

INTRODUCTION

There has been a quest for ease of doing things ever since the mankind is evolved. While it is very important in day-to-day life, it is even more important in the manufacturing activity which is a driver of economic growth. There has been a constant effort by the industry to make the process easier than the previous day. Hence it is continuous journey and not a destination.

Industrial automation has passed through various revolutions such as mechanization, electrification, automation and today we are in the midst of digitalization. An important pre-requisite to achieve best results out of digitalization is automation. The human thoughts have to be communicated to the machine through HMI and the actions there on has to be commanded by PLC logics. In the present scenario of ever demanding industrial automation needs, HMIs and PLCs are equipped with new protocols, latest features and utilities. It is very important for the industrial community to know the real power of HMI and PLC in making the Industrial automation easy and successful.

Keeping this in view, Indian Machine Tool Manufacturers' Association (IMTMA) is organizing a 2-day interactive programme on "**PLC & HMI - Key drivers of Technology for Industrial Automation**"

FOCUS AREAS

- Need for Automation
- Basics of Digital Electronics & Relay Logics
- Architecture of PLC
- Concept and clear understanding of Scan Cycles in working of PLC
- Overview of commonly used Hardware (DI/DO and AI/AO Modules)
- Discrete Input / Output modules, interfacing with field devices, concept of Sourcing & Sinking, NPN, PNP, I/O addressing.
- Role of sensors in facilitating industrial automation
- Overview of Communication and Networking
- Overview of Programming Techniques
- Creating & Editing Ladder Logic Program
- Hands-on practice in simulators
- HMI Basics & Features
- HMI Screen Building
- Integrating Sensors, PLC and HMI
- Live Examples of working on PLC and HMI with sensors

KEY TAKE AWAYS

After undergoing the program, the participants will be able to have an overview of:

- Basics of PLC technology and understand the concept of Ladder programming
- Basics of HMI and creating some screens.
- Simulation of HMI and PLC codes.
- Importance & types of Sensors and Peripherals.
- Integrating the Sensors, PLC and HMI.
- Latest features in HMIs and PLCs in view of digitalization.
- Knowledge about various application possibilities using PLCs and HMIs
- Hands on experience of the PLC and HMI usage so as to get a feel of Industrial automation.

PARTICIPATION FEE

Rs. 9500/-
+18% GST

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

USD 380/-
Overseas Participants

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

PARTICIPANT PROFILE

Programme will be beneficial for Automation Engineers, Maintenance Engineers, Engineers in Design, R&D and NPD activities. Programme is relevant to industry viz., Any Process Industry, Auto OEMs, Auto ancillaries, Pump Manufacturers, Aerospace ancillaries, Defence & Railway Establishment, General Engineering and Engineering Service providers. Faculties from educational institutes can also participate in the programme. Students who are interested in Industrial Automation can participate to get a hands-on feel.

FACULTY

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

Dr. Prathima Holla is a rare blend of Industry and academics. Graduate in Electronics and Communication Engineering from NMAMIT Nitte. Masters in Industrial Electronics from SJCE Mysore. She is MTech Gold Medallist from VTU. She worked in Industry majors like L& T Emsys, Intel, Microview Software Technologies for more than 14 years. She also spent about 8 years in academic institutions, teaching Electronics and Electrical subjects. She completed her Doctorate from VTU in 2021 with her research subjects around Industry 4.0. She has architected an Internet gateway to monitor machine shop activities which involves M2M communication, Data Analytics, Close looping of many manufacturing challenges using digital capabilities. Her research papers are published in international journals like Taylor and Francis, Springer etc. Passionate about teaching, skilling and knowledge transfer. At present she is Heading automation division in Distinct Productivity Solutions Pvt. Ltd., Bangalore.

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