

Item No.: CO4205-1L

## Course - Automotive 24: "DC-DC Step-Down Converters in Hybrid and all Electric Vehicles"

For inverters in electric and hybrid vehicles, as well as many other applied circuits, DC voltages of multiple levels are required. This course investigates ways of converting from one DC voltage to another.

### Includes

- Experiment card (step-down-converter) with circuitry for experiments in Eurocard format
- Interactive training course on CD-ROM with Labsoft browser, course software and additional virtual instruments
- Storage case
- Jumpers
- Extra capacitor
- Two coils with iron core

### Components on experiment card:

- Push-buttons
- Electronic circuitry for a DC-DC converter
- Electrical controller for electronics with indicator light
- Sockets for a coil
- Sockets for extra capacitor
- Sockets for jumpers to connect components
- Measurement sockets

### Training contents

- Fundamental of DC-DC converters
- Compiling repair shop orders
- Diagnostic functions
  - Reading out fault memory with a diagnostic tester
  - Classifying faults in vehicle systems
- Function and design of a pilot line
  - Design of electric circuit
  - Principle of operation
  - Control
  - Circuit variants
- Repair methods and conversations with customers
  - Selection of repair actions as specified by manufacturers
  - Working with spare part numbers
- Investigation using measuring instruments
- Course duration 6 hours approx.

### Operating voltage:

- Input voltage 15 V DC
- Output voltage 0-15 V DC

### Dimensions/Weight:

- 100 x 170 mm (width x height)
- 0.8 kg

