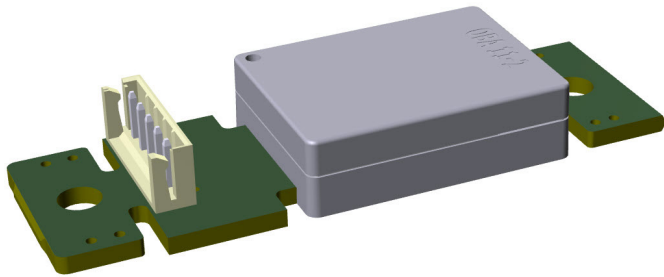


Senseair S8-4BP

Miniature CO₂ sensor safety switch with NDIR-technique

The Senseair S8-4BP CO₂ sensor module is designed for battery powered applications. to serve as a CO₂ safety switch when built-in into kerosene heaters. The sensor utilises reliable and highly accurate infrared gas sensing technology. The electronic circuitry is optimised for low power consumption.

The Senseair S8-4BP sensor measures ambient gas CO₂ concentration every 105 seconds and will set alarm output when CO₂ level is higher than 7500 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.



Standard specification

Article No.	004-0-0083
Measured gas	Carbon dioxide (CO ₂)
Operating principle	Non-dispersive infrared (NDIR)
Operating temperature range	-20 – 55 °C
Operating humidity range	0 – 90% RH
Measurement range CO ₂	400 – 15000 ppm ¹
Accuracy CO ₂	±1000 ppm @ 7000 – 9000 ppm ^{2,3}
Output alarm threshold [CO ₂]	7500 ppm
Ventilate warning threshold [CO ₂]	6500 ppm
Maintenance	Forced calibration (assuming 400 ppm exposure)
Life expectancy	>5 years
Power supply	4.3 – 7 V ⁴
Dimensions (L x W x H)	59.9 x 19.7 x 9.6 mm
Peak current	100 mA ±10%
Average current	<2 mA ⁵
Storage temperature	-40 – 70 °C

Key benefits

- Designed for the Original Equipment Manufacturer (OEM)
- Wide supply voltage range enables a variety of power supply options
- Adaptive sampling period
- Low power consumption
- Individually factory calibrated



Note 1: Sensor is designed to measure with best accuracy in the range 7000 – 9000 ppm, which is specified in the table accuracy. Nevertheless, exposure to concentrations below 400 ppm may result in incorrect operation of ABC algorithm and shall be avoided.

Note 2: Accuracy is specified over operating range 5 – 30 °C, 0 – 80% RH.

Note 3: Specification is referenced to uncertainty of calibration gas mixtures (±1%).

Note 4: Unprotected against surges and reverse power supply polarity.

Note 5: Average current varies below and above measured 6500 ppm level due to difference in sampling interval.