Course description

T360
System 800xA with AC 800M
Basic Engineering for Channel Partners

Course goal

The goal of this workshop is to learn the engineering workflow of a complete automation project using the Extended Automation System 800xA with AC 800M controllers. The participants will learn to identify the critical issues and will gain the basic knowledge to start a project in an efficient manner. It is highly recommended to utilize the ABB technical coaching after this course in order to implement best practices.

Learning objectives

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

- Identify the critical issues with respect to an efficient engineering workflow in 800xA
- Create a new control project and plan the structure of application programs
- Select the suitable existing building blocks and describe the necessary steps to develop project specific libraries
- Configure basic control applications by using a variety of IEC 61131-3 languages
- Describe the principles to integrate other devices with various communication protocols
- Configure simple graphic displays, faceplates and operator workplaces
- Identify the critical issues to manage, structure and configure alarm and events
- Configure historical data logging and trends
- Describe the principles of user security
- Backup / restore System 800xA data
- Describe the steps to use bulk data handling

Participant profile

Students shall have working experience with Control Systems and have basic knowledge of Windows XP and networking technologies. The e-learning course T360e must have been completed upfront.

Prerequisites

Students shall have working experience with Control Systems and have basic knowledge of Windows XP and networking technologies. The e-learning course T360e must have been completed upfront.

Topics

- Engineering workflow
- AC 800M hardware configuration
- Available libraries
- Variables and data types
- IEC 61131-1 applications
- Control modules
- Sequential Function Charts (SFC)
- Task assignment
- Communication and device integration
- OPC connectivity
- Function Designer
- Graphic displays and faceplates
- Alarm and events
- Historian and trends
- Operator Workplaces
- User security
- Backup / restore
- Bulk data handling
- Simple reports (MS Excel Data Access)

Course type and methods

This is an instructor led course with interactive classroom discussions and associated lab exercises. Approximately 50% of the course is hands-on lab activities.

Course duration

The duration is 5 days.

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Course outline

Day 1

- Engineering workflow
- AC 800M hardware configuration
- Available libraries
- Variables and data types
- IEC 61131-1 applications

Day 2

- IEC 61850 network
- Control modules (PID loops etc.)
- Sequential Function Charts (SFC)
- Communication and device integration

Day 3

- OPC connectivity
- Function Designer
- Graphic displays

Day 4

- Faceplates
- Alarm and events
- Historian and trends
- Operator Workplace

Day 5

- Operator Workplace
- User security
- Backup / restore
- Simple reports (MS Excel)
- Bulk data handling
- Next steps

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