



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
2 to 6 November 2026	Online	Online	R8,500
9 to 13 November 2026	Johannesburg, South Africa	Classroom	R19,950
7 to 11 December 2026	Kampala, Uganda	Classroom	USD 1,325
21 to 25 December 2026	Cape Town, South Africa	Classroom	R19,950



Fees and how to register

This 5 day course is **R8,500** per delegate online, **R19,950** in the classroom in South Africa, Botswana, Namibia, Lesotho and Eswatini, and **USD 1,325** 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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