

Scandinavian Academy
Training Center

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Riyadh - Al Khaleej District - Sheikh Abdul Aziz Bin Abdul Rahman Bin Bishr Street - 13223 - Office No. 5 | P.O.BOX : 13224

Course: Servo Motor Technology

Code	City	hotel	Start	End	price	Language - Hours
CM-547SA	Al Baha	Hotel Meeting	2027-02-07	2027-02-11	13950 SR	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 Center adopts the latest scientific and professional methodologies in training and human resource development, aiming to enhance the efficiency of individuals and organizations. Training programs are delivered through a comprehensive approach that includes:

- Theoretical lectures supported by PowerPoint presentations and visual materials (videos and short films).
- Scientific evaluation of participants before and after the program to measure progress and knowledge acquisition.
- Brainstorming sessions and practical role-playing to simulate real-life scenarios.
- Case studies tailored to align with the training content and participants work nature.
- Assessment tests conducted at the end of the program to evaluate the achievement of training objectives.

Each participant receives the training material (both theoretical and practical) in printed form and saved on a CD or flash drive. Detailed reports, including attendance records, final results, and overall program evaluations, are also provided.

Training materials are prepared professionally by a team of experts and specialists in various fields. At the end of the program, participants are awarded a professional attendance certificate, signed and accredited by the Scandinavian Academy for Training Center.

Program Timings: 9:00 AM to 2:00 PM

The program includes:

- A daily buffet provided during the sessions to ensure participants comfort.
- A closing ceremony on the final day to distribute certificates and celebrate participants achievements.
- **Note: All prices are exclusive of 15% Value Added Tax (VAT).**

Our Success Partners

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