

## SIMATIC - Motion Control in the TIA Portal (TIA-MC)

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### Kurzbeschreibung

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In this course, you will learn to program the motion control functions integrated in the SIMATIC S7-1500 or S7-1200 controllers using TIA Portal. Core topics are the technology objects speed axis, positioning axis and synchronous axis with practical exercises on training devices (SIMATIC S7-1500 and SINAMICS).

[Also available as online-training](#)

### Ziele

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You will program the SIMATIC S7-1500 or S7-1200 controllers in the TIA Portal. You will be able to precisely control the motion of axes with the integrated motion control functions.  
In this technology course, you will learn step by step the benefits and the use of these functions. After each learning step, you will deepen your knowledge with hands-on programming.  
After attending the course you will understand the interaction of the technological functions. You will be able to select and configure appropriate technology objects, such as speed axis, positioning axis and synchronous axis, and integrate them in your program.

### Zielgruppe

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Programmer  
Commissioning engineers  
Engineering personnel

### Inhalte

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Overview of the S7-1500T Technology-CPU, basics of Motion Control  
SpeedAxis and PositioningAxis technology objects  
Programming with Motion Control instructions  
Homing and traversing movements  
Closed-loop control and optimization  
Error messages and diagnostics  
Output cam and measuring input technology object  
SynchronousAxis technology object  
Absolute and relative gearing  
Cam discs technology object  
Kinematics technology object  
Interplay between Motion Control and Safety Integrated  
Practical exercises on training devices with SIMATIC S7-1500(T) and SINAMICS drives

### Teilnahmevoraussetzung

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Knowledge of programming in the TIA Portal (equivalent to knowledge after completion of the TIA-PRO1 or TIA-SERV2 course)

### Hinweise

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Over the year 2022, the courses TIA-MC1 (3 days) and TIA-MC2 (2 days) will be combined to form the course TIA-MC (5 days). The content remains unchanged.

### Typ

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Präsenztraining

### Dauer

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5 Tage

### Sprache

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