SIEMENS

Online-Training - SIMATIC Programmieren 1 in TIA Portal (TIA-PRO1)

Short Description

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

In this first online training of the SIMATIC TIA Portal programming training, we teach you the handling of the TIA Portal, basic knowledge about the structure of the SIMATIC S7 automation system, configuration and parameterization of hardware, and the basics of standard PLC programming. You also receive an overview of HMI and PROFINET IO.

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 fundamentals of interaction of the TIA components
- Solve simple programming tasks using elementary STEP 7 instructions
- Reliably operate the "TIA Portal" engineering platform
- Program simple plant functions with basic STEP 7 instructions in the ladder
- diagram (LAD) or function block diagram (FBD)
- Perform simple commissioning of TIA components

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.

Combine your online course with web-based trainings on our digital learning platform for industry and thus increase your personal learning success in the face-to-face course. On SITRAIN access you will find further topics, for example, TIA Portal, PROFINET or data communication with Industrial Ethernet, digitization, ...

As part of your course booking, you will receive free test access for the digital learning platform:

Click here for more information about SITRAIN access

You have access to over 270 web-based training 7 days before the start of the course. The test period automatically ends 14 days after the end of the course.
As an introduction to the digital learning platform, we recommend the following learning path:

Automation Basic Curriculum

Target Group

Programmers
Commissioning engineers
Engineering personnel

Content

Overview and significant performance characteristics of the SIMATIC S7 system family
The components of the TIA Portal: STEP 7, WinCC, Startdrive
Program execution in automation systems
STEP 7 block types and program structuring
Binary and digital operations in the function block and ladder diagram (FBD/LAD)
Programming of parameterizable blocks
Data management with data blocks
Programming organization blocks
Test tools for system information, troubleshooting, and diagnostics
Hardware configuration and parameterization of the SIMATIC S7 modules, a PROFINET IO system (ET-200), a Touch Panel.
Program Cycle, Process Image and Procee Image Partiion
Explanation and using different organization blocks
Consolidation of the content through practice-oriented exercises in the virtual exercise environment.

Prerequisites

Basic knowledge of automation technology
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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