

**HUKX**

Sensor  
Technology

Brochure

Pyranometer with handheld  
read-out unit/data logger

**SR05-L19**

# SR05-LI19 Pyranometer

with handheld read-out unit/data logger

SR05 is a solar radiation sensor that is applicable for most common solar radiation observations. SR05-A1, with analog millivolt output, is Hukx's most affordable pyranometer that complies with the spectrally flat Class C specifications of the ISO 9060 standard and WMO Guide. LI19 is a high-accuracy, handheld read-out unit/data logger. The SR05-LI19 combination offers a portable and versatile solution, ideal for mobile field measurements and short-term data logging.

## Introduction

**SR05-LI19** is a solar radiation sensor that is applied in general observations. It measures the solar radiation received by a plane surface from a 180 ° field of view angle, expressed in  $W/m^2$ .

Built for both outdoor and indoor use, the SR05 pyranometer can be used under natural sunlight and lamp-based solar simulators. Depending on your application, SR05 can be mounted horizontally, tilted

(for Plane of Array radiation), or inverted (for reflected radiation). Model version SR05-A1 offers an analog millivolt output.

LI19 is a high-accuracy, handheld read-out unit/data logger that displays measured radiation data in real-time and stores it. Once programmed with the sensitivity of SR05 through its PC user interface, the display will automatically show the actual value of the solar radiation in  $W/m^2$ .

Figure 1 SR05-A1 pyranometer (right) with LI19 handheld read-out unit/data logger (left).



The entire SR05-LI19 system is supplied in a practical transport case, for easy portability and protection during field measurement campaigns. The rugged case includes all of the essentials: software, a USB cable, and AA batteries—allowing for more than 50 days of continuous operation. LI19 is also compatible with other pyranometers and heat flux sensors.

## Operation

Operation of SR05-LI19 is easy and user-friendly. As LI19 has already been pre-programmed at the factory, measurements can begin by simply switching on the device. To adjust the data storage interval, connect the LI19 to a PC and access the LI19 user interface software.

## Suggested use

- short-term field measurement of solar radiation
- education in solar energy



Figure 2 SR05-LI19 as it is delivered, in a practical transport case for portability and protection.

## Delivery

SR05-LI19 comes pre-packaged in a field-ready transport case. The package includes:

- SR05-A1 pyranometer
- pre-programmed LI19 with batteries
- 3 m cable with female M12-A connector on sensor end and stripped on other end
- 2 AA batteries
- LI19 read-out unit/data logger software
- carrying case, with space for sensors
- product certificates for SR05 and LI19
- strip with measurement unit markers
- USB cable

## Latest software

The latest software can be downloaded [here](#).



Figure 4 LI19 paired with a pyranometer in a field measurement campaign.

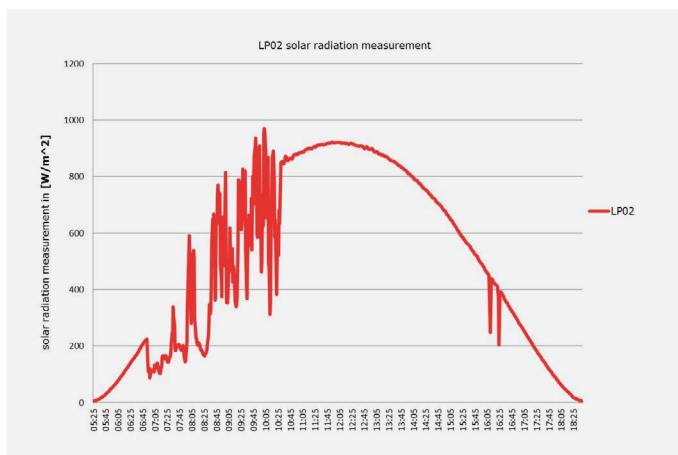


Figure 3 A graph generated using data stored on LI19.

## See also

- Read about the [SR05-A1](#) spectrally flat Class C pyranometer.
- Learn more about the [LI19](#) read-out unit/data logger.
- View our complete [range of solar sensors](#).

## SR05-LI19 specifications

### SR05-A1 specifications

measurand	hemispherical solar radiation
ISO classification:	
ISO 9060:2018 classification	spectrally flat Class C pyranometer
ISO 9060:1990	second class pyranometer
WMO performance level	moderate quality pyranometer
calibration uncertainty	< 2.4 % (k = 2)
calibration traceability	to WRR
spectral range	285 to 3000 x 10 <sup>-9</sup> m
sensitivity (nominal)	10 x 10 <sup>-6</sup> V/(W/m <sup>2</sup> )
rated operating temperature range	-40 to +80 °C
temperature response	< ± 3 % (-10 to +40 °C)
standard cable length	3 m

### LI19 specifications

output on display	solar radiation
stored measurement definition	minimum maximum and average over storage interval with conversion to W/m <sup>2</sup>
A/D conversion	16 Bits
temperature dependence	< 0.5 % + 3 x 10 <sup>-6</sup> V over rated range
display refreshment rate	1 s <sup>-1</sup>
battery type	2 x AA
battery life	> 50 days (on fresh batteries)
storage interval range	2 to 65535 s (selectable)
storage capacity	3518 measurements
rated operating temperature range	-10 to +40 °C

## About Hukx

Hukx is the leading innovator in solar radiation and heat flux sensor technology. We are proud to set the standard in high-accuracy measurement, and to be working at the heart of the energy transition.

Customers worldwide rely on our bestselling pyranometers and heat flux sensors. From sensor design and selection to supply and recalibration, we support you across the entire lifecycle.

Hukx is headquartered in the Netherlands, with locally owned representative sales offices in the USA, Brazil, India, China, Southeast Asia, and Japan.

Let us help you select the best sensor for your application. Get in touch with our experts today via: [info@hukx.com](mailto:info@hukx.com)

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