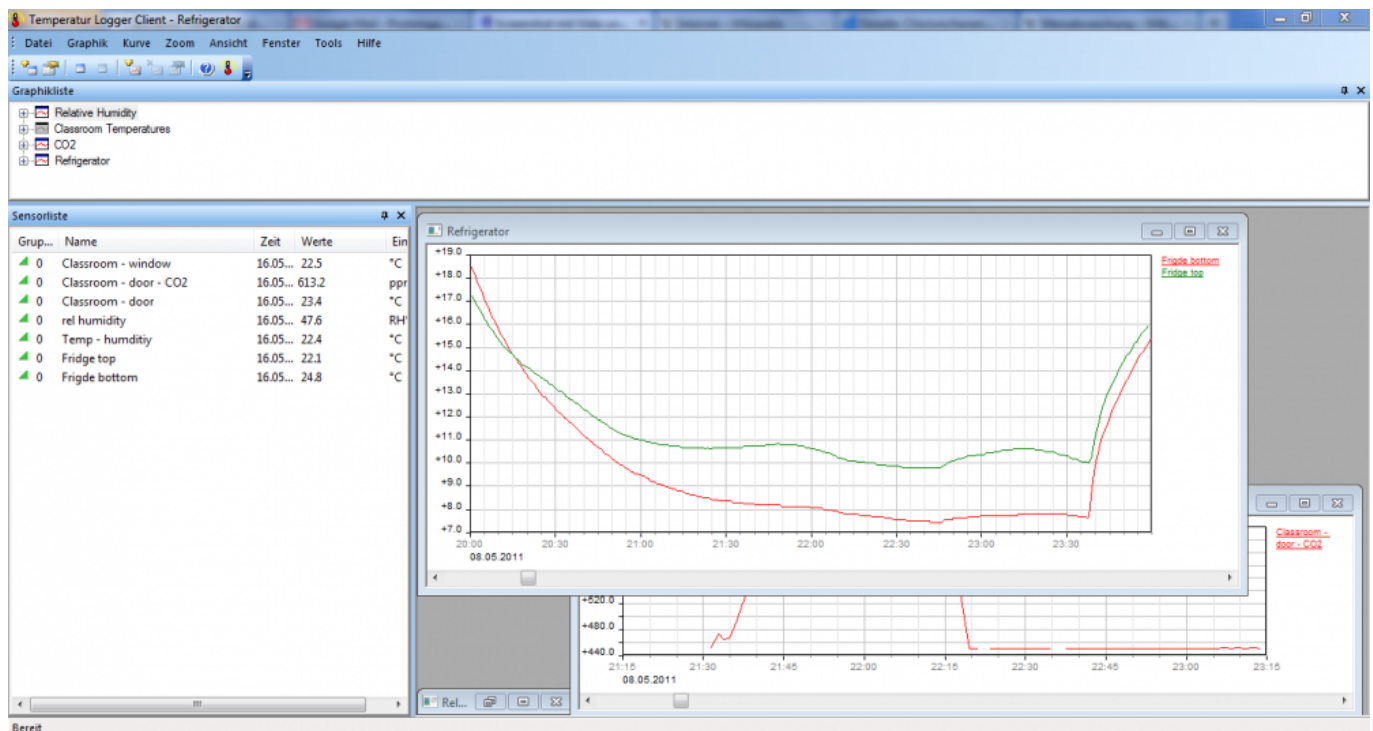




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leXsolar-ESave Ready-to-go

Order code: **5501.1502**



Information about product price on demand

Parameters

Subject

Energy saving

Quantitative unit

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Thanks to the leXsolar-ESave Ready-to-go, discussions about energy becomes more tangible. The approach is holistic: the students focus first on issues like global energy consumption, climate change or energy consumption at private households. Based on the question-at-hand, students will make measurements based on the problem; for instance things like room temperature or climate, water and energy consumption, etc. The goal is to foster the ability to identify potentials for improvements and savings.

Key data:

- With the help of this combination of instruments, the following topics can be analyzed and optimized:
 - Electrical energy consumption
 - Heating behavior
 - Air quality
 - Water consumption of a school/household
 - Lighting
- Optimal for energy saving projects in the classroom
- Many measurements can utilize an automatic Data Logging System
- Includes a detailed introduction to the topics for students, exercise sheets for the respective measurements and an experiment guide for teachers

Components:

- 1x Data Logging USB base station with power supply
- 3x Temperature sensors for inside use (temperature range: -30 °C – 80 °C/-22 °F – 176 °F, measuring accuracy: $\pm 0,5$ °C/0,5 °F)
- 1x Combined humidity-temperature-sensor (0 – 100 % relative humidity, accuracy $\pm 4,5$ %, temperature range: -40 °C – 120 °C/-40 °F – 248 °F, $\pm 0,5$ °C/0,5 °F)
- 1x Temperature sensor for outside use (temperature range: -30 °C – 80 °C/-22 °F – 176 °F, measuring accuracy: $\pm 0,5$ °C/0,5 °F)
- 1x Digital Light Meter (0,01 – 50000 Lux)
- 1x Infrared thermometer
- 2x Electricity meter
- 1x Flow meter
- Detailed worksheets
- Robust aluminium case with foam inserts

Experiments:

Understanding energy

- Primary and secondary energy, resources and reserves
- Units and conversions, key sizes
- Production of electricity, comparison of power plants
- Worldwide energy consumption
- Climate change and CO₂
- Why save energy?

Heating

- Learn more about your school - Which energy sources are used? What are their locations and costs?
- Temperature in the classroom
- Heat loss of buildings
- Air quality
- Heating and ventilating: correct behavior
- Humidity

Water

- Learn more about your school - Where does drinking water come from? Where does the used water go? What are the annual consumption and costs, etc.
- Hot water preparation
- Where is water consumed: correct behavior

Electricity Consumption

- Learn more about your school - Which energy suppliers are used? What are the annual consumption and costs?
- Electrical energy in everyday life
- Electrical energy in the kitchen
- Energy guzzler
- Hidden loss: stand-by-mode and the "off" position

Light

- Light in the classroom
- Comparison of different light sources
- Researching different brightnesses

Extra available:

- 1500-01 Combined CO₂-temperature sensor (CO₂: 400 ppm do 90%, accuracy: ± 15 %, temperature range: -30 °C – 80 °C/-22 °F – 176 °F, measuring accuracy: $\pm 0,5$ °C/0,5 °F)

Age: 14 - 19 years