

Senseair Sunrise HVAC



A new generation NDIR sensor

Senseair Sunrise HVAC is a new generation NDIR sensor with Optical Solid State design. Electronics with no moving parts makes this sensor robust and resistant to vibrations. Any application with a tough environment or in environments with explosion risk is benefited by the solid state design.

It is the first NDIR sensor with LED technology that truly saves power while maintaining a high precision.

The ultra low power consumption makes Sunrise optimal for battery and wireless applications.

The sensor has an accuracy (CO₂) $\pm 30\text{ppm} \pm 3\%$ of reading. Thanks to the built-in self-correcting algorithm you can mount and forget your sensor for the next 15 years and it will still be accurate.

Standard specification

Article No.	006-0-0008
Measured gas	Carbon dioxide (CO ₂)
Operating principle	Non-dispersive infrared
Measurement range	(CO ₂) 400–5000ppm; extended range up to 10000ppm
Accuracy	(CO ₂) $\pm 30\text{ppm} \pm 3\%$ of reading ^{1,2} (extended range $\pm 10\%$ of reading)
Average current	1–35 μA
Measurement period	Default: 16s, 8 samples (adjustable by host)
Peak current	< 125mA
Power supply	3.05–5.5V ³
Dimensions	33.5 x 19.7 x 11.5mm
Weight	5g
Life expectancy	> 15 years
Operating range	0–50 °C, 0–85% RH
Storage temperature	-40–70 °C
Serial communication	UART, I ² C

Key benefits

- Optical Solid State
- Ultra Low Power consumption
- Compliant with ANSI/ASHRAE Standard 62.1-2022
- Compliant with RESET grad B
- Compliant with WELL Building Standard® (WELL v2™)
- High Precision
- Robust
- Mass Production
- Self-correcting

Note 1: 15–35 °C, 0–80% RH, after 3 ABC periods and default measurements settings.

Note 2: Specification is referenced to uncertainty of calibration gas mixtures ($\pm 1\%$).

Note 3: Unprotected against surges and reverse power supply polarity.

