

## AC Motors Basics Web based Training / 交流电机基础网络课程 (W1201)

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### Objectives

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Electrical drive technology plays an important role in industry, mobility and infrastructure. A general knowledge of drives systems is therefore essential for the performance of planning, commissioning and maintenance work. This training session introduces you to this subject. It gives you a basic understanding of what you need to know to achieve optimal learning results from SITRAIN courses at the training center.

### Target Group

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- Decision makers, sales personnel
- Project managers, project assistants
- Engineers, programmers
- Startup engineers, configuration engineers
- Service personnel
- Operators, users
- Maintenance personnel

### Content

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- Output ranges and areas of application of electric motors
- Fundamental electrical principles: magnetism, alternating current, induction, permanent and electromagnets
- Fundamental mechanical principles: speed and acceleration, force and torque, power and energy, gear ratios
- Design and construction of electric motors: rotors, stators, windings, bearings, enclosures, number of poles and speed
- Operating principle of three-phase motors:
  - Induction motors
  - Permanently excited synchronous motors
  - Separately excited synchronous motors
- Characteristic curves: torque-speed curve, current-speed curve, starting torque, breakdown torque, slip
- Association between active power, reactive power, apparent power and power factor
- Behavior of an induction motor during voltage and frequency fluctuations
- Load curves: linear, quadratic and constant torque, constant power, moment of inertia
- Energy efficiency, lifecycle costs, system analysis
- Standardized motors as per IEC and NEMA

### Prerequisites

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None

### Type

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E-Learning

### Duration

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6 hours

### Language

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zh

### Fee

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300 CNY