



Kipp & Zonen DustIQ Soiling Monitoring System, Mounting Clips, Panel Temperature Sensor

Product #: 0386915
USD Price: Contact Hach

DustIQ monitors the loss of light transmission caused by dust, sand, pollen, or any other particles on PV panels using Kipp & Zonen's new and innovative Optical Soiling Measurement (OSM) technology. The DustIQ has no moving parts and it does not need sunlight to operate. Rather, it uses an internal light source to measure scattered and reflected light that is directly proportional to soiling accumulation on the surface of the DustIQ.

Unique measuring principle

The DustIQ is unique because it does not require routine cleaning and mechanical maintenance, it is easily mounted directly in between framed PV modules on fixed and tracked sites, and is cleaned only when the modules are cleaned.

Clean your modules when it is most economically viable

Module cleaning is most economically viable when the revenue losses and performance penalties caused by soiling exceed the operational costs of monitoring and cleaning. DustIQ provides the information for solar energy plant management systems so that you can decide exactly when and where to clean. The cost-effective price of the DustIQ makes it feasible to install a network of DustIQ units to monitor the variation in soiling over across an entire PV plant.

Know exactly when to clean

Set alarms in your system software to indicate when a certain soiling ratio has been reached and cleaning is needed.

Maintenance free

It has no moving parts and it does not need sunlight to make its measurements. The DustIQ is cleaned when all other panels are cleaned

Convenient set-up

The sensor is integrated into leading plant management software.

Specifications

Accuracy:	Transmission loss:
	±0.1 of reading ±1% (after local dust calibration)
Cable:	No cable
Daisy-chain Capability:	Three instruments max. in one chain.

Only the last device can have the PV panel temperature sensor attached.

Digital Outputs:	RS485 Modbus RTU
Dimensions:	39 x 6 19/64 x 1 3/8 in (990 x 160 x 35 mm)
Interface:	2-wire RS-485 RTU using Modbus
IP Rating:	IP65
Material Enclosures:	Aluminum, anodized
Maximum Voltage:	The maximum differential between either of the Modbus® RS-485 lines (yellow and grey) and the power ground / RS-485 common line (black) is 70 VDC.
Measuring Range:	Back of module temperature sensor: -4 to +212 °F, ±1.8 °F (-20 to +100 °C, ±1 °C)
Operating Temperature Range:	-4 to +140 °F (-20 to +60 °C)
Output Values:	Soiling Ratio (SR) 100 to 50% and Transmission Loss (TL) 0 to 50%
Outputs:	Percentage of sunlight that is blocked or scattered in such a way that it does not reach the actual solar cells 0 to 50%
Power Consumption:	# 2.5 W
Power Supply:	12 to 30 VDC, 70 to 200 mA; < 2 W
Standard storage temperature:	-4 to +176 °F (-20 to +80 °C)
Tilt X and Y-axis:	-180° to 180° ; ±1°