

Item No.: SO4204-8B

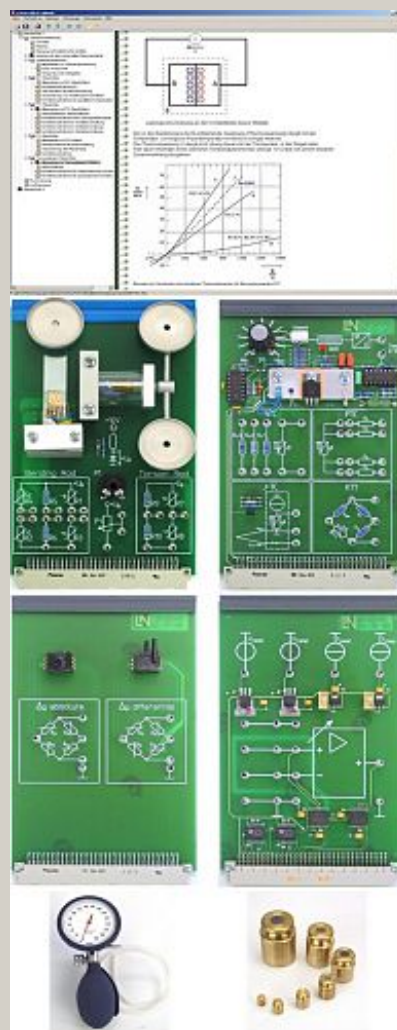
Course - Measurement technology 2: Non-electric values T/P/F

Includes:

- 1 Experiment card for force and torque measurement using strain gauges on a bending bar and torsion rod, with bridge measuring circuits
- 1 Experiment card for temperature measurement with temperature-controlled heater and 4 different sensors (PTC, NTC, KTY, thermocouple)
- 1 Experiment card for pressure measurement with absolute and differential pressure sensors and measuring bridges
- 1 Experiment card with universal measuring amplifier, adjustable gain and offset (max. gain 8000), constant-current and constant-voltage sources
- 1 Pressure sensor with pressure display
- 1 Set of weights 2g - 200g
- CD-ROM with Labsoft browser and course software

Course contents:

- Calibration of instrument amplifier
- Introduction to circuits for temperature measurement
- Linearisation of a Wheatstone bridge
- Listing possible sources of error in temperature measurements
- Introduction to the principles and characteristics of various temperature sensors: NTC, Pt 100, KTY, thermocouple
- Recording the characteristics for various electrical temperature sensors: NTC, Pt 100, KTY, thermocouple
- Introduction to methods of linearising non-linear characteristics
- Introduction to the term piezo-electricity
- Introduction to the function and characteristics of pressure sensors, piezo-electric, inductive and resistive
- Recording characteristics for absolute and differential pressure sensors
- Introduction to the principle of force measurement using strain gauges
- Introduction to the function and characteristics of strain gauges



- Recording characteristics for strain gauges on a bending bar and torsion rod
- Measuring forces on a bending bar and torsion rod
- Investigation of the effect of the measuring circuit (full bridge, half bridge, quarter bridge)
- Course duration 7.5 h approx.