

Solar Radiation Sensor ES101-SR

The ES101SR Solar Radiation Sensor uses a photoelectric method to measure solar radiation across a 0.3–3 μ m spectral range. It features high-precision, wide-spectrum photosensitive elements for excellent absorption and stability. The dust cover, with 95% radiation transmittance, provides effective dust and waterproofing to improve measurement accuracy.



Features & Benefits

Excellent Solar Radiation Detection.

- Photoelectric measuring technology
- Wide spectral: 0.3 ~3.0 μ m
- Wide Measuring Range 1800 w/m²

Water-Proof / Anti-Dust

- IP65 Ingress Protection
- Anti Dust Absorption Treatment
- Anti-U/V Plastic Housing

Harsh Operating Environment

- Wide range power input 10~30V
- Lower Power Consumption 0.08w
- Wide Operating Temperature -40~60°

Modbus RTU Standard

- 2-Wire RS-485 Communication Interface
- Simply Data Access

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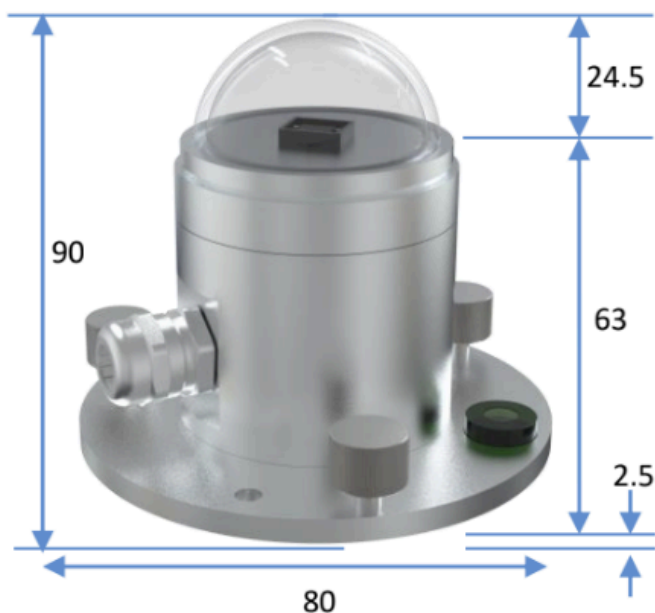


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Dimension (mm)



Application



Solar Radiation Sensor

Parameters

Measuring Range	0 ~1800 w/m ²
Spectrum Range	0.3 ~3 μ m
Accuracy	1 w/m ²
Long term stability	$\leq \pm 2\%$ / Year
Response time	≤ 10 Sec.

System Operating Parameters

Operating Temperature & Humidity	0 ~1800 w/m ²
Power Input Range	10~30Vdc (V+: Brown, V- : Black)
Power Consumption	0.08w
Communication Interface	2-wire RS-485 (RS485-A: Yellow, RS485-B: Blue)
Enclosure Material	Polycarbonate Plastic & Acrylic
Enclosure Protection	IP65 Protection Level
Enclosure Dimension	80 mm (Diameter) x 90mm (High)

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Modbus Register Information

Parameters Function	Register Add. (HEX / DEC)	PLC Add. (Configure. Add.)	Note
Device ID Storage Add.	07D0H / 2000	2001/(32002, 62002)	R/W , System Factory Default ID: 1
Serial Baud Rate Add.	07D1H / 2001	2002/(32003, 62003)	R/W , Default: 2 2(9600), 0(2400), 1(4800)
Real Solar Radiation	0000H / 0	1 / (30001)	R/O(03) , Real Value = Read Value
Offset Value (Solar Radiation)	0052H / 82	83/ (30083 , 60083)	R/W (03/06), 0~1800 w/m2

R/W: Read & Write, R/O: Read Only

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