SCANDINAVIAN ACADEMY
For Training and Development

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Course: Servo Motor Technology

Code	City	Hotel	Start	End	Price	Language - Hours
547	Istanbul (Turkey)	Hotel Meeting	2025-05-19	2025-05-23	3450 €	En - 25

About this course

A servomechanism, or servo for short, is a type of automatic control system using feedback for precise positioning or for speed control of a motor. Servos and their drives are found in many industrial applications including robotics and machine speed control.

A servomechanism is a type of automatic control system used for feedback, precise positioning, or speed control of a motor. Servos and their drives are found in robotics as well as machine speed control. In this course you will learn the ins and outs of servo drives, servo components, and servo motors.

In this course on servo drive fundamentals, you will learn about:

- The operations and functions of an AC servo drive
- The specifics of a servo drive system
- The different servo components, including: AC to DC converters, DC to AC inverters, feedback devices, power supplies, PPCs, and the servo motor
- Servo operation including SCRs, functions, and gain and bandwidth control
- Feedback signals

Knowledge checks in between lessons will quiz you on what you have learned so far from the modules. A summary and final test is offered at the end of the course to calculate how well you understand what you have learned. With over 30 minutes of material, this course by Technology Transfer Services provides you with a great amount of useful information. Get started now and increase your knowledge on servo drive fundamentals.

Who should attend?

Suitable for anyone who is required to maintain or configure stepper or servo systems (electricians, instrument technicians etc). Whilst a knowledge of basic electrical principles is desirable, no prior knowledge of motor theory or electronics is necessary.

Course Outcomes

On completion of the course, participants will be able to:

- apply safe working practices when working with stepper or servo systems
- understand the principles of operation of stepper and servo systems
- correctly configure, operate and monitor stepper and servo systems
- identify and correct configuration errors
- differentiate between drive faults, motor faults and power faults
- differentiate between control / power circuit drive faults
- appreciate the concepts of fieldbus communications and SCADA systems.
- Describe the sections of a t typical AC servo drive
- Explain how a typical AC servo drive operates
- State the inputs and outputs of a t typical AC servo drive
- Describe a typical AC servo motor

Course Content

- Analysis of the open-loop and closed-loop response
- Relationships of a DC servo motor
- Automatic angular and speed control
- Detection of position and speed of the DC servo
- by means of incremental encoder
- Determination of control characteristic, dead time,
- Transient response, error signal and control oscillation

- Recording step response
- Determining time constants
- Operation using various controller types
- Exploring the servo drive’s response to load variations

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.