SIEMENS

TIA-S7-1500 Programming 2 (TIA-PRO2)

Short Description

You can deepen your theoretical knowledge with numerous practical exercises on a TIA system model. This consists of a SIMATIC S7 automation system, ET200 distributed I/O, Touchpanel, drive, and a belt model.

Objectives

The Totally Integrated Automation Portal (TIA Portal) forms the work environment for integrated engineering with SIMATIC STEP 7 and SIMATIC WinCC.
The second part of the SIMATIC TIA Portal programming training is based on the knowledge of the TIA Portal gained in the SIMATIC S7 TIA Portal programming 1 course, including STEP 7, SIMATIC S7, HMI, connection of drives, and PROFINET IO. You will expand your knowledge of complex operations and you get an introduction in the programming language statement lists (STL), Structured Control Language (SCL) and S7-GRAPH. Along with analog value processing and data administration with complex data types, the evaluation and handling of program-related errors are also considered. Building on this, you will learn how to display messages on the operator control and monitoring system (HMI). Thanks to the knowledge imparted, you will gain new impetus and ideas for efficient PLC programming.
After attending the course, you can do the following:
• Understand the interaction of TIA components
• Apply classical program development methods
• Solve comprehensive programming tasks
• Program advanced functions such as indirect addressing in STEP 7
• Implement data administration 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 alarms of the operator control and monitoring system (HMI)
• Configure TIA system components consisting of SIMATIC S7, HMI, PROFINET IO, and drive

Target Group

Programmers
Commissioning engineers
Engineering personnel

Content

- Commissioning - S7-1500
- Commissioning - Distributed I/O
- PLC Tags
- Commissioning - HMI
- Program Design Methods
- Analog Value Processing and Arithmetic
- FCs, FBs and Multiple Instances
- Complex Data and Addressing
- Optimized Blocks
- HMI Alarm Messages
- System Diagnostics and Error OBs
- Commissioning a Drive with Startdrive and Technology Object
- Introduction to SCL
- Appendix: Introduction to S7-Graph
- Appendix: Introduction to STL

Prerequisites

SIMATIC S7 knowledge corresponding to TIA-PRO1 and practical experience in using the knowledge.

Note

The course teaching and material language is English. The material is provided for students in electrical form as pdf document.
Training Devices:
• SIMATIC S7-1500
• Profinet I/O ET200 SP
• Comfort-panel
• Sinamics G120
• Belt model
1 training set / 2 students
PG M6 / TIA Portal Step7 V18
1 PG for every student

Type

Face-to-face training

Duration

5 days

Language

en

Fee

1,980 EUR

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