

Item No.: CO4205-1P

Photovoltaics for motor vehicles

Includes:



Experiment board with the following features:

- 4 Monocrystalline solar modules, 6 V/40 mA
- 1 Solar rechargeable battery 12 V/1.2 Ah
- Integrated charging regulator with microcontroller, deep discharge protection and excess voltage protection
- 12-V PC fan and 12-V built-in LED indicator to act as fixed loads
- Variable load for recording characteristics
- Dimmable 120-W reflector lamp
- CD-ROM with Labsoft browser and course software

Training contents:

- Functioning principle and method of operation of solar cells
- Meaning of terms "solar radiation" and "solar constant"
- Various types of solar cell
- Methods of manufacture for solar cells
- Circuit designs for solar cells
- Recording the characteristic for a solar module
- How current and voltage from a solar module depend on temperature, radiation intensity and angle of incidence
- Design of a solar rechargeable battery
- Energy storage in a solar rechargeable battery
- Various types of solar plant
- Design of an insular power network with a rechargeable battery
- Course duration: 4.5 h approx.