Modbus RTU RS485 Perc-Irradiance Sensor Datasheet

Product Name : Modbus RTU RS485 Perc-Irradiance Sensor

Product Code : PIRS-MB

Overview

The sensor transmits irradiance values digitally via RS-485 using the Modbus RTU protocol. Mounted parallel to the panel plane, it accurately reflects the actual irradiance received by the solar panels. This provides critical data for energy production, efficiency analysis, and performance monitoring.



Application Areas

- Solar Power Plants
- Wind Power Plants
- Meteorological Applications
- Agricultural and Greenhouse
- Industrial Applications
- Maritime and Ports
- Forest Regions
- Highway Applications

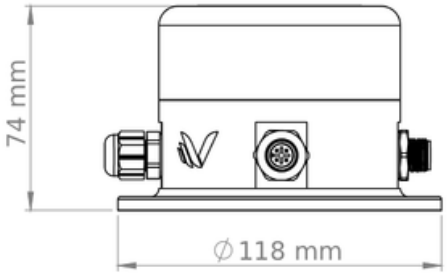
Electrical Specifications	
Measurement Range	: 0 ~ 1600 W/m²
Operating Temperature	: −35 ~ 80°C
Resolution	: 0.1 W/m²
Uncertainty	: ≤ 2%
Response Time	: 0.5 sn
Drift	: < 0.25% / yıl
Field of View	: 175°
Tilt-Azimuthal Angle	: 0°~ 0°
Connection Output	: Modbus RTU RS-485
Supply Voltage	: 9-48 V DC
Current Consumption	: 10 mA @24 VDC
Top of Cell	: Front Sheet or Solar Glass
Cell Temperature Range	: −40...+100°C (PT1000 Class 1/10)
Cell Technology	: Monocrystalline PERC Cell

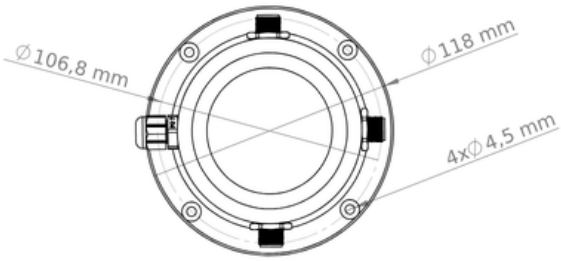
Mechanical Specifications	
Dimensions	: Ø118 x 74 mm
Housing	: Aluminum, Plastic
Protection	: IP 65

Standarts & Tests & Calibration	
Compatible Standard	: IEC 61724-1:2021 and IEC 60904
Calibration	: Calibrated under Class AAA solar simulator and natural sunlight in accordance with IEC 60904-2 and IEC 60904-4 standards.
Stability Test	: Tested under natural sunlight by comparison with reference cells calibrated by independent testing organizations
Cell Strength Test	: Tested cell manufacturer under opposite current and reported .

Cable and Connection Specifications		
Cable Length	: 3 m	
Connector Type	: IP 67	
White	: 9- 48 V DC (+)	○
Brown	: GND (-)	●
Yellow	: Data (+)	●
Green	: Data (-)	●

Technical Specifications





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