SIEMENS

SIMATIC TIA Portal Programmering 1 for PLS (TIA-PRO1)

Short Description

You can deepen your theoretical knowledge with numerous practical exercises on a TIA system model. This consists of a SIMATIC S7-1500 automation system, ET200SP distributed I/O, Touchpanel TP700, drive SINAMICS G120 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.
In this first part 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, PROFINET IO, and connecting drives.
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

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, and a drive
Program Cycle, Process Image and Procee Image Partiion
Explanationn and using different organization blocks
Startup of a drive (G120) an cummunication with standard telegram 1
Deeper understanding of contents through practical exercises on the SIMATIC S7-1500 system model

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.

Note

In this course you will work with SIMATIC S7-1500 and software SIMATIC STEP 7 based on TIA portal – for SIMATIC S71-1200 we offer the trainings TIA-MICRO1/2.
This is the first of three courses that prepare you for certification as a "Siemens Certified Programmer, based on the TIA Portal". The examination is a "SITRAIN Certification Program" module.
Documentation in English.
Register in the calendar one week before the training starts.

Type

Face-to-face training

Duration

5 days

Language

no