

Professional radiation measuring

It can take many months from the concept to the realisation of a solar plant. Time which can be used to gather information from the planned location.

Today statistical enquiry and simulation allow for a good forecast when planning a solar plant. Weather and climate information are highly accurated available.

By measuring with the **Energy monitor ISET Sensor *global*** the usable solar radiation can be gathered and measured, as it would be used by future solar panels.

The sensor

With the radiation sensor **ISET sensor** developed by **ISET** a new sensor with integrated temperature measurement capabilities is available. These temperature values are used correctively for measurement purposes.

The sensor operates with the same silicon cells that are also used within the solar module.

Measurement disposition

The measurement array of **ISET Sensor *global*** is also developed by **ISET/Kassel** - Institute for solar energy supply Club of the university of Kassel e.V.

(<http://www.iset.uni-kassel.de>, <http://www.pvtestlab.de>)

With the **ISET Sensor *global*** solar radiation from all different directions (East, South-East, South, South-West, West) and from different radiation angles (0°, 32° (variabel), 90°) can be measured. Other directions and angels are optional.

If the PV-module type to be used is already known, then this can be considered during measuring as the sensor is available in all usual solar cell versions.

The resulting measurement series provides detailed information about the complete solar radiation power per day as well as other dependencies environmental factors, (outdoor temperature, global radiation, humidity, wind information, etc.).

With this system it is now possible to use real measurements for validation of data from climate cards and simulations, thereby giving extra reliability to the planning of the solar plant.



SOL.Connect™

With the integration of **ISET Sensor *global*** into **SOL.Connect™** you have a complete and intelligent tool for recording, normalisation and analysis of values. The system replaces a complicated and cost-intensive laboratory construction with robust industrial technology.

The energy requirement of the system is approx. 6W, which allows autarkic power supply as well as mains operation.

All information will be recorded on a standard flash card, which can store data over many months.

Although not essential, it is recommended to have a direct Internet connection (LAN, WLAN, Modem, GSM etc.). The **SOL.Connect™ Data Warehouse** (or similar internet database) is an important component of the system, as it is here where an overall view and comparison of multiple plants can be made.

Equipment

Standard:

Measurement head:

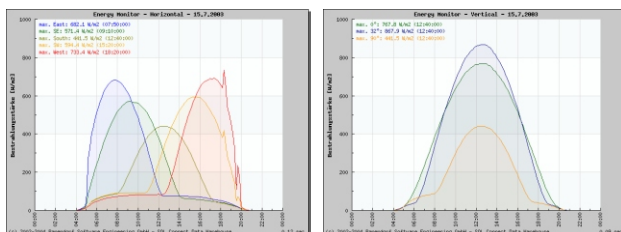
- 7x solar radiation sensors **ISET Sensor**
- Temperature sensor

Datacenter:

- **SOL.Connect™ Center**
- **SOL.Connect™ MultiScan**
- Data connection LAN (internet connection)
- Power supply (100-240V~ AC)

Options:

- Stand for measurement head
- Additional sensors (Pyranometer, humidity, Wind direction, etc.)
- Modem
- GSM
- Autarkic power supply
- **SOL.Connect™ Data Warehouse** (free of charge for 2 years)



<http://www.sol-connect.de>
<http://sdwh.sol-connect.de>