
VIRTUAL TRAINING COURSE

TÜV Rheinland functional safety technician training (T252)

A three day course to learn the principles and requirements of functional safety in the context of operation and maintenance of Safety Instrumented Systems (SIS) according to IEC 61508 / IEC 61511.

[12-14 December 2022 - Virtual classroom](#)

09-11 May 2023 - Virtual classroom

12-14 December 2023 - Virtual classroom



TÜV Rheinland functional safety technician training (T252)

The goal of this course is to learn the principles and requirements of functional safety in the context of operation and maintenance of Safety Instrumented Systems (SIS) according to IEC 61508 / IEC 61511.

Course attendance is open to all interested parties. Achieving the threshold mark for the examination and meeting the prerequisites as detailed below will result in the candidate obtaining a TÜV Rheinland functional safety technician certificate.

Learning objectives

Upon completion of this course, the participants should be able to:

- Describe the principles of functional safety management and the key features of IEC 61511
- Describe the requirements of the safety lifecycle
- Outline the key deliverables from the operations and maintenance safety lifecycle phase, roles and responsibilities
- Understand the key factors used within the SIS engineering and design lifecycle phase
- Understand the requirements for proper inspection, operation and maintenance of installed SIS
- Understand the requirements for management of change and modification of SIS
- Appreciate the role and requirements of highly managed alarms
- Understand the requirements for SIS Cyber security in the operations lifecycle phase

Course duration

The duration is 3 days consisting of 2.5 days of tuition with an examination on the 3rd day.

Course type and methods

This is an instructor led course with interactive classroom discussions and practical examples of safety system implementation.

Delegate profile

This training is aimed at those who will be involved in supporting the commissioning, inspection, testing, operation, maintenance, modification and change management of SIS for process plant applications. Candidates are likely to be plant operators, control, instrumentation and electrical supervisors & technicians.

Prerequisites for TÜV Rheinland FS technician

In accordance with the TÜV Rheinland functional safety training program, students shall have:

- A minimum of 2 years' experience in the field of functional safety
- Certificate in a relevant engineering discipline or equivalent engineering experience and responsibilities as certified by employer or engineering institution

Certificate

Participants, who fulfil the requirements, attend the complete training and pass the exam successfully will receive the functional safety technician (TÜV Rheinland) certificate with an individual ID number. Holders of this certificate will be listed at the TÜV Rheinland website www.tuvasi.com 'List of functional safety technicians'.

Topics covered:

- TÜV Rheinland FS training program
- Background on functional safety
- Regulations and safety standards
- IEC 61508 and IEC 61511
- Management of functional safety
- Competency management
- Safety lifecycle phases and planning
- Hazard and risk management
- Safety requirements specification
- SIS design and engineering
- Selection of components and subsystems
- Verification, validation, audit and assessment
- Continuous review and improvement
- Installation and commissioning
- Proof testing strategies and the impact of testing
- Highly managed alarms
- Operation and override procedures
- Inspection and maintenance management
- Modification, change management and impact analysis
- Requirements for cyber security
- Practical exercises

Agenda

Day 1

Course overview and TÜV Rheinland functional safety training program
Regulations and safety standards
The functional safety lifecycle
Concept of hazard and risk management
Industry good practice
SIS design and engineering
Requirements for operation, maintenance and decommissioning
Worked examples
Course knowledge review

Day 2

Operation and maintenance and the role of the technician
Planning
Operational activities
Maintenance activities
Modification and Management of Change (MoC)
Decommissioning
Partial proof testing
Worked examples
Course knowledge review

Day 3

Highly managed alarms
Cyber security
Exam overview
Examination

How to book

Please contact ABB as listed below for either attendance at any open course being planned in your region or if you would like to run a training course specific to your organisation.

For on-site training, a fixed price training proposal will be issued to you for your approval to proceed.

ABB technical training

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