



DL WIND-L

Wind Energy

This system provides you with all the answers you need concerning the basics of using wind energy. It discusses different topics, which are necessary for understanding the functions of wind power plants.

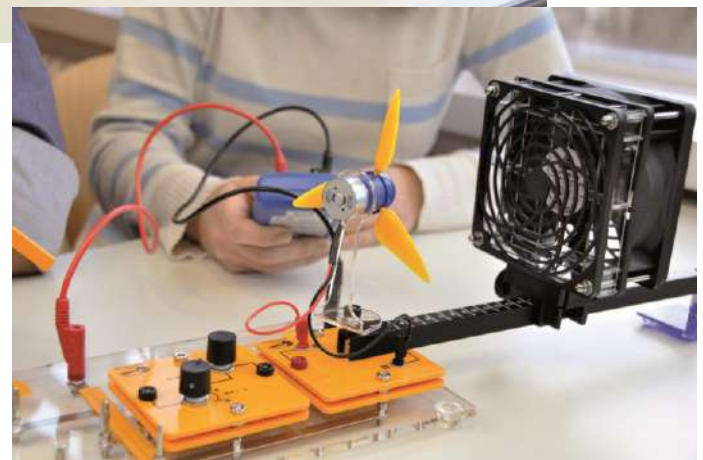
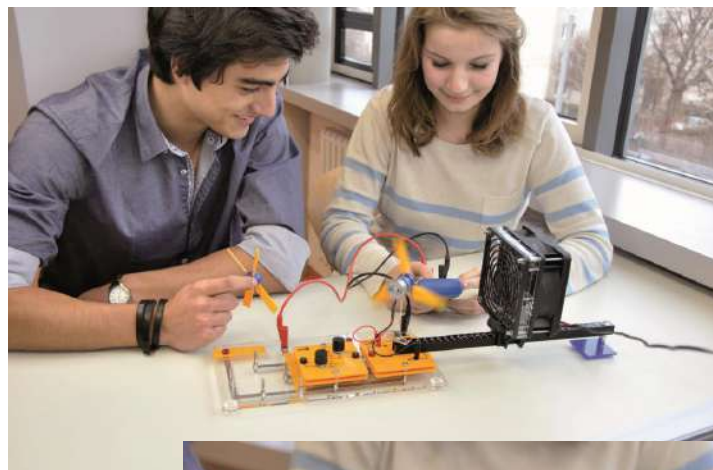
The study of how wind force, wind direction or rotor type influences the power output are only some examples of possible experiments.

Both qualitative and quantitative experiments are described in detail in the manual provided with the kit.



COMPONENTS

- Plastic box with hard foam insert
- Wind machine module
- Base
- Potentiometer module
- Wind generator module
- LED-module
- Capacitor module
- Resistance module
- Set of wind turbines (2, 3 and 4 blades)
- Savonius rotor
- Buzzer module
- Light bulb module
- Motor module without gear
- Color disc
- Lid for tray
- 1 AV module
- 1 power supply
- CD with teacher and student manuals
- 2 leads - black 25 cm
- 2 leads - red 25 cm





EXPERIMENTS

- Measuring the wind speed
- Installing and replacing the rotor blades
- Influence of the wind speed on a wind turbine
- Changing wind speed by changing the distance
- Start-up wind speed at a wind turbine
- Comparison of the start-up wind speed of a Savonius and a three-blade rotor
- Change the turbine voltage by connecting a consumer (with resistance)
- Change the turbine voltage by connecting several consumers
- Examine the wind speed behind the rotor
- Energy balance sheet at a wind turbine
- Calculating the efficiency of a wind turbine
- Storing electric energy
- Energy conversion in a wind turbine
- Examine color wheels using a wind turbine
- Comparison of a Savonius rotor and a three-blade rotor
- Comparison of two, three and four-blade rotors
- Characteristic curves of a wind turbine
- Influence of the wind direction
- Influence of the rotor blade pitch
- Influence of the rotor blade pitch on the start up speed of a wind turbine
- Influence of the blade shape