

## TIA-S7-1500-Safety eng (TIA-SAFETY)

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### Short Description

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You will put your theoretical knowledge to use the training system SIMATIC S7-1500F with the STEP 7 Safety Advanced software in practical exercises.

### Objectives

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The Totally Integrated Automation Portal (TIA Portal) forms the work environment for integrated engineering with SIMATIC STEP 7 and SIMATIC WinCC. In this course, you will learn about configuring, programming, starting up, diagnosing and troubleshooting of the failsafe CPUs of the SIMATIC S7 Safety PLC (no H systems) and the failsafe, distributed ET200 systems. After attending the course, you can do the following: starting up failsafe CPUs of the SIMATIC PLC programming of safety-related programs in the languages F-FBD and F-LAD diagnosing and troubleshooting of safety-related programs.

### Content

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- Overview and guidelines
- AS S7 Safety (principle, system configuration and I/O)
- Configuring of the failsafe I/O with STEP 7 Safety Advanced
- Programming of a safety-related user program
- Failsafe communication PROFIsafe (CPU-CPU communication, master-slave communication)
- Diagnostics facilities (CPU diagnostics, I/O diagnostics, advanced diagnostics)
- Exercises for I/O configuration, communication, troubleshooting
- Programming examples
- Deeper understanding of contents through practical exercises on the system SIMATIC S7-1500F

### Prerequisites

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Basic knowledge of SIMATIC S7 according to the courses TIA-SERV2 or TIA-PRO2

### 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 S7-1500F
- Profinet I/O ET200SP
- Comfort-panel

1 training set / 3 students

PG M5 or M6 / TIA Portal Step7 V17

1 PG for every student

### Type

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Face-to-face training

### Duration

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3 days

### Language

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en

### Fee

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1,200 EUR