Guidelines for the transition from SR20 to SR200-A1 analog pyranometers

SR200-A1 offers the same measurement accuracy and reliability as older models, but in an updated form factor and connector. To make the transition from the older analog SR20 pyranometer as easy as possible, Hukx offers this overview of changes and improvements. In case you want to reuse an existing SR20 cable, we offer an adapter cable.

Introduction

Hukx SR200-A1 analog pyranometers offer the same measurement accuracy as their predecessors, but benefit from the updated housing and connector. This document provides guidelines and considerations for customers transitioning from older analog models to these new models.

Depending on the specific installation design, more changes may be required when replacing an SR20-T1 or SR20-T2 with the corresponding SR200-A1 models.

Notable changes

This document focuses on customers who are using the SR20 (ISO 9060 Class A) pyranometers. Each consideration contains specific instructions, remarks, or points of attention. Please refer to the respective user documentation for a complete overview of all installation advice and instructions for use.

Figure 1 The transition from SR20 to SR200-A1 or from SR15-A1 to SR100-A1 is an easy step with the help of our guidelines.

Table 1 ISO 9060 specifications.

item	direction
response time (95 %)	SR20 specification 4.5 s SR200-A1 specification 3 s

Table 2 Cabling and connector.

item	direction
connector incompatible	Replace the cable with the SR200-A1 cable. Refer to the SR200-A1 product user manual for instructions. Alternative change: Use the available Hukx adapter cable C12A-A1 to reuse the existing SR20 cable.
temperature sensor wiring The SR20 temperature sensor has 4 wires for readout, while the SR200-A1 temperature sensor has 3 wires.	Consider changing the temperature sensor wiring in case a 4-wire readout was used for SR20. Refer to the product user manual for instructions. Alternative change: Use the available Hukx adapter cable C12A-A1 to re-use the existing cable and 4-wire temperature sensor wiring.

Table 3 Mounting and mechanical.

item	direction
change in positioning of the two off-center mounting holes distance between mounting holes SR20: 65 mm SR200-A1: 46 mm	Adapt mounting hole position when the two offset mounting holes are used. No changes are needed when the central hole is used for mounting.
increase in total height total height SR20: 74 mm SR200-A1: 88 mm	This may affect the measurement accuracy in some setups and may cause the instrument to mechanically interfere with accessories. Consider the impact on the application, special attention should be paid to the following situations: – installation on a shadow ring – installation on a solar tracker – installation in an external ventilation unit Note that the detector surface is 14 mm higher for SR200-A1. For both models, the detector position is at 20 mm below the top of the pyranometer dome.

item	direction
pyranometer overall diameter overall diameter SR20: 78 mm SR200-A1: 68 mm	Ensure there is no impact on the existing installation and make modifications if needed.
incompatible feet	None, the threads on the SR20 model feet are different, making them unsuitable for SR200-A1 pyranometers.

Table 4 Earthing and isolation.

item	direction
earthing the instrument housing	SR200-A1 features an earthing terminal to connect the housing to an earth ground to improve signal integrity and safety. It is strongly recommended to use it. Refer to the SR200-A1 product user documentation for instructions.

Table 5 Heating and ventilation.

item	direction
internal heater SR200-A1 does not have an internal heater	When heating is required, the recommended action is to replace the unit with the SR300-D1 digital Class A pyranometer.

Table 6 Desiccant replacement and maintenance.

item	direction
desiccant window SR200-A1 does not have a desiccant window	None, desiccant replacement only scheduled in conjunction with calibration when replacement has taken place > 5 years ago. Refer to the SR200-A1 product user documentation for instructions.

Table 7 Accessories.

item	direction
incompatible sun screen	None, a fitting sun screen will be delivered with a new pyranometer.

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.
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