SIEMENS

Process Automation - TDC

SIMATIC TDC Engineering with D7 and CFC

General Information

Course Code: SCT-PCTDCP2A
Length: 4½ Days

Audience

- Programmers
- Commissioning engineers, configuring engineers
- Service personnel

Prerequisites

- S7 Automation Maintenance 1

OR

- S7 Programming 1

Profile

2.9 CEUs (Continuing Education Credits)

This course is designed for service technicians and commissioning/configuration engineers who are responsible for project maintenance, design, development and commissioning a TDC system using CFCs. This course provides you with the knowledge for programming and commissioning the control system SIMATIC TDC. After the training you will be able to configure technological functions with CFC and establish the communication via PROFIBUS, Industrial Ethernet and GDM-connection.

Theoretical knowledge will be reinforced with numerous practical exercises using a TIA plant model. This consists of a SIMATIC Technology TDC System, PROFIBUS DP bus and a mix of peripheral devices such as ET200M, MICROMASTER, SINAMICS S120 compact and other test equipment.

Objectives

Upon completion of this course, the student shall be able to:

- Obtain help using the online documentation
- Configure rack hardware
- Copy, archive and restore a project
- Configure the PG/PC interface
- Create and edit a program using CFC blocks
- Configure the processing sequence of CFC blocks
- Configure scan times and interrupts
- Create run-time groups
- Save, compile, and load the program to the memory module
- Monitor program and hardware operation using Test Mode
- Create and use reference data for a program
- Convert a task to a program (Chart in chart, chart as block)
- Configure and track global signals and multi-processor signal exchange
- Configure communications to and from peripheral components (ET200, Drives, etc.) using PROFIBUS DP
- Test communications to and from peripheral components
- Trace signals to and from Field interface modules
- Monitor the CPU operating status
- Import and update block libraries
- Configure rack to rack and S7 to rack communications using Netpro
- Configure rack to rack communications using virtual signals and GDM (global data memory)
- Configure pointer-based connections
- Configure communications with WinCC

Topics

1. Working with the SIMATIC-Manager
2. Hardware configuration for the system SIMATIC TDC
3. Preparation of CFC charts for this system
4. Working with own blocks and chart in chart
5. Communication-Hardware and its ranges of application
6. Introduction to the communication
   a. MPI
   b. PROFIBUS DP
   c. GDM- Communication (Subrack coupling)
   d. Industrial Ethernet with TCP/IP and UDP
7. Processor communication with
   a. $-Connection
   b. virtual Connection
   c. pointer connection
8. Getting to know the testing and error indication
9. Programming, loading and proof testing of examples for practical training
10. Introduction to the communication SIMATIC TDC - WinCC