

## TIA-1500\_2 – Expanded course on studying of the principles of a configuration and programming of controllers of new generation of S7-1500 in TIA Portal V13 / К y p c TIA-1500\_2 (TIA-1500\_2)

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### Short Description

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The course is intended for experts who will program, put into operation and to serve systems of automation on the basis of SIMATIC S7-1500 c controllers use of panels of the operator, tire PROFIBUS and PROFINET system. It is aware expanded opportunities for work with TIA Portal V13 on creation of projects and commissioning of systems on the basis of SIMATIC S7-1500, and also possibility of obtaining diagnostic information are considered at emergence of mistakes in work of system. The special attention is paid to new opportunities of S7-1500 controllers which were not available in 300 and 400 series on work with the difficult types of data and indirect addressing which are elegantly realized in the graphic LAD and FBD programming languages earlier.

### Objectives

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Receiving expanded knowledge of work with hardware of SIMATIC S7 systems, operator panels, to programming and commissioning of comprehensive programs with use of various programming languages on the basis of SIMATIC S7-1500 controllers by means of a software package of TIA PORTAL V13. Studying of absolutely new program instructions and hardware opportunities of S7-1500

### Content

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- Educational stand
- Debugging of a hardware configuration of the S7-1500 controller
- Technique of creation of the program
- Instructions of transitions and work with accumulators
- Processing of analog signals and mathematical processing by means of new instructions of S7-1500
- Bases of structural programming, multicopy model
- Difficult types of data and new opportunities of work with them in S7-1500. Expanded instructions
- Work with indirect addressing. Indexed and selective access to massifs in the graphic S7-1500 languages
- The optimized blocks in S7-1500/1200 controllers
- Emergency messages in HMI
- Receiving expanded system diagnostics and processing of mistakes
- Programming bases in the SCL language
- Programming bases in the S7-Graph language

### Prerequisites

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passing of the course TIA-1500\_1

### Note

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The course contains a large number of the practical exercises which are carried out with use of educational stands with SIMATIC S7-1500 controllers and the touch Comfort TP700 panels, stations of the distributed periferiya of ET200SP, frequency Sinamics G120 converters, a programmer of FieldPG or RS (with the established software of TIA PORTAL V13) and conveyor models.

The course provides individual training on separate computers in small groups.

### Type

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Face-to-face training

### Duration

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5 days

### Language

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