

SIEMENS TIA PORTAL SERVICE & MAINTENANCE – PART 1

COURSE SPECIFICATIONS

Course Code: TIA-SERV1

Course Length: 5 Days

TARGET AUDIENCE

This course is directed at users & maintenance personnel of SIMATIC S7 programmable controllers using the new TIA Portal Software.

PRE-REQUISITES

Basic knowledge of Siemens PLC automation technology, e.g., ST-7PLC Intro.

COURSE 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 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.

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, drive SINAMICS G120 and a conveyor belt model.

LEARNING OUTLINE

1. Overview and Significant Performance Characteristics of the SIMATIC S7 System Family
2. The Components of the TIA Portal: STEP 7, WinCC, Communication
3. Program Execution in Automation Systems
4. Binary and Digital Operations in the Function Block Diagram (FBD)
5. Setup and Assembly of the Automation System
6. Addressing and Wiring the Signal Modules
7. Hardware and Software Commissioning of the SIMATIC S7 Automation System with the TIA Portal
8. SIMATIC S7 Hardware Configuration and Parameterization
9. Presentation of a Touch Panel
10. Presentation of the Drive
11. Setup and Parameterization of PROFINET IO
12. Saving and Documentation of the Implemented Program Changes with the TIA Portal
13. Deeper Understanding of Contents Through Practical Exercises on the SIMATIC S7-1500 and the Conveyor Belt Model

CERTIFICATION

Successful participants will receive an **international Siemens certificate**. Siemens LTD is accredited by **merSETA** to fulfil the functions as contemplated in SAQA regulation 13 for the standards and qualification as detailed in the statement of accreditation.

MERSETA TRAINING PROVIDER

Onetrust Training Solutions has received full accreditation as a **merSETA Training Provider**. (Certification number: 17-QA/ACC/2313/21.) We are in the process of extending our scope of accreditation for most of our individual training courses and skills programmes.

CONTACT DETAILS

Further enquiries may be directed to:

ONETRUST TRAINING SOLUTIONS (PTY) LTD

Vanderbijlpark | South Africa

Tel: +27 16 982 1651

Cell: +27 83 565 0915

Email: admin@otts.co.za

