

ABB UNIVERSITY & ONLINE ACADEMY FOR EXCITATION AND SYNCHRONIZATION

J900 - SYNCHROTECT® 5 Operation and Commissioning

2 days, in person training

Course goals

SYNCHROTECT® is ABB's automatic synchronization for generators with power lines and for paralleling of synchronous lines. They are designed for fully automatic paralleling of monitoring of paralleling (SYNCHROCHECK) by means of dual-channel or single-channel systems. The course goal is to learn how to operate the device and set up the appropriate system parameter.

Main learning objectives

The course goal is to teach students to operate the device and set up the appropriate system parameter. Upon completion of this course, attendees will:

- Know the basic requirement of a synchronizing equipment
- Understand the meaning of the parameter settings
- Know how to calculate and change parameters
- Apply SYNCHROTECT® 5 to specific system
- Be able to put the SYNCHROTECT® 5 into operation

Participant profile(s)

- Project design, commissioning, instrumentation, and control engineers
- Operating, testing and maintenance personnel
- Sales personnel who wish to gain a basic knowledge as well as a system overview

Prerequisites

- Basic knowledge in electronics and electrical machines

Delivery and learning methods

- Lectures
- Practical exercises using generator simulator and SYNCHROTECT® rack

Duration

- 2 days, Number of Participants: Max. 6

Registration

For registration please contact: ch-learningcenter-powerelectronics@abb.com

[Registration Link: J900 SYNCHROTECT® 5](#)

Notes

Tailor-made on-site courses on request

Topics

Basic synchronizing theory

- Paralleling conditions
 - Principle of paralleling
 - Modes to paralleling
 - Effects of bad paralleling
 - Hardware-specific information
 - Channel configurations
 - Software and parameter setting
 - How to use the SynView Tool
 - Test and commissioning aspects
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Virtual Course map

Typical course layout (time or sequence may change)

DAY 1 | 8:30 AM – 4:30 PM

- Course overview
- Product overview
- Fundamentals about synchronizing
 - Synchronizing criteria
 - Effect of “bad” paralleling
 - Synchronizing asynchronous grids or sources
 - Synchronizing of synchronous grids or sources
 - Coarse synchronization
- Principle of operation of the SYNCHROTECT® 5
- Various configuration and topology of SYNCHROTECT® 5 combined with SYNCHROCHECK
- Interpretation of the SYNCHROTECT® 5 Parameters
- How to use the SynView Tool
 - How to get started
 - Parameter settings
 - Actual value monitoring
 - Transient Recorder function
 - Faults and Event handler
- Introduction to the training unit used for the hands-on part

DAY 2 | 8:30 AM – 4:30 PM

- Recap day 1
- Hands-on training using the training units
 - Prepare the system and SynView Tool for the first synchronizing
 - Synchronize the generator to the grid
 - Evaluate the measured values
 - Optimize parameters
 - Verify the effect of parameter settings versus quality of the synchronization
- Engineering aspects
 - How to integrate and adapt SYNCHROTECT® 5 into various system set up
 - Engineering hints
- Commissioning Aspects
 - The commissioning procedure
 - Hints to commissioning
- Maintenance and trouble shooting
 - Recommended maintenance work
 - What to do in case of troubles
 - How to replace defective components



Contact us

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