

## SINAMICS and SIMOTICS - Basics of Drive Technology (DR-BASIC)

---

### Descrição resumida

---

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.

### Objetivos

---

This is an advantage both in commissioning and diagnostics, and when configuring and planning drive systems.

### Grupo alvo

---

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

### Conteúdo

---

- 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

### Pré-requisitos

---

Basic knowledge in electrical engineering

### Observações

---

**Included in the course price:** Free access to the digital learning platform [SITRAIN access](#) – starting one week before the start of the course until two weeks after the end of the course. Here you will find web-based trainings on [SINAMICS Converters](#) as well as other topics such as [SIMATIC Motion Control](#) and many more. With the Learning Membership, you can deepen or repeat the content of this Learning Event as well as continue your education on other interesting topics.

### Tipo

---

Treinamento presencial

### Duração

---

5 dias

### Idioma

---

en