



SOILING STATION MODEL NO: HS-DUST



PRODUCT OVERVIEW

The HS-DUST offers an advanced and intelligent solution for monitoring soiling on solar PV panels. It's designed specifically for solar power plants to help optimize energy production and maintenance planning.

KEY FEATURES

Soiling Measurement:

Tracks Performance degradation due to dirt and dust accumulation on PV panels

• Data Utilization:

- Estimates energy loss from Soiling.
- Aids in accurate energy production estimates.
- Supports maintenance scheduling (e.g., cleaning cycles.)

• Measurement Parameters:

- Short-circuit current (Isc) of clean and soiled PV modules.
- Back surface temperature of PV modules.

• Additional Capabilities:

- Option for automatic Cleaning of PV Panels.

• Smart Soiling Measurement: Accurately detects and reports the soiling status of PV modules.

- Dual Sensor Inputs: Measures Short-circuit current (Isc) and module back temperature.
- Soiling Status Evaluation: operates via solar panel or external power supply.
- Built-in Data Logging: Logs all measured parameters for historical analysis and parameters of historical analysis and reporting.
- Panel offset Calculations: Computes the offset between clean and soiled panel Performance.
- Time Synchronization: Ensures consistent and accurate time- stamped data.

• Optional Add-ons:

- Battery Backup for uninterrupted operation.



Parameters	Specifications
Input Voltage	12-24 VDC / Solar Power Supported
Communication Protocols	MODBUS RTU, MODBUS TCP
Sensor Inputs	ISC,VOC & Back Temperature
Data Logging	Internal memory 1 GB
Protection With ENC	IP-66
Mounting	Stainless Steel Pipe (supplied)
Soiling loss measurement	0.3%
Device Type	Dual panel solar reference cells
Soiling Index Accuracy	0.5%
Solar Panel Support	2000 W
Short Circuit Current (Isc) range	0-20 A
Open-Circuit Voltage (Voc) range	0-100 V
Resolution	Voltage: 1 mV Current: 10mA
Sensor Measurement	2 cells method; 1 Clean Cell & 1 Dirty Cell
Ambient working temperature	-40 to +70 °C
Mounting Pole	2 meter mounting mast pole with base plate
Sensor cable	Default 10 meters (As per plant location)
Calibration	After three years



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