

SR30 Digital Pyranometer

ISO-9060 Secondary Standard | IEC 61724-1:2017 Class-A Compliant



Join the evolution...

Unparalleled Value and Performance

The SR30 digital pyranometer represents an evolutionary leap forward in thermopile pyranometer design, resulting in the highest achievable measurement accuracy and data availability of any Class-A / Secondary Standard pyranometer commercially available.

SR30 features a patent pending onboard maintenance-free recirculating ventilation system with heating (RVH™ technology), that outperforms competing pyranometer models optioned with bulky high power ventilation units requiring regular filter maintenance.

The SR30 is ideally suited for research grade meteorological monitoring networks, as well as CNI and utility scale PV performance monitoring applications requiring IEC 61724-1:2017 compliance: Diffuse, GHI, and GPOA applications.

The sensor reports the sampled solar irradiance signal received at the detector level (180° view) in W/m^2 , when polled over an RS485 / Modbus connection via the host DAQ / SCADA system.

Best Data Availability

High data availability is achieved by circulating heated air flow between the inner and outer domes, via a miniaturized low-power ventilation system within the pyranometer housing. Hukseflux RVH™ technology suppresses dew and frost deposition as effectively as traditional ventilation systems, but at a mere fraction of the power and without the need for routine filter maintenance.

- ✓ Low power consumption, < 2.3 Watts
- ✓ No routine filter or desiccant maintenance
- ✓ Real-time sensor tilt / level reporting
- ✓ Pollable calibration history and due date

RVH™ technology actively facilitates thermal equilibrium between SR30 inner / outer domes and instrument case, so much so that thermal offset-A bias is reduced by 70% compared to other competing ventilated Class-A pyranometer brands.

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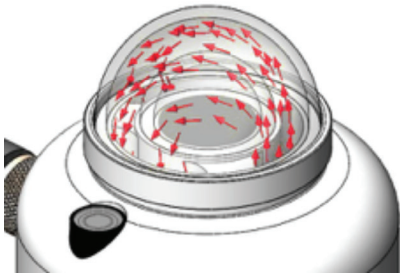
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Standard Features

- RVH™ ventilation technology with heating
- RS485 RTU / Modbus communication
- Internal desiccant cartridge (maintenance free)
- Easy view spirit / bubble level
- 5-year warranty (standard)
- Data registers:
 - raw irradiance
 - temp corrected irradiance
 - tilt / elevation
 - case temperature
 - % RH (internal)
 - pressure
 - ventilator fan speed (RPM)
 - ventilator heater & fan current
 - sensitivity
 - calibration history and date
 - sensor model & serial number



Recirculating ventilation with heated air flow between the inner and outer domes is extremely power efficient, resulting in a deposition free sensor optic with minimal power drain.

SR30 Specifications

Specifications:	SR30 Pyranometer
ISO-9060 Classification	Secondary Standard
IEC 61724-1:2017 Class	Class-A and B compliant
Signal Output	RS-485 RTU (Modbus)
Spectral range	285 – 3000 nm
Response time (95%)	< 3 sec.
Directional response	< ± 10 W/m ²
Temp response (80K range)	< ± 0.4% (-30 to +50°C)
Operating temperature	-40 to +80 °C
Thermal offset-A	< 2 W/m ²
Thermal offset-B	< ± 2 W/m ²
Non-linearity	< ± 0.2%
Non-stability (annual)	< ± 0.5%
Tilt response	< ± 0.2%
Calibration traceability	WRR
Calibration uncertainty	< ± 1.2% (k = 2)
Ventilation / heating	Yes (RVH™ technology)
Tilt measurement uncertainty	< ± 1° (0 - 90°)
Operating voltage	8 to 30 VDC
Warranty (parts & labor)	5-years



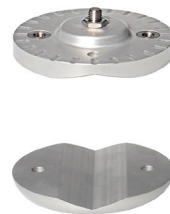
SR30 digital pyranometer with RVH™ technology (foreground), extreme winter weather conditions

IEC 61724-1:2017 Compliance

The latest revision of the IEC 61724-1:2017 standard (Photovoltaic System Performance Monitoring - Guidelines for Measurement, Data Exchange and Analysis) requires the pyranometer be ventilated and heated, if the PV monitoring system calls for Class-A sensors. SR30 is the only high-performance pyranometer commercially available equipped standard with ventilation and heating. Most competing pyranometers don't even comply with IEC 61724-1:2017 Class-B specifications (i.e. case heating required).

System Cost Reduction

For system integrators manufacturing and installing monitoring systems meeting IEC 61724-1:2017 Class-A compliance, SR30 represents a substantial cost savings as ventilation and heating are included standard. With an estimated 75% power reduction over competing pyranometers 'optionally' equipped with ventilation and heating, SR30 power savings translate into lower system build cost as UPS power demand / sizing are markedly reduced.



Optional spring loaded TML tube mount leveling fixture, for flush surface or cross-arm tube mounting

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