KIPP & ZONEN

DustIQ

for PV soiling monitoring

Know exactly when and where to clean

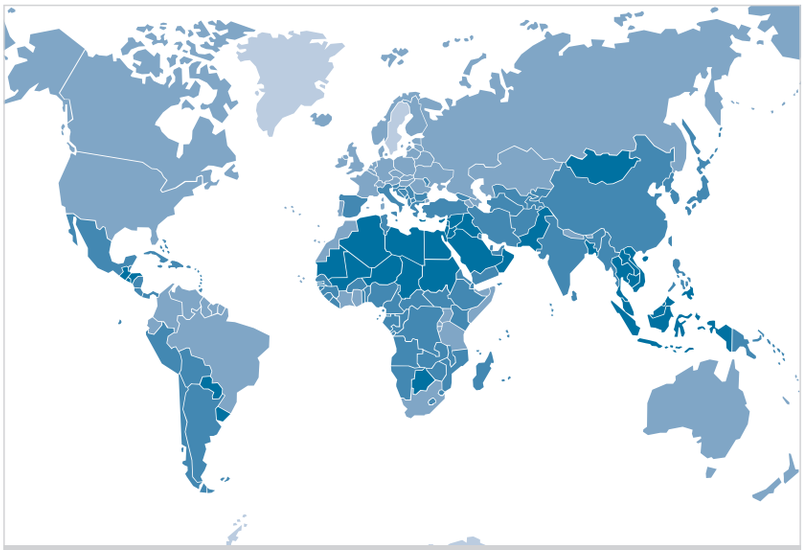
Optimize yield

The only maintenance free solution to measure soiling

Integrated in the leading monitoring software systems

What if you could measure soiling of PV modules with a solution that does not require any maintenance? The new DustIQ is a sensor without moving parts, does not need regular cleaning and uses a breakthrough development to accurately measure soiling. This fundamental new Optical Soiling Measurement (OSM) technology provides you with insights into the power loss due to light transmission loss. With a network of DustIQs you will know exactly when it is time to clean, and where on the plant.

DustIQ for PV soiling monitoring



Dust intensity around the world

Benefits of the DustIQ Soiling Monitoring System

- Patent applied for, unique new technology
- Measures soiling ratio from 100 % (clean) to 50 %
- Doesn't need sun to operate
- Cost effective solution for multiple points of measurement
- Comes with a back-of-module temperature sensor
- Integrated tilt sensor for alignment angles
- Small and light panel with solar industry standard materials
- Flexible mounting to fit everywhere: at the side or top, or between, solar modules

Better than alternatives

- Completely passive: no need for daily cleaning as it follows the plant's cleaning schedules
- 24/7 day and night measurements, 1 minute measurement interval
- Multiple sensors are better than existing spot-measurement solutions
- Integration in solar array provides more reliable measurements than existing solutions
- Easy to mount and install

Specifications 0386910 and 0386915 DustIQ Soiling Monitoring System	
Transmission loss (TL) range Percentage of sunlight that is blocked or scattered in such a way that it does not reach the actual solar cells	0 to 50 %
Soiling Ratio (SR) range	100 to 50 % (SR = 100 –TL)
Transmission loss measurement accuracy	± 0.1 of reading ± 1% (after local dust calibration)
Ambient working temperature	-20 to +60 °C
PV panel temperature sensor	-20 to +100 °C, ± 1 °C
Tilt X and Y	-180 to 180 degrees ± 1 degree
Communication	Modbus® over 2-wire RS-485
Daisy-chain capability	Up to 3 devices in one chain
Power	12-30 VDC, 200-70 mA at 24 V, 500 mA power supply is advised
Power consumption	< 2.5 Watt
In rush current	300 mA max.
Glass type	standard PV glass
IP Class	IP65
Dimensions unpacked	990 x 160 x 35 mm
Weight packed with 10 m cable	6 kg
Weight unpacked	DustIQ unit: 4 kg; Mounting clamps: 600 g; 10 m cable: 400 g