

Senseair S8 LP

A very small, versatile and mass-producible CO₂ sensor module

More than 30 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 LP. The new sensor has excellent performance such as high accuracy and low power consumption. Senseair S8 LP 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 is maintenance-free and has an estimated life time of more than 15 years.

Senseair S8 LP is a module that is designed for simple integration into products. Senseair S8 LP 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 bio-related processes.



Standard specification

Measured gas	Carbon dioxide (CO ₂)
Operating principle	Non-dispersive infrared (NDIR)
Measurement range CO ₂	400 – 2000 ppm
Accuracy CO ₂	±40 ppm ±3% of reading ^{1,2}
Maintenance	No maintenance required
Life expectancy	>15 years
Power supply	4.5 – 5.25 V DC
Operation temperature range	0 – 50 °C
Communication	UART (Modbus)
Dimensions	33.9 x 19.8 x 8.7 mm
	with pin headers (optional) 33.9 x 19.8 x 9.3 mm
Power consumption	300 mA peak 18 mA average
Response time	2 minutes by 90%

Note 1: In normal IAQ applications. Accuracy is defined after minimum three (3) ABC periods of continuous operation with ABC on.

Note 2: 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.

Key benefits

- Miniature size
- Compliant with ANSI/ASHRAE Standard 62.1-2022
- Compliant with RESET grad B
- Compliant with WELL Building Standard® (WELL v2™)
- Individually calibrated
- Maintenance-free
- Long term stability
- Low power consumption



Senseair

an Asahi Kasei company