



Last date for registration 14 May 2025

INTRODUCTION

Industrial sensors play a crucial role in process control by enabling precise measurement, monitoring, and automation in manufacturing and industrial environments. These sensors come in various types, including optical, ultrasonic, proximity, temperature, pressure, and flow sensors, each designed for specific applications. Selecting the right sensor involves considering factors such as accuracy, environmental conditions, response time, and compatibility with control systems. Proper sensor selection enhances efficiency, ensures quality control, and improves safety in industries such as automotive, pharmaceuticals, food processing, and energy production.

This course provides a comprehensive introduction to Industrial Sensors and Controls, as commonly implemented in both discrete and continuous manufacturing environments. Key topics include sensor specifications, sensor selection, connection techniques, and measurement systems in automation. Additionally, the course covers sensors and signal conditioning, as well as discrete and continuous variable control systems, including IO-Link technology.

Keeping this in view, Indian Machine Tool Manufacturers' Association (IMTMA) is organizing a training program on “**Industrial Sensors-Types, Selection, Applications for process Control**”.

FOCUS AREAS

- Sensor data sheets
- Types, Applications and Selection of sensors
- Proximity sensors
- Photo sensors
- Ultrasonic sensors
- Temperature Sensors
- Flow sensors
- Pressure switch
- Read Switch
- Encoders
- Connection techniques
- Measurement systems in an automation system
- Control systems with IO-Link
- Use of Identification Technology in an Automation system.
- Bar code identification
- QR code identification
- RFIDs and its frequency ranges and few Applications examples of RFID
- **Live Demo of connection and testing of different sensors for real time applications**

KEY TAKE AWAYS

After undergoing the programme, the participants will be able to -

- Understand differences between discrete and analog sensors.
- Selection of sensor for a given process.
- Make sensor connections to controller.
- Configuring sensors to a controller and addressing them.
- Setup Industry 4.0 enabled IO-Link sensors, and IO-Link Master.
- Understand connection of sensor to PLC and monitoring its state/value on PLC
- Understand industry 4.0 advancements in sensor technologies.

PARTICIPATION FEE

Rs. 10450/-

+18% GST

**IMTMA Members/ Micro Companies/ Individuals/
Educational Institutions / Students/ IMTMA Non
Members/ Others**

USD 415/-

Overseas Participants

Group Concession : 10% for 3 to 5 and 20% for 6 and more delegates being nominated from the same company

PARTICIPANT PROFILE

This program benefits engineers, technicians, and system integrators in automation and control who want to enhance their knowledge of industrial sensors. Industry managers can also gain insights into advanced sensor technologies for efficient process control.

Manufacturing & Process industry professionals Involved in quality control, production and maintenance, seeking to optimize efficiency and accuracy.

It is valuable for faculties from educational institutes students and researchers in industrial automation.

FACULTY

This Program will be conducted by **Dr. Prathima Holla**.

Dr. Prathima Holla is a unique blend of industry expertise and academic experience. She holds a degree in Electronics and Communication Engineering from NMAMIT Nitte and a Master's in Industrial Electronics from SJCE Mysore, where she was a VTU M.Tech Gold Medalist. With over 15 years in leading companies like L&T Emsys, Intel, and Microview Software Technologies, she has extensive industry experience. Additionally, she has spent a decade in academia, teaching Electronics and Electrical subjects and training professionals in Industrial Automation.

She earned her Doctorate from VTU in 2021, focusing on Industry 4.0. Her research includes developing an Internet gateway for monitoring machine shop activities, incorporating M2M communication, data analytics, and digital solutions for manufacturing challenges. Her work has been published in prestigious international journals such as Taylor & Francis, Springer, and IEEE. Driven by a passion for teaching, skilling, and knowledge transfer, she currently heads the automation division at Distinct Productivity Solutions Pvt. Ltd., Bangalore.

For Registration Contact

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REGISTRATION : Prior registration for participation is necessary. Number of participants is limited and will be accepted on 'First Come First Serve' basis. A Certificate of participation will be issued to participants.

Important Information : Participation fee includes, course material, working lunch and tea / coffee. Interested companies are requested to register online by clicking on 'REGISTER' button and by filling up the nomination authority and participant's details in specified form.