Course description

T562
Freelance
PROFIBUS DP/PA, HART Technology & Configuration

Course goal
The participants acquire theoretical knowledge and the necessary practical experience in order to project, configure and to commission PROFIBUS applications independently. They will be able to operate and maintain the system.

Learning objectives
Upon completion of this course the participants will be able to:

- Project the system structure for using PROFIBUS and HART based field devices.
- Configure and commission cyclic and acyclic PROFIBUS DP communication.
- Configure and commission GSD and DTM based modular PROFIBUS DP devices.
- Link up PROFIBUS PA field devices to a PROFIBUS DP line.
- Analyze disturbances in the PROFIBUS network.
- Optimize bus cycle times.
- Configure and commission HART field devices with Control Builder F.

Participant profile
Freelance users who want to couple PROFIBUS field devices to the Freelance controllers.

Prerequisites
Participation in the Freelance System and Engineering basic course (T560). Participation in the Freelance Advanced Configuration Controller course (T564) is beneficial.

Topics
- History of the field device communication
- Structure of a field-bus-based distributed control system
- Field devices with fixed and modular structure
- Hardware components of the PROFIBUS network
- Bus access procedure, cyclic and acyclic communication
- Field Device Tool (FDT) and the specific Device Type Manager (DTM)
- Planning the system structure and the field devices to be connected to the bus
- Freelance PROFIBUS master configuration
- Standard configuration of modular field devices using GSD files
- Progressive configuration of modular field devices using DTM
- Commissioning and testing the configured application

Course type and methods
This is an instructor led course with interactive classroom discussions and associated lab exercises. Approximately 50% of the course is hands-on lab activities.

Duration
The duration is 4 days.
Course outline

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