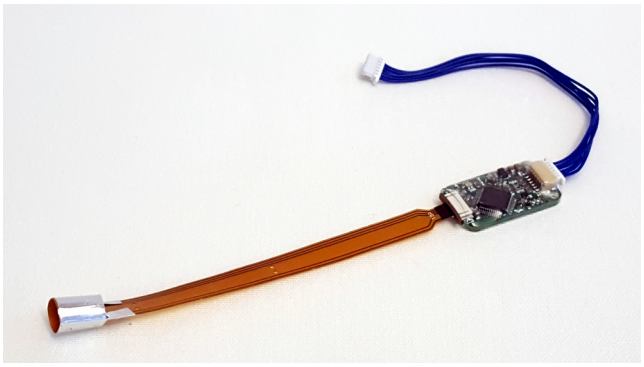
SKS1 Datasheet

Temperature and Humidity Sensor



SKS1 is a temperature and relative humidity sensor adapted for UAV applications. The flexible arm that connects the sensor to the electronics makes it easy to place the sensor in undisturbed air and makes the sensor element itself replaceable. SKS1 is cheaper than SKS2 but has significantly slower response time.

Note that SKS1 needs flowing air to avoid radiation heating in sunny conditions.

Parameters	**Specifications**
Measured Quantities	Temperature and Relative Humidity
Measurement Principle	Temperature: Band gap Humidity: Capacitive
Measurement Range	Temperature: -40 - +80°C Relative Humidity: 0 - 100%RH
Absolute accuracy	Temperature: 0.2 °C Humidity: 1.8 %RH *Typical values at reference conditions.*
Resolution	Temperature: 0.01 °C Relative Humidity: 0.05 %RH
Response Time τ 63%	Ca 6 seconds at 2 m/s air flow *As measured at 25 °C. Response time increases in low temperature.*
Sampling frequency	1 Hz
Power supply	3.3 – 15 V_{DC}
Power consumption	Ca 5 mA

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Communication	Sparvio SSP
Attachment	Two holes with diameter 2.5 mm, 12 mm center-to-center distance
Size	Arm without electronics: 100 x 10 mm Electronics: 30 x 15 x 5 mm
Weight	4 gram without cable

Sparvio background

The Sparvio system provides a modular, plug-and-play solution for measuring various quantities for UAVs, other environmental studies, lab experiments and education. The system is designed to start immediate measurements without any further integration.

SKS1 is designed and manufactured in Sweden by Sparv Embedded AB.