



J & S Instruments, Inc.

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AS-170 SOLAR RADIATION SENSOR w/ MOUNT DATA SHEET

The AS-170 Solar Radiation Sensor is a photovoltaic detector (silicon photo diode) located in a fully cosine-corrected miniature head seated in an aluminum mounting plate. The sensor is fully weatherproof and has an acrylic diffuser. This plate has three adjusting screws and a target bubble level for assurance of a totally horizontal installation.

In a clear and unobstructed daylight condition, the AS-170 compares favorably with a thermopile. This pyranometer type solar energy measurement does not cover the full range of the solar spectrum, but the error is <5% on most sunlight days. It functions in the spectral range (wavelength) of 400 to 1100 microns and outputs a microamp current. This unit comes with six feet of coaxial cable stripped and tinned for attachment to a data logging or monitoring device.

SPECIFICATIONS:

Calibration: against PSP in natural daylight
Sensitivity: typically 90 microamps/1000 W/meter²
Linearity: maximum 1% up to 3000 W/meter²
Dimensions: 3" Dia. x 1.25" H (total)

OPTION:

On occasion, it will not be convenient to have the output of the AS-170 as a microamp current and will instead require a 4 to 20 mA output. As an option, this unit can be fitted with a transmitter module that will provide for the microamp to milliamp conversion to drive most control units. The electronics package circuitry is encapsulated in vacuum degassed rubber to provide immunity to gasses, humidity and vibration for a rugged applications where inhospitable weather swings and rough handling mandate it. This module is installed in a cast aluminum housing and has a cast cover and rubber gasket to give it a NEMA 4 classification. This option comes complete with six feet of cable and two weatherproof entrance connectors. To order this option, add the suffix -T to the device ordered part number.

(continued)

SPECIFICATIONS: -T

Housing dimensions: 2" W x 4" L x 2" D
Rating: NEMA 4
Output: 4 to 20 mA
Supply voltage: 12 VDC
Supply current: 250 mA

The AS-170 Solar Radiation Sensor w/ Mount comes complete with a full one year warranty against defects in materials or workmanship.

March 1998

