CHT315C – System 800xA with AC 800M Engineering
Part 1 – Control Builder

Course goal

The goal of this course is to learn the engineering of a complete control project using the Extended Automation System 800xA with AC 800M controllers and Control Builder M as the engineering tool. Note that this course is split in two parts and the follow-up course is T315H for the Human System Interface (HSI) configuration.

Main learning objectives

The participants will be able to:

— Explain the System 800xA architecture and the function of the different components
— Navigate in the system and create new Objects/ Aspects
— Create a new control project and plan the structure of application programs based on a P&ID and a Functional Specification
— Configure the AC 800M hardware and corresponding I/O's
— Handle the standard libraries provided by ABB and develop project specific libraries
— Design and configure application diagrams by using a variety of IEC 61131-3 languages
— Define tasks and describe the assignment rules
— Analyze the controller diagnostics and optimize the CPU load / memory usage
— Configure user defined object types
— Setup communication using various protocols
— Setup the OPC connectivity to AC 800M

Participant profile

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

Prerequisites

Students shall know the fundamentals of working with Control Systems and have basic knowledge of Microsoft Windows and networking technologies.

Topics

— System 800xA architecture
— Engineering Workplace/Plant Explorer
— Project and application structures
— AC 800M hardware
— Libraries
— Variables and data types
— Function Block Diagrams
— Diagrams
— Structured Text
— Task assignment and memory
— Control Modules
— User defined object types
— Sequential Function Charts (SFC)
— Communication
— OPC

Course type

This is a face to face class room training with maximum 8 participants.

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Learning methods and tools

This is an instructor led course with interactive classroom discussions and associated lab exercises. Approximately 50% of the course is hands-on lab activities. **Laptop** or tablet is required to have access to the e-documentation.

Duration

5 days

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