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.

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

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Classroom training

Hands-on training

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COURSE DESCRIPTION ADD-ON FOR G761

G761vc ACS60x0 Service & Commissioning
Virtual Classroom

Preface
Due to travel restrictions in connection with COVID-19, the access to normal classroom trainings is limited. Therefore, we offer the course also as Virtual Classroom version. Certain parts of the course can be taught through web tools, but some hands-on exercises cannot be covered through web. Therefore, special prerequisites and certification limitations apply.

Main learning objectives and topics
The objectives and topics are the same as for the regular classroom course (see course description G761 - ACS6000/ACS6080 Service & Commissioning), except hands-on training requiring power hardware.

Participant profile
Same as for regular classroom course

Prerequisites
— On-site service Basic certificate of another ACS MV Drive
— Successful completion of the preparation tasks

Methods
— In the mornings: Approx. 3h instructor-led Virtual Classroom training (e.g. via MS Teams)
— Interactive training with state-of-the-art online tools in small classes of 5 – 10 participants.
— In the afternoons: Self-learning tasks on training equipment accessed over web, self-study and self-assessments; trainer available for support

Limitations
The following topics cannot be covered to the same degree as in the regular classroom training:
— Operation of demo unit
— Phase module replacement
— Semiconductor check and replacement
— Fault finding exercises on demo unit
Those topics are taught as good as possible using videos, demonstrations, case studies, etc. But the practical skills have to be acquired through other means in order to achieve the certificate.
The certificate can be acquired by a self-declaration followed by an assessment.

Duration
— Up to 20 hours e-learnings and preparation tasks
— 5 days Virtual Classroom training

To register
Please apply online (log in to MyLearning first): ABB MyLearning/G761vc