Item No.: CO4204-8N

Course - Automation Technology 1: Compact automation, PLC and bus technology

Includes:

- 1 Experiment card containing CPU with PLC functionality and PROFIBUS-DP master interface, 8 digital inputs with simulation switches and status LED, 8 digital outputs with status LED connected via 2mm socket, 8 analog inputs with 10-bit resolution, 4 analog outputs, potentiometer for simulating analog inputs, selectable levels for digital signals 5/24V DC, level for analog signals 0-10V, external PROFIBUS devices may also be connected
- 2 Experiment cards with PROFIBUS-DP slave, 16 digital inputs connected via 2mm sockets with simulation switches and status LED, 16 digital outputs with status LED connected via 2mm sockets, selectable levels for digital signals 5/24V DC, coding switches for setting PROFIBUS address
- 1 Experiment card with sensors and actuator for the following application circuits:
- Temperature measurement
- Light measurement
- Motor control
- Fan control
- Control of a traffic light system
- CD-ROM with Labsoft browser and course software

Course contents:

- Fundamentals and basic terminology for PLCs
- Design and function
- Logical operations, memory functions, timing and counting functions, edge response, controlling program sequences, processing analog variables
- Addressing

- Program structures
- Planning an automation system
- Programming using IL/ST editors conforming to IEC 1131
- Preparing a PLC for operation, program diagnostics
- Field bus systems for automation
- PROFIBUS-DP
- Bus structures, access techniques, interfaces, packet structure, error checking, diagnostic capabilities
- Setting up and using PROFIBUS networks
- Transmission and error checking
- Connecting external components
- Connecting PROFIBUS devices, GSD
- Course duration: 10 h approx.