

The soiling on the glass of solar modules is the main factor affecting the power generation efficiency of PV power plants. The soiling monitoring device using blue light pollutant measurement technology can be easily installed in the PV array and integrated into the power plant management system. The device is installed on the frame of the PV panel and calculates the reduction in sunlight reaching the solar modules by measuring the proportion of pollutants (SR).

This allows operation and maintenance personnel to know when pollutants reach the critical point and decide whether it is necessary to start the cleaning process. The product does not require maintenance, only cleaning surrounding components in the same way. Due to the varying pollution rates of large photovoltaic power plants throughout the entire park, the IEC 61724-1 standard requires multi-point measurement. Compared to traditional products, it has much lower procurement, installation, and maintenance costs, making it more economical.

FEATURES

- Continuous optical measurement
- Multi filter technology
- Closed loop optical structure
- Clean at the same time as photovoltaic panels
- 24-hour monitoring
- High monitoring sensitivity
- Temperature compensation
- On-site calibration



SPECIFICATIONS

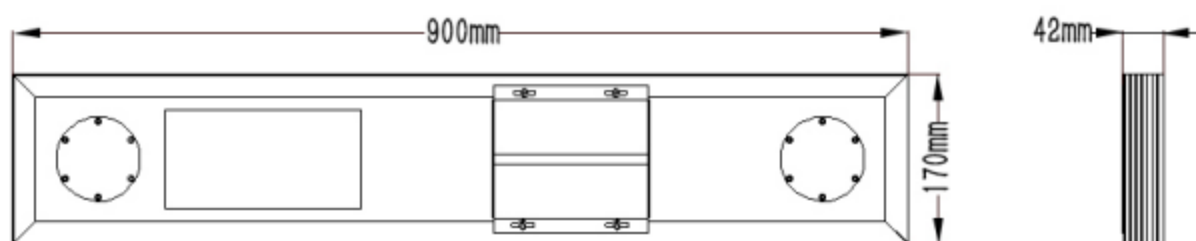
Item	Specification	Remark
Technical principles	Continuous multi frequency blue diffuse scattering closed-loop technology	
Execution standard	IEC61724-1:2017	
Soiling ratio (SR) range	100% - 50%	SR = 100-TL(Transmission Loss)
Accuracy	90-100%	± 1%
	80-90%	± 3%
	50~80%	± 5%
PV module temperature	Principle:PT100 Measurement range : - 50~150°C Accuracy: ± 0.5° C Resolution: 0.1 °C	Optional
GPS	Positioning accuracy: 10m	Optional
Output	RS485	
	Relay (Linkage output, passive normally open contact)	
Communication	Modbus-RTU	
Supply	12~24VDC	
Maximum power	<2.5W @DC12V	Low-power design
Alarm threshold	Can set upper and lower threshold values	

RK210-03 Dust Monitoring System

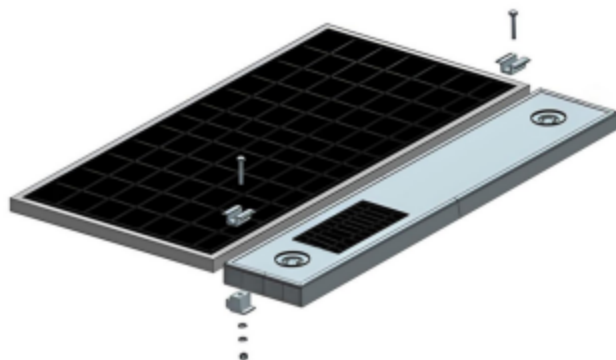
Stability	±1%/year	
Operating environment	-40℃-+60℃@0-90%RH	
Weight	3.5kg	Net weight
Size	900 * 170 * 42mm	
Cable length	20m	
Ingress protection	IP65	
Storage condition	10℃-60℃@20%-90%RH	

DIMENSION

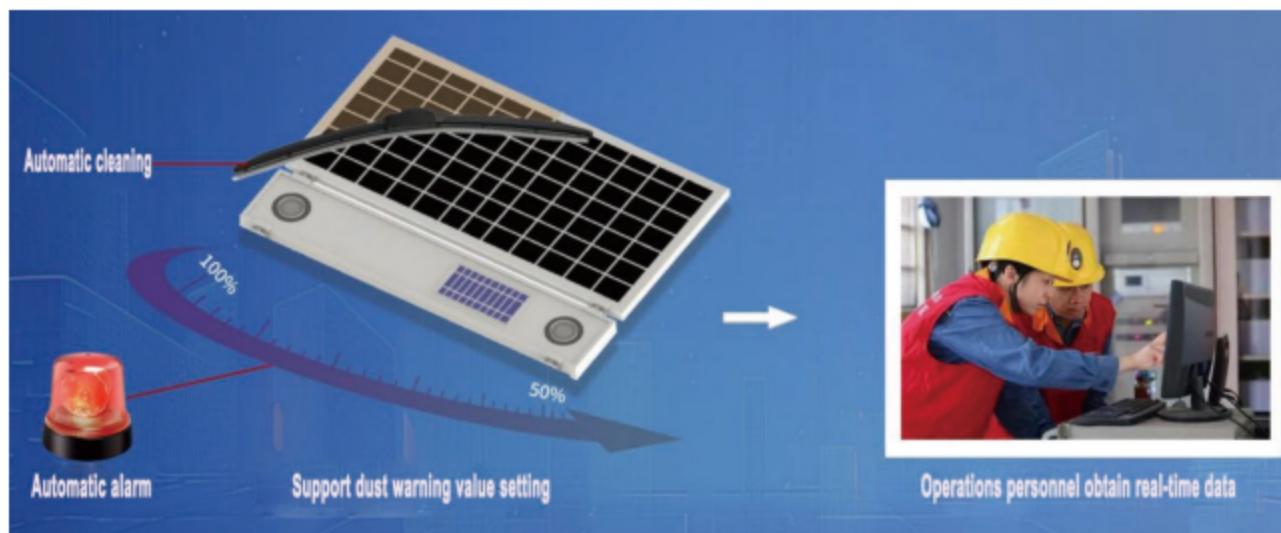
Unit: mm



INSTALLATION



DUST THRESHOLD WARNING LINKAGE



Revision time	Reviser	Current Version	Remarks
20250404	Lee	V5.0	