



POWER AND ELECTRICAL TRAINING

Motor Control Centres and Variable Speed Drive Systems

3 day course

Classroom, online or in-house

Course overview

A three day hands on course on motor control centres and the drives increasingly fitted to the loads they feed. Delegates work through motor control centre architecture and the starter types found in industrial installations, then move to variable speed drive principles and topologies, and the selection of a drive against the load characteristic of a pump, fan or conveyor, which differ enough that a drive correctly sized for one is wrong for another. Commissioning and parameter configuration are practised rather than described. The course covers fault diagnosis across motor control and drive systems, and closes on the energy savings correct drive application delivers, which is what is driving their adoption on mine and process plant loads.

What you will learn

- Describe motor control centre architecture and starter types
- Select variable speed drives appropriate to specific load characteristics
- Configure and commission drive parameters for common industrial applications
- Diagnose common motor control and drive faults
- Apply energy saving strategies through correct drive application
- Manage harmonics and electromagnetic interference introduced by drives
- Specify cable, earthing and motor insulation requirements for drive fed motors

Who should attend

- Electrical technicians
- Control engineers
- Plant electricians
- Instrumentation and control engineers
- Maintenance electricians

Course outline

- 01 Motor control centre design and starter types
- 02 Variable speed drive principles and topologies
- 03 Drive selection for pumps, fans and conveyors
- 04 Commissioning and parameter configuration
- 05 Harmonics, filtering and electromagnetic compatibility
- 06 Cable, earthing and motor insulation for drive fed motors
- 07 Fault diagnosis on motor control and drive systems
- 08 Energy efficiency through variable speed drive application

Upcoming dates

Dates	Venue	Format	Fee per delegate
7 to 9 October 2026	Johannesburg, South Africa	Classroom	R14,950
16 to 18 November 2026	Lagos, Nigeria	Classroom	USD 995
28 to 30 December 2026	Online	Online	R6,500
17 to 19 February 2027	Addis Ababa, Ethiopia	Classroom	USD 995



Fees and how to register

This 3 day course is **R6,500** per delegate online, **R14,950** in the classroom in South Africa, Botswana, Namibia, Lesotho and Eswatini, and **USD 995** in the classroom elsewhere in Africa. In-house training is quotation on request. Book 2 or more delegates on this course and save 10%.

To register or request an in-house proposal, visit www.afrisciencegroup.com, email info@afriscience.co.za, or WhatsApp us on **+27 63 479 1136**.

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