SIEMENS

SINUMERIK ONE Safety Integrated F-PLC Service

General Information

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

Audience

This advanced course is designed for controls engineers and service specialists who use the SINUMERIK ONE and Safety Integrated F-PLC functions in machine tool applications.

Prerequisites

- SINUMERIK ONE Start Up

Profile

This course provides the knowledge and skills that Controls Engineers and/or maintenance technicians require for familiarization and the operation of an automated machine tool, equipped with a SINUMERIK ONE CNC, which uses the optional Safety Integrated F-PLC System. The goal of the class is to teach the students to identify the various types of applications associated with the Safety Integrated System, to achieve a working knowledge of the concepts, and to identify and diagnose Safety Integrated related problems. The course format is a combination of instruction and hands-on exercises. The hands-on exercises provide exposure to a SINUMERIK ONE CNC, its system components, connections, start up, and operation. Students will perform practical exercises related to service and Safety Integrated F-PLC aspects.

Objectives

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

- Understand 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.
- Understand the principles related to safe communication.
- Identify, understand, and use Machine Data and
- interface signals related to Safety Integrated F-PLC
- Perform error detection procedures related to Safety Integrated applications.
- Evaluate diagnostics and alarm displays associated with Safety integrated applications.
- Understand and perform Test Stop procedures.
- Understand the User Agreement and its implications.
- Understand and use Safe Limits.
- Diagnose hardware related problems while
- working with Safety Integrated applications.
- Diagnosing PLC I/O with TIA Portal.
- Create and Restore Series Start-Up Archive files with regards to Safety integrated functions.
- Understand and correct Checksum errors.

Topics

1. Safety-oriented inputs and outputs
2. Safe Standstill
3. Safe operational stop
4. Securely reduced speed
5. Safe software limit switches
6. Safe stopping process
7. Safe programmable logic
8. Safety related Machine Data
9. Understand OEM safety related alarms
10. Understand checksums

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