Automated Power System Protection Testing Masterclass

29 March – 2 April 2027
Paris (France)



Automated Power System Protection Testing Masterclass

Ref: 322874_217192 **Date:** 29 March – 2 April 2027 **Location:** Paris (France) **Fees:** 5900 GBP

Course Description

This comprehensive 1-week course provides in-depth training on automated testing of power system protection devices. Participants will learn industry-standard tools and best practices for efficient and effective protection system testing. The course covers test planning, execution, analysis, and reporting for various protection schemes.

Learning Objectives

- Understand principles of automated protection testing
- Master industry-standard test equipment and software
- Develop efficient test plans for various protection schemes
- Analyze test results and generate comprehensive reports
- Apply best practices for protection system maintenance

Course Modules

Day 1: Fundamentals of Automated Protection Testing

- Introduction to power system protection
- Automated testing principles and benefits
- Overview of test equipment and software
- Test planning and documentation

Day 2: Testing Overcurrent and Distance Protection

- Automated testing of overcurrent relays
- Distance protection testing techniques
- Fault simulation and injection methods
- Analysis of tripping characteristics

Day 3: Differential and Transformer Protection Testing

- Differential protection testing principles
- Transformer protection test procedures
- CT saturation and ratio testing
- Harmonic restraint and blocking tests



Day 4: Advanced Protection Schemes and IEC 61850

- Testing of complex protection schemes
- IEC 61850-based protection testing
- GOOSE messaging and virtual inputs/outputs
- Automated test sequencing and logic

Day 5: Test Result Analysis and Reporting

- Interpreting test results and waveforms
- Troubleshooting protection malfunctions
- Generating comprehensive test reports
- Best practices for protection maintenance

Practical Wins for Participants

- Ability to create efficient automated test plans
- Proficiency in using industry-standard test equipment
- Skills to analyze complex protection schemes
- Expertise in generating professional test reports

