



## Certified PROFINET Engineer

The 'Certified PROFINET Engineer' course is a world wide recognized training program. It's standardized by PROFIBUS International to create a quality platform for PROFINET qualified persons who are acknowledged by an official exam.

### Details

- **Training methodology:** Theory + practical exercises
- **Duration:** 3 Days (9 AM - 5 PM)
- **Price:** € 1800.- per person, subjected to changes

### Description

This high tech training course provides detailed technical knowledge of PROFINET and the advantages it offers your automation and production processes. PROFINET is using Industrial Ethernet as communication medium, which has lots of myths and grey areas for users like: cabling, security, determinism and speed. This training course will take a close look at these issues so that the participant has confidence to evaluate himself if PROFINET is an appropriate solution for his automation requirements and that he can design a proper application. All Topics will be finalized with a demonstration and practical exercises to get a direct link with the real world.

The training takes 3-days to complete at the end of the course there will be a theory and practical exam. Participants who pass both parts of the exam get the title Certified PROFINET Engineer and are awarded an official certificate.

This event is hosted by the experts of PROCENTEC who are constantly deployed worldwide to carry out projects and training sessions. They can realistically inform you about the advantages and consequences of PROFINET technology.

### Target audience

This course is intended for everyone who has to understand the theoretical and practical aspects of PROFINET. For example:

- Advisors and consultants
- System integrators
- Project leaders
- Programmers
- Hardware engineers
- Installers
- Suppliers
- Teachers

## Topics

### *Introduction*

- Current PROFIBUS situation
- Why PROFINET?
- Application areas of PROFINET

### *PROFINET IO technology*

- Setting Device Names and IP addresses
- Watchdog
- Messages
- Send cycles
- Hardware and software of a PROFINET device

### *PROFINET Basics*

- Device types
- RT and IRT
- IO and CBA
- Addressing
- Performance and cycle times
- Proxies
- Configuration steps
- GSD files

### *Others*

- Certification of devices
- Available tools
- PROFINET versus other Ethernet systems
- Cost comparison between PROFINET and PROFIBUS
- Peek in the future

### *Ethernet overview*

- Access method
- Frame structure
- MAC and TCP/IP addresses
- Switches
- Cabling guidelines for 100 Mbps and 1 Gbps
- Cable types
- MLT-3 and 4B/5B coding
- Connectors
- IWLAN
- Fibre Optic

### *Practical exercises*

- Assembling connectors
- Testing cables
- Configuring switches
- Analysing messages
- Configuring a PROFINET installation
- Integrating a PROFIBUS segment

### **Dates**

### **Prerequisites**

There are no prerequisites for joining the course, however it's recommended that the attendee has knowledge about the following:

- Terms which are common in industrial automation (PLC, remote I/O, etc.).
- Terms which are common in electrical engineering (resistance, voltage, etc.).
- Familiar with Binary and Hexadecimal representations.
- Capable of working with Windows XP.