



**HUKX**

Sensor  
Technology

Brochure  
Handheld read-out unit  
Data logger

**L19**

# LI19

## Handheld read-out unit

Data logger

LI19 is a high-accuracy handheld read-out unit/data logger. It is used to make mobile measurements, for short term data logging (as a static logger), and as an accurate millivolt amplifier directly connected to a PC. LI19 can be used with a variety of sensors.

LI19's most common application is with heat flux and solar radiation sensors. LI19 battery life and memory allow continuous measurement for up to 50 days.

Figure 1 LI19 read-out unit/data logger.



## Introduction

LI19 is typically used to display the measured solar radiation or heat flux. It measures a DC voltage. Once programmed with the sensitivity of the connected sensor, the display will show the actual value of the heat flux or solar radiation in  $W/m^2$ . LI19 is programmed through its PC user interface. We recommend downloading the latest software. LI19 is battery-powered, using 2 x AA-type batteries. Fresh batteries allow more than 50 days of operation. The system is supplied in a practical transport case, for easy transport and protection during field measurement campaigns. LI19 may be used with pyranometers and heat flux sensors.

## Operation

Operation of LI19 is easy. Directions for use:

- Switch on LI19, connect the sensor.
- Optional: mark the units of measurement on LI19, in the window below the display.
- Connect LI19 to a PC, using the USB cable and the LI19 software.
- Program sensor model and sensitivity.
- Switch off LI19 and restart LI19, check sensor sensitivity settings on the display (displayed 1 s after startup).
- Optional: program the storage interval and starting time of storage.

NOTE: switching off LI19 will discontinue data storage.

- Disconnect LI19 from the PC.
- Start a mobile measurement.
- Later actions: export data to the PC.

## Suggested use

- short-term field measurement of solar radiation or heat flux
- amplification of heat flux sensor signals
- education in solar energy

## Latest software

The latest software should be downloaded from <https://hukx.com/downloads>

## LI19 design

LI19 is built for easy use with a large size LCD, displaying quantities in  $W/m^2$ , and a USB connection.



Figure 3 Application example: with HF03 heat flux sensor.



Figure 2 Application example: SR05-A1 Class C pyranometer with LI19 read-out unit/data logger.

## Delivery

- LI19 with 2 x AA battery
- 2 spare batteries (type AA)
- LI19 software
- transport case with space for sensors
- LI19 product certificate
- strip with measurement unit markers
- USB cable

## See also

- [SR05 / LI19](#) Class C pyranometer with LI19 for solar radiation measurement
- [HF03 / LI19](#) heat flux sensor with LI19 for flare radiation/heat flux measurement

## LI19 specifications

output on display	heat flux solar radiation	battery type	2 x AA
input conversion	analogue voltage division by the sensor sensitivity	internal power supply voltage	3 VDC
display definition	4 digits with sign	battery life	> 50 days (on fresh batteries)
display refreshment rate	1 s <sup>-1</sup>	rated operating temperature range	-10 to +40 °C
calibration uncertainty	0.1%	system requirements for use with PC	Windows XP and higher
temperature dependence	< 0.5 % + 3 x 10 <sup>-6</sup> V over rated range	connection to PC	USB 1.1 / 2.0 low speed
sample rate	2 s <sup>-1</sup>	user interface on PC	LI19 software
rated input range	6.25 to 200 x 10 <sup>-3</sup> V (selectable)	IP protection class	IP40
A/D conversion	16 bits	connection to sensor	2 x (female chassis plug for 4 mm banana with screwed signal wire clamp)
stored measurement definition	minimum maximum and average over storage interval with conversion to W/m <sup>2</sup>	weight	0.175 kg (net) 1.3 kg with carrying case
storage capacity	3518 measurements	dimensions LI19	(70 x 146 x 25) mm
storage interval range	2 to 65535 s (selectable)	dimensions transport case	(400 x 300 x 120) mm
compatibility with Hukx sensor models	SR05-A1, HFP01, SBG01, HF03		

## 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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