



**RIKA RK200-03
Pyranometer
Output: 4-20mA and RS485**



Model: RK200-03B
Manufacture warranty: 12 months
Country of Origin: China

Descriptions

The RK200-03 Pyranometer is produced based thermoelectric principle; sensing elements are made by winding - plated thermopiles with multi contacts. Its surface is coated by black coating with high absorption rate. Hot contacts on the sensors surface, while the cold junction is located within the body, temperature difference between the hot and cold junction generates electromotive force, the thermoelectric effect is proportional to the solar radiation. In order to reduce the ambient temperature effect, temperature compensation circuit designed here to reduce the effects to products properties.

Features

- Conform to the WMO standard
- Suitable for harsh environment
- With horizontal bubble
- High sensitivity
- Double transmission glass
- Visual desiccant window
- Easy installation

Applications

- Solar energy & photovoltaic power generation
- Agriculture and forestry monitoring
- Crop growth monitoring
- Tourism eco
- Weather stations



Specification:

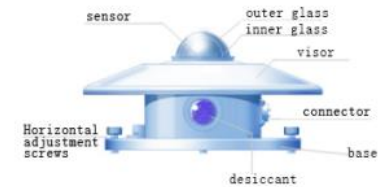
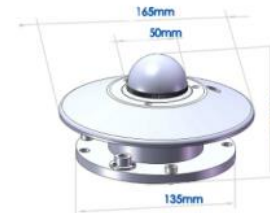
- Spectral Range: 300~3200nm
- Supply: 12-24VDC
- Range: 0~2000W/m²
- Output Signal: 4-20mA or RS485
- Sensitivity: 7-14μV*W⁻¹*m²
- Internal resistance: 350 Ω
- Non-linearity: <±2%
- Measuring angle: 2π solid angle
- Response time: ≤35s (99%)
- Zero drift (temperature drift:5h/h): ±5W/m²
- Stability: ±2%/year
- Cosine correction: ≤±7%(Solar elevation angle=10°)
- Temperature effect: ±2%(-10°C--+40°C)
- Operating Temperature: -40°C to +80°C
- Recalibration interval: 2 years
- Desiccant: Silica gel desiccant
- Weight(unpacked): 2.5kg
- Pack: Aluminium instrument box
- Dimension: ø165 x 120 mm
- Installation bracket(optional): Horizontal bracket or adjustable angle bracket
- Ingress Protection: IP65
- Storage Condition: 10°C to 60°C@20%-90%RH

For RS485/4-20mA output signal, the external signal conversion module(98*66*49mm) will be additional.

Output Characteristics

- **4-20mA**
Solar radiation values(W/m²) = (I-4)/16*2000
(Where I is output current value, unit: mA)
- **RS485**
MODBUS-RTU

Dimension



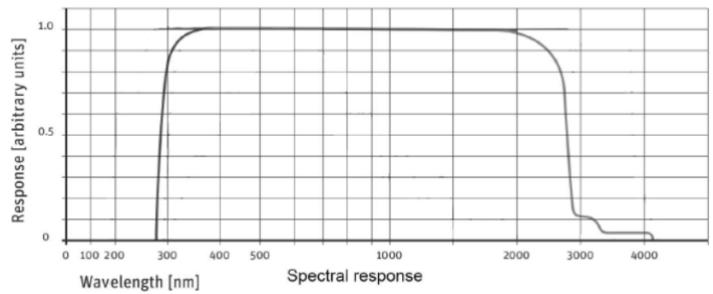
Mounting

- The sensor should be installed in the open air without any shield above the sensing surface.
- The sensor connector should be faced to the north, fix it after the horizontal position is well adjusted.
- Please check the filter cover regularly & make sure it is clean.
- Please do not remove or loose the filter cover, otherwise the accuracy will be affected.
- Please make sure the desiccant to be dry (If the colour of desiccant is changed from blue to red, it should be replaced)



- Protection cover is not necessary in general rainfall, but if prolonged heavy rains or hail, the protective cover is recommended to be installed
- The sensitivity is recommended to be re-calibrated after two years use.

Spectral Response



Complies with applicable CE directives.
Specification subject to change without notice.
Version 3.0