

SINUMERIK ONE Service (NC-ONE-SERV)

Type

Instructor-led Learning

Duration and Continuing Education Units (CEU)

4 Days

2.6 CEUs

Target Group

- Maintenance

Short Description

This course is designed for electrical/electronic end-user maintenance personnel for machine tools using the Siemens SINUMERIK ONE CNC control. This course presumes the customer is using an HMI with IPC or ITC hardware, and the SINUMERIK HMI OPERATE software. This course emphasizes the maintenance aspects of the SINUMERIK ONE. An overview of the soft key menus of the control is provided, including the basic principles of operating the control. Demonstrations are given on how to competently manage maintenance functions, and on back-up/restore functions of the NC, PLC and PROFIBUS Drive using series start-up archive files. The class format is a mixture of lecture and hands-on exercises. SINUMERIK ONE simulators are utilized to allow the student to build proficiency in control navigation and managing different forms of data.

Objectives

- Edit and store machine data
- Back-up and restore NC data, PLC program and PROFIBUS drive data to the IPC hard drive or System SD Card
- Back-up and restore NC data, PLC program and PROFIBUS drive data to an external data medium
- Reset NC, PLC, and Drives. Reload backup
- Diagnosing problems using SIEMENS generated alarm displays
- Overview of Integrated SINAMICS drive system
- Adjust Absolute and Incremental Encoders
- Use on-screen help functions to help diagnose alarm related problems
- Perform file management functions using System Data Management
- Go online with Integrated SIMATIC 1500-F PLC

Content

- Overview and components of the SINUMERIK ONE
- Introduction to operation
- Data backup and restart
- Analysis of fault displays and diagnostics displays
- Basic configuration of the axes and drives
- Adaptation of the machine data following mechanical maintenance work
- Introduction to SINAMICS S120 system hardware (The student learns how to troubleshoot the S120 Drive Cliq communication bus using Topology)

- Structure of the user program (Use TIA Portal to create project, Upload from PLC, use cross reference to locate output in Block, and monitor rung of logic)
- NC/PLC interface structure, important interface signals and user alarms
- Practical service training on training devices
- Use TIA Portal to create project, Upload from PLC, use cross reference to locate output in Block, and monitor rung of logic

Recommended Prerequisites

[TIA Portal Service 1: US-PTTAS1A](#)

OR

[SINAMICS S120 Basic Maintenance - STARTDRIVE: US-DVS12M1B](#)

OR

[SINAMICS S120 Basic Maintenance - STARTER: US-DVS12M1A](#)

Language

English

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