

SINAMICS G120 Basic - TIA Portal Startdrive

General Information

Course Code	SCT-DVGPTM1A
Global Code	DR-G12-PMT
Length	2½ Days
CEUs	1.6

Audience

This course is intended for Personnel responsible for the long-term maintenance and diagnostics of the Siemens Drive.

Prerequisites

- Basic Computer Skills
- Basic industrial technology skills
- Basic Industrial Electronics experience
- Competent in safe use of common electrical test tools such as VOM, DMM, oscilloscope, etc.
- Completion of the following quickSTEP online course: Basics of AC Drives at <https://www.sitrain-lms.com/STEP.aspx>

Profile

This course is intended to introduce the SINAMICS G120 drive using TIA Portal Startdrive as it pertains to safety, hardware identification, repair, maintenance, diagnostics and troubleshooting.

Interconnections with the G120 – Computer – PLC will be utilized in the session. It is formatted as a combination of instruction and carefully structured, hands-on exercises aimed at developing job-related knowledge and skills.

Objectives

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

- Utilize G120 Architecture to troubleshoot Hardware Modules,
- Troubleshoot the Power Electronics.
- Operate the Drive via BOP-2 and/or IOP Operator Panels.
- Perform Basic Commissioning and Set Up via BOP-2 and/or IOP.
- Backup and Restore the Operating Program via Memory Card and Ops.
- Establish communication with the TIA Portal Startdrive.

- Upload, Archive, and Restore G120 Configuration via Startdrive.
- Control Drive via Startdrive Control Panel.
- Trace Signals within the G120 configuration utilizing BICO technology.
- Modify/Trace Command and Setpoint sources.
- Troubleshoot Drive via LEDs, Operator Panels, and Startdrive.
- Use the Diagnostic Fault and Warning Buffer to troubleshoot the system.
- Install or Replace Drive System Components.

Topics

1. Safety, PPE, and ESD
2. Introduction to SINAMICS G120 Drives
3. Set up, Operation, and Data Backup via Operator Panels
4. STARTDRIVE commissioning software
5. G120 Data Backup
6. G120 Repair and Maintenance
7. BICO Technology
8. G120 Diagnostics
9. Obtaining Technical Support/Additional Training