Industrial Data Xchange

Competence Centre

Industrial Communications Training Brochure

2026

CORPORATE TRAINING

Develop the skills that keep your plant running.

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Industrial Data Xchange
Competence Centre

Africa's leading industrial ICT training academy

About the IDX Academy

Established in 2001, the IDX Academy offers industry-driven Information and Communications Technology (ICT) training for the industrial sector.

Over the years, the IDX Academy has built a reputation for delivering accredited, high-quality training that blends theoretical knowledge with practical, real-world skills required to support and optimise any industrial network with confidence.

In 2004, the Academy achieved a major milestone by receiving certification from PROFIBUS International (PI), becoming the first and only Certified PROFIBUS International Competence Centre (PICC) in Africa.

With the rise of PROFINET and the growing need for industrial automation, the Academy expanded its capabilities and became a Certified PROFINET International Competence Centre (PICC) in 2011.

Today, the IDX Academy remains Africa's first, and still the only, PICC to provide industrial training that empowers technicians, engineers, and plants across the continent.

Excellence since 2001

Two decades of industrial experience and knowledge to share with your team.

CPD points

Students can earn ECSA-accredited CPD points for fieldbus courses.

Certification

Receive a certificate after passing the theoretical and practical examinations.

Africa-wide impact

Trusted by major industrial plants, system integrators, OEMs, and engineers across the continent.

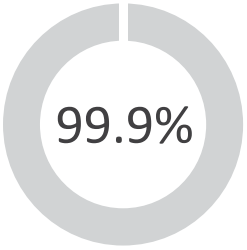
Develop the skills that keep your plant running

Why train your employees?

Training your employees is essential for keeping your plant up and running, taking a proactive approach to ensure equipment performs reliably, and preventing unnecessary downtime.

Budget limits, time pressures, and a constantly changing workforce can make it challenging to roll out effective training across multiple locations.

IDX's industrial training solutions simplify this process, allowing you to strengthen employee capabilities, improve reliability, and protect operations in a cost-effective manner.



Success rate

99.9% of our students said that the content consumed during the training is relevant to their average daily job tasks.

Minimise downtime and improve business connectivity

- Increase efficiencies in processes
- Reduce wastage
- Adopt new technologies
- Empower employees
- Improve cost of ownership
- Uniformity of work processes
- Boost productivity
- Expand job satisfaction levels

"Well impressed because the course has helped me a lot in terms of how to set up a network and what to put in place in order to improve the system continuously. Also how to perform audits."
– Johannes Khwe

"I came in not knowing much about Profibus but when I left the training centre, I now understand and do troubleshooting and can intepret the language as well."
– Duduzile

"Eye opener. Teaches a lot about the equipment properties, error and troubleshooting. Easily relating to issues previously experienced."
– Shadrack Danisa

Training that benefits your plant

Convince your employer to pay for your training

Do you want to stay ahead in your field but are not sure how to approach your employer about investing in your training? Many employees underestimate the willingness of their employers to support development, especially when it improves performance, reduces downtime, and strengthens teams.

Use the motivation points below to confidently request employer-funded technical training and show the value it brings to both you and the plant:

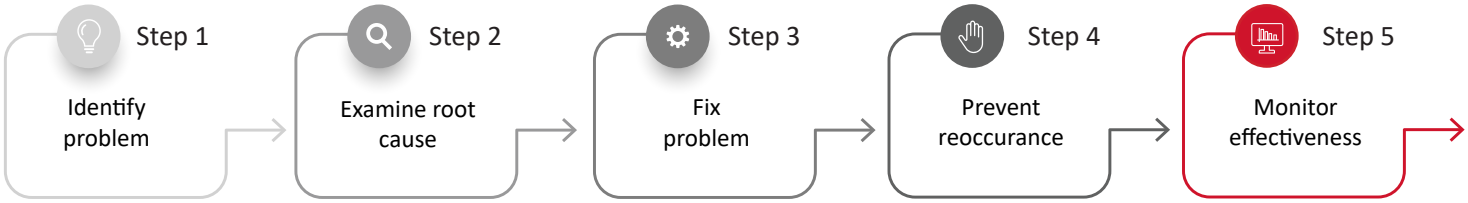
- Identify and troubleshoot problems faster
- Accept more responsibility
- Build leadership ability
- Better company image
- More efficient at handling tasks
- Pass on new skills to the team
- Increase job satisfaction
- Tax-deductible

Customised training designed for your plant

Every plant has unique systems and skill gaps. IDX's customised on-site training aligns with your team's capabilities and company goals, letting them apply skills directly on your plant's equipment and real operational scenarios. From foundational knowledge to advanced diagnostics and specialised fieldbus or PROFINET skills, training is tailored to your operational requirements.

Training that drives real change

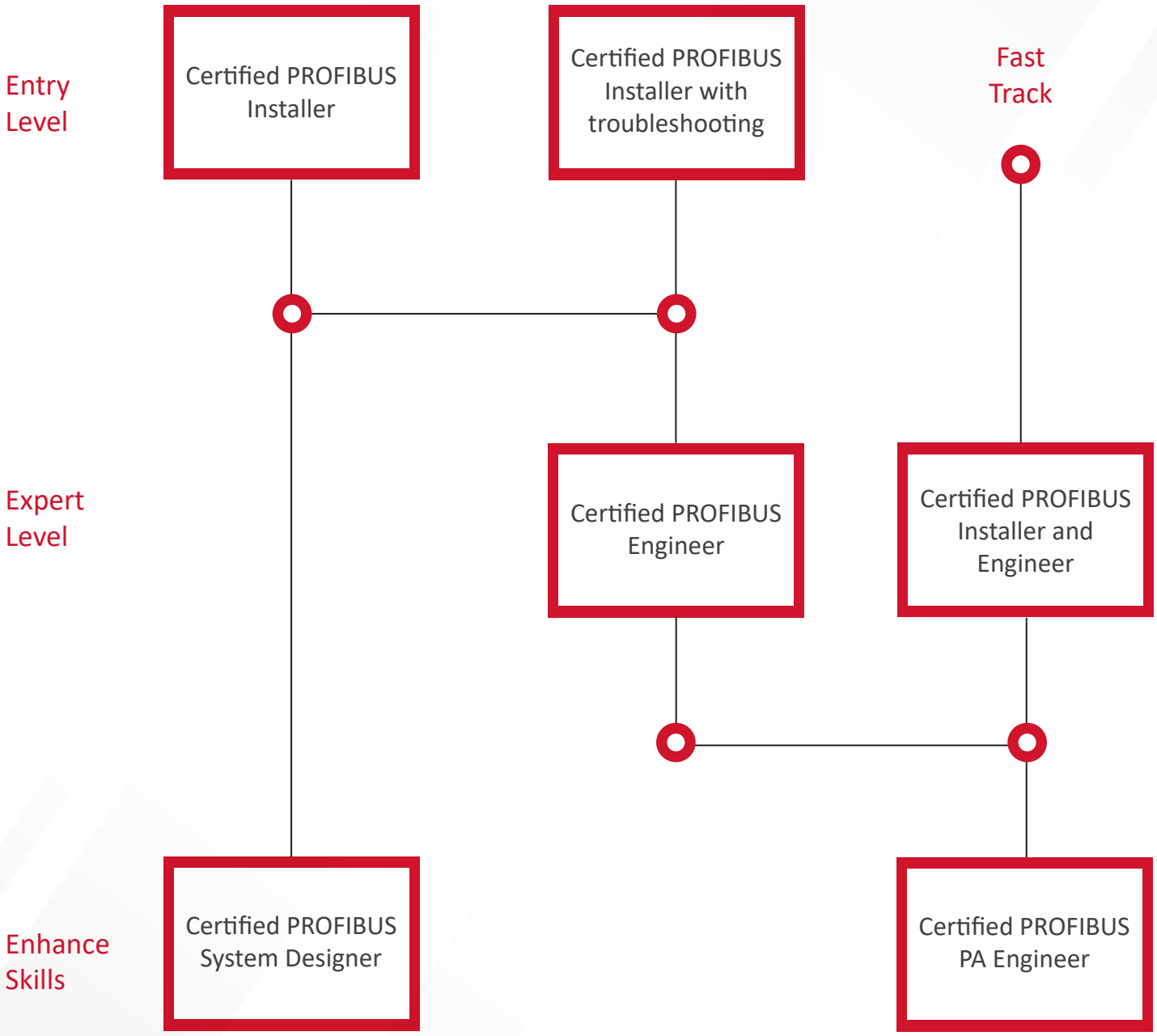
By the end of your training, you will have an understanding of the concepts you are aiming to master. With this knowledge, you will be able to contribute more meaningfully to projects, and make confident, high-impact decisions at work.



Become a PROFIBUS expert

PROFIBUS is at the heart of industrial automation, and mastering it requires both theoretical knowledge and practical experience. Our courses are designed to take you from foundational concepts to advanced skills, combining classroom learning with hands-on exercises that equip you to install, commission, maintain, and troubleshoot PROFIBUS networks in real-world industrial environments.

With certification, both employees and companies can demonstrate their expertise in a competitive industrial landscape. IDX has mapped out a clear path to help you achieve this certification, giving you the knowledge, practical experience, and confidence to become a PROFIBUS expert.



IDX Industrial Data Xchange
PROFIBUS PROFINET
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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.

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.

Course information

This course provides a detailed overview of PROFIBUS network operation and characteristics, covering the theoretical, practical, and troubleshooting aspects of PROFIBUS DP and PA installations. Using demonstration boards, participants gain an understanding of 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.

Who should attend this course

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

Prerequisites

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

Duration

This course is completed within two days.

CPD points

Students can earn two ECSA accredited CPD points for this course.

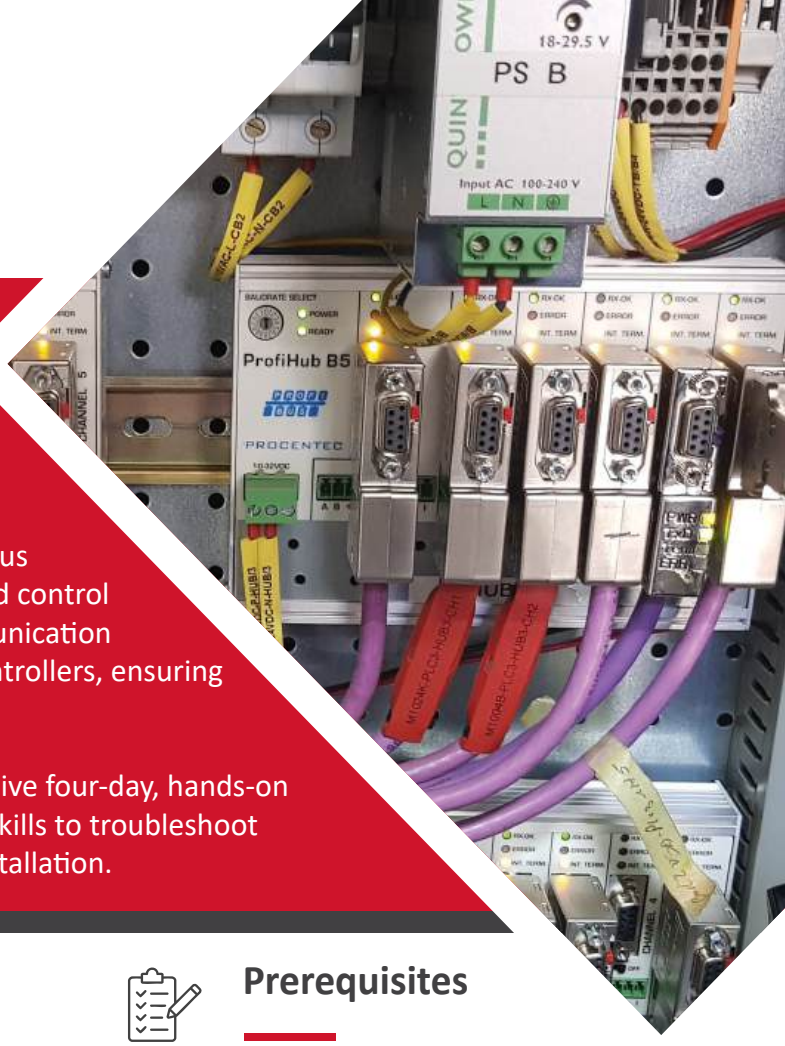
Certification

Receive an internationally recognised certificate after passing the theoretical and practical examinations.

Certified PROFIBUS Engineer

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.

The Certified PROFIBUS Engineer Course is a comprehensive four-day, hands-on training program designed to equip individuals with the skills to troubleshoot technical difficulties that may accompany a PROFIBUS installation.



Course information

This course provides a comprehensive understanding of PROFIBUS technology, covering its history, protocol positioning, and physical layers. Participants engage in practical exercises to reinforce their knowledge, including site audit checklists and hands-on experience with DPV0 interactions and extensions such as DPv1.

Key topics include system debugging, network components, and functional earthing and bonding. As the course progresses, participants focus on system timing, troubleshooting techniques, and advanced DP network components.

The course concludes with a revision session and trial examination, followed by an internationally recognised certification exam, equipping participants with the skills to implement and maintain reliable PROFIBUS networks.

Who should attend this course

Application engineers, system integrators, technical support/maintenance staff, project leaders, installers, suppliers.

Prerequisites

All students of the Certified PROFIBUS Engineer Course must first complete the Certified PROFIBUS Installer Course.

For those who have not, the Certified PROFIBUS Installer Course is scheduled for the same week.

Duration

This course is completed within four days and the combined course runs for five days.

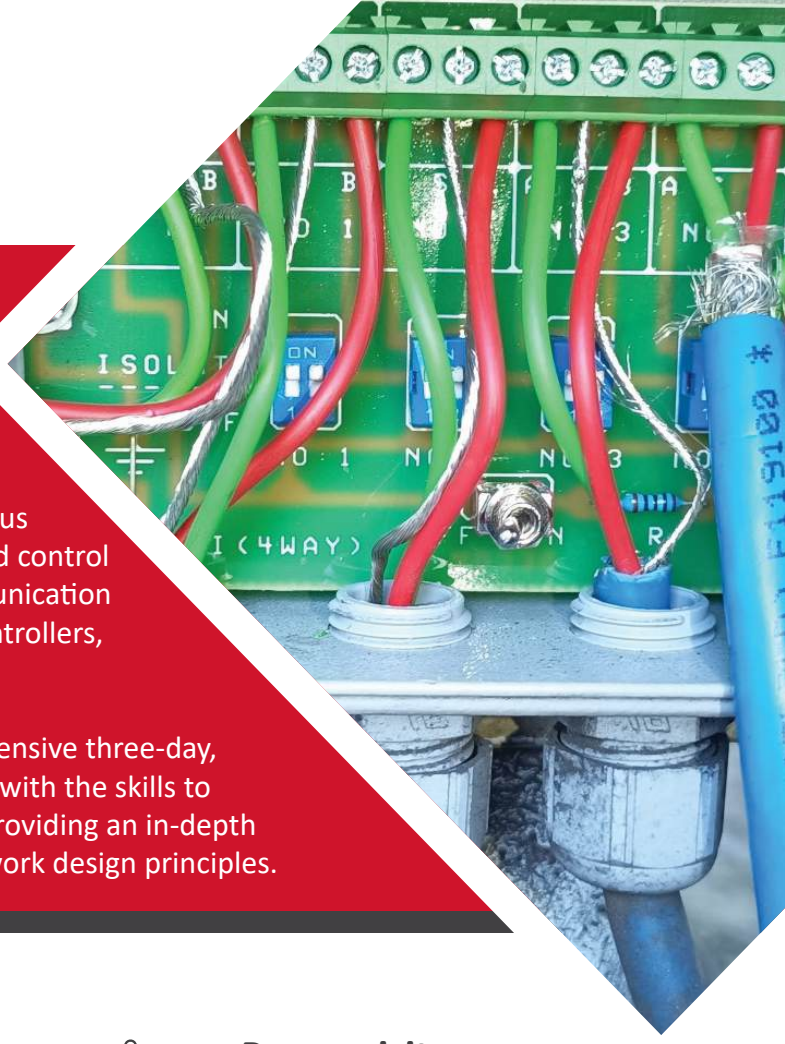
CPD points

Students can earn four ECSA accredited CPD points for this course.

Certification

Receive an internationally recognised certificate after passing the theoretical and practical examinations.

Certified PROFIBUS PA Engineer



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.

The Certified PROFIBUS PA Engineer Course is a comprehensive three-day, hands-on training program designed to equip individuals with the skills to commission and troubleshoot a PROFIBUS PA network, providing an in-depth exploration of its fundamentals, characteristics, and network design principles.

Course information

This course provides a comprehensive understanding of PROFIBUS PA, covering basic principles and how to integrate PA into control systems. Participants learn about DP/PA and PN/PA couplers, including links and the migration from PA to Ethernet APL.

The course also covers cabling rules, installation practices, and the importance of grounding and shielding in PROFIBUS PA installations, ensuring safe network setups. Practical exercises provide hands-on experience to reinforce these concepts.

In addition, the course delves into more advanced topics like PROFIBUS DP-V1, bus analysis, and PA profiles, enabling participants to analyse and optimise network performance.

The course concludes with practical and theoretical examinations, ensuring attendees can effectively implement and maintain PROFIBUS PA networks.

Who should attend this course

System programmers, control and instrumentation engineers, design and planning engineers, service and maintenance staff, installers, project managers.

Prerequisites

All students of the Certified PROFIBUS PA Engineer Course must first complete the Certified PROFIBUS Engineer Course.

Duration

This course is completed within three days.

CPD Points

Attendees can earn three ECSA accredited CPD points for this course.

Certification

Receive an internationally recognised certificate after passing the exams.

Certified PROFIBUS System Designer

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.

The Certified PROFIBUS System Designer Course is a three-day, hands-on training program designed for those looking to design modern PROFIBUS control systems, focusing on minimising the impact of the inevitable control system and network failures throughout a plant's lifecycle.

Course information

This course provides a comprehensive understanding of PROFIBUS system architecture, focusing on planning, layout, and environmental considerations for optimal network performance.

Participants learn high-level communication methods, including fibre optic and wireless technologies, while exploring PROFIBUS PA integration to design efficient and reliable industrial networks.

Advanced topics include hazardous environment requirements, ProfiDrive profiles, diagnostics, and network monitoring, along with fail-safe design, safety, availability, and timing considerations.

The course ends with an internationally recognised certification examination that includes both practical and theoretical components.

Who should attend this course

Application engineers, system integrators, technical support/maintenance staff, project leaders, installers, suppliers, automation and control systems staff.

Prerequisites

All students of the Certified PROFIBUS System Designer Course must first complete the Certified PROFIBUS Installer Course.

Duration

This course is completed within three days.

CPD points

Students can earn three ECSA accredited CPD points for this course.

Certification

Receive an internationally recognised certificate after passing the theoretical and practical examinations.

Certified PROFINET Engineer

Process Field Network (PROFINET) is a leading industrial Ethernet technology that enables high-speed, real-time communication and seamless integration between devices in automation systems.

The Certified PROFINET Engineer Course is a comprehensive three-day, hands-on training program designed to equip individuals with the skills to design, install, commission, and troubleshoot a PROFINET network.

Course information

This course provides an in-depth view of the PROFINET network, focusing on installation guidelines, Ethernet basics, and the infrastructure required for a successful network setup. Participants gain practical experience using demonstration boards that simulate real-world industrial environments, helping them understand Ethernet basics, network components, time scheduling, and sequences. Students also learn to work with key technologies like IWLAN, SNMP, and LLDP, while gaining a solid understanding of the PROFINET protocol, message structure, and network components.

In addition, the course covers troubleshooting echniques, network failure identification, and the use of diagnostic tools and remote monitoring solutions. Advanced sessions on PROFINET isochronous real-time systems and GSD files equip attendees with the knowledge to optimise network performance. The course concludes with practical and theoretical examinations, ensuring attendees can effectively maintain and troubleshoot PROFINET networks.

Who should attend this course

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

Prerequisites

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

Duration

This course is completed within three days.

CPD points

Students can earn three ECSA accredited CPD points for this course.

Certification

Receive an internationally recognised certificate after passing the theoretical and practical examinations.

INDUSTRIAL ETHERNET

Introduction to Industrial Ethernet

Industrial Ethernet is the backbone of modern industrial communication, providing a high-speed, reliable network for devices and systems to exchange data in real time.

The Introduction to Industrial Ethernet Course is a one-day, hands-on training program designed to equip individuals with the knowledge to work confidently with industrial Ethernet systems.

Course information

This course introduces Industrial Ethernet and its importance in enabling reliable communication within industrial environments.

Participants develop an understanding of Ethernet fundamentals, how it operates, and the key differences between standard and industrial networks. The course covers installation considerations such as physical setup, cabling requirements, and network topology to ensure optimal performance. Security aspects are addressed to help identify cyber risks and protect critical systems.

Common faults and diagnostic methods are explored, equipping learners with the skills to identify and troubleshoot issues in an industrial Ethernet network.

Practical exercises support the theory, providing hands-on experience through real-world scenarios. The course concludes with practical activities to ensure participants have a solid understanding of Ethernet communication.

Who should attend this course

Installers, network engineers, project planners, industrial engineers, maintenance workers, plant employees.

Prerequisites

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

Duration

This course is completed within one day.

Certification

Upon completion of the course, attendees will be awarded a certificate of attendance.

Fundamentals of Modbus

Modbus is a widely used communication protocol in industrial automation that enables data exchange between electronic devices. The protocol supports reading and writing data such as sensor measurements, actuator commands, and system statuses.

The Fundamentals of Modbus Course is a one-day, hands-on training program designed to equip individuals with the knowledge and tools necessary to implement and maintain Modbus-based systems effectively.

Course information

This course provides an introduction to Modbus, a widely used industrial communication protocol. Participants will explore the fundamentals of digital systems, including their operating principles and underlying physics.

The course covers physical transmission media, explaining how data is transmitted across different network types. Attendees will also learn about various Modbus protocol versions and how they facilitate seamless communication between devices in automation environments.

A key focus of the training is understanding the Modbus protocol, including its structure, functions, and practical applications. Participants will engage in hands-on exercises to apply their knowledge, gaining experience in setting up and troubleshooting Modbus networks.

The course concludes with practical exercises, ensuring attendees will have a strong grasp of Modbus communication.

Who should attend this course

Installers, network engineers, project planners, industrial engineers, maintenance workers, plant employees.

Prerequisites

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

Duration

This course is completed within one day.

Certification

Upon completion of the course, attendees will be awarded a certificate of attendance.

Actuator Sensor-Interface

Fundamentals of Actuator Sensor-Interface (AS-i)

Actuator Sensor-Interface (AS-i) is a globally recognised industrial networking solution designed for simple, cost-effective communication between sensors, actuators, and controllers

The Fundamentals of Actuator Sensor-Interface (AS-i) Course is a one-day, hands-on training program designed to equip individuals with the knowledge and tools necessary to maintain and optimise AS-i networks in industrial environments.

Course information

This course provides an introduction to communication systems, focusing on AS-i. Participants will gain a solid understanding of AS-i technology, its architecture, and how it facilitates seamless communication between sensors, actuators, and controllers in industrial automation. The training covers key concepts, including data transmission principles, topology options, network structures, and integration with other industrial communication protocols.

A major component of the course is fault-finding in AS-i systems. Attendees will learn how to diagnose and troubleshoot common issues using structured fault-finding techniques and an AS-i checklist. Practical exercises will help reinforce problem-solving skills, ensuring that participants can efficiently identify and resolve communication failures. The course concludes with a tutorial, ensuring attendees can effectively build and troubleshoot AS-i networks.

Who should attend this course

Installers, network engineers, project planners, industrial engineers, maintenance workers, plant employees.

Prerequisites

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

Duration

This course is completed within one day.

Certification

Upon completion of the course, attendees will be awarded a certificate of attendance.

Training Schedule for 2026

Course	Date	Duration
Certified PROFIBUS Installer with troubleshooting	25 Mar 2026	2 days
Certified PROFIBUS Engineer (incl. Certified PROFIBUS Installer)	20 Apr 2026	5 days
Certified PROFINET Engineer	20 May 2026	3 days
Certified PROFIBUS System Designer	27 May 2026	3 days
Certified PROFIBUS Installer with troubleshooting	10 Jun 2026	2 days
Certified PROFIBUS Engineer (incl. Certified PROFIBUS Installer)	13 Jul 2026	5 days
Certified PROFIBUS PA Engineer	22 Jul 2026	3 days
Certified PROFINET Engineer	19 Aug 2026	3 days
Certified PROFIBUS Installer with troubleshooting	02 Sep 2026	2 days
Certified PROFIBUS Engineer (incl. Certified PROFIBUS Installer)	05 Oct 2026	5 days
Certified PROFINET Engineer	11 Nov 2026	3 days
Certified PROFIBUS System Designer	18 Nov 2026	3 days
Certified PROFIBUS Installer with troubleshooting	02 Dec 2026	2 days

We can provide on-site training and arrange customised sessions for our products.
Please email us at academy@idx.co.za to discuss your requirements.

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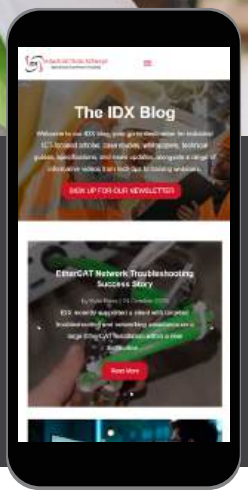
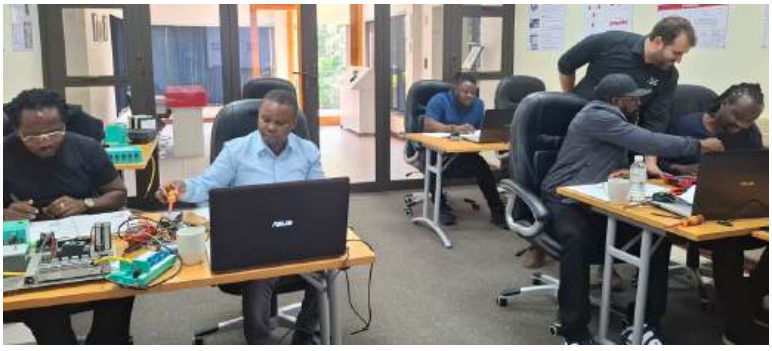
Operational Excellence Unlocked



Free Resources

Check out our blog, which is packed with articles, case studies, industry news, technical guides, specifications, and whitepapers.

You can also visit our YouTube channel for tech tip videos and helpful training webinars, all available for you to learn for free.



Get in touch with us

We believe operational excellence begins with the right guidance, reliable industrial connectivity, and technology that works as hard as you do.

That is why we are committed to supporting your business growth by equipping your team with the tools and training they need to boost performance across your plant.

Whether it is plant infrastructure, consulting, specialised training, or navigating complex industrial networks, our team is here to provide the support you need.

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