

Data Sheet SCC30-DB

Humidity and Temperature Sensor Module

- Relative humidity and temperature output
- Superior sensor performance, typical accuracy RH: $\pm 3\%$, T: $\pm 0.3^{\circ}\text{C}$
- Fully calibrated and processed digital signal output
- 2.4 to 5.5V supply voltage range

Product Summary

The RH/T sensor module SCC30-DB is specifically designed to meet the most demanding requirements of home appliance applications as well as from other applications, which require sensing remotely from the main control board. It offers the superior sensor performance of capacitive type sensor elements and a very attractive price/performance ratio due to Sensirion's latest generation of highly integrated humidity and temperature sensors (SHT3x).

All in all, the SHT3x platform incorporates more than ten years of knowledge of Sensirion, the leader in the humidity sensor industry.

Customer Benefits:

- High reliability & excellent long-term stability due to capacitive type sensor
- Versatile low cost sensor module
- Broad and competent application support by Sensirion.

1 Product Description

The SCC30-DB is a humidity and temperature sensor module with digital I2C output, consisting of a SHT30-DIS humidity and temperature sensor mounted on a PCB with connector.

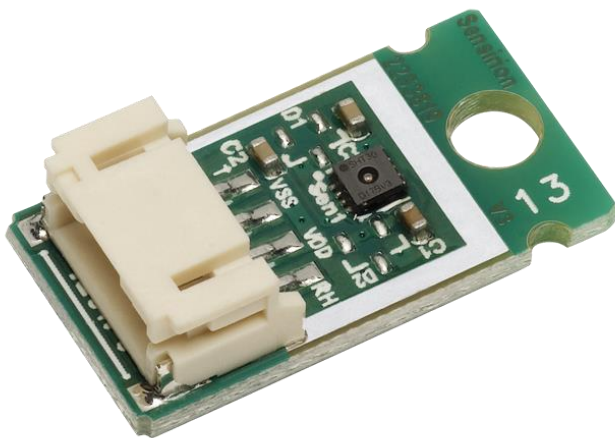


Figure 1 SCC30-DB

2 Sensor Specifications

Relative Humidity

Parameter	Condition	Typical Value	Units
Accuracy Tolerance ¹	10 to 90 %RH	±3	%RH
Operating Range	non-condensing environment ²	0-100	%RH
Hysteresis	-	< ±0.8	%RH
Long Term Drift ³	-	< 0.25	%RH/yr
Response time ⁴	τ 63%	8	s

Table 1 Relative Humidity Performance Specification

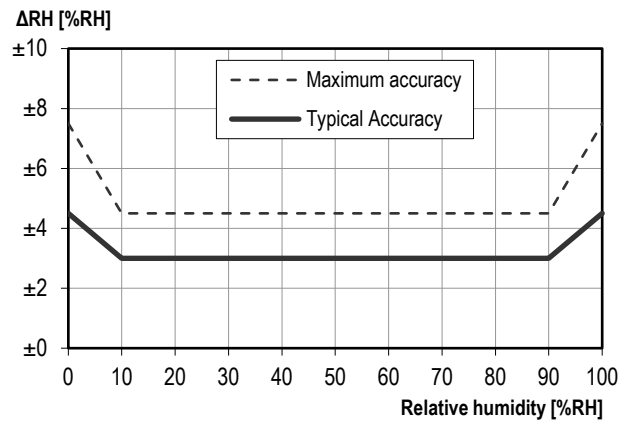


Figure 2 Relative Humidity Accuracy Specification.

Temperature

Parameter	Condition	Typical Value	Units
Accuracy Tolerance	0 to 65°C	±0.3	°C
Operating Range	-	-20 to +85	°C
Storage Range	-	-25 to +85	°C
Long Term Drift	-	< 0.04	°C/yr
Response Time ⁵	τ 63%	45	s

Table 2 Temperature Performance Specification

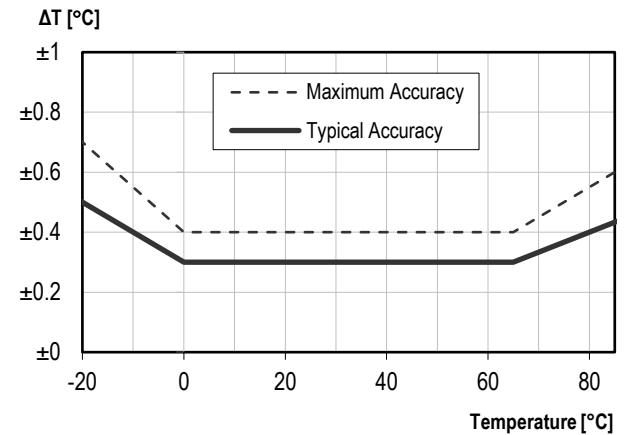


Figure 3 Temperature Accuracy Specification

¹ For definition of typical and maximum accuracy tolerance, please refer to the document "Sensirion Humidity Sensor Specification Statement".

² Condensation shall be avoided because of risk of corrosion and leak currents on the PCB.

³ Typical value for operation in normal RH/T operating range, see section 2.1. Maximum value is < 0.5 %RH/yr. Value may be higher in environments with

vaporized solvents, out-gassing tapes, adhesives, packaging materials, etc. For more details please refer to Handling Instructions.

⁴ Time for achieving 63% of a humidity step function, valid at 25°C and 1m/s airflow. Humidity response time in the application depends on the design-in of the sensor.

⁵ Response time is measured when the sensor is exchanged between water reservoirs of different temperatures