Hukseflux Thermal Sensors





### Figure 1

 $S\overline{R}12$  solar radiation sensor. Sensor (1), glass dome (2,3), desiccant (5), cable, standard length 5 m (10), heater (11), temperature sensor (12).



**Figure 2** *SR12 dimensions in mm.* 

# **EKOPOWER type Hukseflux SR12** FIRST CLASS SOLAR RADIATION SENSOR FOR SOLAR ENERGY TEST & EVALUATION

SR12 is a solar radiation sensor that meets and exceeds the ISO-9060 Standard performance mandate for a First Class pyranometer, specific to "solar energy test applications".

## INTRODUCTION

The SR12 is supplied standard with a laboratory characterised directional response report, built-in case temperature sensor, and low power resistive heater for dew/frost prevention. Ideally suited for solar renewable systems performance and solar energy resource validation, the SR12 is the first COTS (Commercial Off-The-Shelf) pyranometer of its kind meeting the ISO-9060 First Class performance mandate for solar energy test applications.

ISO 9060 covers "Solar energy - Specification and classification of instruments for measuring hemispherical solar and direct solar radiation". The official classification name for SR12 is "first class pyranometer for purposes of solar energy test applications" as defined by ISO 9060 paragraph 4.3.2. ISO recommends and approves this pyranometer type for outdoor testing related to solar energy use. The added temperature sensor is used for additional quality assurance. Also added is 1.6 W heating. Heating in the evening will help to keep dew and frost away and will promote evaporation of deposited rain and snow.

## SPECIFICATIONS

ISO classification:

Spectral range: Sensitivity (nominal): Operating temperature: Irradiance range : Temperature response: Calibration traceability: Required heater power: Temperature sensor: first class for solar energy test applications  $0.3 \text{ to } 3 \mu\text{m}$  $15 \mu\text{V/(Wm}^{-2})$  $-40 \text{ to } +80 \,^{\circ}\text{C}$  $0 \text{ to } 2000 \,\text{Wm}^{-2}$  $4 \,\% (interval 50 \text{ K})$ WRR  $1.6 \,\text{W} @ 12 \text{VDC}$ Pt100 (standard) 10 kOhm Thermistor(optional) 5 m (standard) extended in multiples of 5 m (optional)

Cable length:

### ACCESSORIES

iBOX and EKO21N Dataloggers with internet options and wireless 3R/GPRS, see www.ekopower.nl

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