

E136

System 800xA with AC 800M - Checking, Maintaining & Troubleshooting PROFIBUS Networks

Workshop goal

PROFIBUS networks need to be checked during commissioning and later on, regular inspection and maintenance is needed. The students learn how to check the physical installation and network settings such as parameters, firmware versions etc. Troubleshooting methodologies are practiced and students learn bus traffic diagnostic. To exchange fieldbus devices with malfunction, students learn how to identify and replaced failed devices in a complex network.

Learning objectives

Upon completion of this workshop the participants will be able to:

- Visual inspect a PROFIBUS network and create a check protocol
- Check the communication and parameters for master and slave devices
- Find out the relevant versions on firmware, system components, device components and software (DTM)
- Diagnose the bus traffic on cyclic, acyclic (DPV1) communication
- Interpret system integrated device diagnostic information
- Measure the important cabling data, e.g. impedance and signal level
- Analyze the PROFIBUS protocol of the DP segment (bus protocol analysis)
- Find failed DP / PA devices, exchange them and restore device data
- Find failed PA segment components, exchange them and restore the data
- Check fiber optic networks and exchange devices
- Analyze faulty bus signals with storage oscilloscope, e.g. missing termination
- Set up long term measurements on PROFIBUS networks.

Participant profile

This Expert Workshop is targeted to electrical and instrumentation engineers, application engineers, service & support engineers and maintenance engineers.

Prerequisites and recommendations

Students should have attended the PROFIBUS/HART course T316 (T304) or have knowledge and experiences associated with the content of these courses.

The required knowledge can be verified with user assessment modules T710e-10 and T710e-11.



Workshop type and methods

This is an instructor led workshop with short presentations and demonstrations, extended exercises, hands on sessions and discussion.

Duration

The duration is 4½ days.