

Online Training - SIMATIC S7-1500 PLC & SINAMICS S120 (CO-TIAS120)

Objectives

- Making participants familiar / work with SIMATIC S7-1500 and SINAMICS S120. You will learn the programming & troubleshooting of S7-1500 PLC & S120, also communications of S7-1500 with remote station & S120.
- After the course you can put the S7-1500 PLC & converter system S120 efficiently into operation. You can use the diagnostic tools in case of a fault.

Target Group

- Users, Commissioning / Service / Maintenance Engineers

Content

SIMATIC S7-1500

Hardware:

- System overview of SIMATIC controller families
- SIMATIC S7-1500 family in detail
- Hardware configuration of S7-1500 controller in TIA
- Installation guidelines, powering & wiring of modules, addressing

Software and Programming concepts:

- Programming language, PLC Tags and representation in LAD
- Elementary Data types in PLC
- Symbol Table and VAT

Communication:

- S7-1500 controller with remote station ET200SP on Profinet (PN)/Profibus DP protocol

HMI:

- Introduction to HMI & 2nd generation HMI
- Basic Configuration of HMI

Diagnostic topics:

- Basic Diagnostics & Web Server as a diagnostic tool
- Upgradation & Migration of PLC program.

SINAMICS S120

- Design and functional principle of the converter system SINAMICS S120

Hardware:

- Control unit, line infeed and motor modules
- Option boards, Terminal modules, Sensor modules.
- Motors, encoders, and interfaces
- Block diagram of Drive System

Commissioning:

- Operation of Drive through BOP20 (Drive Object Concept)
- BICO technology concept.
- Parameterization using STARTER / STARTDRIVE Tool
- Online connection via Profibus or Profinet
- Automatic configuration.
- Project structure: drive objects and drive components
- Topology Concept.

S120 function & feature:

- Extended Setpoint channel
- Operation of drive with speed control
- Sinamics Compact Flash card structure

PLC Drive Communication:

- Establishing Communication between Sinamics S120 & Simatic PLC S7-1500 over Profibus or Profinet.
- PZD Configuration (Send / Receive data)

Diagnostics:

- Fault Diagnostics with Trace in Starter / Startdrive & other software / hardware options
- Project Backup
- FW & Project Upgradation
- Hardware Replacement
- Diagnostics Using Web Server.

Hands on:

- Exercises defined based on Topic explained.
- Hands on practice on demo kit.

Type

Online-Training

Duration

6 days

Language

en