SIEMENS

Online-Training - SIMATIC Programmieren 3 in TIA Portal (TIA-PRO3)

Short Description

The Totally Integrated Automation Portal (TIA Portal) forms the work environment for integrated engineering with SIMATIC STEP 7 and SIMATIC WinCC. The third 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 courses 1 and 2, including STEP 7, SIMATIC S7,HMI, connection of drives, and PROFINET IO. You will expand your knowledge regarding the reusability of STEP 7 blocks and their storage in user libraries. You get an introduction in ProDiag. You will create user-specific blocks for reporting, handling and analyzing program errors. To save the machine data, you will learn how to manage recipes in SIMATIC HMI (operator control and monitoring system). You will set up communication between SIMATIC CPUs based on Industrial Ethernet. The comprehensive knowledge that is imparted to you will allow you to shorten configuration times and to react flexibly to the need to optimize your plant.

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 principle of object-oriented programming
- Program reusable STEP 7 blocks based on IEC 61131-3 in an object-oriented manner
- Create usable blocks as well as user libraries
- Program STEP 7 blocks for program-related error handling and evaluation
- Program alarm messages
- Configure data administration with SIMATIC HMI recipes
- Configure CPU – CPU communication via Industrial Ethernet

You can deepen your theoretical knowledge with numerous practical exercises on a TIA system model. This consists of a SIMATIC S7 automation system, distributed I/O ET 200, a Touchpanel and avirtual conveyor belt model.

Target Group

Programmers
Commissioning engineers
Engineering personnel

Content

Commissioning of the TIA system model with distributed I/O on PROFINET IO
Functions, function blocks, and multi-instances
Reuseable blocks and optimized data access
Indirect addressing of complex data structures and parameters ARRAY*, VARIANT, REF_TO und DB_ANY
Block versioning in Project and Global Libraries
Administration of a recipe database in the operator control and monitoring system (HMI)
Creating alarms (with Program_Alarm and in the diagnostic buffer) with an HMI device (Touchpanel)
ProDiag
Overview of the engineering tools for all aspects of the TIA Portal
Deeper understanding of contents through practical exercises on SIMATIC S7-1500 system model

Prerequisites

SIMATIC S7 knowledge corresponding to TIA-PRO2 or TIA-SYSUP 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 > VLab

Note

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

Type

Online-Training

Duration

5 days

Language

de

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