

TECHNICAL DATA

Fluke Solmetric PVA SolSensor Kit



Key features

- Accurate measurement of PV irradiance, temperature, and module tilt for precise data collection.
- Wireless connectivity with 100 m range for flexible and efficient solar testing.
- Temperature-compensated sensor with spectral response calibration for various PV technologies.
- Dual thermocouple inputs for measuring module backside temperatures and SmartTemp feature for enhanced accuracy.

Product overview: Fluke Solmetric PVA SolSensor Kit

The Fluke Solmetric PVA SolSensor Kit is an advanced, highly accurate tool designed to streamline and enhance the process of collecting critical data for photovoltaic (PV) system performance analysis. This innovative kit measures irradiance, temperature, and module tilt, ensuring that you have the precise data needed to assess the performance of solar panels and diagnose any issues. The SolSensor is engineered for ease of use, durability, and reliability, making it ideal for solar installers, technicians, and engineers who require accurate and timely data for PV system optimization.

Key Features:

Accurate Irradiance, Temperature, and Tilt Measurements

The SolSensor accurately captures irradiance levels, module temperatures, and the tilt of solar panels, providing comprehensive data that feeds into the PV Analyzer (PVA) model. This allows the system to predict the I-V (current-voltage) curve shape under actual operating conditions and adjust it to standard test conditions. The module frame clamps help ensure that the irradiance sensor is automatically aligned to the plane of the solar array, providing consistency and eliminating guesswork.

Wireless Connectivity

One of the standout features of the SolSensor Kit is its wireless interface, which allows seamless communication between the SolSensor, the PV Analyzer, and a tablet or laptop (Windows-based). With a wireless range of up to 100 meters, users can move freely around the site without worrying about tripping over wires or needing cumbersome setups. This wireless setup improves efficiency and flexibility, making it easier to troubleshoot and measure different combiner boxes with a single SolSensor setup.

Precision for Multiple PV Technologies

The SolSensor's silicon photodiode is specifically designed to measure irradiance with accuracy across a wide range of PV technologies, including multi-crystalline, mono-crystalline, cadmium telluride (CdTe), and other thin-film modules. The sensor is temperature-compensated and its angular response is calibrated for different rotational and elevation angles. This ensures accuracy in various weather conditions, sun angles, and technology types, enabling more precise measurements earlier and later in the day when irradiance angles may vary.

SmartTemp Technology

To further enhance temperature measurement accuracy, the SolSensor offers two external thermocouple inputs, allowing users to measure the module's backside temperature directly. Additionally, the system can calculate effective cell temperature based on the measured I-V curve according to IEC 60904-5 standards. The SmartTemp feature blends these two methods—direct thermocouple readings and curve-based calculations—to provide the best possible accuracy for solar performance analysis.

Easy Setup and Portability

Designed for quick and easy setup, the SolSensor Kit reduces installation time and increases productivity. Its compact and lightweight design makes it easy to transport between job sites, and the clamp-on feature ensures quick and secure attachment to the module frame. This allows technicians to begin collecting data in just a few minutes, reducing downtime and increasing efficiency in the field.

Ordering information



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Optional accessories	Description
Fluke Solmetric PVA Charger	Fluke Solmetric PVA Charger: Charges PVA I-V units and SolSensor via wall adapter with USB cable.



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