

## T309

# System 800xA Safety – AC 800M High Integrity Configuration and Maintenance



The goal of this course is to learn the configuration and maintenance of the Extended Automation System 800xA with AC 800M High Integrity controller.

### Learning Objectives

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

- Describe the requirements for a SIL certified application and explain the different SIL levels
- Use the Safety manual as important document
- Describe the function of the AC 800M High Integrity components
- Configure the AC 800M HI controller with the corresponding I/O's
- Set up safety relevant controller settings and explain the execution in the controller
- Maintain and troubleshoot an HI controller, incl. firmware online upgrades
- Configure SIL2 / SIL3 applications by using standard libraries and describe the purpose of VMT and CTA applications
- Modify applications considering safety relevant topics
- Configure the access management
- Create communications between SIL applications
- Create Fire & Gas application by using the FireGasLib and SupervisionLib (optional)
- Configure Partial Stroke testing
- Set up and exchange redundant HI controllers

### Student Profile

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

### Prerequisites

Students should have attended the course T315C "Engineering with Control Builder" and T315H "Engineering with HIS" or have knowledge and experience associated with the content of this course. The required knowledge should be verified via the user assessment T710-01e "Engineering using AC 800M". Basic knowledge of safety implemented systems is an advantage.

### Main topics

- Course introduction (Functional safety introduction)
- Safety standards (SIL levels)
- AC 800M High Integrity hardware
- Hardware configuration
- Controller settings
- SIL marked applications for: Emergency Shutdowns/ Burners
- Access management (modify parameters, download applications etc.)
- Communication between SIL applications
- Fire & Gas application and Partial Stroke testing
- Maintenance and troubleshooting
- Redundancy
- Safety manual

### 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.

### Duration

The duration is 4 days

Course Outline				
Day 1	Day 2	Day 3	Day 4	Day 5
Course Overview	Hardware configuration	SIL marked application	Fire & Gas	Redundancy
Safety standards	Controller settings	Access Management	Application and Partial	
AC800M High Integrity	SIL marked applications	Communication between	Stroke Testing	
Hardware		SIL application	Maintenance and	
Hardware Configuration			Troubleshooting	
			Redundancy	