

Solar radiation (global irradiance)

Technical features - MODELS



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Secondary standard pyranometers

Radiometer for solar irradiance measurement, according to ISO 9060 and WMO No. 8 (Part I, Chapter 7) standards. These sensors are classified as ISO 9060 Secondary Standard. With a total daily uncertainty of only 2%, fast response time, these sensors are ideal for users requiring high-end accuracy and reliability.

Order numb.	DPA252 (1)	DPA952 (2)
Output	μV	RS485-Modbus 4÷20 mA
Power supply	-	7÷35 Vdc
Sensitivity	7÷25 $\mu\text{V}/(\text{W}/\text{m}^2)$	NA
Measuring range	See Irradiance range	0÷1500 W/m^2
Data logger compatibility	M-Log (ELO007-008), R-Log (ELR515), X/E-Log (all models)	

Common features

Secondary Standard pyranometer	ISO 9060 classification	Secondary Standard
	Achievable uncertainty 95% confidential level (daily totals). According to WMO manual, not considering calibration errors, for well maintained instruments on clear sky days, at mid-latitude sites	$\pm 2\%$
	Spectral range	285÷3000 nm
	Temperature response (50 K range)	$< \pm 1\%$ (-10÷40 °C) when compensated: $< \pm 0,4\%$ (-30÷50°C)
	Irradiance range	0÷4000 W/m^2
	Response time 95%	3 s
	Directional (azimuth+cosine) error W/m^2 (@1000 W/m^2) $0 < \theta < 80^\circ$	$< \pm 10 \text{ W}/\text{m}^2$
	Zero offset a (response to 200 W/m^2 net thermal radiation)	$< 5 \text{ W}/\text{m}^2$ (unventilated)
	Zero offset b: Thermal change W/m^2 (5 °C/h)	$< \pm 2 \text{ W}/\text{m}^2$
	Non linearity % (1000 W/m^2)	$< \pm 0.2 \%$
	Stability (% change/year)	$< \pm 0.5 \%$
	Standard built-in temperature sensor	Yes
	Standard built-in heater	Yes (12 Vdc, 1,5 W)
	Data provided with each sensor	- Calibration certificate - Temperature dependence data - Directional response data
	Recommended recalibration	Every 2 years
	Mounting (pole \varnothing 45÷65 mm)	Using DYA034 or DYA035 arms + DYA049
	Cable	Not included. See Accessories
	Housing	Anodized aluminum

