

## TIA-S7-1500 Service 2 (TIA-SERV2)

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### Short Description

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Service2 is the second part of the TIA-Service learning path SERV1-SERV2-SERV3. You will deepen your theoretical knowledge of TIA-portal and S7-1500 with numerous practical exercises. You will be more familiar with TIA-portal program, SIMATIC S7 automation system, ET200 distributed I/O, Touchpanel and drive. You will expand your troubleshooting and error correction knowledge using the TIA Portal diagnostic tool in the commissioning and productive phase.

### Objectives

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You will thus be able to adapt your plant to new demands and to reduce downtime.

After attending the course, you can do the following:

- Understand the interaction of TIA components
- Understand, adapt, and expand given STEP 7 programs, including with step sequences and analog value processing
- Systematically diagnose and correct hardware and software errors in the SIMATIC S7 automation system with the diagnostic tools of the TIA Portal engineering portal
- Use the test functions in Structured Control Language (SCL)
- Perform specific commissioning of TIA components
- Adapt your WinCC configuration to new requirements through small modifications or extensions

### Target Group

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Maintenance personnel  
Service personnel

### Content

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- Hardware diagnostic functions of the TIA Portal in the SIMATIC S7 automation system
- Software diagnostic functions of the TIA Portal in the SIMATIC S7 automation system
- Possible applications of various block types (function (FC), function block (FB), organization block (OB), data block (DB))
- Principles of analog value processing
- Sequence control with S7-Graph
- Commissioning of distributed I/O on PROFINET IO
- Alarm configuration in WinCC
- Parameterization of the drive
- Test functions in Structured Control Language (SCL)
- Deeper understanding of contents through practical exercises on the SIMATIC S7-1500 system model

### Prerequisites

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SIMATIC S7 knowledge corresponding to TIA-SERV1 and practical experience in using the knowledge.

### Note

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The course teaching and material language is English. The material is provided for students in electrical form as pdf document.

Training Devices:

- SIMATIC S7-1500
- Profinet I/O ET200 SP
- Comfort-panel
- Sinamics G120
- Belt model

1 training set / 2 students

### Type

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Face-to-face training

### Duration

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4 days

### Language

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en

### Fee

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1,760 EUR