SIEMENS

Online-Training - SIMATIC - Motion Control in the TIA Portal (TIA-MC)

Short Description

In order to be able to provide you with the best possible support and training in your personal learning environment (own office/home office), we have implemented selected training courses for you in the form of digital online training. With the help of our virtual learning environment for practical exercises, we provide you with live theory lectures from our expert speakers, which convey the training content described in the learning objectives in a practical and comprehensive manner. In our virtual classroom, our subject specialist is also available to you at any time during your individual practical exercises for in-depth questions and technical discussions. In this course, you will learn to program the motion control functions integrated in the SIMATIC S7-1500 or S7-1200 controllers using TIA Portal. Core topics are the technology objects speed axis, positioning axis and synchronous axis.

Also available as face-to-face training

Objectives

You will program the SIMATIC S7-1500 or S7-1200 controllers in the TIA Portal. You will be able to precisely control the motion of axes with the integrated motion control functions.
In this technology course, you will learn step by step the benefits and the use of these functions. After each learning step, you will deepen your knowledge with hands-on programming.
After attending the course you will understand the interaction of the technological functions. You will be able to select and configure appropriate technology objects, such as speed axis, positioning axis and synchronous axis, and integrate them in your program.
You will deepen your theoretical knowledge through numerous practice-oriented exercises in our virtual learning environment with SIMATIC S7-1500.

Target Group

Programmer
Commissioning engineers
Engineering personnel

Content

Basics of motion control
SpeedAxis technology object
PositioningAxis technology object
Homing and traversing movements
Programming with PLCopen
Error messages and diagnostics
Communication and libraries
Output cam and measuring input
SynchronousAxis technology object
Absolute and relative gearing
Strategies for synchronization and desynchronization
Cam disc creation using the graphical cam editor and during runtime
Closed-loop control and optimization
Interplay between Motion Control and Safety Integrated
Cam disc creation using libraries
Practical exercises on training devices with SIMATIC S7-1500T and SINAMICS drives

Prerequisites

- Knowledge of programming in the TIA Portal (equivalent to knowledge after completion of the TIA-PRO1 or TIA-SERV2 course)
- Technical requirements > VE Lab

Note

Over the year 2022, the courses TIA-MC1 (3 days) and TIA-MC2 (2 days) will be combined to form the course TIA-MC (5 days). The content remains unchanged.

Type

Online-Training

Duration

5 days

Language

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