

## MEASURES NET SHORTWAVE AND NET LONGWAVE RADIATION.

### DESCRIPTION

This model includes two shortwave and two longwave sensors, which are combined to provide separate outputs for net shortwave and net longwave radiation.

The JNR2 measures net radiation in Watts per meter squared. Net longwave is calculated by combining the output of two longwave sensors. Net shortwave is calculated separately by combining the output of two shortwave sensors.

The use of four sensors solves the problem of accurately measuring short-and longwave radiation with a single instrument. The JNR2 has similar accuracy to the Kipp & Zonen JNR1 and is half the cost. The compact, rugged, and lightweight design facilitates mounting.



### RECOMMENDED ACCESSORIES



**JSP-110** The pyranometer sensor is calibrated to measure the shortwave radiation reaching the Earth's surface.

### SPECIFICATIONS

#### RANGE

- Pyranometer: 0 to 4000 W m<sup>-2</sup>
- Pyrgeometer: -250 to 250 W m<sup>-2</sup>

#### NON-LINEARITY

- Pyranometer: (0 to 1000 W m<sup>-2</sup>) < 2%
- Pyrgeometer: (-250 to 250 W m<sup>-2</sup>) < 1%

#### ZERO OFFSET

- Pyranometer: < 15 W m<sup>-2</sup>

#### DIRECTIONAL ERROR

- < 20 W m<sup>-2</sup>

#### RESPONSE TIME 95%

- 10 s

#### TEMPERATURE ERROR

- (-10 to 40° C) < 5%

#### SPECTRAL RANGE (50% POINTS)

- Pyranometer: 0.31 to 2.8 μm
- Pyrgeometer: 4.5 to 42 μm

#### FIELD OF VIEW

- Pyranometer: Upper - 180°, Lower - 150°
- Pyrgeometer: Upper - 150°, Lower - 150°

#### SENSOR ASYMMETRY

- < 5%

#### SENSITIVITY

- 10 to 20 μV per W m<sup>-2</sup> (for both shortwave and longwave)

#### ANNUAL SENSITIVITY CHANGE

- < 1%

#### TILT ERROR

- < 1%

#### UNCERTAINTY IN DAILY TOTAL

- < 10%

#### OPERATING ENVIRONMENT

- -40 to 80° C
- Designed for continuous outdoor use

#### DIMENSIONS

- 4 x 20 x 7 cm long; 30 cm mounting rod

#### MASS

- 250 g (+300 g for 10 m cable)

#### CABLE

- 10 meters

#### WARRANTY

- 1 year against defects in materials and workmanship