

7241

PYRANOMETER/SOLAR RADIATION SENSOR



MODEL C-A



The 7241 pyranometer / solar radiation sensor is a compact sensor for solar energy measurements. It compares favourably with thermopile sensors at a lower price point.

The sensor features a fully potted, domed-shaped head making the sensor fully weatherproof, self-cleaning, and impervious to thermal based accuracy fluctuations. The pyranometer sensor is calibrated against precision reference thermopile sensors in natural light conditions.

This generation sensor head design includes:

- Self-cleaning dome-shaped head.
- Excellent cosine response.
- Potted solid to withstand extreme and humid conditions, and reduce thermal based accuracy fluctuations.
- Calibrated silicon-cell photodiode sensor accurate to $\pm 5\%$, under clear sky conditions.
- Easily integrates with Unidata Starlog loggers and and Neon Remote Terminals.

Unidata can provide mounting assembly that is ideal for mounting Radiation Sensors/ Pyranometers.

Radiation Sensors must be optically levelled to ensure repeat measurements are accurate and to ensure for repeat measurements are at the same level orientation to the sun.

Radiation sensor mounting assembly includes a levelling unit fitted with a bulls eye as well as a mounting arm and mounting hardware for poles to a maximum of 60mm diameter.

SPECIFICATIONS

PHYSICAL SPECIFICATIONS PYRANOMETER	
SIZE:	Diameter 24mm x 27.5mm tall, IP68 Can be submerged under water up to depths of 30m
WEIGHT:	90 grams with 5m of cable
OPERATING TEMPERATURE:	-40°C to 70°C. Not affected by humidity
ELECTRICAL SPECIFICATIONS	
POWER SUPPLY:	5 ... 24 VDC
TYPICAL CURRENT CONSUMPTION:	300µA
OUTPUTS:	1 analog 4mV per 1W/m ²
SENSITIVITY:	2.0mV/m ²

NON-STABILITY:	<2% per year
NON-LINEARITY:	<1% up to 1750W/m ²
RESPONSE TIME:	<1ms
SPECTRAL RANGE:	360nm to 1120nm
DIRECTIONAL RESPONSE ERROR:	$\pm 2\%$ at 45° and $\pm 5\%$ at 75°
CABLE:	5m of 3 core cable
PHYSICAL SPECIFICATIONS MOUNTING ASSEMBLY	
MATERIAL:	Powder coated aluminium
SIZE:	190mm x 101mm x 120mm (LxWxH)
WEIGHT:	700grams
MOUNTING:	Set of two 60mm U-bolts and saddle clamps