

leXsolar-H2 Professional 2.0

Order code: **5501.1222**



Cena bez DPH	4.210,00 Eur
Price with VAT	5.094,10 Eur

Parameters

Renewable resources and greenhouse effect

Subject

Quantitative unit

Renewable energy resources

Fuel cells and "H" technology

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The H2 Professional 2.0 is a great experimenting kit for all students to investigate the technology of hydrogen production and usage. The H2 Professional can be used for basic training and for advanced studies.

The electrolysis process operates either with the solar module for green hydrogen production, or with main current for gray hydrogen. New version of a fuel cell stack, which can be dismantled completely into single cells. Experiments are therefore possible with the stack and the single cells. The fuel cell stack has a maximum power of 1 W. Running the fuel cell is possible with the electrolyser or with the already known H₂ Storage Module.

Experiments

- U-I characteristic curve of the solar module
- U-I characteristic curve of the solar module as a function of the illumination intensity
- U-I characteristic curve of the solar module as a function of temperature
- Hydrogen production with the electrolyzer
- U-I characteristic of the electrolyzer
- Faraday and energy efficiency of the electrolyzer
- Operation of the electrolyzer with the solar cell
- Setting up, connecting and checking the fuel cell stack
- Operation of a consumer with the fuel cell stack
- U-I characteristics of the fuel cell stack
- Investigation of the single cell
- Hydrogen consumption of the fuel cell stack
- Investigation of the stack effect
- Operation of the model car to demonstrate the use of a fuel cell

Components:

- 1x 1118-02 Motor module Pro
- 1x 1100-04 Solar module 5.33 V, 370 mA
- 1x 1100-62 Potentiometer module 110 Ohm Pro
- 1x 1118-17 Base for solar panel
- 1x 1200-18 H₂ Storage
- 1x 1222-01 Aluminium case 1222
- 1x 1222-02 manometer set-up 1 bar
- 1x 1400-13 leXsolar-Base unit Professional
- 1x 1400-19 Wind machine
- 1x 9100-03 AV-Module
- 1x 9100-05 PowerModule
- 1x 1800-17 Distilled water (100 ml)
- 1x L2-01-126 FC Mount
- 1x L2-02-017 Propeller
- 0,25x L2-02-088 Silicone tube inside 4mm outside 6mm
- 0,15x L2-02-048 Silicone tube 2 mm
- 1x L2-02-083 Y-connector 4mm
- 2x L2-04-059 Safety test lead, 50cm, red
- 1x L2-04-060 Safety test lead, 50cm, black
- 1x L2-04-080 Lamp housing
- 1x L2-04-200 Illuminant infrared 230V
- 3x L2-05-068 Safety short-circuit plug, with mid socket
- 1x L2-06-087 Syringe 2ml
- 1x L2-06-132 Valve for H₂ Storage
- 1x L2-06-205 Fuel Cell Stack 1W
- 1x L2-06-206 Double Cell Electrolyser
- 1x L2-06-207 FCEV Car Model
- 2x L2-06-210 Adapter 2mm/4mm red
- 2x L2-06-211 Adapter 2mm/4mm black
- 1x L3-01-222 Inlay H₂ Professional 1222
- 1x L3-03-258 Info sheet initial startup
- 1x L3-03-307 Layout diagram 1222 H₂ Professional 2.1
- 1x L2-06-213 Hose Clamp 1-5 mm
- 1x L2-04-066 Safety test lead, 25cm, red
- 1x L2-04-067 Safety test lead, 25cm, black

Extras needed:

- 1x 1200-17 H2 Charger