

## SINAMICS SM150 - Diagnostics and Service (DR-SM15-DG)

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### Short Description

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[Also available as online-training](#)

### Objectives

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You are responsible for service work and maintenance of medium-voltage converters. In this course you will learn how the SINAMICS SM150 converter works in the circuit technology of the voltage source inverters VSI. After the course you will be able to read and understand operating parameters. In the event of a fault, you can carry out a target-oriented troubleshooting and recommissioning. For this purpose, you will also be able to back up data using the STARTER / SCOUT PC program.

### Target Group

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Service personnel  
Maintenance personnel

### Content

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Design and function of the SINAMICS SM150:

- Principle of an inverter with DC-link voltage
- Infeed, regenerative feedback and multi motor system
- Inverter in IGBT and IGCT design

Operation and diagnostics with Operator Panel TP900  
Operation and diagnostics with PC program STARTER / SCOUT  
Data backup:

- Upload and download of parameter sets
- Comparison of parameter sets

Reading and understanding circuit diagrams:

- Input and output signals, setpoint channel
- Control with CU320-2 / SIMOTION
- Interface to PROFIBUS / PROFINET

Diagnostics and troubleshooting:

- Checking the control and status signals
- Analysis of alarm and error messages
- Signal recording via trace function

Test functions after replacement of spare parts  
Function and operation of cooling units  
Work safety on medium-voltage installations  
Practical exercises on special training equipment

### Prerequisites

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Knowledge of electrical drive technology  
Knowledge of SINAMICS or STARTER / SCOUT is not required  
The participant must be an electrically skilled person

### Note

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During the course you will work on special training equipment and partly on original equipment, adapted to low voltage (400 V) for your safety. An introduction to the complete system and its operation under medium voltage (> 1000 V) is not covered by the course. This is usually done on site by personnel with the appropriate experience. Course also in German language available, please contact us.

### Type

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Face-to-face training

### Duration

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5 days

### Language

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