

Sensor Module for CO₂ and RH/T Measurements

Experts in Environmental Sensing

SCD30 – Sensor Module for HVAC and Indoor Air Quality Applications

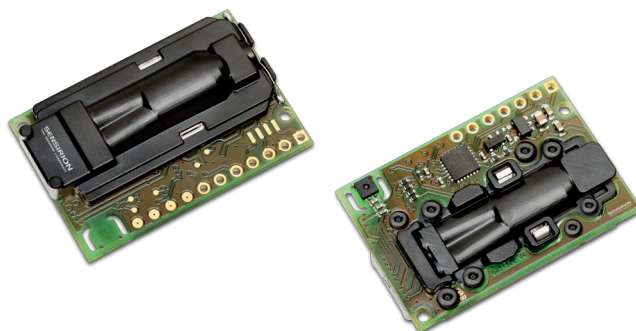
- Outstanding stability due to compensation of long-term drifts by dual channel principle
- Three sensor signals based on Sensirion's CMOSens® Technology
 - Absolute carbon dioxide concentration
 - Relative humidity and temperature
- Small form factor and thinnest package

CO₂ and RH/T Sensor Module SCD30

APPLICATIONS

The SCD30 has been designed for the usage in various applications and devices such as:

- Demand-controlled ventilation
- HVAC equipment
- Air conditioners
- Air purifiers
- Smart home
- IoT devices



TECHNOLOGY AND BENEFITS

Benefits	Technology
Accurate and reliable CO ₂ measurement	NDIR measurement principle
Superior long-term stability	Built-in reference channel
Best temperature stability	Temperature compensation of CO ₂ sensor signal
Best performance-to-price ratio	Inhouse detector based on Sensirion's CMOSens® Technology
Saves effort regarding system design and qualification	On-board temperature and humidity sensor
Easy interfacing and read-out	Fully calibrated and linearized. UART and I ² C interface

SENSOR MODULE SPECIFICATIONS

CO ₂ Sensor Specifications	
CO ₂ measurement range	0 – 10'000 ppm
Accuracy	± 30 ppm ± 3% (25 °C, 400 – 10'000 ppm)
Repeatability	10 ppm
Temperature stability	2.5 ppm / °C (0 – 50 °C)
Response time (t ₉₀)	25 s

Humidity Sensor Specifications	
Relative humidity measurement range	0 – 100% RH
Typ accuracy	± 2% RH (0 – 100% RH)
Repeatability	0.1% RH
Response time (t ₉₀)	8 s

Temperature Sensor Specifications	
Temperature measurement range	– 40 °C – 120 °C
Typ accuracy (°C)	± 0.5 °C (0 – 50 °C)
Repeatability (°C)	0.1 °C
Response time (t ₉₀)	>2 s

Electrical Specifications	
Supply voltage	3.3 – 5.5 V
Average current @ 2 s measurement rate	17 mA
Max. current	75 mA