

Item No.: SO4205-8A

## Course - Automation Technology 9: Hydraulics / Electrohydraulics

### Scope of supply

- Experiment board with: Course Hydraulics and Electrohydraulics
- 2 double acting cylinders with displacement sensors
- 1 single-acting cylinder
- 2 Throttle valves
- 1 Current control valve
- 1 Return valve
- 1 double check valve
- 1 4/2 directional control valve
- 1 4/3 directional control valve
- 1 2/2 directional control valve
- 1 manually operated 4/3 way valve
- 3 pressure sensors
- 2 pressure check valve
- 1 time relay delayed on
- 1 time relay delayed off
- 2 displacement sensor for double acting cylinder
- Relays and control and monitoring components for construction of control circuits
- Virtual relays and control and monitoring components for construction of control circuits as part of the course software
- Integrated microcontroller for measurement and control
- CD-ROM with Labsoft-Browser and courseware



### Training aims

- Basics of hydraulics / electro-hydraulics
- Hydraulic and electrical circuit diagrams
- Single and double acting cylinders
- Displacement of a cylinder using a push button
- Displacement of a cylinder by self-locking

- Limit switch as a normally closed contactor
- Feed control with starting conditions
- Start interlock with arbitrary intermediate stopping
- Pressure-dependent control
- Mechanical interlocking of button contacts
- Electrical interlocking of button contacts
- Rapid feed/traverse control
- Time-dependent control
- Recording displacement-time diagrams
- Course duration: approx. 8 h