

## SINAMICS S120 - Parametrizing Safety Integrated (DR-S12-SAF)

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### Type

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Instructor-led Learning

### Duration and Continuing Education Units (CEU)

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4 Days

2.6 CEUs

### Target Group

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- Maintenance
- Commissioning
- Engineer

### Short Description

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The learner will understand applications of the different safety functions and parameterize them using Startdrive in the TIA Portal. As a result, the learner can take advantage of the benefits over conventional safety technology, like reduced cabling or faster commissioning of identical machines.

### Objectives

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- Provide examples of Machine Safety fundamentals, standards and regulations
- Perform a risk assessment procedure
- Define PL and SIL evaluations
- Perform a parameterization using Startdrive in the TIA Portal
- Explain SINAMICS S120 Safety Integrated Basic and Extended functions
- Demonstrate control of the SINAMICS S120 drive integrated Safety Functions using SIMATIC F-CPU and PROFIsafe
- Interpret safety function effects on closed-loop control and kinetic energy of an axis on the drive
- Prepare and execute an acceptance test and report
- Explain the procedures for handling spare parts and retrofit measures

### Content

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- Fundamentals, standards and regulations of Machine Safety
- Procedure for risk assessment
- Performance Level (PL) and Safety Integrity Level (SIL)
- Safety Evaluation Tool (SET) for the evaluation of PL and SIL
- Parameterization using Startdrive in the TIA Portal
- SINAMICS S120 Safety Integrated Basic Functions and Extended Functions
- Control of the drive integrated Safety Functions via SIMATIC F-CPU and PROFIsafe
- Effect of settings of the closed-loop control and the kinetic energy of an axis on the safety functions
- Execution of the acceptance test and preparation of the acceptance report
- Procedures for the handling of spare parts and at retrofit measures
- Practical exercises on training kits with SINAMICS S120 and SIMATIC F-CPU

## **Mandatory Prerequisites**

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[SINAMICS S120 Basic Maintenance: US-DVS12M1A](#)

OR

[SINAMICS S Setup and Maintenance: DR-S12-PM](#)

## **Note**

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In the course the learner goes through all steps for the implementation of the safety functions until the final acceptance report.

## **Language**

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English

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