

Siemens Step 7 1200/1500 via TIA Portal

Level (1)

Course Description

This training course provides you the handling of the TIA Portal, basic knowledge about the structure of the TIA portal S7 automation system, configuration and parameterization of hardware. PLC hardware, communication program writing and error search will be covered.

Target Audience

Programmers, commissioning engineers, service personal and configuring engineers.

Pre-requisites

- Basic computer skills with Windows 7 very helpful.
- Few classic control experience or knowledge.

Duration

- **Class room:** 5 days, 6 hours/day.
- **On line:** 10 days, 3 hours/day.

Course Outline

- System overview of the TIA world and essential performance features of the TIA system family.
- Components of the STEP7 Basic Package and its use.
- STEP7 basic operations.
- Hardware configuration and parameterization of the S7-1200 modules.
- Ladder diagram programming language (Bit Instructions – Timers – Counters).
- STEP7 block types and program structuring.
- Programming of blocks.
- Data Management with data blocks.
- Identify and using different organization blocks.
- Deeper understanding of contents through practical exercises on the TIA S7-1200/1500 system model.
- Program documentation and backup.
- Test tools for system information, troubleshooting, and diagnostics.

Course Agenda

Day 1	<ul style="list-style-type: none"> • Introduction to PLC. • Program Scan Cycle. • Introduction to Siemens PLC Families. • Communication to Station S7 1200/1500. • Hardware Configuration.
Day 2	<p><u>Ladder diagram programming language:</u></p> <ul style="list-style-type: none"> • Bit Instructions, • Timers, • Counters.
Day 3	<ul style="list-style-type: none"> • STEP7 block types and program structuring. • Programming of blocks. • Data Management with data blocks. • Identify and using different organization blocks.
Day 4	<ul style="list-style-type: none"> • Deeper understanding of contents through practical exercises on the TIA Portal S7-1200/1500 system model, • Symbols. • Variable tables. • More instructions (Mov , Compare ,etc).
Day 5	<ul style="list-style-type: none"> • Program documentation and backup. • Test tools for system information, troubleshooting, and diagnostics. • Reference data filter. • Overview of Analog Signals.