



Training on **INDUSTRIAL SENSORICS**

RFID | Vision | Ultrasonic | Photoelectric

Duration: 5 Days

Learning Goals

To Illustrate the fundamentals of most commonly used analog and digital sensors
To learn integration with other products relating to Hydraulics, Pneumatics and PLCs

Sensor Technology has emerged as a key technology to deploy Industrial Automation solutions. Scientific and technical innovation is now increasingly linked with the term sensor. There are few problems today in data acquisition that cannot be solved using sensors. For that reason, sensors occupy a prime position in the broad field of factory automation and in many other applications like in construction, utilities, building management and office equipment etc. BOSCH Rexroth sensorics trainer, fitted with Pepperl & Fuchs industrial sensors, provides opportunity to work on practical exercises and gain specialized technical knowledge about characteristics of each sensor.

Course Outline

- ▶ Introduction to sensor Technology.
- ▶ Fundamental construction feature of various sensors.
- ▶ Principle & Functioning of various sensor like
- ▶ Photo Electric Sensor
- ▶ RFID Sensor
- ▶ Position and Vision Sensor
- ▶ Ultrasonic sensor.
- ▶ Sensor Integration.
- ▶ Sensor Interfacing with PLC
- ▶ Sensor Interfacing with Electro-Pneumatic
- ▶ Sensor Interfacing with Electro-Hydraulic
- ▶ Actuator-sensor Interface (ASI System)

Key Take-aways

- ▶ Use and implement various industrial sensors.
- ▶ Understand how to use the sensor for taking real-time process data.
- ▶ Implement sensors into an automation system using both hardware and software techniques.
- ▶ Add the sensor and sensor interface into a controller-based industrial unit.
- ▶ Create hardware and firmware to process sensor signals and feed data to a controller for further evaluation.
- ▶ Study sensor signal noise and apply proper hardware techniques to reduce it to acceptable levels.