

## Online-Training - SINAMICS and SIMOTICS - Basics of Drive Technology (DR-GAT)

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### Short Description

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This online-course provides extensive basic information for activities in the field of electrical drive technology. This is an advantage both in commissioning and diagnostics, and when configuring and planning drive systems. In order to be able to provide you with the best possible support and training in your personal learning environment (own office/home office), we have implemented selected training courses for you in the form of digital online training.

[Also available as face-to-face training](#)

### Objectives

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This course provides extensive basic information for activities in the field of electrical drive technology. The topics are addressed in a general manner, independently of specific products. In further courses on SINAMICS converters, you will be able to more easily realize details and understand their context. This is an advantage both in commissioning and diagnostics, and when configuring and planning drive systems.

### Target Group

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Sales personnel  
Project managers, project assistants  
Startup engineers, configuration engineers  
Service personnel  
Maintenance personnel

### Content

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- Electronic components: diode, thyristor, transistor, IGBT
- DC converter: design and function
- Rectifier and inverter operation
- Gating angle, commutation, inverter commutation failure
- AC converter: design and function
- Rectifier, DC link, inverter
- Pulse width modulation, pulse-edge and space-vector modulation
- Line connection: active power and reactive power, harmonics
- Line-side and motor-side components: reactors, filters, fuses
- Mechanics: equations of motion, energy balance, gear ratio
- Motors (DC, Synchronous, Induction): design, function and equivalent circuit diagram
- Measuring systems for sensing speed and position
- Control technology, Controller and control loops, optimization criteria

### Prerequisites

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- Basic knowledge in electrical engineering

### Type

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Online-Training

### Duration

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5 days

### Language

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