

Product datasheet (en)

Version: 1504_24.10.2022

Photo:

Name:



leXsolar-Esave Ready-to-go 2.0

Item number:

1504

Youtube link:

Area of application:

Dimensions (cm x cm x cm)

**Air-conditioning, Heating, Energy Efficiency
Technology Training
Physics
Renewable Energies**

Weight (kg):

User group:

**Basic Training
Highschool / Secondary School
Middle School / Junior High School
Industrial Customers**

Key facts:

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.

List of components:

1 x L2-06-221 TFA Basisstation
4 x L2-06-222 TFA Temperatur- und Luftfeuchtigkeitssensor
1 x L2-06-223 TFA CO2 Messstation mit Netzteil und SD-Karte
1 x L2-06-220 SD-Kartenleser
1 x L2-06-034 Luxmeter
1 x L2-06-035 infrared thermometer 4970
1 x L2-06-041 Flowmeter
1 x L3-01-230 Koffer ESave Rtg 2.0 1504
1 x L3-01-229 Einlage ESave Rtg 2.0 1504
11 x L2-04-135 Batterie AA, 1,5V, 2900mAh
2 x L2-06-036 Energy meter
1 x L3-03-329 Einräumplan 1504 ESave Ready-to-go 2.0
1 x L3-03-258 Info sheet initial startup

Extras needed:

No extras needed, all included.

Extras available:

No extras available.

Description:

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.

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?

- **Where do we need energy?**

Heating

- Learn more about your school – Which energy sources are used? What are their locations & 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 & costs, etc.
 - Hot water preparation
 - Where is water consumed: correct behavior
 - Electricity Consumption
 - Learn more about your school – Which energy supplier are use? What are the annual consumption & 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

Specifications of components

L2-06-221 TFA base station:

The base station is the heart of the temperature and humidity measurement. It can receive and store data from up to eight sensors. In addition, the base station itself has an integrated sensor for measuring temperature and humidity. The sensors are detected automatically within a radius of 100 m. If necessary, the sensors can also be connected manually. In addition, the base station contains a radio alarm clock. The data transfer to the PC is done by the included USB stick and the software "Klimalogg Pro". For data transfer, the analysis software must be started on the PC and the USB stick must be plugged in. The data transfer then takes place automatically.

L2-06-222 TFA temperature + humidity sensor:

Temperature and humidity sensor for indoor and outdoor use. The measurement takes place at intervals of 4 seconds. The radio range to the base station is max. 100m. With display for reading the currently measured values. The sensor can be placed on the table with the supplied mounting foot or screwed to the wall.

L2-06-223 TFA CO2 measuring station with power supply unit and SD card:

The CO2 monitor with data logger function via SD card, measures the temperature and humidity in addition to the CO2 content. The display contains a time axis with bar graph and can be adjusted variably. The colored traffic light display is a quick way to control the CO2 value. It is possible to store over 1 million data records (CO2/humidity/temperature with date and time) on the supplied micro SD card as a CSV file.

L2-06-220 SD-card reader:

L2-06-034 Luxmeter:

0-50,000 lx

3 ½ digit 11 mm LCD display and battery status indicator

Perfect for testing and measuring of lighting condition in offices, factories, hotels, etc.

measured spectrum by C.I.E.

Silicon photodiode sensor

Safety: EN 61010-1

Accessories: Light sensor, battery, operating instructions

L2-06-035 infrared thermometer 4970:

L2-06-041 Flowmeter:

L2-06-036 Energy meter:

L3-03-258 Info sheet initial startup:

Specifications extras needed:

No extras needed, all inclusive.

Specifications extras available:

No extras available.