

Solar Sensor PSP-110TM

Apogee Instruments Pyranometer

DATA SHEET

FEATURE SUMMARY

- Hemispheric top to shed water and debris
- Fully potted electronics
- Self-powered design
- Silicon photodiode
- Calibrated to +/-5%
- Made in USA

DESCRIPTION

Solar Sensor PSP-110TM is a silicone-cell pyranometer. It measures the intensity of solar energy striking the sensor. The analog output value is usually presented as W/m² (watts per square meter).

PSP-110 is manufactured in the USA by Apogee Instruments. As a professional quality sensor, it is designed with longevity in mind, aiming to provide years of trouble-free operation.

Pyranometers can be used for scientific calculations to estimate the rate of crop transpiration or used to model expected output from a solar power installation.

PSP-110 can also be used to assess cloud cover conditions for aviation and road maintenance applications.



KEY FEATURES

Construction: Electronic components and shielded cable are fully potted in an anodized aluminum sensor body.

Sensor Output: Analog output.

Installation: **PSP-110** is user serviceable. A single mounting screw is required to secure the solar sensor to the mounting bracket. The cable should point to the north when used in the northern hemisphere.

Mounting: **PSP-110** should be mounted so as to minimize unwanted reflections and shadows. The sensor mounts to the Dyacon radiation shield using **BKT-PSP-1TM**, which is a simple mounting bracket that requires no tools (see image below).

MEASUREMENT *

Sensitivity	0.20 mV per W/m ²
Calibration Uncertainty	+/- 5%
Repeatability	< 1%
Drift	< 2% per year
Non-linearity	< 1% up to 1750 W/m ²
Response Time	< 1 ms
Field of View	180°
Spectral Range	360 nm to 1120 nm
Directional Response	+/- 5% at 75° zenith

ELECTRICAL

Power	None Unamplified photovoltaic response
Sensor Output Range	0 mV to 250 mV typical

*Specifications are based upon manufacturer data.

MECHANICAL

Housing	Anodized aluminum
Cable	Shielded, twisted pair Black Santoprene™ jacket 26 AWG, PVC, tinned Red, black, and white
Dimensions	2.4 cm diameter x 2.75 cm height 0.94" x 1.1"
Weight	90 g (3.17 oz)

ENVIRONMENTAL

Operating Humidity	0% to 100% RH
Operating Temperature	-40°C to 70°C
Sealing	Submersible to 30 m

ACCESSORIES

Accessories	BKT-PSP-1™ mounting bracket
-------------	-----------------------------



Image 1: Front view.



Image 3: Side view.



Image 2: Mounted with BKT-PSP-1.