

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

---

### Short Description

---

In this course you learn the handling of drive based Safety Functions. You know their applications and you can parameterize them using Startdrive in the TIA Portal.

### Objectives

---

In this course you learn the handling of drive based Safety Functions. You know applications of the different functions and you can parameterize them using Startdrive in the TIA Portal. Therefore you use the benefits in comparison with a conventional safety technology, like reduced cabling or faster commissioning of identical machines.

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

### Target Group

---

Programmer  
Commissioning personnel, Engineering  
Service personnel  
Maintenance personnel

### Content

---

Fundamentals, standards and regulations of Machine Safety  
Procedure of 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 the 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

### Prerequisites

---

Knowledge of SINAMICS S120 according to the course DR-S12-PM or DR-S12-PMT.  
For the topic PROFIsafe knowledge of SIMATIC S7 is useful.

### Type

---

Face-to-face training

### Duration

---

4 days

### Language

---

mu