COURSE DESCRIPTION

G761 ACS6000/ACS6080 Service & Commissioning

Course goal

The goal of this course is to introduce and instruct the service and commissioning engineers to the ACS6000 and ACS6080 Variable Frequency Drives and to teach them in a safe and instructive environment the techniques required to carry out the correct procedure in commissioning, servicing and maintaining this drive.

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Main learning objectives

Upon completion of this course, the participants will be able to:

- Understand the drive system topology
- Carry out basic commissioning, service and maintenance work as well as fault tracing.
- Set and tune application and motor control parameters.
- Locate and replace faulty hardware components
- Using MV Drive Portal database to update the knowledge of the drive.
- Start the certification program for commissioning; after completion of the certification program the participants are allowed to commission and service the medium voltage drive system.

Participant profile

Commissioning and service engineers, testing and maintenance personnel of ABB or certified technical partners

Prerequisites

- Good engineering knowledge of AC drives and motors
- Personal computer knowledge
- Laptop with DriveWindow and Drive Composer Pro, fiber optic programming tool RUSB-02
- Successful completion of course G761e

Topics e-learning course (G761e)

Generalities

- ABB medium voltage drives family overview
- Three-level inverter topology, DTC control
- Options and typical applications

Hardware description (power electronics & control)

- Main circuit diagrams
- Component and PCB functions

Water cooled system

- Water circuit description
- Maintenance and troubleshooting

Protection concept

- Fault classes
- Protective reactions

Topics classroom course

Generalities

- MV data base instruction
- Software compatibility and downloading sequence
- How to use commissioning tools
- How to give a short customer training after commissioning

Demonstration drives

- Component recognition and location
- Starting/stopping procedures
- Motor runs and tuning

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Drive commissioning

- Cold commissioning procedure
- Tests and reports
- Calculation of motor parameters
- Using DriveStartup for commissioning and reporting

Software description

- Software structure, parameters description
- Application programming
- Fieldbus programming (interfacing with overriding system)
- Setting and tuning motor control parameters

Fault-tracing and troubleshooting

- Alarm and fault indications
- Measuring and replacing power components

Methods

- E-learning, internet-based course
- Lectures and demonstrations
- Practical exercises with training equipment

Follow-up trainings

- G374e All-compatible panel fundamentals
- G375e Drive Composer Entry fundamentals
- G376e Drive Composer Pro fundamentals
- G3761e Adaptive programming basics with Drive Composer
- ACS6000/6080 Expert Days

Duration

Ca. 2 days e-learning
5 days classroom training
Max. 8 participants

To register:

Please apply online (signup required):
ABB MyLearning/G761
Custom-tailored training courses or standard training at additional course dates are available on request.
Please note: The course is only carried out if at least 4 participants have been booked.

Course outline

DAY 1	DAY 2	DAY 3
— Course overview — Service processes — Revision of G761e e-learning — Operation of the drive — Drive system requirements — Factory visit	— Control software overview — DriveStartup — Power part commissioning — Board programming	— Power part commissioning (continued) — Application software — Voltage Control SW (ARU) — Checking semiconductors

DAY 4	DAY 5
— Torque control SW (AD and SD) — Motor parameter calculation — Hands-on exercises with emulators and training unit	— Preventive maintenance — Replacing semiconductors — Course conclusion, feedback

Classroom training

Hands-on training

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