SIEMENS

Online Training - SIMATIC Programming 2 in the TIA Portal (TIA-PRO2)

Short Description

The Totally Integrated Automation Portal (TIA Portal) forms the work environment for integrated engineering with SIMATIC STEP 7 and SIMATIC WinCC.

The second online training 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 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). 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.

In order to provide you with the best possible support and training in your personal learning environment (own office/home office), we have implemented selected courses as digital online trainings for you. We provide you with live theory lectures from our experts, which convey the course content described in the learning objectives in a practical and comprehensive manner, utilizing our virtual exercise environment for practical exercises. In our virtual classroom, our expert is also available to you at any time during your individual practical exercises for in-depth questions and technical discussions.

Objectives

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 and PROFINET IO

You will deepen your theoretical knowledge through numerous practice-oriented exercises in our virtual exercise environment on a TIA plant model. This consists of a SIMATIC S7-1500 automation system, Comfort Panel TP700 and a virtual conveyor belt model.

Target Group

Programmers
Commissioning engineers
Engineering personnel

Content

Tools for program creation (e.g. structograms)
Analog value processing
Functions, function blocks, and multi-instances using the IEC-compliant timer/counter as an example (International Electro technical Commission)
Jump commands and battery operations
Indirect addressing
Classical software error handling and evaluation with error organization blocks (OBs)
Evaluation of diagnostic data
Troubleshooting and alarms with an HMI device (Touchpanel)
Introduction into Structured Control Language (SCL)
Consolidation of the content through practice-oriented exercises in the virtual exercise environment.

Prerequisites

SIMATIC S7 knowledge corresponding to TIA-PRO1 and practical experience in using the knowledge
You can use the available online entry test to ensure that the selected course matches your area of expertise.

- Online Assessment Test
- Technical requirements > VE Lab

Note

In this course you will work with SIMATIC S7-1500 and software SIMATIC STEP 7 based on TIA Portal.

Type

Online-Training

Duration

4.5 days

Language

en

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