



**Sciencetech 2311A Industrial Sensor Lab** is an excellent platform for students and professionals who want to learn about sensor technology and its applications in automation systems. It provides a hands-on learning experience and allows students to develop the skills necessary to select, use, and evaluate sensors in various applications.

Sensor Training Platform for PLC includes different type of Sensor modules like Photoelectric through beam sensor, Photoelectric retro reflective sensor with reflective plate, Reflective fiber coupled with Fiber sensor amplifier, Diffuse reflective sensor, Distance settable sensor, 8 pin din mounted 24VDC coil electromagnetic relay, Digital counter, Tachometer, Cylindrical capacitive sensor, Flat capacitive sensor, Cylindrical inductive sensor switch and Sensor module, Motorized module with speed controller sensors.

### Features

- Learn the fundamentals of industrial sensors in detail.
- Table top portable training platform with suitable top enclosure to prevent from dust /dirt, accidental damage, and moisture.
- All sensors are mounted with 3 electrical terminals (24V, ground, output).
- Different types of sensor modules are included Photoelectric through beam sensor, Photoelectric retro reflective sensor with reflective plate , Fiber optic sensor with amplifier, Diffuse reflective sensor, Distance settable sensor, 8 pin din mounted 24V coil electromagnetic relay, Digital Counter , Tachometer, Cylindrical capacitive sensor, Flat Capacitive sensor, Cylindrical inductive sensor switch and sensor module.
- All sensor modules are enclosed and coupled with compatible latch arrangement to secure into position.
- Facility of using a bread board enabling custom made circuit design and testing.
- Actuator includes motorized module with speed controller sensors.
- The platform has facility for easily connecting different sensor modules for study /testing.
- Built-in DC Power Supply.
- Easy to operate.
- Compact tabletop ergonomic design.
- Ready assignment details.
- Robust construction.

### Technical Specifications

#### Photoelectric through beam sensor: 1 no.

Sensing method	:	Through beam
Maximum sensing distance	:	5 meter
Control output	:	PNP
Operating voltage	:	12 – 24VDC



#### Photoelectric retro reflective sensor with reflective sensor: 1 no.

Maximum sensing distance	:	2 meter
Control output	:	PNP
Operating voltage	:	10 – 30VDC



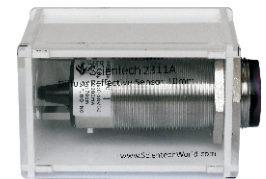
#### M6 reflective fiber coupled with fiber sensor amplifier: 1 no.

Control output	:	PNP
Operating voltage	:	12 – 24VDC



#### Diffuse reflective sensor: 1 no.

Maximum sensing distance	:	50 – 70cm (approximately)
Control output	:	PNP
Operating voltage	:	10 – 30VDC



#### Diffuse reflective sensor adjustable sensitivity : 1 no.

Maximum sensing distance	:	10 – 30cm (approximately)
Control output	:	PNP
Operating voltage	:	10 – 30VDC



#### Distance settable sensor: 1 no.

Maximum sensing distance	:	2mm – 80mm (approximately)
Control output	:	PNP
Operating voltage	:	10 – 30VDC



#### Digital counter : 1 no.

Display	:	Single display , 4 digit, 0.56", 7 segment, Red LED display
Input	:	PNP sensor/ switch
Range	:	0-999999 count
Supply	:	230V AC



### Tachometer: 1 no.

Range	:	4-5000RPM
Display	:	Single display, 4 digit, 0.56", 7 segment, red LED display
Input	:	PNP sensor/ switch



### Switch and LED module : 1no.

LED light	:	3 nos.
Momentary switch	:	2 nos.
Supply	:	24VDC



### Motorized (24VDC) rotary disc: 1 no. (with 2 set of black and white region)

Supply	:	24VDC
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### Motorized (24VDC) rotary disc: 1 no. (with 2 set of yellow, green, blue, and red region)

Supply	:	24VDC
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### Cylindrical capacitive sensor : 1 no.

Maximum sensing distance	:	10 mm (approximately)
Control output	:	PNP
Operating voltage	:	10-30VDC



### Flat capacitive sensor : 1 no.

Maximum sensing distance	:	8mm (approximately)
Control output	:	PNP
Operating voltage	:	10-30VDC



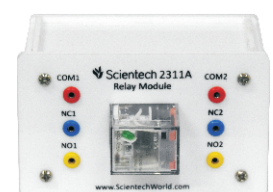
### Cylindrical inductive sensor : 1 no.

Maximum sensing distance	:	8mm (approximately)
Control output	:	PNP
Operating voltage	:	10-30VDC



### 8 pin din mounted 24VDC coil electromagnetic relay : 1 no.

Coil voltage	:	24VDC
Type	:	DPDT



Weight	:	3 kgs approximately
Dimensions (mm)	:	W 326 x D 252 x H 52
Mains Supply	:	110-220V ±10%, 50/60Hz

## Scope of Learning

### Study and use of

- Photoelectric through beam sensor.
- Photoelectric retro-reflective sensor with reflective plate.
- M6 reflective fiber coupled with fiber sensor amplifier.
- Diffuse reflective sensor (approx. 10mm detecting distance).
- Diffuse reflective sensor (adjustable sensitivity).
- Distance settable sensor (can approximate distance 2mm – 80mm).
- 8 pin DIN mounted 24V coil electromagnetic relay.
- Digital counter.
- Tachometer.
- LED light indicator.
- Momentary push button.
- Motorize (24VDC) rotary disc (D50mm) c/w 2 sets of alternate black and white region.
- Motorize (24VDC) rotary disc (D50mm) c/w 2 sets of the alternate yellow, green, blue, and red region.
- Cylindrical capacitive sensor (detecting distance 8mm).
- Flat capacitive sensor (detecting distance 8mm).
- Cylindrical inductive sensor.
- Analog inductive proximity sensor.

### List of Accessories

- Scientech 2311A trainer platform : 1 no.
- Briefcase (for sensors) : 1 no.
- Mains cord : 1 no.
- 2mm patch cord 16" (red) : 4 nos.
- 2mm patch cord 16" (black) : 4 nos.
- 2mm patch cord 16" (yellow) : 4 nos.
- Aligner screw driver : 1 no.