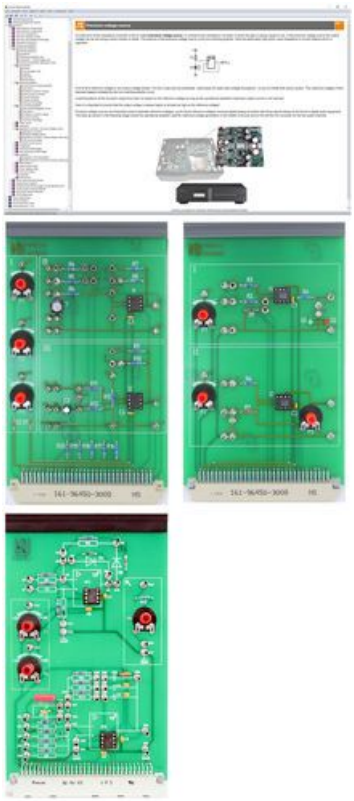
Item No.: CO4204-5M

Course - Electronics 5: Operational amplifiers



Includes:

- 1 Experiment card with inverting and non-inverting op-amp circuits
- 1 Experiment card with comparator and Schmitt trigger circuit with adjustable reference voltage
- 1 Experiment card for the assembly of various operational amplifier circuits (active filter, precision rectifier, derivative-action element, integral-action element, constant current source, precision voltage source) with adjustable reference voltage and variable load resistor
- Labsoft browser and course software

Course contents:

- Introduction to the design and function of operational amplifiers
- Circuit diagram and basic circuit types for operational amplifiers (impedance converters, adders, comparators, Schmitt triggers)
- Determination of the characteristic and limiting values of an operational amplifier by measurement
- Investigation of DC and AC response of inverting and non-inverting op-amp circuits
- Set-up and measurements of precision voltage source and constant current source
- Set-up and measurements of adder and subtractor circuits
- Set-up and measurements of integral-action and derivative-action circuits
- Measurements on a comparator circuit
- Investigating the switching response of a Schmitt trigger as a function of reference voltages
- Set-up and measurements of active filter circuits
- Set-up of a precision rectifier and examination using measurements
- Fault simulation (6 simulated faults activated by relay)
- Course duration 5.5 h approx. (fault finding 0.5 h approx.)