

Online Training - SINAMICS DC Master 6RA80 (DR-DCM)

Objectives

This training course shows you how to adapt the parameter settings for the converter in line with the application and DC motor. It also gives you the opportunity to broaden your theoretical knowledge by means of exercises carried out on special training equipment. Once you have completed the course, you will be familiar with the functions of a converter and the respective interfaces. You will also be able to commission a converter quickly and reliably. Routine fault diagnosis and rectification help save time and optimize the availability of your plant

Target Group

Users, Commissioning / Service /Maintenance Engineers

Content

BASICS OF DC DRIVE

- Basic DC motor equations
- Speed variation techniques
- Three phase-controlled converters
- Block diagram of DC Drive
- Braking & Reversal
- Structure and functional principles of the SINAMICS DC MASTER converter

HARDWARE

- Control Unit: Standard CUD & Advanced CUD
- Power Module & Field card (1Q,2Q)
- Excitation circuit, interfaces.
- Expansions with Terminal Modules and Sensor Modules via DRIVE-CLiQ

COMMISSIONING

- Commissioning and parameterization activities using the BOP-20 and AOP 30 operator panels as well as with STARTER PC tool.
- Online connection of Drive via PROFIBUS interface.
- BICO Technology
- Procedures for commissioning and functional checks.
- Project structure: drive objects and drive components.
- Automatic Optimization

DCM 6RA80 FUNCTION & FEATURE

- Function Block Diagrams: Inputs/Outputs, Setpoint channel, Free Function Blocks
- Optimizing current regulation and closed-loop speed control.
- Using various Data sets – CDS, DDS, EDS, MDS, PDS.
- Using Micro Memory Card: Structure and data backups
- Drive Control Charts (DCC)

PLC DRIVE COMMUNICATION

- Establishing communication between SINAMICS DCM 6RA80 & PLC (S7 - 300/S7- 400/S7-1500) over PROFIBUS
- PZD description (Send / Receive data)
- Diagnostics at Drive & PLC Side (Control word /Setpoint / Status word)
- Integrated project & Individual project data mapping wrt. defined PZD

HARDWARE COMMUNICATION

- Parallel connections and peer-to-peer interfaces.

DIAGNOSTICS

- Operating states, Alarms and Fault codes
- Project Backup
- FW & Project Upgradation
- Service functions: Trace, Measurement functions, Diagnostic memories
- Thyristor checking
- Hardware replacement

HANDS ON

- Exercises defined based on topic explained
- Hands-on practice on training kit

Note**TECHNICAL REQUIREMENT (ONLY FOR ONLINE TRAINING)**

- A Desktop or laptop with Windows 7/10 OS and a stable internet connection. (We recommend a data transfer rate of 5 Mbit/s.)
- Microsoft Teams platform for technical presentations
- TeamViewer platform for Hands-on

Type

Online-Training

Duration

6 days

Language

en