

## Learning Journey - SINAMICS S120 - Parameterizing and Commissioning in the TIA Portal (DR-S12-PMT-LJ)

### Short Description

In this online-course you learn to put the converter system SINAMICS S120 into operation using the PC-tool Startdrive in the TIA Portal. You can adapt the parameters to the respective application and perform diagnostics in case of a fault.

Through an optimal mix of guided live modules (online) and self-directed self-learning modules, you learn the content that is important for your work with sustainable learning success. Numerous practical tasks on real SINAMICS S120 training devices with servo motors in online access provide ideal preparation for practice during the Learning Journey. And all this without leaving your workplace.

### Objectives

You are responsible for the commissioning of SINAMICS S120 drive systems using the commissioning software Startdrive in TIA Portal. Modern converter systems offer a variety of functions and setting possibilities. By a purposeful procedure you can save time and avoid faults.

In this course you will learn the procedure at commissioning step by step. You can handle parameter setting and data saving with the software Startdrive in the TIA Portal. By a correct parameter setting you support the reliable operation of the entire plant.

After the course you can put the converter system SINAMICS S120 efficiently into operation. You can adapt the parameters of the closed-loop controller to the respective application and use the diagnostic tools in case of a fault.

You will deepen your theoretical knowledge through numerous practice-oriented exercises in our remote learning environment with SINAMICS S120.

### Target Group

Commissioning Engineers

### Content

The learning journey consists in:

- 6 live-modules (each approx. 3,5 hours)
- 5 self-learning modules (each 3,5 to 4 hours)
- Topic related on-demand content
- Individual 1:1 coaching (1 hour)

A learning membership on SITRAIN access for working on the self-learning modules is included for 1 year.

#### Themen

Design and functional principle of the converter system SINAMICS S120:

- Control unit, line infeed and motor modules
- Motors, encoders and interfaces

Parameterization, data backup and diagnostics using Software Startdrive in the TIA Portal:

- Online connection via PROFINET and Ethernet
- Project structure: drive objects and drive components
- Topology of the DRIVE-CLiQ-Interface

Function charts: setpoint channel, Input and output signals

Control signals and internal signal interconnection using BiCo-technology

Optimization of the closed loop control using automatic procedures

Functional principle of the operating modes Servo and Vector

Analysis of the operating status using enable signals, warnings and alarms

Monitoring of signals using the trace function

Introduction to positioning and Safety Integrated

Data exchange with SIMATIC S7 via PROFINET using PROFIdrive Standard Telegram

Consolidation of the contents through practice-oriented exercises in the remote learning environment with SINAMICS S120.

### Prerequisites

- Basic knowledge of drives technology
- Basic knowledge of the SIMATIC TIA Portal
- [Technical requirements](#)

### Note

Participation in the Learning Journey is personal and non-transferable.

Time required 40 hours: of which you need to reserve about 20 hours for the fixed scheduled live modules and about 20 hours for individual work on the self-learning modules.

### Type

Learning Journey

### Duration

40 hours

## Language

---

en