

COURSE DESCRIPTION

G723 ACS1000 & ACS2000 Service & Commissioning

Course goal

The goal of this course is to introduce and instruct the service and commissioning engineer to the ACS1000 and ACS2000. To allow them to learn in a safe and instructive environment the techniques required to carry out the correct procedure during commissioning, servicing and maintaining the ACS1000 and ACS2000.

Main learning objectives

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

- Understand the drive system topo-logy
- 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 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 DriveDebug and DriveWindow loaded, fiber optic programming tool (RUSB-02 or PCMCIA equivalent)
- Successful completion of the e-learning courses G711e and G781e

Topics e-learning courses G711e and G781e Generalities

- ABB medium voltage drives family overview
- Inverter topology, DTC control
- Options and typical applications

Control hardware ACS1000/2000

- Main circuit diagrams
- Component and PCB functions
- PCB settings and configuration

Power hardware description

- Air and water cooled ACS1000
- ACS1000i
- ACS2000

Protection concept

- Fault classes
- Protective reactions

Topics classroom course

Generalities

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

Demonstration drive

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

ABB Switzerland Ltd Learning Center MV Drives Austrasse CH-5300 Turgi

E-mail: ch-learningcenter-mvdrives@abb.com
Visit our page

mylearning.abb.com

Drive commissioning

- Cold commissioning procedure
- Tests and reports
- Calculation of motor parameters

Software description

- Software structure, parameter's 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

Course type

This is a face to face class room training with maximum 8 participants.

Methods

- e-learnings, internet-based courses
- lectures and demonstrations
- Practical exercise with training equipment

Follow-up training

- ACS1000 and ACS2000 Expert Days

Duration

ca. 4 days e-learning 5 days classroom training

To register:

Please apply online (signup required): ABB MyLearning/G723

Additional course dates are available on request.

<u>Please note</u>: The course is only carried out if at least 4 participants have been booked.

Course outline

DAY 1 (ACS1000)	DAY 2 (ACS1000)	DAY 3 (GENERAL)
 Component recognition and location Operation of the drive Software structure, parameter's description Pass codes, service parameters 	 Insulation resistance measurements Preventive maintenance Checking/ exchanging semiconductors Troubleshooting 	 MV data base instruction Software compatibility and downloading How to use software tools How to give short customer training

DAY 4 (ACS2000) DAY 5 (ACS2000)

- Component recognition and location Commissioning tool DriveStartup
- Operation of the drive
 Preventive maintenance
- Power part commissioning
 Application SW programming
 Semiconductors
 - Troubleshooting



Classroom training



Hands-on training

ABB Switzerland Ltd Learning Center MV Drives Austrasse CH-5300 Turgi

E-mail: ch-learningcenter-mvdrives@abb.com
Visit our page
mylearning.abb.com