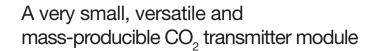
Senseair S8 Commercial



More than 25 years experience of research and development within the field of infrared gas sensing has now brought us the smallest CO2 sensor, with NDIR-technique, in the world – Senseair S8 Commercial. The new sensor has excellent performance such as high accuracy and low power consumption.

Senseair S8 Commercial is designed for high volume production with full traceability by sensor serial number on all manufacturing processes and key components. Every sensor is individually calibrated and is provided with UART digital interface. The sensor has an estimated life time of more than 15 years.

Senseair S8 Commercial is a module that is designed for simple integration into products. Senseair S8 Commercial can be used in a wide range of applications such as in ventilation control to improve energy savings and to assure a good indoor climate. Other fields of use are personal safety and measurements to increase process yield and to increase economic value in biorelated processes.



Standard specification

Measured gas
Operating principle

Measurement range CO₂
Accuracy CO₂
Maintenance
Life expectancy
Power supply
Operation temperature range
Communication
Dimensions Max. (L x W x H)

Response time

Power consumption

Carbon dioxide (CO₂)
Non-dispersive infrared (NDIR)
400-2000ppm
±30ppm ±3% of reading¹
No maintenance required
>15 years
4.5-5.25VDC
0-50°C
UART (Modbus)
33.9 x 19.8 x 8.7mm
300mA peak
30mA average

2 minutes by 90%

Key benefits

- Miniature size
- Individually calibrated
- Maintenance-free
- Long term stability
- Low power consumption





Note 1: Accuracy is specified over operating temperature range. Specification is referenced to certified calibration mixtures. Uncertainty of calibration gas mixtures (±1% currently) is to be added to the specified accuracy for absolute measurements.

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Senseair S8 Commercial Technical Specification

General Sensor Performance:

Required storage/operation environment Non-corrosive and non-condensing

Sensor lifetime expectancy >15 years

Maintenance Maintenance-free for normal indoor applications with Senseair ABC on ¹ Self-diagnostics A full system test is executed automatically every time the power is turned ON

Operative environment required for keeping calibrated and specified accuracy in gas measurement:

Operative temperature range

0-85%RH, non-condensing Operative relative humidity range

Electrical Properties:

Power supply 4.5-5.25V unprotected against surges and reverse connection

Power consumption 300mA peak, 30mA average

Mechanical Properties:

Electrical connections DVCC, G+ and G0

33.9 x 19.8 x 8.7mm (Max. Length x Width x Height)

CO₂ Measurement:

Operating principle Measurement range Non-dispersive infrared (NDIR)

400-2000ppm, up to 10000ppm extended range ²

±30ppm ±3% of reading 3

Measurement interval 2 seconds

Optional calibrations are background calibration, which requires that the sensor is exposed to fresh air (400ppm CO2) and zero calibration, which requires the Note 1: sensor measuring cell to be completely evacuated from CO2 e.g. by exposing it to Nitrogen or Soda Lime CO2 scrubbed air.

Note 2:

Accuracy is specified over operating temperature range. Specification is refer Note 3: enced to certified calibration mixtures. Uncertainty of calibration gas mixtures ($\pm 1\%$ currently) is to be added to the specified accuracy for absolute measurements.

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