



ENGINEERING AND TECHNICAL TRAINING

Industrial Controller Troubleshooting and Diagnostics

5 day course

Classroom, online or in-house

Course overview

When a control system fault stops production, the cost is measured in hours. This course builds a systematic method for finding the fault rather than replacing parts until the symptom clears. Delegates work through controller and input output architecture, diagnostic indicators and what they actually mean, communication and network fault finding, power supply and earthing problems, and the discipline of isolating a fault to hardware, configuration or field device. Substantial time is spent on the failures that mislead: intermittent faults, earthing problems that present as communication errors, and field device failures that appear to be controller faults.

What you will learn

- Describe controller and input output architecture and the signal path end to end
- Interpret diagnostic indicators and status information correctly
- Isolate a fault to hardware, configuration, network or field device
- Diagnose industrial network and communication faults
- Identify power supply and earthing problems and their misleading symptoms
- Approach intermittent faults systematically rather than by replacement
- Restore a system safely and verify the repair before returning to service

Who should attend

- Control and instrumentation technicians and engineers
- Maintenance and shift technical staff
- Automation engineers
- Plant electricians working on control systems
- Technical supervisors responsible for uptime

Course outline

- 01 Controller and input output architecture and the signal path
- 02 Diagnostic indicators, status words and what they really tell you
- 03 A systematic fault isolation method
- 04 Industrial network and communication fault finding
- 05 Power supply, earthing and the faults they imitate
- 06 Field device failures that look like controller faults
- 07 Intermittent faults and how to trap them
- 08 Safe restoration and verification before return to service

Upcoming dates

Dates	Venue	Format	Fee per delegate
7 to 11 September 2026	Mbabane, Eswatini	Classroom	R11,995
8 to 12 September 2026	Maputo, Mozambique	Classroom	R11,995
13 to 17 September 2026	Gaborone, Botswana	Classroom	R11,995
4 to 8 October 2026	Lagos, Nigeria	Classroom	R11,995



Fees and how to register

Online **from R6,500** per delegate, classroom **from R11,995** per delegate, 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@afri-science.co.za, or WhatsApp us on **+27 63 479 1136**.

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