**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 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 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
**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.

**Course outline**

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<th>DAY 2 (ACS1000)</th>
<th>DAY 3 (GENERAL)</th>
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<td>Component recognition and location</td>
<td>Insulation resistance measurements</td>
<td>MV database instruction</td>
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<tr>
<td>Operation of the drive</td>
<td>Preventive maintenance</td>
<td>Software compatibility and downloading</td>
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<td>Software structure, parameter’s description</td>
<td>Checking/exchanging semiconductors</td>
<td>How to use software tools</td>
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<td>Pass codes, service parameters</td>
<td>Troubleshooting</td>
<td>How to give short customer training</td>
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<td>Application SW programming</td>
<td>Troubleshooting</td>
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**Methods**
- e-learnings, internet-based courses
- lectures and demonstrations
- Practical exercise with training equipment

**Follow-up training**
- ACS1000 and ACS2000 Expert Days

**Duration**
cia. 4 days e-learning
5 days classroom training

**To register:**
Please apply online: ABB MyLearning/G723
Additional course dates are available on request.
Please note: The course is only carried out if at least 4 participants have been booked.

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Classroom training

Hands-on training