



## CERTIFICATION TRAINING PROGRAM ON

# **ELECTRICAL DRIVES, CONTROL PANEL, PROGRAMMABLE LOGIC CONTROLLER (PLC) & SCADA**

**Duration 48-60 Hrs**

**Who Should Attend:** Engineering students from Electrical, E&I, C&I, E&C

### **Outcome of the Program:**

Participants will be able to do complete Control Panel wiring, understand required components, connections and communication, Industrial Applications.

**Method of Delivery:** Presentation, Simulation and Complete Hands on actual Work)

**Expert:** Pioneer and working in the field

### **Contents:**

Complete installation & preparation of Control Panel

- Electrical Drives (Wiring, Installation, Commissioning, Programming of Parameter, Testing & Troubleshooting).
- Contactor (Connections, Requirement & holding)
- DOL Starter-Applications
- Start Delta
- Relay
- Timer
- Counter
- Temp Controller
- PLC & SCADA

(Control Card, Control terminal, Power Supply)

### **Sub Contents:**

Web: [www.cisat.co.in](http://www.cisat.co.in); Email: [vikas@cisat.co.in](mailto:vikas@cisat.co.in); Contact: +91- 7709012815 (Branches: Thane/Pune/Nagpur/Bhilai/Vapi/Wardha)



- INTRODUCTION · Automation · History of Automation · Application of Automation
  - Relay (Idea) · Hardware Relay Logics · Relay Programs · Definition
  - Need of PLC · Wiring details of PLC [Sink & Source] · Types of Signals
  - PLC Architecture · Scan time. Ladder logic Introduction · Basic programming based on LD (Ladder Diagram)
  - Introduction of Timers & Counters.
- AB · Software Introduction · Hardware configuration · Timers · Counters
- Practice Compute Math · Compare · Move/Logical · Advanced Math
- Pneumatic & Field Instruments · Configuration of AB Rack types PLC?
  - Controlling Method [On-Off Controller, P- Controller, PI-Controller, PD-Controller, PID Controller] · Explain the setup diagram? · Explain the Process flow?
  - Designing of program for controlling method?
  - Introduction about RTD & Thermo couple? · How to interface the RTD & Thermo Couple?
- PROJECT INTRODUCTION
- Practice
  - Introduction about Mitsubishi & Panel wiring details Configuration of PLC & working with programming Software Working with basic function
- Timers 2. Counters Working with special function
  - INTOUCH · How to create database to same design · How to reload the design · How to create a tag name · How to choose the inputs · How to Link the inputs & Outputs · How to Use Properties From toolbox · How to select the design the process by using properties · How to go use simulation and check the process · How to fill the tanks?[Verticals, Horizontal] · How to move the objects [verticals, Horizontal, Rotation, and Scale] · How to differentiate with colors [fore ground, border] · How to animate the design [visibility, commands] · Script · DDE · Application based on topics
- Practice - TRENDS · Real time · Historical · Alarms PLC to SCADA Interfacing
  - VFD · Needs of VFD; Different between AC and DC Drives · Different between 3 phases & 1 phase VFD · How to select the VFD by series No · Function of the VFD · How to assign the motor name plate details to the VFD · Wiring details of PLC to VFD · VFD Commissioning · Controlling Method (Local mode & Remote mode) REVISION.

Fees: INR 5000 per head

Batch size: Min 8 participants in one batch.