SIEMENS

"Online-Training" TIA Portal Programming 1 Course (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 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. You can deepen your theoretical knowledge with numerous practical exercises on a TIA system model. This consists of a SIMATIC S7 automation system, ET200 distributed I/O, Touchpanel, drive, and a belt model.

Objectives

On completion of this course the participant will be able to 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 predominantly in ladder diagram (LAD)
- Perform simple commissioning of TIA components

Content

Overview and significant performance characteristics of the SIMATIC S7 system family
The components of the TIA Portal: STEP 7, WinCC, communication
Program execution in automation systems
STEP 7 block types and program structuring
Binary and digital operations
Programming of parameterisable blocks
Data management with data blocks
Programming organisational blocks
Test tools for system information, troubleshooting and diagnostics
Hardware configuration and parameterisation of the SIMATIC S7-1500 modules, a PROFINET IO system (ET-200SP), a Touch Panel (TP 700) and a Sinamics G120 drive over PROFINET
Program documentation and saving
Deeper understanding of contents through practical exercises on TIA system model

Prerequisites

Basic knowledge of automation technology.
You can use the online tests below to find out whether you have sufficient prior knowledge to participate effectively in the course you wish to attend. If you answer more than 70 % of the questions correctly you are well prepared to take part in the course.

Test TIA-PRO1

Note

This training course is not appropriate for trainees using S7-200, S7-300 or S7-400 based systems. This course is also suitable for those using mainly S7-1500 and/or S7-1200 based systems. For more information concerning details of S7-300, and S7-400 please see the section called Simatic S7 PLC.

Type

Online-Training

Duration

5 days

Language

en

Fee

2,810 GBP