

## DC DRIVE 6RA70 & 6RA80 (MFC-R70R80)

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### Objectives

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- This training course shows you how to adapt the parameter settings & use of hardware / software options to diagnose the DC drive. It also gives you the opportunity to broaden your technical skills and troubleshoot the Drive system quickly to reduce downtime in the plants.

#### **BENEFITS:**

- 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. You will also be able to back up data using the Software Tool.

### Target Group

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- Users, Commissioning / Service / Maintenance Engineers

### Content

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#### **Grasp a basic overview of terminology, functions and components:**

- Three phase-controlled converters
- Block diagram of DC Drive
- Line-side & Load-side components
- Typical applications

#### **Getting familiar with hardware, wiring diagrams and features:**

- Hardware Identification of 6RA70
- Control Unit – CUD1 & CUD2
- Power module – Armature & Field Circuit
- Block Diagram, Terminal & Wiring Details
- LBA, ADB & supplementary option boards
- Hardware Identification of 6RA80
- Control Unit: Standard CUD & Advanced CUD
- Power Module & Field card
- Interfaces, Terminal & Wiring Details
- Expansions with Terminal Modules & Sensor Modules via Drive-CLiQ
- Setting of Drive Parameters & I/O Assignment:
- SIMOREG DC Master 6RA70
- Basic Start-Up Procedure & operating with OP1S
- BICO Technology, Binary Inputs / Outputs & Analog Interfaces
- Commissioning and parameterization using Drive Monitor Software
- Automatic Optimization
- SINAMICS DCM 6RA80
- 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.
- Procedures for commissioning and functional checks.
- Project structure: drive objects and drive components.
- Automatic Optimization
- Diagnostics & Troubleshooting:
- Hardware
- LED diagnostics
- Cold testing
- Diagnostics using operating panel.
- Software
- Fault Memory and Fault Diagnostics
- Service function -Trace
- Control & Status Word
- Missing Enables & Interconnections
- Thyristor Checking
- Project Backup using OP1S, Micro Memory Card & Software
- FW & Project Upgradation
- Maintenance & Service:
- Procedure for replacement & handling of hardware (CUD, Interface card & power cards)
- Procedure for FAN replacement.
- Precautions regarding ESD while handling electronic cards.
- Regular service & maintenance activities. (Dust deposit, ventilation, cable & screw terminals)

#### **FAQs:**

- Important Parameters
- Frequently occurred faults
- 6RA70 to 6RA80 Migration guide

#### **HANDS ON:**

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

### Prerequisites

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- Engineers in Electrical / Electronic Engineering with Power Electronics Background

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**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 Team platform for technical presentations.
- TeamViewer platform for Hands-on.

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**Type**

Face-to-face training

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**Duration**

5 days

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**Language**

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