



**SCANDINAVIAN ACADEMY**  
Training and Development

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# Course: Electrical Switchgear for Engineers

Code	City	hotel	Start	End	price	Hours
753	Hamburg (Germany)	Hotel Meeting Room	2024-09-09	2024-09-13	5950 €	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:**

- 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:**

- We provide practical cases that align with the scientific content and the participants specific needs.

- **Examinations:**

- Tests are conducted at the end of the program to assess knowledge retention.

- **Educational Materials:**

- We provide both printed and digital scientific and practical materials to participants.

- **Attendance and Final Result Reports:**

- We prepare detailed attendance reports for participants and offer a comprehensive program evaluation.

- **Professionals and Experts:**

- The programs scientific content is prepared by the best professors and trainers in various fields.

- **Professional Completion Certificate:**

- 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.