
Course Outline: Certified PROFIBUS Installer with Troubleshooting

Process Field Bus (PROFIBUS) is the world's leading fieldbus technology, developed by industry experts to connect and control devices within industrial environments. It enables communication between field devices such as sensors, actuators, and controllers, ensuring efficient data exchange across systems. Known for its reliability and scalability, PROFIBUS plays a vital role in optimising industrial processes.

Course Information

The Certified PROFIBUS Installer with Troubleshooting Course is a comprehensive two-day, hands-on training program designed for individuals with little to no experience with PROFIBUS.

This course provides a detailed overview of PROFIBUS network operation and characteristics, covering the theoretical, practical, and troubleshooting elements of PROFIBUS DP and PA installations. Participants gain practical experience using demonstration boards that simulate real-world industrial environments, helping them understand network topology, wiring, and fault detection.

In addition to network fundamentals, the course delves into digital systems, covering their operating principles, and application within PROFIBUS networks. Participants develop an understanding of PROFIBUS properties, transmission technology, and cabling installation, with a focus on both DP (RS-485) and PA implementations.

Building on this foundation, the course explores common PROFIBUS faults, troubleshooting strategies, and problem analysis techniques. Participants learn to identify and resolve issues using testing and diagnostic tools. The course concludes with practical and theoretical examinations, ensuring attendees can effectively maintain and troubleshoot PROFIBUS networks.

Course Outline

Day 1

- Introduction to digital systems
- Digital system operating principles
- Digital system physics
- Introduction to PROFIBUS
- PROFIBUS properties and operation
- PROFIBUS transmission technology
- PROFIBUS DP (RS-485)
- PROFIBUS cabling installation
- PROFIBUS PA
- Putting it all together

Day 2

- PROFIBUS faults
- Troubleshooting strategies
- Problem analysis
- Fault finding
- Testing and diagnostic tools
- Theory examination
- Practical examination

Prerequisites

This course covers advanced content. Participants should have a technical qualification, experience working with digital communication systems, and strong proficiency in English.

Who Should Attend This Course

Any individual who installs or provides technical support to PROFIBUS networks.

Certification

On the final day of the course, students must demonstrate their proficiency by completing an open-book multiple-choice theory test and a practical assessment. Candidates who pass both tests will be registered with PROFIBUS and PROFINET International (PI) as Certified PROFIBUS Installers. Those who do not pass will have the opportunity to schedule one additional attempt with the IDX Academy.

CPD Points

Students can earn one ECSA-accredited CPD point for this course.

Venue

All courses are conducted at the IDX Academy in Fourways, Johannesburg, South Africa. Onsite training is available upon request, in collaboration with your Safety, Health, Environment, and Quality (SHEQ) team to ensure safe interactions.

Capacity

Given the technical nature of the course, training groups are capped at a maximum of eight participants to ensure a high pass rate.

Course Date and Booking

Click [here](#) to view the training schedule. To book, complete the [application form](#) and email it to academy@idx.co.za. For additional inquiries, contact +27 (11) 548 9960 or visit <https://www.idx.co.za>.