

# Sensor Trainer Kit

## Features

This trainer is used to perform all the experiments of **Sensor Trainer Kit**. It is useful for experimentation as well as project work. This trainer is designed in fashion, all sections can be operate individually. This is useful for and B.Tech And M.Tech. For research / Project work we give Re-programmable facility & PC interface with Lab view Easy to perform, This trainer i for **ECE, EEE, EE, ME and I&C Eng** streams.

## Technical Specification

- On board test & measuring point in each section.
- On Board +5V, +12V, -5V power
- Digital voltmeter
- On Board circuit block
- On Board LCD to check the Motor RPM
- On Board Relay
- Amplifier for various voltage amplifier

## ON BOARD SECTIONS

### LVDT SENSOR

- On Board I/P DB9 socket for LVDT Cell. On board function generator. Test points to measure LVDT O/P with or without amplifier. Range:-20mm (-10 to +10)

### TEMPERATURE MEASUREMENT

- Various temp sensors like Thermocouple, Thermistor, RTD, LM35. I/p & O/P on banana socket, Amplifier for RTD and Thermocouple.

### STRAIN GAUGE SENSOR

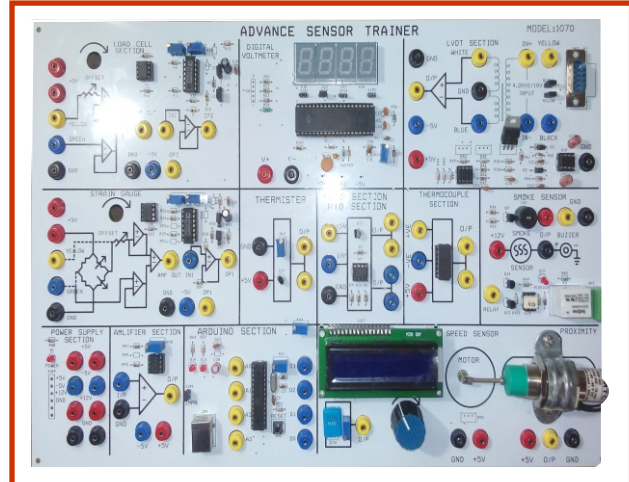
- On Board I/P banana Socket, Cantilever Beam type I/P method by hanging weight. Half bridge circuit, op amp based two different amplifiers, with each testing & measuring point. O/P is connected to voltmeter through banana socket

### SMOKE SENSOR

- +12V operated smoke sensor, Buzzer alarm for indication. Provision to measure O/P on banana sockets.

### PROXIMITY BASED SPEED MEASUREMENT

- Measurement of motor speed by proximity sensor. Variable potentiometer to vary speed. LCD display to show speed in RPM.



## Experiments

- To Study the Characteristics Of LVDT.
- To Study the Characteristics Of Temperature LM35 Sensor.
- To Study the Characteristics NTC temperature sensor.
- To Study the Characteristics thermocouple.
- To Study the Characteristics of strain gauge sensor.
- To Study the Characteristics Load cell sensor
- To Study the Characteristics Smoke sensor
- To Study the Characteristics RTD sensor
- To Study the Characteristics Speed sensor

## FUTURE USE

- Optional : For B.Tech/ M.Tech all ready can be displayed on labview VI and can be used for project implementation.



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