Online-Course: Fundamentals and applications of partial discharge diagnostics with the MPD series

2.5 days | **English** | **# oCpdm01en**

Become familiar with the basic principles of partial discharge measurements using the MPD system.
Learn to set-up and measure according to IEC 60270 in online practical sessions on special training equipment.
Get a systematic introduction to the interpretation of test results.

Objectives

- Measure partial discharges on high voltage devices with the MPD according to IEC 60270
- Monitor the quality of the production process by performing measurements on assembled parts (quality assurance)
- Perform measurements to determine the insulation condition and identify fault types and fault location

Content

- Getting to know the MPD system
- Understanding how partial discharges are measured
- Connecting the MPD to high voltage devices, such as power transformers, generators, motors, cables
- Getting to know the MPD software for efficient measurements
- Performing partial discharge tests according to IEC 60270
- Performing partial discharge measurements in online practical sessions
- Getting to know PRPD, Q(V), trend analysis
- Interpreting partial discharge test results
- Handling interferences

Solutions

MPD 600, MPD 800 and their accessories

Audience

Technical staff from electric utilities, railway and service companies as well as manufacturers to be involved in partial discharge testing

Prerequisites

Knowledge of electrical engineering

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Implementation

This course takes place entirely online. From your desk, you participate in sessions with our trainer. Innovative tools and methods allow you to actively participate and interact with both the trainer and the course participants. Subsequently, practical parts (with remote access to our PD simulator and HV lab) enable you to apply the knowledge you have learned during the theoretical sessions.

Structure

- Introduction round
- PD theory sessions:
  - What are partial discharges (PD)?
  - Methods of measuring PD
  - How to analyse the results?
- Practical part with our PD simulator and in our HV lab (working in smaller groups):
  - Learn how the MPD system (HW and SW) is working
  - Learn how to connect the measuring equipment according to current standards
  - Learn about different PD defects
- Lunch break
- PD theory sessions:
  - Noise suppression
  - PD and noise separation
  - Interpretation and assessment
- Practical part with our PD simulator and in our HV lab (working in smaller groups):
  - Learn how to perform noise suppression, how to separate different overlapping PD sources, how to assess PD measurements
- Question and answer session and discussion

You will receive the detailed agenda in time before the start of the course

Your Tools

- Computer/Laptop with Internet access
- Headset
- Webcam
- Cisco Webex access (provided by OMICRON)