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## COURSE DESCRIPTION

# G761 ACS6000 / ACS6080 Service & Commissioning Classroom training in Turgi, Switzerland

### 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

### 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
<ul style="list-style-type: none"><li>– Course overview</li><li>– Service processes</li><li>– Revision of G761e e-learning</li><li>– Operation of the drive</li><li>– Drive system requirements</li><li>– Factory visit</li></ul>	<ul style="list-style-type: none"><li>– Control software overview</li><li>– DriveStartup</li><li>– Power part commissioning</li><li>– Board programming</li></ul>	<ul style="list-style-type: none"><li>– Power part commissioning (continued)</li><li>– Application software</li><li>– Voltage Control SW (ARU)</li><li>– Checking semiconductors</li></ul>
DAY 4	DAY 5	
<ul style="list-style-type: none"><li>– Torque control SW (AD and SD)</li><li>– Motor parameter calculation</li><li>– Hands-on exercises with emulators and training unit</li></ul>	<ul style="list-style-type: none"><li>– Preventive maintenance</li><li>– Replacing semiconductors</li><li>– Course conclusion, feedback</li></ul>	



Classroom training



Hands-on training

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](https://mylearning.abb.com/G761vc)