SIEMENS

SINUMERIK ONE Safety Integrated F-PLC Startup

General Information

Course Code	SCT-SNONESUF
Global Code	NC-SAF-SIW
Length	4 Days
CEUs	2.6

Audience

This advanced course is designed for controls engineers and service specialists who configure and commission the SINUMERIK ONE Safety Integrated F-PLC functions in machine tool applications. The student will receive a certificate after successfully completing the course.

Prerequisites

- SINUMERIK ONE Startup

Profile

During this course, the student will learn about configuring and commissioning the Safety Integrated F-PLC using the SINUMERIK ONE. Practical exercises with Siemens simulators concerning configuring, commissioning, and servicing will be a major part of this training course. At the end of the course, the learner will be familiar with Safety Integrated F-PLC using SINUMERIK ONE. The student will learn to independently configure, test, and commission specific installation configurations with safety functions. This enables the learner to make full use of the advantages of Safety Integrated F-PLC on the machine tool. The course format is a combination of instruction and hands-n exercises. Students will perform practical exercises related to configuring and commissioning the Safety Integrated F-PLC aspects of the SINUMERIK ONE.

Objectives

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

- Identify the concepts of safety technology and the system requirements for Safety Integrated F-PLC.
- Have a working knowledge of safety-oriented inputs and outputs for PROFISafe Modules.
- Commission, describe, and use SAFE Machine Data and interface signals related to Safety Integrated
- F-PLC Inputs and Outputs.
- Commission Safe Motion Monitoring functions.
- Commission SAFE Position Monitoring functions and describe the User Agreement and its' implications.
- Commission and perform Test Stop procedures.
- Commission and perform the Force Checking Procedure.
- Commission and perform the Brake Test Procedure.
- Perform error detection procedures related to Safety integrated applications.
- Commission and Diagnose PROFISAFE PLC I/O with TIA Portal.
- Perform and document the Safety Acceptance Test procedure.
- Identify and correct Checksum errors.

Topics

1. System requirements
2. General information on safety technology.
3. Description of the safe basic functions
4. Procedure during startup and troubleshooting
5. Description of the machine data and interface signals
6. Safe Communications with PROFISafe
7. Evaluation of diagnosis and alarm displays
8. Test stop
9. Sensor / actuator integration1
10. Safe brake management
11. Acceptance test with SINUMERIK OPERATE
12. Practical exercises on training devices

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