

Fundamentals of AC Drives - inclusive of Micro Master 440 (DR-DRV-FUN)

Short Description

Fundamentals - Inclusive of Micro Master MM440

Objectives

This course provides extensive 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. Practical exercises using a MICROMASTER 440 Training Case are an important component. On completion of the course, you will have mastered safe handling of the STARTER commissioning tool.

Target Group

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

Content

Basics of Drives Technology
Content
Electronic components: diode, thyristor, transistor, IGBT
DC converter: design and function
Bridge connection: behavior on ohmic and inductive load
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
Generator operation: feedback and braking resistor
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: design, function and equivalent circuit diagram
DC motor
Synchronous motor
Asynchronous motor
Measuring systems for sensing speed and position
Control technology:
Controller and control loops, optimization criteria
Speed, torque and current control
V/f control and vector control
MICROMASTER 440
Overview of MICROMASTER units
Electrical installation
Parameter input, structure of the parameter set
Motor rating plate
Drive commissioning
Assigning various functions to the terminals

Prerequisites

Basic knowledge in electrical engineering

Type

Face-to-face training

Duration

5 days

Language

en

Fee

13,538 ZAR

