Course Description

Course Duration
The duration is 5 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 how to troubleshoot the AC 800M hardware in an Extended Automation System 800xA.

Student Profile
This training is targeted to first level maintenance personnel.

Note: There is some overlap in T308 with the material of T314 Basic Configuration. Since both courses are intended not to require prerequisite knowledge of 800xA, there is introductory material in both courses that is very similar.

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

Course Objectives
Upon completion of this course, students will be able to:

- Explain the System 800xA architecture and the function of the different components
- Operate objects through faceplates
- Handle alarms
- Navigate in the Project Explorer
- Describe the structure of application programs i.e. variables, libraries, programs, tasks
- Configure the AC 800M hardware and corresponding I/O’s
- Load the controller and work in online mode
- Troubleshoot and exchange AC 800M hardware
- Troubleshoot Profibus and Modulebus communication to the S800 I/O’s
- Troubleshoot the OPC communication to the AC 800M controller
- Monitor control applications
- Trace alarms from the Human System Interface (HIS) down to control logic
- Trace signals in Control Builder

Main Topics
- System 800xA architecture
- Operation
- Project Explorer
- AC 800M hardware
- Hardware diagnostics
- Hardware redundancy
- Monitoring applications
- Alarm tracing
- Signal tracing
- I/O communication
- OPC communication
## Course Outline

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