GRID AUTOMATION TRAINING

Railway protection RER670
Course SEP676

Course goal
The goal of this course is to learn the applications, structure, and functions of RER670. 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 have knowledge of:

- Settings/configuration for railway backup protection functions
- Settings/configuration for catenary feeder protection (16.7 Hz/50Hz/60Hz)
- Setting/configuration for 16.7Hz, two-phase, HV line distance protection
- Setting/configuration for 16.7Hz differential protection for railway transformer
- Test of railway protection schemes
- Working with RER670 using the PCM600 tool

The exercises make use of modern numerical test sets. Test will be done to verify the setting and configuration of RER670.

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 RER670.

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.

Topics

- RER670 hardware and software features
- Backup protection functions
- Fuse Failure
- Fault Locator
- Auto-reclosing
- Synchro-check
- Control
- Two-phase or single-phase protection scheme for catenary feeders (i.e. for AT and BT systems)
- Two-phase, 16.7Hz distance protection function for HV railway lines including communication aided protection schemes: System grounding, Impedance Zones, Phase Selector, Directionality, Switch onto Fault, Communication Logics
- Railway transformer protection for 16.7Hz

Course type and methods

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

Duration

The duration of the standard course is three days. On request a two-day course can be given. In such case the second day is either dedicated to catenary feeder protection or HV line distance protection.