

SIGMA MICRO 3

The course has been designed to familiarise Electricians and Technician Apprentices with the operation, control and configuration of MICRO 3 drives. The course will explain the components of a MICRO 3 Drive and their operation.

Objectives

To ensure the students will be able to understand the components and their functions contained in a MICRO 3 drive. Understand how the drive controls the thyristor bridge and to show how to test the thyristors. How to interpret control on and control available faults. Fault finding and understanding speed feedback devices. To be able to download programs and monitor drive parameters.

Course Reference
ALSGD3

Course Duration
3 Days

Documentation
Micro 3 Training Manual.

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COURSE CONTENT

- ✓ Explanation of why DC Drives are used and their applications.
- ✓ DC motor theory.
- ✓ Operation of the MICRO 3 speed control servo.
- ✓ Introduction to field control and field weakening.
- ✓ Power wiring to the MICRO 3 Drive.
- ✓ Control wiring to the MICRO 3 Drive.
- ✓ Introduction to modules in the Micro 3 that control the speed.
- ✓ Using the Keypad to monitor.
- ✓ Speed Reference / feedback, current reference / feedback and firing angle.
- ✓ Thyristor and thyristor bridges and their relationship with the firing angle using open loop test.
- ✓ Testing thyristors.
- ✓ Using the programmer to monitor the drive parameters.
- ✓ Downloading the program to the drive.
- ✓ Demonstration of protection with control on and control available.
- ✓ How the line contactor is controlled.
- ✓ Fault finding on control on and control available.
- ✓ Understanding speed feedback devices and testing.
- ✓ Understanding how the speed, voltage and current feedback enter the drive.
- ✓ Fault codes.
- ✓ Introduction to protection I2T overloads, fuses and instantaneous overload.
- ✓ Common faults that occur.
- ✓ Testing the thyristor bridge.
- ✓ Insight how the PLC sends the start and speed reference signals to the drive.