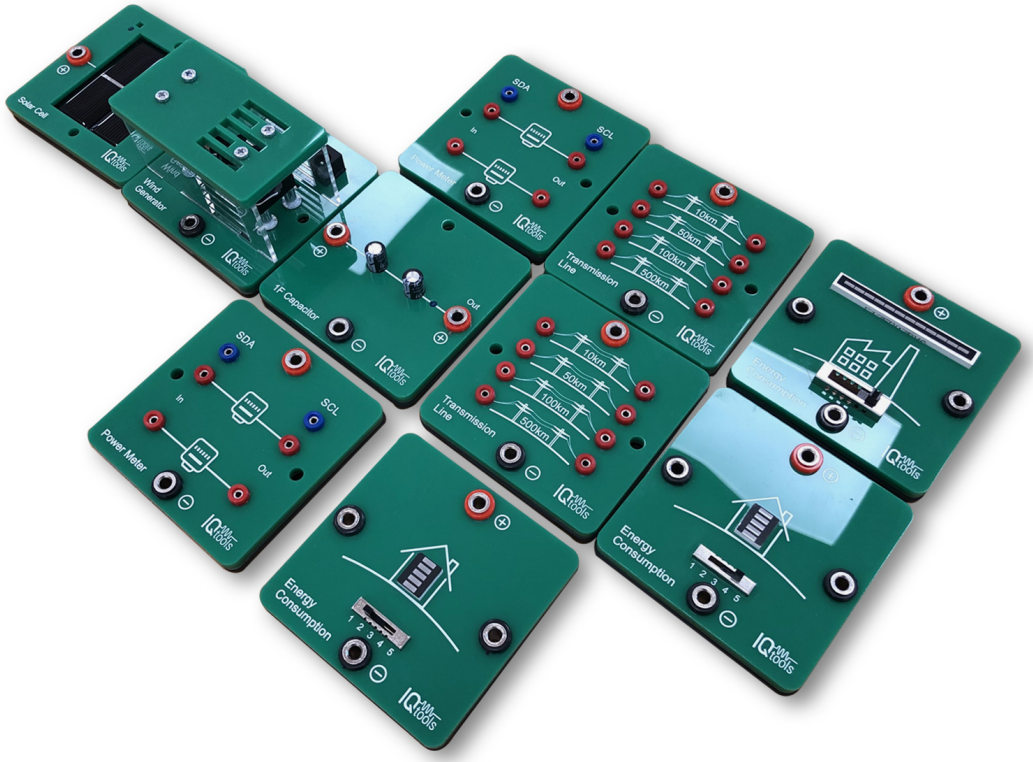
Laboratory kit "Smart Grids"



DESCRIPTION

This kit gives children the ability to work on Smart Grids technology hands-on experiments as a part of a supplementary education program.

The kit enables visual demonstration of the process of electric power generation and transportation, as well as power lines control, depending on the end users' load.

Simple layout of an electric circuit built on interchangeable modules is easy to understand both for students and teachers.

Each topic included in the curriculum has a theoretical part and detailed instructions for the experiment.

FUNCTIONAL FEATURES

- ✓ Laboratory kit modular design
- ✓ Reliably protected electric circuit, modules, and kit elements
- ✓ Theoretical materials to each topic
- ✓ Hands-on experiments step-by-step guide

SOFTWARE

- ✓ The software is developed in NI LabVIEW graphical programming environment.
- ✓ The software is intuitive and has user-friendly interface is designed for easy adoption.
- ✓ Graphical and digital representation of results

SPECIFICATIONS

Main modules

- ✓ Main Board (modules platform) - 1 pc.
- ✓ Smart Control module - 1pc.
- ✓ Solar energy module - 1 pc.
- ✓ House 1 electric energy consumer module- 1 pc.
- ✓ House 2 electric energy consumer module - 1 pc.
- ✓ «Hospital» electric energy consumer module - 1 pc.
- ✓ «Factory» electric energy consumer module - 1 pc.
- ✓ Wind source module - 1 pc.
- ✓ Non-Renewable Energy Sources module - 1 pc.
- ✓ Electric energy accumulator module - 1 pc.
- ✓ Light source module - 1 pc.
- ✓ Transmission line module - 1 pc.
- ✓ Power meter module - 1 pc.

Auxiliary elements

- ✓ Power supply - 1 pc.
- ✓ Set of safe connecting wires - 1 pc.

HANDS-ON EXPERIMENTS

- ✓ Daily power fluctuations of a solar power plant
- ✓ Daily power fluctuations of a wind power plant
- ✓ Power supply of consumers using traditional energy sources
- ✓ Power supply of consumers using alternative energy sources
- ✓ Power supply of consumers using alternative energy sources and accumulator
- ✓ Power supply of consumers using both traditional and alternative energy sources
- ✓ Consumer priority based power supply stability
- ✓ Power lines control

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