

Course description

J450 Power Electronics AC 800PEC Matlab/Simulink

Course goal

The "AC 800PEC" Control Platform is ABB's high performance process control system and belongs to the ControllIT product line. The AC 800PEC is the optimum solution for combining:

- the high-speed control requirements of power electronics applications
- low-speed process control tasks usually carried out by separate PLC units.

The course goal is to teach the student how to program AC 800PEC by means of the Matlab/Simulink tool.

Learning objectives

The course shows how to build system simulations and to use the control part of the simulation directly as real-time code.

Participants

Application, Test, Service and Commissioning Engineers

Prerequisites

Basic knowledge of electronics
Personal computer knowledge
Basic Matlab / Simulink knowledge

Topics

- Systematic procedure for building up a system simulation, later use of the control part for real-time code
- Show parallels between real-time code and simulation



- Guidelines (signal- and variable names, program structures)
- Interfaces of the control application:
To the FPGA
PSE-Interface
- Task Handling / Timing / Dead-times / Delays
- State Machine
- Program download, use of installer
- External mode

Methods

Lectures, Presentations, Demonstrations
Exercises using table model

Duration

3 days
Max. 8 participants