

SK08 & SK08-E PYRANOMETER

First Class Pyranometer for Solar Global Radiation



The Middleton SK08 is a solar radiometer for the accurate measurement of global irradiance on a plane surface. It exceeds the international accepted specifications for a Good Quality pyranometer. The SK08 features a passive thermoelectric sensor, optimised for thermal stability. The SK08-E version has an inbuilt signal amplifier.

Performance Specification	ISO9060 First Class WMO Good Quality	SK08 & SK08-E
Response time (95%)	< 30s	11s
Zero offsets a) thermal radiation (200 W.m ⁻²) b) temperature gradient (5K/hr)	+ 15 W.m ⁻² (ventilated) ± 4 W.m ⁻²	< + 2.5 W.m ⁻² (unventilated) < ± 4 W.m ⁻²
Non-stability (change/year)	± 1.5%	< - 0.5%
Non-linearity (100 - 1000 W.m ⁻²)	± 1%	< ± 1%
Directional response (1000 W.m ⁻² at 80°)	± 20 W.m ⁻²	< ± 20 W.m ⁻²
Spectral selectivity (0.3 to 3μm nominal)	± 5%	< ± 3%
Temperature dependence of sensitivity	4% (for 50K interval)	< 2% (-30 to +50°C)
Tilt response (0-90°, at 1000 W.m ⁻²)	± 2%	< ± 1%

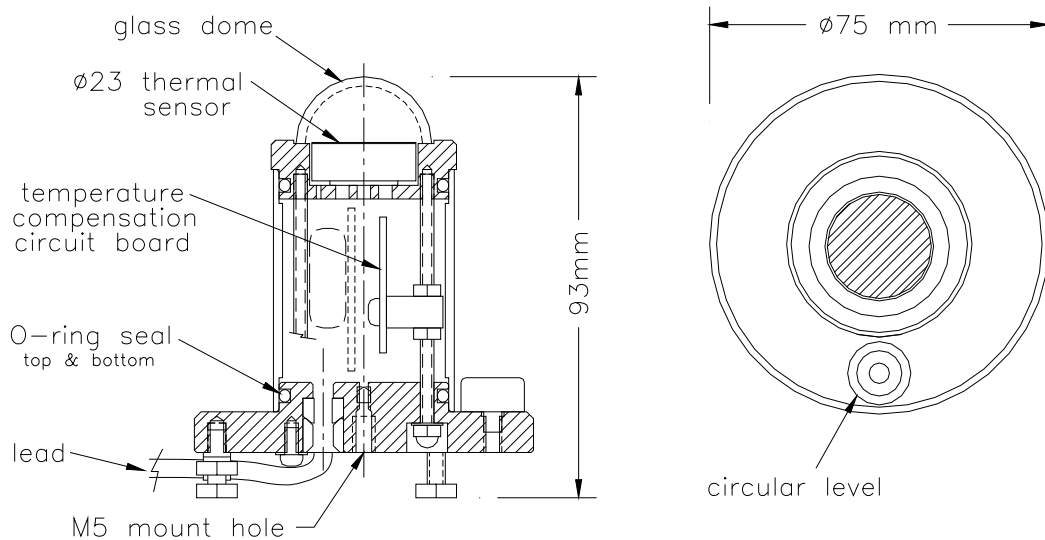
FAST RESPONSE and STRONG OUTPUT SIGNAL

Aluminium construction, hard anodized for corrosion resistance.

Excellent directional response, and minimal thermal errors.

Fully sealed for low-maintenance.

Middleton Solar SK08 & SK08-E Pyranometer Detailed Specification



Meets the ISO9060 specifications for a First Class Pyranometer, and the equivalent WMO specifications for a Good Quality Pyranometer.
Temperature-compensated thermoelectric sensor.
The SK08 has a passive microvolt output, and the SK08-E version has an in-built signal amplifier to give a millivolt output for easy measurement.
Fully sealed to IP66, with no need for regular desiccant inspection.
Glass dome windshield to protect the sensor.
User's Instructions and Calibration Certificate included.

General Specification

sensitivity	18 - 21 $\mu\text{V}/\text{W}\cdot\text{m}^{-2}$ (SK08); 1.0mV/W.m ⁻² (SK08-E)
viewing angle	2π steradians
maximum irradiance	2000 W/m ²
spectral range	0.3 - 3 μm (nominal); 305 - 2800 nm (50% points)
resolution	± 2 W.m ⁻²
operating temperature	-35 to +60°C
impedance	40 Ω (SK08); 65 Ω (SK08-E)
level accuracy	0.2°
power requirement (SK08-E only)	5 -15 VDC; < 6mA
desiccant	orange silica gel (non-toxic)
mounting method	central M5 hole; adjustable feet
output lead	6m
shipping size & weight; net weight	150 x 150 x 150mm, 0.5Kg; 0.3Kg
fullscale output	< 40mV (SK08); < 2V (SK08-E)
daily uncertainty (95% confidence)	5%
applications	economical good quality measurements for weather stations, networks, climate control, field testing