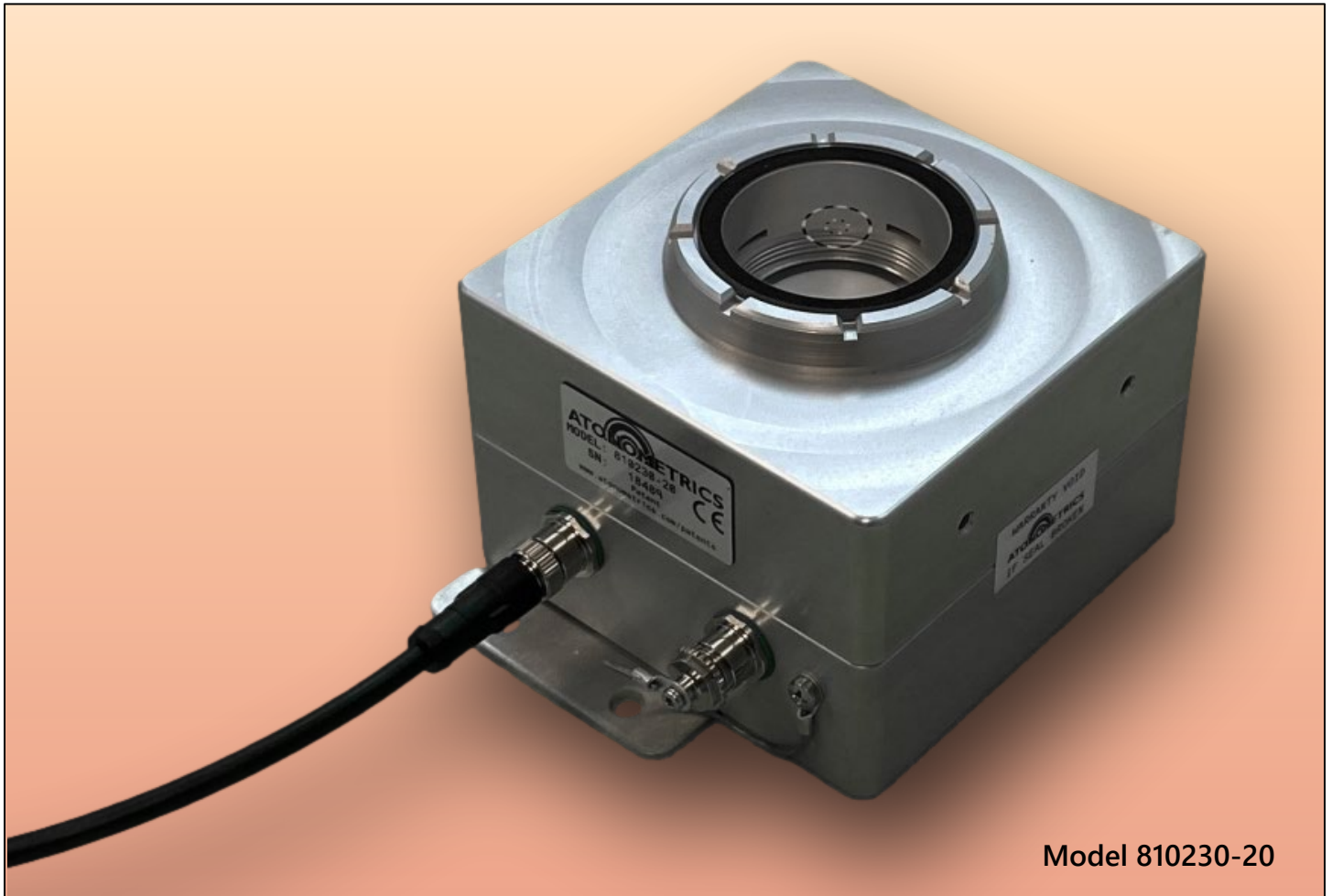


power  
wise SOLAR  
**MARS**  
Soiling Sensor

## Maintenance-Free Solution For PV Soiling & Dust Monitoring



### Maintenance-free measurement

- Specifically designed for low-cost, maintenance-free measurement of PV soiling – with no on-site staff

### No water, washing, or moving parts

- Does not use water, does not require cleaning, has no moving parts

### Unique all-optical technology

- Unique all-optical technology captures images of the sensor surface and performs image analysis to calculate soiling loss

### No site-specific calibration required

- Mars™ technology does not require site-specific or dust-type-specific calibration
- No color-dependence of calibration

### Ideal for a range of PV plants

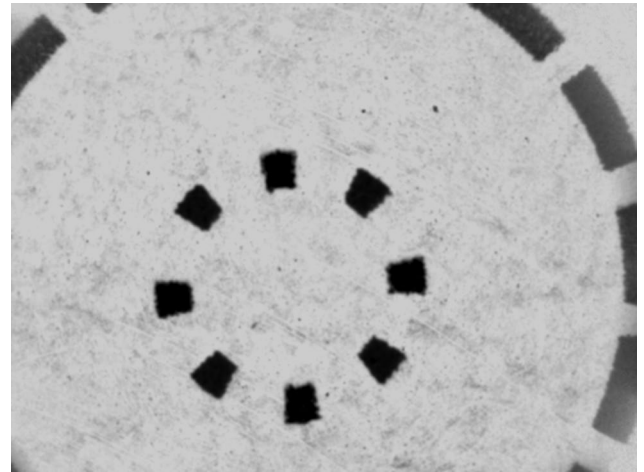
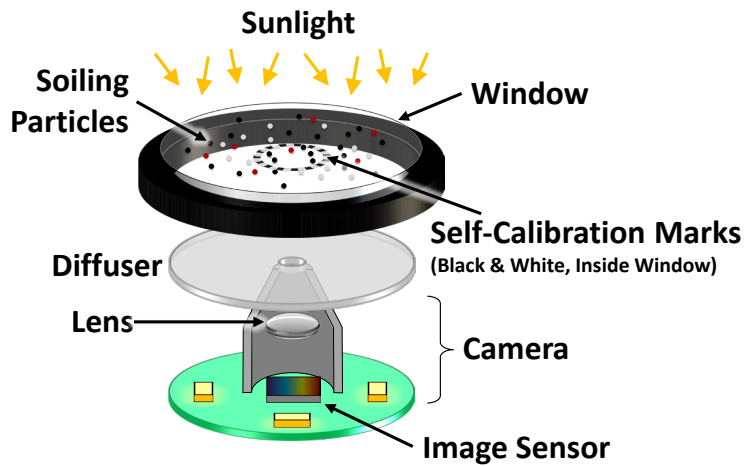
- Fits budgets and constraints of even small PV plants
- Cost-effective solution for multi-point measurement

### Easy installation

- Compact sensor mounts anywhere in solar array
- Quick setup

## Mars™ Technology

- Patented technology sees soiling particles on the sensor window and does not require any dust-specific calibration
- Internal image processing calculates transmission loss due to soiling



## Specifications

<b>General</b>	Model	Mars Soiling Sensor™ 810230-20
	Ambient temperature	-20 to +60 °C
	Input power	10 to 30 VDC
	Power consumption	<3 W average, <6W peak
	Transmission loss	± 1%
	Local dust calibration	Not required
	Communication options	Modbus RTU (RS485); Modbus TCP (Ethernet)
	<b>Mechanical</b>	Material
	Ingress protection	IP67
	Dimensions	Main body: 4.53 x 4.53 x 3.86 in. / 115.0 x 115.0 x 98.1 mm
	Weight	3.27 lbs. / 1.48 kg
	Mounting	Multiple mounting configurations Standard mounting plate accessory included
<b>Connectors</b>	Power & RS485	M12 connector, IP67. Cables available separately
	Ethernet	M12 connector, IP67. Cables available separately
<b>Configuration</b>	Configuration Kit	Available separately



PowerWise Systems, 124 Main Street, Bucksport, 04416 Maine, USA  
[www.powerwisesystems.com](http://www.powerwisesystems.com) +1 207 370 6517 [sales@powerwisesystems.com](mailto:sales@powerwisesystems.com)