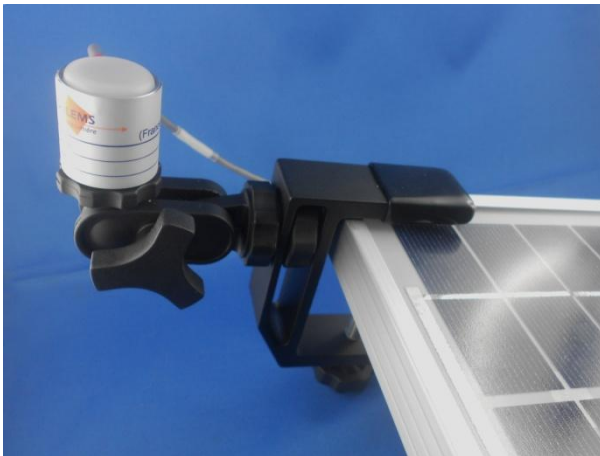


# RG- SolSpy

## SOLAR RADIATION SENSOR

**KEEP AN EYE ON SUNLIGHT**



RG-SolSpy sensor in operation on a PV plant



- Up-grade of RG100 sensor
- Optimized in partnership with GEEPS laboratory in Supelec <sup>1</sup>
- Measurements equivalent to a pyranometer and much faster (see next page)
- Much cheaper and easy to use

### Optical characteristics

- Cristalline silicon cell 1cm<sup>2</sup>
- Spectral width : 400 – 1100 nm (FIG 1.)
- Cosine response : < 5% up to 85° of incidence
- Range of irradiance : 1 – 1300 W/m<sup>2</sup>

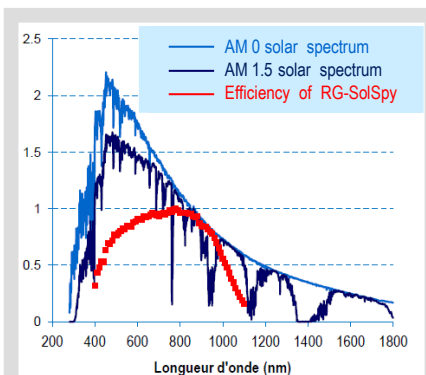


FIG. 1 – Quantum efficiency of RG-SolSpy vs. solar spectrum

### Electrical characteristics

- No power supply needed\*\*
- Signal 100mV \*\* @ 1000W/m<sup>2</sup> STC (AM1.5 spectrum and 25°C)
- 0 - 200mV channel recommended
- Precision ± 5%
- Response time < 1s for 100% of the signal (see FIG.2)

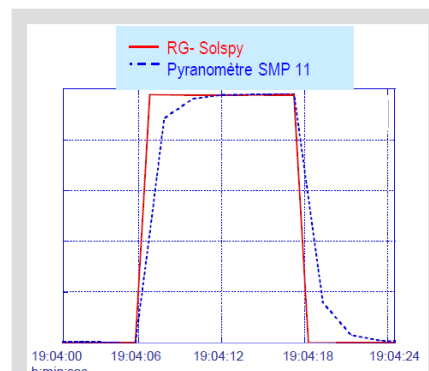


FIG. 2 – RG-SolSpy response time

\*\* 4-20mA version under development

<sup>1</sup> Génie Electrique de Paris-Saclay, Ecole Supérieure d'Electricité (FRANCE, 91) – Thomas Mambrini PhD thesis, 2014

### Climatic characteristics

Weatherproof housing for outdoor use

- Continuous temperatures : - 30°C / + 40°C
- Peak temperatures : - 40°C / + 60°C
- Temperature coefficient : +0.1% per °C
- Continuous relative humidity : 85% H.R.
- Peak relative humidity : 100 % H.R.
- UV stability : excellent (PMMA housing)
- Total immersion in water : only a few hours.

### Mecanical characteristics

Measurement to be made on a voltmeter or a datalogger (not supplied)

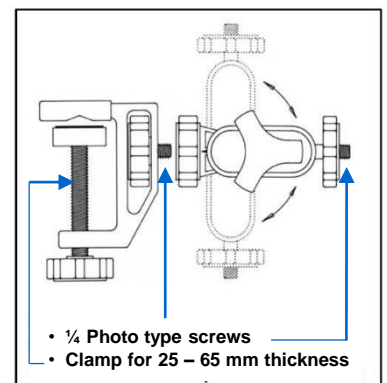
- Dimensions of the probe :  $\Phi 28.6$  mm x height 31.7 mm
- PMMA housing and anodized aluminum casing
- Casing with an assembly threaded hole  $\frac{1}{4}$  BSW (photo standard)
- Shielded cable 2 x 0.22mm<sup>2</sup> UL5471C type – 5m long
- Delivered with :
  - An individual calibration certificate
  - A black versatile mounting bracket – see picture opposite
  - 2 quick-banana plugs
  - 1 transport suit-case



RG-SolSpy probe alone



Complete set



Details of the bracket

### Comparison RG Solspy vs. fast SMP 11 pyranometer - example over a complete day (1 point each 30sec.)

SMP 11 pyranometer

RG-Solspy

