PROFIBUS & PROFINET Communication Network

Course Description

This training course provides you the ability to to design, commissioning and sustaining of PROFIBUS and PROFINET networks. The course uses a 'hands-on' practical approach to reinforce the theoretical aspects of the training.

Target Audience

Programmers, commissioning engineers, service personal and configuring engineers.

Pre-requisites

- Basic computer skills with Windows 7 very helpful.
- knowledge of PLC level (1) and level (2) training course.

Duration

- **Class room:** 5 days, 6 hours/day.
- **On line:** 10 days, 3 hours/day.

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Course Outline

- Install and troubleshoot PROFIBUS DP Networks.

- Install and troubleshoot PROFIBUS I/O, ET200M and ET200S.

- Configure a CPU as a DP Master or as an Intelligent DP Slave.

- Configure a CP342-5 as a DP Master or as a DP Slave.

- Configure a DP/DP Coupler to link two independent PROFIBUS Networks.

- Configure and troubleshoot S7 connections.

- PROFINET IO with configuring and programming.

- Commissioning the media redundancy.

- Plant-wide engineering & diagnostics in the TIA Portal.

- Data communication Controller / Controller with:

    - an S7 connection to the S7 communication blocks, PUT/GET, BSEND/BRECEIVE

    - Ethernet connections (ISO on TCP, TCP, UDP) to the T-communication blocks, T-Send/T-Receive

Course Agenda

Day 1	• Communication Techniques Used in Automation Engineering. • Technology of PROFIBUS. • Transmission media for PROFIBUS. • Configuration of a CPU as a PROFIBUS DP Master.
Day 2	• PROFIBUS DP Slaves. • Remote I/O using PROFIBUS. • Examples for remote I/O. • Configure PROFIBUS network.
Day 3	• CPU to CPU PROFIBUS communication. • Send and receive instructions. • Troubleshoot network.
Day 4	• Introduction to SIMATIC Net - Industrial Ethernet. • PROFINET IO device types: IO controller, IO device, IO supervisor. • Examples for remote I/O. • Configure PROFINET network.
Day 5	• CPU to CPU PROFINET communication. • S7 connection to the S7 communication blocks, PUT/GET, BSEND/BRECEIVE. • Ethernet connections (ISO on TCP, TCP, UDP) to the T-communication blocks, T-SEND/T-RECEIVE. • Troubleshoot network.

Note: -

This course could be applied on SIMATIC Manager or TIA Portal