PV SOILING MEASUREMENT SYSTEM

GroundWork’s PV Soiling Measurement System (PVSOIL) delivers site-specific, PV-module soiling ratios. Soiling trends are used for plant acceptance testing, analysis of soiling losses for PV performance guarantees, determination of the effects weather events have on soiling, and optimization of panel washing schedules.

PVSOIL measures module short-circuit current and back-of-module temperature from a pair of identical modules. The system calculates the temperature-compensated soiling ratio. One naturally-soiled test module is left uncleared while the other is regularly cleaned manually. Shunts can be sized for both silicon and thin film modules. The PVSOIL system includes a real-time data interface for SCADA applications and data storage.

SPECIFICATIONS

- PVSOIL enclosure
  Dimensions: 10 x 12 x 4.5 in., weight: 10 lbs
- PVSOIL-DAS enclosure
  Dimensions: 16 x 18 x 9 in., weight: 25 lbs
- Communication protocol: Modbus or DNP3

MEASUREMENTS: ACCURACY

- Datalogger: ±0.04%
- Current shunt: ±0.25% (0 to 10 Amps)
- Back of module temperature: ±0.15 °C (-73°C to +260 °C)

SYSTEM COMPONENTS

- Traceable precision shunts (2)
- PT1000 Class A RTD sensors (2)
- Datalogger with Ethernet
- Power supply with AC integration

REQUIRES - NOT INCLUDED

- Plant modules (2)
- Mounts

OPTIONS

- 20W panel and battery UPS
- Wireless
- 20W modules for resource assessment

WHY GROUNDWORK?

Intensely client focused
Solar resource measurement specialists
High quality and cost-effective service
NREL best practices and calibrated reference instruments
Campbell Scientific, EKO, Hukseflux, Irradiance, Kipp & Zonen and Lufft
Serving the United States, Canada, Mexico and Central & South America