

Senseair S8 5%



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 world's smallest CO₂ sensor, with NDIR-technique – Senseair S8 5%. The new sensor has excellent performance such as high accuracy and low power consumption.

Senseair S8 5% is designed for high volume production and simple integration into products. The sensor measures ambient gas CO₂ concentration every 2 seconds and will set alarm output when CO₂ level is higher than 8500 ppm. A diagnostic routine will set Fault Alarm if any malfunction is detected. An alarm filter protects the sensor from issuing false alarm caused by intermittent short disturbances. The sensor is maintenance-free and has an estimated life time of more than 15 years.

Senseair S8 5% 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.

Standardspecification

Measured gas	Carbon dioxide (CO ₂)
Operating principle	Non-dispersive infrared (NDIR)
Measurement range CO ₂	0.04 - 5% vol
Accuracy CO ₂	±(200 ppm +10% of reading) ^{1,2}
Maintenance	No maintenance required
Life expectancy	>15 years
Power supply	4.5 - 5.25 V DC
Operating temperature range	0 - 50 °C
Communication	UART (Modbus)
Dimensions Max. (L x W x H)	33.9 x 19.8 x 8.7 mm
Power consumption	300 mA peak 30 mA average
Response time	2 minutes by 90%

Key benefits

- Miniature size
- Output alarm with false alarm protection
- Individually calibrated
- Maintenance-free
- Long term stability
- Low power consumption



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.

Senseair