

Course description

F850

ABB Automation Products AC500

Basic

Course Duration

The duration is 4 days.

Course Type

This is an instructor led course with interactive classroom discussions and associated lab exercises. Approximately 50% of the time is used for hands-on labs and practical exercises.

Course Goal and Learning Objectives

The goal of this course is to teach the students the basic system engineering methodology of AC500 controller using Automation Builder software and provide first hand practical experiences as well as enabling them to take on the role of PLC Engineer developing different small applications assembled in one project.

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

- Explain the AC500 architecture and the functions of its components.
- Create a new project and configure the AC500 hardware with corresponding I/Os as well as a program structure.
- Configure decentralized I/O expansions via CS31 bus and PROFIBUS DP.
- Design and configure simple application programs by using a different type of IEC61131-3 languages and integrated visualization.
- Navigate and use the available libraries.
- Configure connection between AC500 and PC via Ethernet TCP/IP.
- Set-up PLC cycle time to optimize the CPU load.
- Use the diagnostics tools for system monitoring and trouble-shooting.

Student profile

This training is targeted to system and application engineers, commissioning and maintenance personnel, service engineers and system integrators.

Prerequisites and Recommendations

The student shall have a basic understanding of Programmable Logic Controllers and be familiar with operating in a Microsoft Windows environment.

Main Topics of the Training

- AC500 system architecture
- Automation Builder
- Project structures
- AC500 hardware configuration
- Decentralized I/O expansions via CS31 bus and PROFIBUS DP
- Standard operators/Functions Blocks
- AC500 Libraries
- Integrated visualization
- Project test tools and fundamentals of diagnostics
- Project backup by use of SD memory card
- Web Server

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Course Outline

Day 1	Day 2	Day 3	Day 4
<ul style="list-style-type: none">AC500 hardware overviewAutomation Builder installation procedureBasic overview of the design and main functions of Automation BuilderCreation of a new projectHardware configuration and I/O MappingIP address set-up and creation of an online access to AC500Programming according to IEC 61131-3 in FBD editorProgram testProject backup	<ul style="list-style-type: none">CS31 bus fundamentalsFurther project engineeringProject structure and componentsMemory structure and areasStandard data typesVariable declarationProgramming in different editors using triggers, timer and countersOperators and LibrariesIntegrated visualizationFirst diagnostics and trouble-shootingOnline Help	<ul style="list-style-type: none">PROFIBUS fundamentalsFurther project engineeringDecentralized I/O expansion via PROFIBUS DPScaling of analog valuesSubroutines, jumps and returnsTask configurationDiagnostics toolsCPU start modes	<ul style="list-style-type: none">Web server fundamentalsCP600 –WEB operator panels (presentation)SD memory card fundamentalsProject backup

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Please note that a notebook with Automation Builder is provided by the training facility. If you wish to use your notebook, please install the current version of Automation Builder Plus by yourself prior to the training.

Course Bookings

<http://www100.abb.com/TPOnline/NET/Public%20Courses.aspx>

Contact

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