

Diagnostica PLC SIMATIC S7-1200/1500 con ambiente TIA Portal (TIA-DIAG-PLC)

Short Description

This course provides the fundamental knowledge required to understand the structure and operation of SIMATIC S71200 and S71500 automation systems. Its goal is to enable technical personnel to quickly identify the causes of faults and reduce machine downtime. During the course, participants will examine the architecture of SIMATIC systems, the main hardware components, and the procedures for module replacement. Special attention will be given to the diagnostic tools available on the CPU and within the TIA Portal engineering environment, which support fast identification and resolution of anomalies and malfunctions. The course also covers the procedures for backing up and restoring PLC programs—activities essential for effective plant management and for minimizing the impact of failures on production. Theoretical concepts will be reinforced through practical exercises on a SIMATIC S71500 system, allowing participants to directly apply diagnostic and maintenance techniques.

Objectives

After attending the course, you will be able to:

- Recognize the hardware components of a SIMATIC S71200/1500 system
- Identify a hardware fault and replace a module
- Use TIA Portal diagnostic tools for fault analysis
- Perform backup and restore operations on a PLC program

Target Group

- Electrical maintenance technicians
- Mechanical maintenance technicians
- Service personnel
- Machine testers
- Commissioning personnel
- Operators

Content

- Typical architecture of a SIMATIC S71200/1500 system
 - Installation of components: PM/PS, CPU, SM, CM/CP, TM
 - Hardware diagnostic tools: CPU display, expansion module LEDs, etc.
 - Replacement of hardware components: order code and firmware compatibility
 - Basic introduction to the TIA Portal engineering environment
 - Selecting the correct TIA Portal version and opening a project
 - Using TIA Portal for diagnostics and error detection: cross-references, memory layout, etc.
 - TIA Portal online functions for machine downtime analysis: diagnostic buffer, code monitoring, watch and force tables, communication load, etc.
 - TIA Portal online functions for CPU parameterization: operating mode, IP address configuration, date and time management, password protection, etc.
 - Backup and restore of programs using TIA Portal and external tools (SIMATIC Automation Tool, Web Server, etc.)
- Theoretical knowledge will be reinforced through practical exercises on a SIMATIC S71500 control system.

Prerequisites

No prerequisites required.

Type

Face-to-face training

Duration

2 days

Language

it