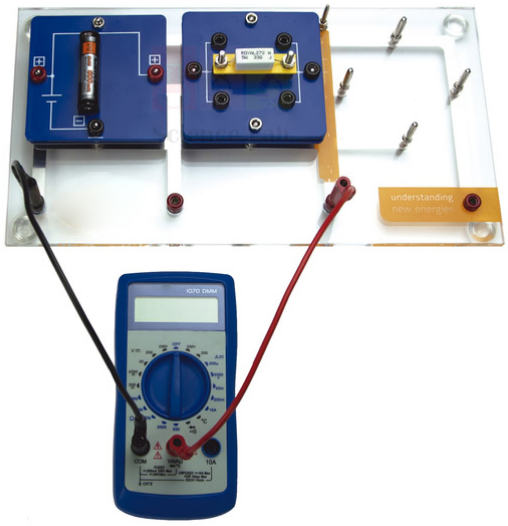
Email : sales@scilabexport.com
Phone: +91-7082934803

Product Name :

Solar EMobility Ready-To-Go

Product Code :

SLE/PHY/209



Science Lab
Email : sales@scilabexport.com
Phone: +91-7082934803

Description :

Solar EMobility Ready-To-Go (Product Code: SLE/PHY/209) is a portable battery-technology experiment case used to teach the foundations and applications of energy storage, from Ohm's law to fuel cells, in secondary school, college and teacher-training labs. Eight different battery types, including a lithium-polymer battery, a capacitor and a reversible fuel cell, can each run the included electric car, and an integrated Charger Module keeps the batteries ready for use. It is manufactured by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, Ambala, as part of itsrange of physics lab equipment in India.

Specifications

Parameter	Detail
Subject	Physical and technical foundations and applications of different battery technologies
Storage types	Eight different battery types, including NiMH, NiZn, LiFePo, lead and lithium-polymer batteries, a capacitor and a reversible hydrogen fuel cell
Electric car	Can be run with all included storage types
Charging	Integrated Charger Module keeps batteries ready to use and lets charging methods be studied
Measurement andloads	AV-Module, potentiometer module 110 Ohm Pro, resistor module (triple) Pro, resistor plug elements 1 Ohm, 10 Ohm (x2) and 100 Ohm
Use	Flexible and location-independent; no additional equipment required
Product code	SLE/PHY/209
Manufacturer	Jain Scientific Equipments Pvt Ltd (ScienceLab), Ambala, India

Experiments:

- Circuit basics: Ohm's law; series connection and parallel connection of ohmic resistances
- Capacitor: the charging process and the discharge process of a capacitor
- I-V characteristics of the single NiMH, triple NiMH, NiZn, LiFePo, lead and lithium-polymer battery modules
- The charging process of the NiMH, NiZn, LiFePo, lead and lithium-polymer batteries; the discharging process of a battery module
- Voltage sources: nominal voltage and capacity; four-terminal sensing; internal resistance; series connection of voltage sources
- Battery module performance: capacitance, energy density, Ri efficiency and total efficiency
- Temperature-dependent behaviour of the lithium-polymer cell
- Hydrogen: hydrogen production in the reversible hydrogen fuel cell; characteristic curve of the electrolyzer; hydrogen consumption of a fuel cell; characteristic curve of the fuel cell; efficiency of the hydrogen fuel cell
- Electric car: operation with several battery modules; operation with the reversible fuel cell

Components:

- AA, 1
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