About PROCENTEC

Who are PROCENTEC?

PROCENTEC are an independent Dutch company that supply products, training and consultancy to the Industrial Automation market. Our primary focus is the development and manufacturing of automation products for PROFIBUS, PROFINET and Industrial Ethernet.

Some of our products are the most recognized solutions on the market today. ProfiTrace, our mobile troubleshooting and maintenance tool has established itself as one of the most pioneering, yet essential tools available to engineers. In contrast our robust ProfiHub has, over the last decade, established itself as the go-to solution for ensuring a reliable network infrastructure. The combination of these products with our ComBricks solution has seen PROCENTEC become the primary manufacturer of network components with the integrated capability for remote monitoring and remote asset-management.

Our training facility, the PROCENTEC Academy, has certified over 4000 engineers to implement and maintain their PROFIBUS and PROFINET networks to the highest standards available.

The PROCENTEC Competence Centre has established itself as the leading consultancy on PROFIBUS and PROFINET projects worldwide, advising on architecture, engineering, training and commissioning. Once a network is commissioned, we have experts available 24/7, to answer questions with maintenance or help troubleshooting a problem.

## Products
- **PROFIBUS**
  - ProfiTrace
  - ComBricks
  - ProfiHub

- Industrial Ethernet Protocols
  - Atlas
  - Mercury
  - EtherTAP
  - EtherMIRROR

- Other Products
  - Cables and connectors
  - VPGate

## Training courses
- **PROFIBUS training courses**
- **PROFINET training courses**
- **Product training courses**

## Services
- On-site & Online Support
- Network Audit
- Network Certification
- Consultancy
- Testlab & Democenter
- Competence Center
Environmentally Conscious Production

Few would challenge the reality and implications of global warming on our planet. But at the same time, continual technological advances in areas such as computing and physical materials offer us a chance to frequently evaluate their potential, and consider doing things in a more efficient, environmentally conscious way. In both Global and technological terms, the world is literally changing before our eyes.

It’s far too easy to say ‘we already do this’ - to tick the correct environmental box. What is more difficult, is to ask ‘Could we do more?’ We consider, in general, the answer is always “yes”. It sounds dramatic, but we owe it to the next generation to continually question our methodology and practises.

As a company, we regularly have to have a stern look in the mirror, extrapolate our footprint and examine, at a macro-level, how our processes impact the environment.

As far as the CSR attributes of PROCENTEC products. We aim to source our component parts from Dutch or other EU manufacturers. Where possible, we try to use recycled plastics. Final products and components are assembled and in-house laboratory in Watering.

We ship our components all over the world but always strive to send as environmentally conscious as possible. Packaging is always recyclable. We take great care to make sure shipments are routed in the most efficient way possible to reduce our footprint.
PROFIBUS is a 2-wire industrial data communication standard (fieldbus) that allows components such as sensors, actuators and controllers to exchange process values and achieve the automation of a complete process. It is the most commonly used fieldbus with more than 50 million installed devices.

It has been standardized as IEC 61158 and is available worldwide. PROFIBUS is widely used in the industrial automation business. Thousands of different products offered by hundreds of suppliers provide a solid foundation to utilize PROFIBUS for every automation application.

PROFIBUS DP delivers high speed data transfer and low installation costs. It is designated as the standard PROFIBUS for the automation of production. PROFIBUS PA is designed for process automation to replace 4-20 mA and HART applications. Data and power are modulated on both wires and it offers an option for intrinsic safe applications.
ProfiTrace

ProfiTrace is the most powerful mobile analyzer for PROFIBUS networks. It is an essential tool for fault finding, monitoring and health checking networks. The complete PROFIBUS network can be easily checked and troubleshooting with only one software package and one piece of hardware (ProfiCore™ Ultra). ProfiTrace is easy to use and combines all required elements to detect all PROFIBUS faults. The use of this mobile analyzer results in a higher uptime, lower operational costs and the optimization of the entire production process.

Thousands of users benefit from this powerful tool daily. ProfiTrace boosts the competences of service, maintenance and engineering technicians. Typical PROFIBUS failures such as noise, reflections, voltage drops, termination problems, double addresses, wire breaks and configuration faults are easily identified. Predictive maintenance and asset management are really possible with ProfiTrace.

Features

- Busmonitor for DP and PA with powerful statistics
- Oscilloscope - ScopeWare
- Bar graph
- Topology scan
- Reporting
- 3-Color network condition indicator
- DP master - ProfiCaptain
- ProfiCore Ultra USB interface
- OPC server and CommDTM
ComBricks

ComBricks is the first PROFIBUS and PROFINET based automation system that unites network components and permanent monitoring with ProfiTrace. It provides the perfect solution for diagnosing and designing networks in an area with a shortage of (qualified) technical staff and a huge amount of pressure on system availability. ComBricks enables engineers to remotely monitor PROFIBUS installations from anywhere in the world and will alert them if any faults arise. Therefore, faults can be solved efficiently and quickly which reduces downtime and optimizes the entire life cycle of the installation.

ComBricks is a modular platform able to carry repeater and fiber optic modules. Over Ethernet, the condition of the installation can be remotely inspected with ProfiTrace OE in a web browser. Monitoring does not require additional and frustrating software installations on the PC. As it is accessible through a web browser, most platforms - including mobile phones - are compatible with ComBricks. The combination of network components and monitoring makes this product an ideal choice for organizations where asset management is paramount. It raises awareness amongst technical staff because the installation becomes understandable and predictable.

Features

- Modular PROFIBUS repeater and fiber optic backbone
- Permanent PROFIBUS monitoring with ProfiTrace and oscilloscope
- Diagnostic slave information with PROCENTEC ProfiHubs
- Automated responder to bus problems with relay module and digital output module
- Asset management Ethernet gateway for CommDTM
- Transparent PROFIBUS data hub (repeaters, fiber optic, PROFIBUS PA, DP slave)
ProfiHub

The well-known ProfiHub family is a collection of multi-channel PROFIBUS DP network components to create reliable flexible star/tree networks and long multi-device spur lines. They are essential to obtain better control during maintenance and upgrading of the network. The use of ProfiHub results in lower operational costs and the optimization of the entire production process.

ProfiHubs are perfect economic solutions to integrate reliable spur lines in high-speed DP networks. They are equipped with galvanic isolated transparent repeaters. This allows network structures with extended spur lines that individually can handle a maximum of 31 devices and a length equal to the main bus. Each repeater blocks short circuits and other bus problems. The ProfiHub family also offers solutions to support a fiber optic backbone. The ProfiHub with fiber optic connections on the main channel can be used as multi-channel OLM. In case you only need to connect from fiber optic into a single copper segment, the ProfiHub F1 will suit your needs.

ProfiHubs are deployed in many applications worldwide and available in different varieties to meet the requirements of the end user.

Features

- Diagnostics feature
- Dynamic spur lines to devices
- Star, tree and bus structured networks
- Pull/Plug motor control centers
- Barrier for non-galvanic isolated equipment
- EMC sensitive applications
- Applications with device and cable stress
Industrial Ethernet is the use of Ethernet in an industrial environment. It is a well-known and recognized technology in moving data. The use of Industrial Ethernet is growing fast. In 2017, Industrial Ethernet made up for 46% of the global market. Protocols for Industrial Ethernet include EtherCAT, EtherNet/IP, PROFINET, POWERLINK, SERCOS III, CC-Link IE and Modbus/TCP.

Apart from Ethernet in an office environment, Industrial Ethernet requires additional considerations, because the cables, switches and connectors need to withstand the unique and harsh criteria in an industrial setting. These are for example: heat and cold, vibrations, chemicals and factory noise.

Your benefits: Increased speed and distance, compatible with standard access points, routers, consumer switches, hubs, cables and optical fiber, peer-to-peer architectures may replace master-slaves and better interoperability.

Industrial Ethernet not only saves space and wiring, it also simplifies commissioning by offering highly available system integration tools.

PROFINET is the leading Industrial Ethernet standard. This globally established and future-oriented technology is supported by many product vendors, thus ensuring long-term availability and investment protection.

PROFINET uses the same Ethernet as offices and IT departments. However, its capabilities have been enhanced to meet the increasingly demanding environmental conditions and the need for real-time data encountered in industrial applications.

Whether the application involves high speed factory automation or process automation, PROFINET has found its way into all application areas. 12.8 million PROFINET devices were installed by the end of 2015.
Mercury 7"

The Mercury 7” is a robust tablet, which features our cross platform software package Osiris. This portable device is perfect for instant troubleshooting, maintenance and monitoring Industrial Ethernet and PROFIBUS networks. With the device being resistant to water, dust and a drop up to 1,5 meters, it is perfect for on-site use - gaining important information from your network when required.

Mercury 10”

For users that prefer to use laptops and/or tablets, the Mercury 10” is the ideal solution. This 2-in-1 device can be used in laptop mode for the daily use, but also as a rugged tablet. In both modes troubleshooting, maintenance and monitoring your PROFIBUS or Industrial Ethernet network with Osiris is possible. With batteries in both the keyboard and tablet, a hot-swap on the go can be done, allowing a longer battery life.

Your benefits

- Portable device, multiple connection methods
- User friendly
- Pre-installed Osiris software
- Ready to use immediately
- Can be connected remotely

- Mobility
- Diagnostics for all your Industrial Ethernet and PROFIBUS networks in your facility
EtherTAP

PROCENTEC is taking diagnostics to the next level. The new EtherTAP monitoring interface is the bridge to the Osiris functionality on our portable Mercury tablet and permanent Atlas module. Both devices run on diagnostics platform Osiris to analyse the information feed from the EtherTAP. This enables our build-in assistant Delphi to come up with a solution to help you to quickly and effectively get your operations running again.

The EtherTAP allows the user to gain valuable information on the network and device details. These are the cycle time per device, positive and negative message jitter, the number of dropped packets and number of alarms. All this information will be visible on the Osiris dashboard. Additionally the user gets an overview of the network load and communication errors happening on the Ethernet link with the timestamp of the last change.

Features

- Passive diagnostics
- Cycle time per device
- Positive and negative message jitter
- Number of dropped packets
- Alarm triggers
Atlas

PROCENTEC’s Atlas is the solution for monitoring and diagnosing Ethernet networks, where innovative simplicity and predictive capabilities are desired. The tool is perfect for preventing unexpected and expensive downtime in industrial networks. PROCENTEC’s Atlas provides unique insight and knowledge of networks and an overview of the network health, with easy to use and understand displays of network health.

The ease of use and clear overview makes this an ideal solution for complete understanding of networks, always and anywhere. Atlas contains a compact device, that can be installed on a DIN rail and plugged in to the network. Atlas does not require additional and time consuming software installations on the PC. You can get all the information using a custom designed web application. All the information Atlas gives, can be viewed on the central, customizable dashboard page.

Features

- Customizable dashboard
- Topology
- Universe and tree structured networks
- Q-Factor
- Device list
- Traffic light
- Alarm notifications
- USB 2.0-support
- SD Card slot
EtherMIRROR

The EtherMIRROR is perfectly compatible with our EtherTAP. It serves as a measuring point for the EtherTAP to gain passive diagnostics information from your Industrial network running on either PROFINET or Ethernet/IP. When connected to the EtherTAP, the EtherMIRROR will simply mirror the messages flowing between the PLC and the first switch without any prior software configuration.

This tool is ideal for being able to gain passive diagnostic information from multiple networks on demand. It is installed between the PLC and the first switch and can be left there as a measuring point without any further network load. The information gained once the EtherTAP is connected, can be viewed in the Osiris software.

Features

- Measuring port for message traffic
- EtherTAP compatibility
- No configuration needed
- Mirrors passive diagnostics information
Gateways

Virtually all industrial installations are created by implementing a variety of incompatible protocols and isolated systems. The application requires that these objects exchange data. Components such as gateways are required to seamlessly create these bridges. The gateways and converters that we offer are easy to integrate in your existing installation.

Cables and connectors

Cables and connectors are the elementary components of your installation that determine a large part of the overall reliability of your network. Our specialists have put together an extensive product portfolio that has been tested in our own networks and test lab. We thus offer the essential parts needed for your PROFIBUS DP and PA networks and your PROFINET network.
VPGate

The VPGate product line is a series of gateways that enable you to connect any equipment very quickly and at low costs with a serial link to a network. We have VPGates available for PROFIBUS DP, PROFINET and Modbus TCP. All VPGates do not require any additional programming software tools.

VPGate allows for effective diagnostics via an integrated webpage or PROFIBUS and RS-232 diagnostic connections. The system also has diagnostic LEDs on the frontpanel. It supports Modbus RTU, ASCII and transparent mode. This opens up the gateway to support building, factory, process, or other types of automation. For example, HMI’s and barcode scanners commonly use raw serial protocols which could be handled by transparent mode.

The VPGate is an economically attractive solution to enable integration in an existing network. Industrial Ethernet VPGates come with the option of a customized user manual (multiple languages) for large accounts or end users.

Features

- Does not require any additional programming software tools
- Support of Modbus RTU, ASCII and transparent mode
- Indicators for easy first level diagnostic
- Customized web pages
- Termination and polarization can be enabled/disabled on serial side
PROFINET Tools

PROFINET requires other measurement tools than PROFIBUS. Measuring and solving faults on an Ethernet network is a big challenge that could result in unacceptable downtime and high operational costs. In order to avoid these issues in the future, PROCENTEC provides the perfect solution: Netilities. Netilities is a compact and efficient tool that supports engineers in their PROFINET engineering and troubleshooting tasks.

Netilities generates a live list of the PROFINET/Ethernet network and spots the devices which are in Data Exchange. Statistics provide a comprehensive overview of the network status. A detailed report provides information about the reliability of the PROFINET network. Netilities uses the standard Ethernet/WLAN port on the PC or interfaces with a ProfiTap. The best performance of Netilities is achieved when the laptop is directly connected to the mirror port of a switch, which is installed directly behind the PLC or other controller.

Features

- Real-time scan / Live List of the complete network
- Info panel for network problems (device missing, double addresses, etc.)
- Statistics (cycle times, corrupted telegrams, data size, etc.)
- Setting Device Names and IP numbers
- Topology scan based on SNMP
- PROFINET LED test
- Detailed reporting
- Suitable for other Ethernet systems
ProfiConnectors

The ProfiConnector connects the central system with different segments in a network. This connector is easy to use, highly compatible, and robust.

The ProfiConnector is designed to be straightforward for the end user. It is available in different varieties to meet the specific needs of the client. There are four types: with or without a PG connector, and with or without a screw terminal. Each type is available in five different colors to ensure that it remains clear to the user which cable leads to a particular segment in the system.

In addition to being simple to use, the ProfiConnector is also compatible with a wide range of devices. The cable of the connector is at a 90° angle from the device it is connected to. The connector has an indentation so that it fits perfectly onto the device. Finally, the ProfiConnector is made to be resistant to the potentially harsh industrial conditions of a plant. The connector has built-in strain relief for both the incoming and outgoing cable.

Other connectors

In addition to our own ProfiConnectors, PROCENTEC also distributes various PROFINET connectors from Lapp and Siemens and PROFIBUS connectors from Lapp, Siemens and Profichip. These PROFIBUS and PROFINET connectors differ slightly in design, quality and cost.

Our specialists will give you expert advice about the most suitable cable or connector for your application.

Features

- Easy to use, highly compatible and robust
- Equipped with a terminating resistor and high frequency inductors
- Available with or without PG connector
- Available with or without screw terminal
- Different colors to help users distinguish sections of the installation
Cables

Structured and robust cabling is the foundation of a perfectly operating industrial network or bus system. PROCENTEC distributes different suitable PROFINET and PROFIBUS cables from Leoni, Lapp and Siemens. These cables can be used in a wide range of applications and should therefore meet very high standards.

Features

- Standard / universal
- Moving machine parts
- Food industry
- Ground / burial
- Sunlight resistant
- Halogen free
- Rodent protection
- Shipboard
- EMC
- Festoon
- Robust
- Heat and fire resistant
Services

Training

Although PROFIBUS and PROFINET are well-established and easy to use technologies, training is essential for those making use of this advanced automation technology. It gives you the necessary skills and confidence to implement and make use of the most widely used automation technologies. Ultimately, the right training is both a short- and long-term investment to ensure that operations run well without unexpected downtime.

Support

PROCENTEC offers on-site and online consultancy services for PROFIBUS, PROFINET, FOUNDATION Fieldbus, AS-Interface and Fiber Optic data communication technology. This infrastructure is delivered by a professional multilingual team of enthusiastic and qualified support engineers with several years of experience in the field.

TestLab

PROCENTEC is 1 out of 11 accredited PROFIBUS and PROFINET Test Laboratory in Europe for the certification of devices. In our laboratory, vendors from all around the world trust us to test their products on PROFIBUS and PROFINET compatibility. Based upon the positive test reports from our laboratory, PROFIBUS & PROFINET International issues certificates for the tested devices.

Distributors

All our innovative products and services are exported via our global distribution network, enabling our customers to operate successfully worldwide in the sector of industrial automation.
Training

PROFIBUS and PROFINET are user-friendly techniques. However, training is essential to optimally benefit from all the advantages. PROCENTEC, the internationally accredited Competence and Training center for PROFIBUS and PROFINET, provides a wide diversity of training courses. PROCENTEC enables companies to successfully operate in the world of industrial automation.

The goal of our training courses is to upskill engineers in PROFIBUS and PROFINET, to ensure they can optimally use those techniques for their business objectives. Our training courses are useful both for employees who deal with that technology daily and staff that supervises at a higher level. The acquired knowledge enables them to organize and execute projects better, which means the whole lifecycle of the installation is optimized. Our offer includes training courses that perfectly combine theory and practice. We provide our training courses both in our advanced training premises and on location. Tailormade in company training courses of course are also available.

Training overview

**PROFIBUS training**
- PROFIBUS Troubleshooting & Maintenance
- PROFIBUS Product Development
- Certified PROFIBUS Installer
- Certified PROFIBUS Engineer
- Certified PROFIBUS PA Module
- PROFIBUS Product Development

**PROFINET training**
- PROFINET Technical Training
- PROFINET Troubleshooting & Maintenance
- Certified PROFINET Engineer
- Certified PROFINET Installer
- Industrial Ethernet Introduction Course

**Product training**
- FREE ProfiTrace Training
- FREE ComBricks Training
- FREE Netilities Training
- FREE Atlas Training
Support and Consultancy

PROCENTEC has a professional team of qualified support engineers who provide on-site and online technical support. With over twenty years of experience with PROFIBUS, PROFINET and Industrial Ethernet technology, our experts are always ready to help you find the most appropriate solution. From troubleshooting to network audits and from consulting to network certification. We can help you in any of these situations so you can fully experience the advantages of your PROFIBUS or PROFINET installation.

As automation systems are increasing in complexity, it currently is quite a challenge to maintain your installation. Tracking and resolving malfunctions is a time consuming task that can lead to unacceptable downtime. This often involves unnecessary high costs. Our PROFIBUS and PROFINET experts can be deployed for a single troubleshooting situation but also on a more structured basis - from our main office in the Netherlands or on-site, anywhere in the world. Our engineers have in-depth knowledge on PROFIBUS and PROFINET technology and carry advanced products to provide a solution for the widest range of issues. At the right time and the right place.

Support services

- On-site & Online Support
- Network Audit
- Network Certification
- Consultancy
TestLab- Product Certification

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PROCENTEC, your partner in PROFIBUS and PROFINET certification

A PROFIBUS or PROFINET certificate stands for the quality of a product. Many end-users only use certified products in their plants to make sure the products they work with are of high standard. For manufacturers, the cooperation with PROCENTEC’s engineers during this certification process is invaluable. During the critical testing phase you are certain to have unique and proven expertise by your side. Our engineers consult with you along the way, keeping the process transparent and sharing the knowledge we have built up over the past 20 years of performing diagnostics on industrial networks.

The tests which are executed at our PROFIBUS and PROFINET Test Laboratory are up to the latest standard as set by PROFIBUS & PROFINET International.

Test sequence

It depends on the required certificate, which tests are to be performed. For example, the most requests we receive are for a DP-V1 certificate. For this type of certificate, we have to perform all five of the tests we offer:

Schematic check
During the schematic check we examine the layout of the printed circuit board (PCB).

Electrical test
During this test we check the device with an oscilloscope.

Protocol test
We examine the protocols on the device, we generate errors and check if the device does what it is programmed to do.

GSD file check
We check the protocol information on the GSD file.

Multi-vendor test
With this test we check the device’s behaviour in a network with devices from other manufactures.
Distributors

All our innovative products and services are exported via our global distribution network, enabling our customers to operate successfully worldwide in the sector of industrial automation.

- If your country or region is not listed, please contact us
- We are still searching for distributors who can cover complete areas or countries
- PROCENTEC is the only distributor for PROFIBUS ASICs and cables

Argentina  
Australia  
Austria  
Belgium  
Brazil  
Canada  
Chile  
China  
Colombia  
Czech Republic  

Argentina  
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Colombia  
Czech Republic  

Denmark  
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Estonia  
Finland  
France  
Germany  
Hungary  
India  
Indonesia  
Ireland  

Israel  
Italy  
Japan  
Korea  
Lebanon  
Malaysia  
Mexico  
The Netherlands  
New Zealand  
Nigeria  

Norway  
Pakistan  
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