Senseair Sunrise 006-0-0007

A new generation NDIR sensors

Senseair Sunrise 006-0-0007 is a new generation NDIR sensors 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 also the first NDIR sensor with LED technology that truly saves power while maintaining a high precision. The sensor as an accuracy (CO_2) ±30ppm ±3% of reading, and a power consumption 5 times lower than the other low power NDIR sensors on the markets. Average current 45µA [3].

Thanks to the built-in self-correcting ABC algorithm, you can mount and forget your sensor for the next 15 years and it will still be accurate, which is even more important when it comes to wireless applications.

Standard specification

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)	±30ppm ±3% of reading [1, 2] (extended range ±10% of reading)
Peak current	< 125mA
Steady state current during sampling	99mA
Average current	45µA [3]
Measurement period	Default: 16 s, 8 samples (adjustable by host)
Power supply	3.05–5.5V [4]
Dimensions [mm]	33.5 x 19.7 x 11.5
Weight	5g
Life expectancy	> 15 years
Operation range	0–50 °C, 0–85% RH
Storage temperature	-40–70 °C
Serial communication	UART, I^2C

Note 1: 15–35 °C, 0–80% RH, after three eight-day periods, each period followed by ABC command set in the Calculation Control byte.
Note 2: Specification is referenced to uncertainty of calibration as mixtures (±1%).
Note 3: Typical average current consumption @25 °C
Note 4: Unprotected against surges and reverse connection

Key benefits

- Optical Solid State
- Ultra Low Power
- 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

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