Box
Resistance Box
Digital Multimeter.

Naugralabequipments

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