

# Senseair Sunlight HC-R



## A new generation NDIR sensors with Optical Solid-State design

Electronics with no moving parts makes Senseair Sunlight HC-R 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.

Senseair Sunlight HC-R is designed for high volume production with full traceability by sensor serial number on all manufacturing processes and key components.

Every sensor is individually calibrated and is provided with UART (Modbus) and I2C interface. With the ABC-function activated, the sensor is maintenance-free.

Senseair Sunlight HC-R is a module that is designed for simple integration into products. Senseair Sunlight HC-R can be used in a wide range of refrigerant applications based on R32.

### Standard specification

Measured gas	R32 (CH <sub>2</sub> F <sub>2</sub> ) <sup>1</sup>
Operating principle	Non-dispersive infrared (NDIR)
Measurement range	Standard: 0 – 25% LFL Extended: 25 – 50% LFL
Temperature range	Standard: -30 – 60 °C Extended: -40 – -31 °C, 61 – 70 °C
Accuracy	Standard: ±2.5% LFL <sup>2,3</sup> Extended: ±5% LFL <sup>2,3</sup>
Measurement period	2 s default, adjustable
Maintenance	Periodic Zero calibration or ABC calibration <sup>4</sup>
Life expectancy	15 years in normal commercial environments
Power supply	3.05 – 5.50 V DC <sup>5</sup>
Storage temperature	-40 – 85 °C
Communication interface	UART, I <sup>2</sup> C
Dimensions (L x W x H)	34 x 21 x 12 mm max

### Key benefits

- Miniature size
- Fast response time
- Maintenance-free
- Long term stability
- Long lifetime
- Immunity to poisoning
- Individually calibrated
- Very low power consumption
- Mass production



Note 1: The sensor can measure molecules containing C-H bonds.

Note 2: Accuracy is defined after 1 Zero Calibration or 3 ABC period.

Note 3: Accuracy is specified over temperature range. Specification is referenced to certified calibration mixtures. Some industrial applications do require maintenance. Contact Senseair for further information.

Note 4: Default mode: ABC OFF.

Note 5: Unprotected against surges and reverse power supply polarity.

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