multisoft
Systems

SINAMICS G120 Training

COURSE CONTENT

GET IN TOUCH

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About Multisoft

Train yourself with the best and develop valuable in-demand skills with Multisoft Systems. A leading certification training provider, Multisoft collaborates with top technologies to bring world-class one-on-one and certification trainings. With the goal to empower professionals and business across the globe, we offer more than 1500 training courses, which are delivered by Multisoft's global subject matter experts. We offer tailored corporate training; project Based Training, comprehensive learning solution with lifetime e-learning access, after training support and globally recognized training certificates.

About Course

The SINAMICS G120 Training by Multisoft Systems is a professionally designed program aimed at engineers, technicians, and automation professionals who want to gain in-depth expertise in Siemens variable frequency drives. This course provides a strong foundation in the architecture, components, and operating principles of the SINAMICS G120 drive system, widely used across industrial automation applications.

Module 1: Introduction to SINAMICS G120

- ✓ Overview of Siemens drive portfolio
- ✓ Applications of SINAMICS G120 in industry
- ✓ Features, benefits, and modular concept
- ✓ Safety standards and compliance

Module 2: SINAMICS G120 Hardware Architecture

- ✓ Power Modules, Control Units, and Operator Panels
- ✓ Line filters, braking units, and accessories
- ✓ Motor types supported by G120
- ✓ Installation guidelines and wiring overview

Module 3: Drive Fundamentals & Motor Control

- ✓ Basics of AC motors and drive operation
- ✓ Control methods (V/f, Vector Control, etc.)
- ✓ Speed, torque, and current control concepts
- ✓ Energy efficiency considerations

Module 4: Commissioning of SINAMICS G120

- ✓ Initial startup and parameter setup
- ✓ Commissioning using BOP, IOP, and STARTER/TIA tools
- ✓ Motor data identification and tuning
- ✓ Test run and validation

Module 5: Parameterization & Configuration

- ✓ Parameter structure and navigation
- ✓ Application-specific parameter settings
- ✓ Ramp functions, limits, and setpoints
- ✓ Saving, restoring, and cloning parameters

Module 6: Communication & PLC Integration

- ✓ Integration with Siemens PLCs
- ✓ PROFIBUS / PROFINET basics
- ✓ Control via digital, analog, and bus signals
- ✓ Drive control through automation systems

Module 7: Diagnostics & Troubleshooting

- ✓ Faults, alarms, and warning handling
- ✓ Diagnostic tools and trace functions
- ✓ Common issues and corrective actions
- ✓ Preventive maintenance practices

Module 8: Safety Integrated Functions

- ✓ Overview of Safety Integrated features
- ✓ Safe Torque Off (STO) and related functions
- ✓ Safety wiring and parameterization
- ✓ Standards and best practices

Module 9: Optimization & Advanced Functions

- ✓ Performance tuning and optimization
- ✓ Energy-saving functions
- ✓ Application examples (pumps, fans, conveyors)
- ✓ Lifecycle management of drives