T315 System 800xA Engineering

Course Description

Course Duration

The duration is 10 days.

Course Type

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 Goal

The goal of this course is to learn the engineering of the Extended Automation System 800xA with AC 800M controllers.

Student Profile

This training is targeted to application engineers, programmers and system integrators.

Prerequisites and Recommendations

Students shall know the fundamentals of working with Control Systems and have basic knowledge of Windows 2000.

Course Objectives

Upon completion of this course, students 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 project and plan the structure of application programs
- Configure the AC 800M hardware and corresponding I/O's
- Design and configure application programs by using a variety of IEC 61131-3 languages
- Setup the OPC connectivity to AC800M
- Develop project specific libraries
- Configure graphic displays, faceplates and graphic elements
- Manage and configure alarm and events
- Configure historical data and trends
- Configure workplaces and user accounts
- Backup / restore System 800xA data
- Use the Function Designer and Signal objects
- Use bulk data handling with templates

Main Topics

- System 800xA architecture
- Engineering Workplace
- Project and application structures
- AC 800M Hardware
- OPC connectivity
- Applications with FBD and ST
- Control Modules
- Sequential Function Charts (SFC)
- Alarm and Events
- Historian and Trends
- Graphic Displays
- Faceplates and Graphic Elements
- Operator Workplace
- Function Designer
- Backup / restore

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Course Outline

Day 1	Day 2	Day 3	Day 4	Day 5
• Course overview • System 800xA architecture • Engineering Workplace • Project framework • AC 800M hardware	• AC 800M hardware • OPC connectivtiy • Standard libraries • Applications with Function Block Diagram	• Applications with Structured Text • Task assignment and Memory • User defined Function Block types	• Control Modules • Sequential Function Charts (SFC)	• Communication between applications • Alarm and Events
Day 6	**Day 7**	**Day 8**	**Day 9**	**Day 10**
• Graphic displays • Graphic elements • Faceplates	• Faceplates • Historical data collection • Trend displays • Operator Workplace	• Workshop “Engineering”	• Security • Backup and restore • Function Designer	• Signal objects • Bulk data handling • Miscellaneous