

## TIA Portal Openness Programming / TIA Portal Openness 编程 (F4032)

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### Objectives

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TIA Portal Openness is the API or programming interface provided with the TIA Portal, with which you can efficiently automate engineering tasks without using the TIA Portal itself. This includes tasks such as project management, configuration and parameterization of hardware, automatic generation of block code as well as various online functions. The aim of the course is to provide you with an introduction to programming with C#. You will learn the basics of the range of languages and performance of the Openness API in Visual Studio and how to use the C# programming language. During the training, you will create, commission and test your own simple Openness applications. You will also be able to perform diagnostics.

### Target Group

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Programmers, Configuration engineers, Project planners

### Content

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- Digitalization - Industry 4.0
- Introduction to Visual Studio and the C# programming language
- Introduction to TIA Portal Openness
- Introduction to the most important data types integrated in C#
- Introduction to the structure of classes and the object-oriented programming concept of C#
- Creation of uses interfaces with Windows forms
- Tools for debugging programs
- Object models in general
- Working with libraries and projects in the TIA portal
- Adapting hardware through TIA Portal Openness
- Generation of PLC programs from library elements
- Increased flexibility by extending the existing program

### Prerequisites

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Attendance of A7811 and A7816 course is recommended

### Type

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Face-to-face training

### Duration

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4 days

### Language

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### Fee

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7,000 CNY