

Online Training - SINAMICS G130 / G150 (DR-G130)

Objectives

In this course you will be able to commission the converter and make changes to the parameterization. In case of faults, you can reduce downtimes by analyzing the faults and their associated causes, and you can replace faulty components.

Target Group

Users, Commissioning / Service / Maintenance Engineers

Content

- Design and functional principle of the converter system SINAMICS G130/G150

HARDWARE

- Control unit
- Chassis module (AC-AC)
 - CIM
 - Power block
- Option boards, Terminal modules, Sensor modules
- Motors, encoders, and interfaces
- Block diagram of Drive System

COMMISSIONING

- Operation of Drive through BOP-20/AOP 30 (Drive Object Concept)
- BICO technology concept.
- Parameterization using STARTER / SCOUT
- Online connection via Profibus or Profinet
- Automatic configuration.
- Project structure: drive objects and drive components
- Topology Concept.

G130 FUNCTION & FEATURE

- Various Function Modules in G130
- Using various Data sets – CDS, DDS, EDS, MDS, PDS.
- Operation of drive with speed/Torque control
- Sinamics Compact Flash structure
- Licensing of Sinamics G130 system
- Free Function Blocks
- Drive Control Chart (DCC)
- Inverter Functions in G130
 - Automatic Restart
 - Flying Restart
 - Kinetic Buffering
 - Vdc max Controller

PLC DRIVE COMMUNICATION

- Establishing Communication between Sinamics G130 & Simatic PLC (S7-300/S7-400/S7-1500) over Profibus or Profinet.
- PZD description (Send / Receive data)
- Diagnostics at Drive & Plc Side (Control word /Setpoint / Status word)
- Bit Mapping
- Logic Blocks for Send / Receive data.
- Integrated project & Individual project data mapping wrt. defined PZD

DIAGNOSTICS

- Fault Diagnostics with Trace in Starter & other software / hardware options
- Diagnostics using AOP 30
- Project Backup
- FW & Project Upgradation
- Hardware Replacement

HARDWARE IDENTIFICATION

- AOP 30
- Control interface module (CIM)/Control interface Board (CIB)
- Individual power Drive module (IPD)

- Bridge Diode rectifier
- IGBT
- IGBT gate drive unit (IGD)
- Pre-charging resistor
- Bleeder Resistor / Balancing Resistor
- Thyristor
- Thyristor Drive board (TDB)
- CT
- CIM to TDB interconnection through wired cable
- CIM to IGD interconnection through Optical fibre.
- Sensors
- Power blocks removal

DIGITALIZATION

- Access of G130 with web browser without using commissioning software **New**

HANDS ON

- Exercises defined based on Topic explained.
- Hands-on practice on demo kit

Prerequisites

Engineers in Electrical / Electronic Engineering with Power Electronics Background

Note

TECHNICAL REQUIREMENT (ONLY FOR ONLINE TRAINING)

- A Desktop or laptop with Windows 7/10 OS and a stable internet connection. (We recommend a data transfer rate of 5 Mbit/s.)
- Microsoft Teams platform for technical presentations
- TeamViewer platform for Hands-on

Type

Online-Training

Duration

6 days

Language

en

Fee

33,000 INR
18% GST additional on course fees