

Certified PROFINET Installers course

PROFINET networks require specialized wiring and cabling techniques to be robust and trouble-free. This course will provide you with the knowledge and skills you need to run the communication cables, wire the connectors, test the cables, and setup basic equipment. You will also learn how to minimize the impact of EMC on the network. This course uses real world examples and hands-on learning to provide you with the best training experience.

The course ends with a written and practical test. Successful students will be certified by PROFIBUS and PROFINET International as a Certified PROFINET Installer.

Upon completion of this course, the student shall be able to:

- Add devices to an existing PROFINET network
- Understand how the network functions
- Install a PROFINET network
- Know the methods required to mitigate common EMC issues

Course outline

- Introduction to PROFINET
- Network infrastructure
- PROFINET cabling, copper
- PROFINET cabling, fibre-optic
- Signal transmission and pickup
- Grounding and shielding
- Device identification
- Installation qualification

Hands-on Exercises:

- IP addresses and ping
- Wiring lab
- Setting PROFINET names
- Scanning network

Training Equipment:

- IO-Controller (Codesys software running on a Raspberry Pi)
- IO-Devices include Helmholz TB-20 IO rack, Wago IO rack, Turck IO block, Helmholz 4 port managed switch
- PROCENTEC Atlas permanent monitoring system
- PROCENTEC Netilities IO-Supervisor/Monitor
- Wireshark Protocol Analyzer
- Ethernet cable tester

Class Day Information

- Attendees must bring a laptop or tablet which can read a USB drive.
- Attendees will receive a support USB drive with an electronic version of the materials plus key PI documents.
- Students will receive a certificate of attendance and 7.5 verifiable professional development hours
- Certificate as a Certified PROFINET Installer. The certificate is given only if the student passes the in-class written and practical test.
- Attendees will also receive a copy of *'Catching the process Fieldbus – An introduction to PROFIBUS and PROFINET'* co-written by the instructor James Powell
- Class size is limited to a maximum of 8 students (2 students per training rack).

Course duration

This course requires 7.5 hours of instruction which includes two 15 minute breaks and one 30 minute lunch break.

Scheduled Classes

- Please check our website for scheduled classes or contact us to arrange a training date
- On-demand (minimum of 3 students to run this course online).
- On-site classes are available upon request
- Online classes are available upon request

Course code and Prerequisites

- Course code: C-PROFINET-01
- There are no prerequisites for this course.

Instructor

James Powell, P.Eng., is the principal engineer and owner of JCOM Automation Inc. He has written many articles and two books: *HART Communication Protocol – a practical guide*, and *Catching the process fieldbus – An introduction to PROFIBUS and PROFINET*. James is a certified PROFIBUS DP, PA, and PROFINET network engineer, PROFIBUS System Design Engineer and has over 20 years of experience with PROFIBUS, PROFINET, EtherNet/IP, Modbus, and HART installations.

JCOM Automation is a member of PROFIBUS PROFINET North America and is a certified PROFIBUS and PROFINET training center and Competence Center.

To book this course for yourself or your team, please contact JCOM Automation at admin@jcomautomation.ca or +1-705-868-8745.