

T333 System 800xA with AC 800M Integration of IEC61850 Devices

OEM: ABB • Code: T333

COURSE DESCRIPTION

The goal of this course is to learn the engineering for the full integration (horizontal and vertical) of IEC 61850 devices into the Extended Automation System 800xA. This means integration through OPC directly to the HSI for status information such as Asset Optimization and integration to the AC 800M controller for demanding/fast applications such as Power Management. The .scd file, generated by the Substation Automation engineering group, is going to be imported and all necessary configurations done.

COURSE CONTENT SUMMARY

- Course introduction
- Introduction Substation Automation
- IEC61850 standard
- System integration principals
- IEC61850 network
- ABB PCM 600
- ABB IET (Integrated Engineering Tool)
- ABB CET (Communication Engineering Tool)
- IEC61850 OPC server
- Import .SCD file in System 800xA
- IEC61850 Alarm and Events
- IEC61850 Object types enhancement
- Vertical redundancy
- CI 868 card as IED (Intelligent Electrical Device)
- GOOSE engineering in IET
- GOOSE engineering in PCM600
- Import.SCD file in Control Builder M
- GOOSE engineering in Control Builder M
- Horizontal redundancy
- Fault analysis

AUDIENCE 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”.

COURSE OBJECTIVES

By the end of this course, participants will be able to:

- Describe the basics of Substation Automation and Explain the basics of the IEC61850 standard
- Describe the engineering workflow, the different engineering tools and the integration process
- Do basic network and switches configuration
- Configure an IED using ABB PCM 600 (Protection and Control IED Manager) as IED specific configuration tool
- Explain the basic handling of the engineering tools such as ABB IET, CET

COURSE OUTLINE

Module 1: Day 1

- Course overview
- Introduction Substation Automation
- IEC61850 standard
- System integration principals

Module 2: Day 2

- IEC61850 network
- ABB PCM 600 (Protection and Control IED Manager) as IED specific configuration
- ABB IET (Integrated Engineering Tool)

Module 3: Day 3

- ABB CET (Communication Engineering Tool)
- IEC61850 OPC server
- Import .SCD file in System 800xA
- IEC61850 alarm and events

Module 4: Day 4

- IEC61850 object types enhancement
- Vertical redundancy
- CI868 card as IED (Intelligent Electrical Device) in CBM
- GOOSE engineering in IET

Module 5: Day 5

- GOOSE engineering in PCM600
- Import.SCD file in Control Builder M
- GOOSE engineering in Control Builder M
- Horizontal redundancy
- Fault analysis

DELIVERY NOTE

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