PROFIBUS Troubleshooting and Maintenance course

Learn the skills to understand PROFIBUS DP and PA concepts, components, cabling, and be able to find, analyze and solve problems in PROFIBUS installations. Get hands-on experience with the latest PROFIBUS troubleshooting tools, including the all-in-one troubleshooting tool ProfiTrace 2 with Scopeware and the permanent network monitor COMBRICK.

This course meets all the requirements of the Certified PROFIBUS Installers course. The course ends with a written and practical test. Successful students will be certified by PROFIBUS and PROFINET International as a Certified PROFIBUS Installer.

Upon completion of this course, the student shall be able to:
- Have an understanding of PROFIBUS concepts, components, and cabling
- Find, analyze, and solve PROFIBUS installation problems
- Use troubleshooting and maintenance tools

Course outline
- What is PROFIBUS DP
- The different physical layers (RS-485 and MBP)
- Cabling techniques
- Grounding and shielding
- DP/PA segment couplers, repeaters and OLMs
- Diagnostic message
- Fault-finding strategies
- Measurement tools

Hands-on Exercises:
- What a good network looks like
- Common errors on DP
- Common errors on PA
- Permanent monitoring
- Wiring
- Setting up a PROFIBUS master and slave
- Diagnostic message
- Common troubleshooting methods

Training Equipment:
- S7-1200 PROFIBUS Master or Molex SST PROFIBUS Master
- IO-Devices include: Helmholz TB-20 IO rack, PROCENTEC I/O Simulators, COMBRICK, SITRANS TH400, P+F Digital valve controller.
- ProfiTrace bus monitor
- HP-25 PROFIBUS 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 15 verifiable professional development hours
- Certificate as a Certified PROFINET Installer. The certificate is given only if the student passes the written and practical test.
- Students will receive a digital 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 is two days long. Each day includes 7.5 hours of instruction, which includes two 15-minute breaks and one 30-minute lunch break.

Scheduled Classes

- Please contact us to arrange a training date
- On-site classes are available upon request
- Classes can be done on-site, online or in a classroom in Peterborough

Course code and Prerequisites

- Course code: C-PROFIBUS-02
- 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.

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