SIEMENS

TIA Portal Programming 2 (US-PTTIAP2A)

Type

Instructor-led Learning

Duration and Continuing Education Units (CEU)

4.5 Days
3 CEUs

Target Group

- Engineer

Short Description

This course is the second in a three-part series which increases skills with Siemens SIMATIC TIA Portal. Students will learn to leverage the power of TIA Portal software with advanced structured programming techniques. A systems approach to efficiently programming the S7-1500 and S7-1200 PLCs is covered. Integration and connectivity of PROFINET IO, HMI, and G120 Drive are the central focus of this course. Programming emphasis centers on Ladder (LAD) and Statement List (STL) logic, with an introduction to Structured Control Language (SCL) and S7-GRAPH. Both direct and indirect addressing are an integral part of the course.

Objectives

- Leverage the power of Block and Function libraries
- Use LAD and STL for Programming required functions
- Employ direct and indirect addressing in a program
- Incorporate System Functions (SFC) in a program
- Integrate an HMI and Drive system with the PLC on a PROFINET network
- Program Instance and Multi-Instance Block calls
- Use interrupt-driven and error processing program execution blocks
- Leverage STEP7 advanced diagnostics

Content

- Training Devices and Addressing
- Hardware Commissioning
- Program Design Methods
- Jump and Accumulator Functions
- Analog value Processing and Arithmetic
- FCs, FBs, and Multiple Instances
- Complex Data and Addressing
- Optimized Block Accesses
- HMI Alarm Messages
- System Diagnostics and Error Handling
- Introduction to SCL
- Introduction to S7-GRAPH
- Integration and commissioning a Drive with Startdrive

Mandatory Prerequisites

TIA Portal Programming 1: US-PTTIAP1A

Note

The core issues of efficient use of CPU resources, establishing communications, passing information, and managing integrated diagnostics are included. Skills in error management and extended diagnostics are reinforced throughout this agenda. This course includes classroom instruction, demonstration, and considerable hands-on lab work.

Language

English