Instrumentation Lab

ME 1051 - Strain Gauge Trainer Kit (with Cantiliver Beam)

Technical Specification:

- The instrument is designed to study the Strain Gauge Transducer as a Direct Weighing machine's to obersve the effectof weight on the strain or resistivity of the Strain Gauge.
- DC Regulated Power Supply of for +12V Signal Generationing circuit.
- DC Regulated Power Supply for 5V.

ME 1052 - LVDT Trainer Kit

Objective :

- To study input and Output characteristics, Determination of Linear Range, Calibration as displacement meter and to determine senstivity of the instruments, Phase shift on C.R.O.

TechnicalSpecifications :

- Linear variable differential transform with ± 10mm display acement.
- On Board Digital Panel Meter with displacement Signal.
- Output Available for Control & Monitoring. Micrometer for reference Displacement Reading using screw gauge.
- Provided with excitation frequency.
- Waveform display on CRO.
- Test pins for monitoring.
- In-built power supply, signal conditioning using IC 5521.

ME 1053 - RTD Trainer Kit

Objective:

- To plot & Study the characteristics of RTD and to measure temprature.

Technical Specifications :

- Transducer PT 100, signal conditioning circuit with exe-itation source of constant current, power supply of ± 5V DC display at 3½ digital panel meter with resolution of 0.1ºC.

Standard Accessories :

- Beaker, Heating Rod, RTD (PT- 100), Thermometer (0-100ºC)

ME 1054- Thermocouple Trainer Kit

Objective :

- To plot & Study the characteristics of 'K' type Thermo-
- couple and to understand the concept of Thermocouple in instrumentation.

Technical Specifications :

- Tranducer K-Type Thermocouple signal conditioning circuit of constant current, power supply of ± 5V DC display at 3 ½ digital panel meter with resolution of 0.01mV.

ME 1055 - Speed Measurement Module using Photo Electric & Magnetic Sensor

Objective :

To study the speed measurement of DC Motor with the help of Photo Electric and Maganetic Sensor.

Technical Specifications :

DPM 1NO. 200MV, + OR - 1999 COUNTS Test points for observing various waveforms on the CRO .Speed of DC. Motor Canbe measured with the help of photo electric.

- These sensors shall be Mounted on a rigid base supporting 1/4 HP variable speed D.C. Motor for the measurement of speed.
- The photo electric pick up will be mounted on either side of motor and indicated speed can be checked with the help of hand held tachometer generally available in the laboratory.
- The range of speed variation will be 38 to 100 Km/h and a speed controller for the d.c.motor will also be provided.
- Necessary cable connections will also be supplied.
- Photo electric pick up consists of a rigid metallic disk with 20 holes and an associated photo transistor alongwith a light source.For maganetic pick up disc provided with cutts on disc and magnetic sensor is provided.
- Accuracy ± 1.5%.