GRID AUTOMATION TRAINING

Line Differential protection RED670
Course SEP672

Course goal
The goal of this course is to learn the structure, concepts and functions of RED670. Participants will practice device configuration and parameterization with the help of the PCM600 tool.

The course combines both theoretical lectures and practical exercises.

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

- Understand the possibilities using RED670 in different application
- Comprehend the main Line Differential protection functions in RED670
- Configure and engineer a RED670 IED
- Do relevant settings
- Test of Line Differential protection and it’s features
- Test of Line Differential protection with and without test mode

The exercises make use of modern numerical test sets. Test will be done to verify the setting and configuration of RED670.

Prerequisites
Participants should know the fundamentals of working with control systems and electrical power networks. Furthermore, they should have participated in course SEP601 Protection and control IED manager PCM600 or have corresponding knowledge. This as previous knowledge concerning how to use the PCM600 tool is required when working with the exercises.

Also, be aware that all scheduled courses will be in English.

Participant profile
This training is targeted towards users who already know the fundamentals of protective relay theory and who have a desire to know the functions of RED670.

Topics
- Line Differential protection introduction
- RED670 Application
  - Three main variants of Line Differential
  - Possible application in RED670
  - Harmonic restrain
  - Remote communication
- Synchronizing method

- **RED670 Principles of operation**
  - General principle of Line Differential protection
  - Characteristic of Line Differential protection
  - Complementary functions of Line Differential protection
  - Line Differential protection supervision
  - Line Differential protection, Transformer in zone
  - Line Differential communication
  - Configuration, setting and testing of IED

- **Course type and methods**
  This is an instructor led course with interactive classroom discussions and associated exercises. Approximately 60% of the course is hands-on activities.

- **Duration**
  The duration of the course is 2 days.