



Automated Power System Protection Testing

 3 days

 English

 Cprs19en

You will learn how to efficiently test overcurrent, distance and transformer differential relays with the OMICRON Test Universe. Become familiar with the test procedures in theoretical and hands-on sessions and get to know the benefits of automated testing and reusable test templates.

Objectives

- ▶ Get familiar with the CMC test set and the Test Universe software for testing overcurrent protection relays
- ▶ Get to know important safety aspects for test preparation and execution
- ▶ Refresh your technical knowledge of overcurrent, distance and differential protection
- ▶ Be able to choose the appropriate software modules for testing distance and transformer differential relays
- ▶ Become more efficient in testing by creating and expanding reusable test plans
- ▶ Know the OMICRON support options including technical support, knowledge library and the worldwide community
- ▶ Get to know the full range of OMICRON solutions for protection testing

Content

- ▶ Power system protection principles and typical substation topologies
- ▶ Overview of protection testing basics
- ▶ Introduction to the OMICRON Control Center (OCC) and relevant test modules
- ▶ Modelling of the relay characteristics in the Test Object for subsequent testing
- ▶ Test setup and configuration options for the CMC test set
- ▶ Quick current and voltage output for easy wiring tests
- ▶ Fundamentals of non-directional overcurrent protection functions
- ▶ Creating a reusable test plan (OCC file) for testing non-directional overcurrent relays
- ▶ Hands-on testing of non-directional overcurrent protection
- ▶ Fundamentals of distance, ground fault and transformer differential protection functions
- ▶ Creating a reusable test plan for testing distance relays
- ▶ Creating a reusable test plan for testing transformer differential relays
- ▶ Testing ground fault protection with RelaySimTest using realistic network simulation
- ▶ Hands-on testing of distance and transformer differential relays as well as ground fault protection function

Solutions

Test Universe: QuickCMC, Ramping, Pulse Ramping, State Sequencer, Overcurrent, Advanced Distance, Advanced Differential
OMICRON Control Center
RelaySimTest, CMControl, ADMO
CMC-Family

Audience

Technical staff from utilities or companies working mainly in commissioning or maintenance testing

Prerequisites

Basic knowledge of power system protection