

## SENSOR TECHNOLOGY TRAINING KIT

MODEL: MCTR05



### FEATURES

- Robust and sturdy construction
- Easy and versatile operation
- Incorporates standard industrial components
- Can be interfaced with any standard PLC

### DESCRIPTION

The trainer is designed to teach and familiarize students with industrial sensor technology. Various types of sensors are supplied. These sensors can be tested and its output can be viewed on visual indicators. Optionally these sensors can be interfaced with PLC.

## INSTRUCTION MANUAL

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Self explanatory operating manuals are provided with each system. Detailed theory as well as practical exercises is also included in the manual.

## EXPERIMENTS

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1. To study various types of sensors
2. To study the frequency counter
3. To identify type of material using combination of sensors
4. To study behaviour of various sensors with respect to different types of sensing material
5. To measure Hysteresis of various sensors
6. To measure Reduction Factor of inductive Sensor
7. To plot response curve of various sensors
8. To measure effect of different size of groove in a workpiece on proximity sensors
9. To measure output with respect to different bore diameters in the workpiece for various sensors
10. To study PLC interface <sup>NOTE1</sup>
11. To adjust sensing distance of a sensor

*NOTE1: Possible if PLC interface and PLC are purchased*

*Above list of experiments may vary depending on types of sensors supplied*

## COMPONENTS

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1. Proximity sensor - Inductive Type, Digital
2. Proximity sensor - Inductive Type, Analog
3. Proximity sensor – No reduction factor, Inductive Type, Digital
4. Proximity sensor - Capacitive Type, Digital
5. Proximity sensor – Photo Reflective Type, Digital
6. Proximity sensor – Photo Interrupt Type, Fibre optic, Digital
7. Proximity sensor – Optical type to measure transparent glass
8. Proximity sensor – Magnetic Type
9. Linear motion module with DC drive with (Absolute scale)
10. Linear motion module with digital scale, manual
11. Incremental Encoder
12. Sensing material plates
13. Power supply
14. Digital indicators
15. DC motor speed control unit
16. I/O Card
17. Patch chords
18. Aluminium structure
19. Clamp-on type mounting of sensors

#### OPTIONAL

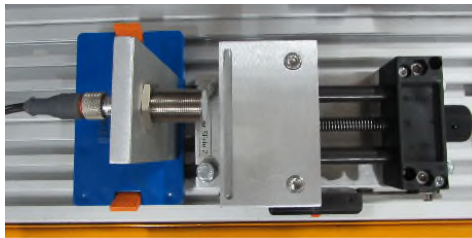
- Temperature sensor with heat source
- Pressure sensor with pressure vessel and facility to vary pressure
- RH sensor with humidifier
- Ultrasonic sensor
- PLC Interface module with PLC, cable and ladder logic software
- Vision sensing
- IO Link sensor, Master and software

#### SERVICES REQUIRED

- Electric supply 230 V AC, 50 Hz

#### DIMENSION AND WEIGHT

- Dimension: 1400 mm x 925 mm x 900 mm (H)
- Weight: 94 Kg



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- (1) Since research and development is an on-going activity, the specifications mentioned herein are subject to change without notice
- (2) Photographs are indicative only