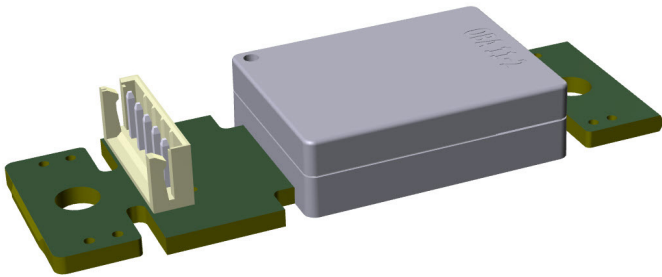


Senseair S8-4BP

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 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.



Standard specification

| | |
|--|---|
| Article No. | 004-0-0084 |
| 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] | 8500 ppm |
| Ventilate warning threshold [CO ₂] | 7500 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.