

leXsolar-Wind Ready-to-go 2.0

Order code: **5501.1405**



Cena bez DPH
Price with VAT

1.886,00 Eur
2.282,06 Eur

Parameters

Subject

Wind and hydropower

Quantitative unit

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Loyal to the tradition of the Ready-to-go products, this system also enables the maximum number of experiments without additional accessory. Due to the stable aluminum box it is also applicable location-independent. The extensions „measurements without measuring

tools“ and “Wind Speedometer” are already included. With leXsolar-Wind Ready-to-go you are able to resolve all questions you may have concerning the physical basics of using wind energy. leXsolar-Wind Ready-to-go is also suitable for the application of in-house workshops – for example for sales representatives.

Experiments:

Dependence of the power plant on wind speed

- Phenomenological with light bulb
- Through measuring the voltage at the generator
- Through determining the power output of the generator using a constant resistance

Variation of the generated voltage during connecting a consumer

- With resistance
- With the consumers buzzer, engine and light bulb

Analysis of wind speed in front of and behind the rotor

- While engine idle
- With loaded generator

Efficiency determination of a wind power plant

Saving energy

Energy conversion and use of wind energy

- Consideration of energy conversion kinetic energy rotational energy electrical energy radiation energy by the LED
- Consideration of different energy conversions with buzzer, engine and light bulb

Analysis of different rotor types

- Comparison 3-bladed and Savonius rotor
- Comparison 2-, 3-, and 4-bladed rotor
- Phenomenological comparison using a light bulb (only with extension „measurements without measuring tools“)

Characteristics of the wind generator

Dependence of the wind generator on wind direction

- While engine idle (measurement of voltage)
- Loaded
- Phenomenological using a light bulb

Other application tests

These are interesting trials, which are included in the curricula and just have an indirect reference to the topic of wind energy

- Air resistance of different objects
- RPM Measurement of the wind generator

Components:

- Aluminum box with hard-wearing foam insert
- Wind machine module

- Profile rail with moveable tab for the wind machine
- 1100-19 leXsolar base unit
- 1100-23 potentiometer module
- LED-module
- Capacitor module (0,1 F)
- 1100-22 resistance module
- Wind turbine with adjustable blades
- Wind turbine 4-blades
- Wind turbine 3-blades
- Wind turbine 2-blades
- Savonius rotor
- Wind speedometer Kaindl Windmaster 2
- Lamp module
- Buzzer module
- 2× 2102 digital multimeter
- 1× 2105 power supply (4 ... 12V DC)
- 2× 2107 measurement connection black, 25 cm
- 2× 2108 measurement connection red, 25 cm
- 2109 measurement connection black, 50 cm
- 2110 measurement connection red, 50 cm

Age: from 12 years