

COURSE DESCRIPTION

G861 PCS6000 Service & Commissioning

Course goal

The goal of the course is to introduce and instruct the service and operation engineer to the PCS6000 Product Family. To allow them to learn in a safe and instructive environment the techniques required to carry out the correct procedure in commissioning and troubleshooting of the PCS6000 Product Family converters.

Main learning objectives

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

- Understand the most important operation & maintenance topics (repetition of G860)
- Operate the converter, energizing, deenergizing, start, stop & state changes
- Carry out commissioning (or hall test) of the PCS6000 converter system in the most efficient manner using the corresponding tools
- Carry out fault tracing work in the converter system using tools & documents in the most efficient manner
- Locate and replace faulty hardware components

Participant profile

Service and commissioning engineers, testing and maintenance personnel from ABB or certified technical partners.

Prerequisites

- Completion of the G860 O&M training
- Electrical engineering knowledge and experience
- Laptop

Topics

- G860 O&M Training repetition
- Commissioning preparation
- Installation inspection
- Service software: ABB Commissioner,
 PEC Tool, IPC, PecTool
- Software upload
- Software parameterization
- Commissioning of cooling unit
- Introduction to MV measurements
- Hot commissioning: Sequences
- Documentation and reporting
- Troubleshooting
- Practical exercises
- Final exam

Course type

This is a face to face classroom training with maximum 4 participants.

Learning methods and tools

This is an instructor led course with lectures and demonstrations. For maximum effectiveness it's based on a good balance between theoretical training and practical exercises with training equipment

To register:

Please apply online (signup required): ABB MyLearning/G861

Additional course dates are available on request.

Duration

4 days

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

Course outline

DAY 1

- Welcome, course goals and schedule
- Repetition of G860 O&M course
- System engineering aspects
- Safety instructions for training unit
- Commissioning preconditions
- Installation inspection

DAY 2

- Cold commissioning
 - Auxiliary power supply
 - Software initialization
 - Cooling system
 - Current transducer
 - Disconnector Module (GDM) / Generator Breaker (GEB)
 - Grid Breaker (GRB) control interface
- Safety interface
 - Safety interface to upper level control
 - Emergency circuits

DAY 3

- Control software overview
- Introduction to hot commissioning
- Introduction to oscilloscope
- Hot commissioning
 - Synchronising checks
 - $\bullet \ \, \text{Sequence OFF} \to \text{Standby} \\$
 - $\bullet \; \; \text{Sequence Standby} \rightarrow \text{VSC}$
 - Sequence Standby \rightarrow Production

DAY 4

- Final commissioning tasks
- Advanced Troubleshooting
 - Case studies
 - Fault finding exercises
- Course conclusion and feedback



Classroom training



Hands-on training

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