



Automation Trainings

Technical Skills Development



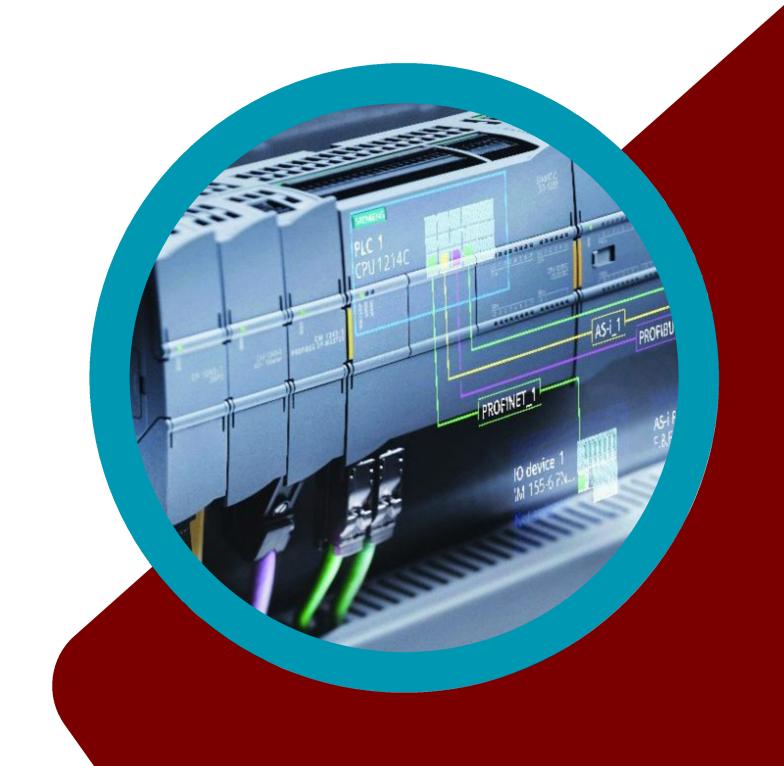
Introduction

Unlock your potential in industrial automation. Machinotech now offers expert-led, hands-on training for today's most indemand skills, including PLCs, HMI, Instrumentation, VFDs, Pneumatics, and Motor Control. Join us to build the expertise you need to advance your career.



S7 1200 Basic Course

- SIMATIC S7 1200 System Family Overview
- Installation and maintenance of a PLC
- SIMATIC S7-1200 software package
- Hardware configuration
- Hardware commissioning
- Block architecture and Program Editors
- Symbols
- Binary and Digital Operations including IEC Timers and Counters
- Introduction to Data Blocks
- Introduction to HMI and Profinet networking
- PLC and HMI tags
- Program documenting, saving and archiving
- Each of the above topic areas are backed up by practical exercises using a conveyor model and simulator. Working examples are provided and tested out during the course.



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TIA Portal Programming 1

- Overview and significant performance characteristics of the SIMATIC S7 system family
- The components of the TIA Portal: STEP 7, WinCC, communication
- Program execution in automation systems
- STEP 7 block types and program structuring
- Binary and digital operations
- Programming of parameterizable blocks
- Data management with data blocks
- Programming organizational blocks
- Test tools for system information, troubleshooting and diagnostics
- Hardware configuration and parameterization of the SIMATIC S7-1500 modules, a PROFINET IO system (ET-200SP), a Touch Panel (TP 700) and a Sinamics G120 drive over PROFINET
- Program documentation and saving
- Deeper understanding of contents through practical exercises on TIA system model



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SIMATIC Programming 2

- Use program design methods to structure the program
- Solve extensive programming tasks with reusable blocks
- Program advanced functions, such as indirect addressing, in STEP 7
- Implement data management with the SIMATIC S7 automation system
- Apply system blocks along with blocks from the standard STEP
 7 library
- Program classical software error handling and evaluation
- Configure the connection of an operator control and monitoring system (HMI).
- Configure TIA system components consisting of SIMATIC S7, HMI, PROFINET IO.





VFD Training Course - Siemens

- Design of the System and Components
- Electrical Basics Review
- Different motor-starting methods
- Incoming Power (line) Wiring
- Motor (load) Wiring
- Control Wiring
- Keypad Controls
- Terminal Strip Control Automatic, Manual
- Bus Communication Control
- Open Loop Control
- Manual Operation
- Automatic Operation 2/3 wire mode
- References & Limits
- Motor Speeds Min, Max and Preset
- Ramp Times
- Speed Reference
- Skip Frequencies
- Inputs / Outputs Functions Analog, Digital, and Relay
- Application Functions
- Reset



VFD Training Course - Danfoss

- What is Local, 2 wire and 3 wire Control why and where it is used
- (explanation)
- Basic programming parameters and Local Control
- 2 wire control
- Analog Input Control
- Program Parameters
- Preset frequency using digital input
- Relay operation
- Display Parameters, Terminal Parameters
- 3 wire control
- Jogging using a digital input.
- All advanced Parameters (Eg:- Skip frequency, Start at power up)
- Other digital input parameters
- Automatic stopping of the motor when the frequency exceeds a predefined limit
- Practice Questions





Thank You

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