





# **Course: Electrical Switchgear for Engineers**

Code	City	Hotel	Start	End	Price	Language - Hours
753	Budapest (Hungary)	Hotel Meeting Room	2025-03-10	2025-03-14	5450€	En - 25

## Objective

This scope includes material that enables attendees to have in-depth understanding of theory of operation of electrical switchgear and essential issues relevant to daily operation and maintenance of motor control centers and low-voltage, medium-voltage and high-voltage switchgear

## Who should Attend

- Electrical Engineers.
- Senior technicians who work in the electrical control and power utilities.
- Technicians who would like to refresh their knowledge.
- Mechanical and chemical Engineers who are interested in control subjects.

## Outline

#### Introduction to Electrical Switchgear:

- General information about switchgear.
- Switchgear use.
- Switchgear requirements.
- Codes and Standards.

#### **Types of Switchgear:**



- Classification of switchgear.
- Switchgear construction:
- The switchgear assembly.
- Switchgear enclosures.
- Mechanical degree of protection.
- Busbars.

#### Switchgear Earthing System

- Switchgear Earthing Requirements
- Components Earthing

#### Medium Voltage Circuit Breakers, Fused Contactors and Load Break Switch

- Description for Each Item
- Differences

#### Switchgear Arc Extinction Media and Theory

- Types of Arc Extinction Media
- Advantages
- Differences

### **Switchgear Protection and Control**

- Switchgear Protection Scheme
- Control requirements

#### **Switchgear Metering**

- Metering specifications
- Metering requirements



#### **Current Transformers**

- Types
- Accuracy

### **Potential Transformers**

- Types
- Requirements.

### Factory Acceptance Test (FAT)

- Type test
- Routine tests
- Handling and Storage

### Handling procedures

Storage requirements

### Erection

- Safety
- Erection Preparations

## Site Acceptance Test (SAT)

- Description
- Requirements

## Commissioning and Start-up.

• Procedures



• Hand over system

#### **Trouble Shooting**

- How to deal with
- Requirements



The Scandinavian Academy for Training and Development employs modern methods in training and skills development, enhancing the efficiency of human resource development. We follow these practices:

#### • Theoretical Lectures:

 We deliver knowledge through advanced presentations such as PowerPoint and visual materials, including videos and short films.

#### • Scientific Assessment:

 $\circ\,$  We evaluate trainees skills before and after the course to ensure their progress.

#### • Brainstorming and Interaction:

 We encourage active participation through brainstorming sessions and applying concepts through role play.

#### • Practical Cases:

- $\circ\,$  We provide practical cases that align with the scientific content and the participants specific needs.
- Examinations:
  - $\circ\,$  Tests are conducted at the end of the program to assess knowledge retention.
- Educational Materials:
  - $\circ\,$  We provide both printed and digital scientific and practical materials to participants.
- Attendance and Final Result Reports:
  - $\circ\,$  We prepare detailed attendance reports for participants and offer a comprehensive program evaluation.
- Professionals and Experts:
  - $\circ\,$  The programs scientific content is prepared by the best professors and trainers in various fields.
- Professional Completion Certificate:
  - $\circ~$  Participants receive a professional completion certificate issued by the Scandinavian Academy for
    - Training and Development in the Kingdom of Sweden, with the option for international authentication.
- Program Timings:
  - Training programs are held from 10:00 AM to 2:00 PM and include coffee break sessions during lectures.