GRID AUTOMATION TRAINING

Digital Substation with SAM600 and Relion® 670 series

Course SEP830

Course goal

The goal of this course is to learn the basics of the Digital Substation Concept with usage of SAM600 units and Relion® 670 series. The course combines both theoretical lectures and practical exercises.

Learning objectives

Upon completion of this course the participants should be able to:

- Engineer a system including SAM600-MU and SAM600-IO
- Include an Relion® 670 series into the system with an application that includes control, protection and measurement functions
- Understand the basics of time synchronization in a digital substation including SAM600 units.
- Understand the interaction between Relion® 670 series and SAM600-IO with usage of GOOSE
- Basic understanding of network topologies for redundant communication such as HSR and PRP
- Understand the benefits when testing a system with IEC 61850 ED2

Participant profile

This training is targeted towards users who want to learn about the Digital Substation concept with usage of SAM600 units and Relion® 670 series.

Prerequisites

Participants should know the fundamentals of working with control and protection systems and electrical
power networks. Furthermore, they should have participated in course PCM600 (SEP601), IEC 61850 (SEP800) and Bay control 670/650 (SEP660) courses, or acquired the knowledge about these topics in another way.

Topics

- Introduction to Digital Substation concept
- Engineering and basic testing of SAM600-MU
- Integration of IED670 including Control and Protection functions
- Integration of SAM600-IO
- Testing with ITT600 and Omicron
- Integration and Testing of Relion® 670 series with protection functionality

Course type and methods
This is an instructor led course with interactive classroom discussions and associated exercises. Approximately 70% of the course is hands-on activities.

Duration
The duration of the course is 3 days.