Course description

T309S
Control Builder Safe – AC 800M High Integrity Configuration and Maintenance

Course goal
The goal of this course is to learn the configuration and maintenance of the Control Builder Safe - 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
- Control Builder Safe overview
- 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 taking into account safety relevant topics
- Configure the access management
- Create communications between SIL applications
- Set up and switchover of redundant Hi controllers

Participant 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 T365 "Compact Control Builder" or have knowledge and experience associated with the content of this course. Basic knowledge of safety system implementation is an advantage.

Topics
- Course introduction
  (Functional safety introduction)
- Introduction to Functional Safety
  (SIL levels)
- Control Builder Safe Overview
- 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
- 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.

Course duration
The duration is 4 days.
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Course outline

Day 1
- Course overview
- Introduction to Functional Safety
- Control Builder Safe Overview
- AC 800M High Integrity hardware

Day 2
- Hardware configuration
- Controller settings

Day 3
- SIL marked applications
- Access management

Day 4
- Communication between SIL applications
- Maintenance and troubleshooting
- Redundancy