

## Basics of Motion Control 1 in TIA Portal (TIA-MC)

### Objectives

After attending the course, you will be able to select and configure appropriate technology objects, such as speed axis, positioning axis and synchronous axis. You will be able to precisely control the motion of axes with the integrated motion control functions.

### Target Group

- Commissioning Engineers
- Service Engineers
- Engineering users

### Content

#### HARDWARE:

- Overview of S7-1500/S7-1500T CPU.
- Overview of PLC-Simulator.
- SINAMICS S120 Line Module, Motor Modules, Option boards, Terminal modules, Sensor modules.
- Motors, encoders, and interfaces

#### COMMISSIONING:

- S7-1500/1500T Hardware configuration.
- SINAMICS S120 commissioning in TIA portal.
- BICO Technology and I/O Assignment.
- S7-1500/1500T and SINAMICS Servo drive communication.
- Telegram assignment

#### BASIC MOTION CONTROL WITH S7-1500/1500T

- Basic parameters of motion control
- Speed Axis technology object
- Positioning Axis technology object
- Homing and traversing movements
- Programming with PLC open
- Error messages and diagnostics.
- Libraries and blocks.
- Synchronous Axis technology object.

#### HANDS ON:

- Practical exercises on training devices with SIMATIC S7-1500 and SINAMICS drives

### Prerequisites

- Knowledge of programming in the STEP7 TIA Portal

### Type

Face-to-face training

### Duration

4 days

### Language

en

### Fee

30,000 INR