

## Simatic TIA Portal service 1 för plc (TIA-SERV1)

### 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 service 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 programming. You also receive an overview of HMI, PROFINET IO, and connecting drives. You will learn to diagnose and clear simple hardware faults and software errors. You will thus be capable of reducing downtimes in your plant.

### Objectives

After attending the course, you can do the following:

- Understand the fundamentals of interaction of the TIA components
- Reliably operate the "TIA Portal" engineering platform
- Understand, change, and expand small STEP 7 programs
- Configure, parameterize, and exchange SIMATIC S7 modules
- Diagnose and fix simple hardware faults using the wiring test
- Diagnose and fix simple program errors using the status block
- Perform simple commissioning of TIA components

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, and a belt model.

### Target Group

The training is aimed at those who work with installation, operation and maintenance who also need to be able to make minor program changes in facilities that are designed with TIA Portal:

- Maintenance personnel
- Service personnel
- Operators

### 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
- Binary and digital operations in the function block diagram (FBD)
- Setup and assembly of the automation system
- Addressing and wiring the signal modules
- Hardware and software commissioning of the SIMATIC S7 automation system with the TIA Portal
- SIMATIC S7 hardware configuration and parameterization
- Presentation of a Touchpanel
- Presentation of the drive\*
- Setup and parameterization of PROFINET IO
- Saving and documentation of the implemented program changes with the TIA Portal
- Deeper understanding of contents through practical exercises on the SIMATIC S7-1500 system model
- Introduction of Sinamics G120 with Startdrive if there is time and the participants are interested.

### 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.

This blended learning course combines web-based training (WBT) on the Internet with a 4-day attendance course: To prepare for the attendance course, you will receive the WBT "PLC Knowledge for Beginners". This allows you to improve your personal learning achievement in the attendance course.

### Note

The training will be carried out in Swedish (or English if you prefer that) with course material in Swedish. The practical exercises are carried out on the Simatic S7-1500, ET200SP distributed I/O and touchpanel TP700.

### Type

Face-to-face training

### Duration

4 days

### Language

sv

### Fee

23,300 SEK

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