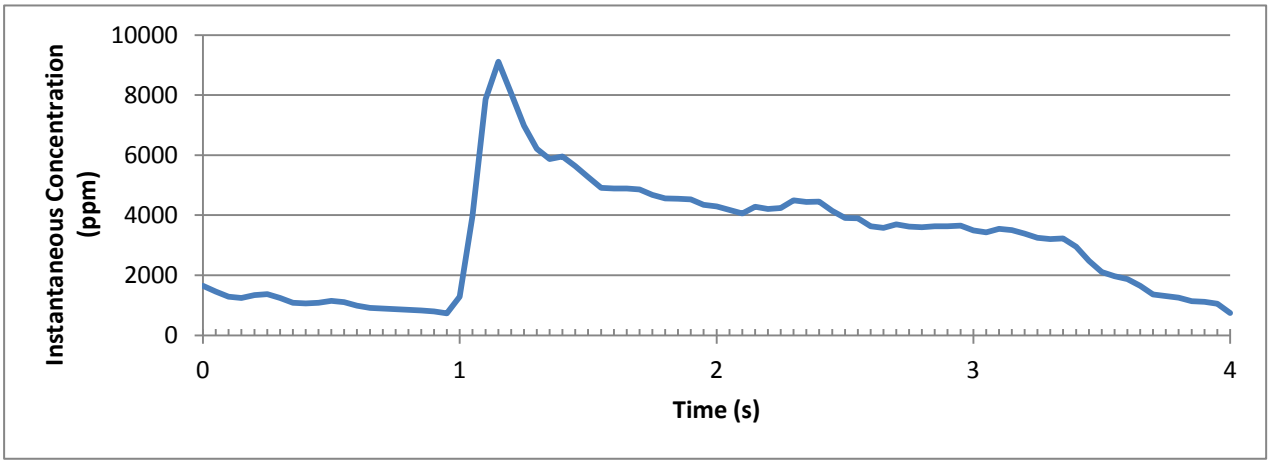
SprintIR™

High Speed Carbon Dioxide Sensor

SprintIR is a high speed (20 Hz) CO_2 sensor, ideally suited for applications which require capture of rapidly changing CO2 concentrations including metabolic assessment and analytical instrumentation.

- High speed sensing (20Hz)
- Measurement ranges from 0 to 100%
- 3.3V supply
- Low power requirement 35mW
- Flow through adaptor now available

SprintIR™ Sensor



Specifications

CO2 Measurement	
Sensing Method	Non-dispersive infrared (NDIR) absorption Patented Gold-plated optics Patented Solid-state source and detector
Sample Method	Flow through
Measurement Range	0-5%, 0-20%, 0-60%, 0-100%
Accuracy	±70 ppm +/- 5% of reading[1]
Measurement Noise	<10% of reading with no digital filtering
Non Linearity	< 1% of FS
Pressure Dependence	0.1% of reading per mbar in normal atmospheric conditions
Operating Pressure Range	950 mbar to 10 bar[2]

Apollosense Ltd

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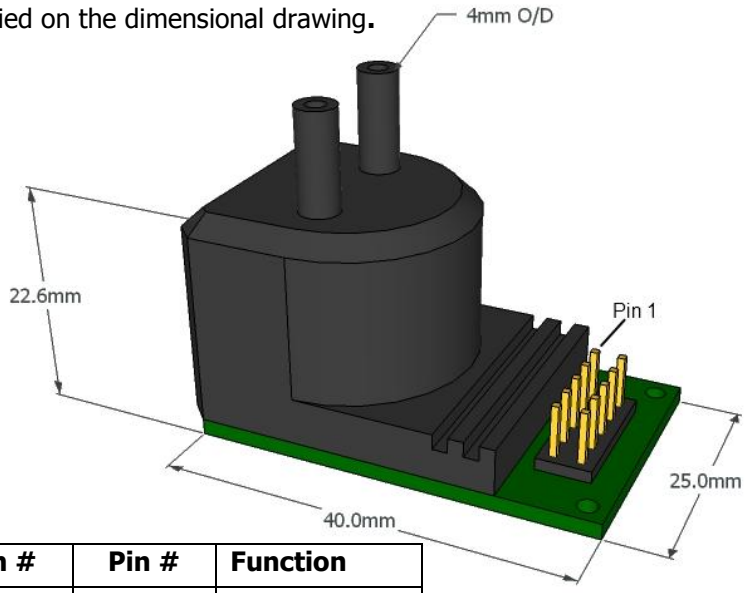
General Performance	
Warm-up Time	< 1 minute
Operating Conditions	0°C to 50°C (Standard) -25°C to 55°C (Extended range) 0 to 95% RH, non-condensing
Recommended Storage	-30°C to +70°C

Electrical/ Mechanical	
Power Input	• 3.2 to 5V. (3.3V recommended) • Peak current 100mA • Average Current <15mA
Power Consumption	35 mW

Dimensions and Wiring Connections

2x5 0.1" header. Pin 1 is identified on the dimensional drawing.



Function	Pin #	Pin #	Function
0V	**1**	**2**	N/C
+3.3V	**3**	**4**	0V
Sensor Rx (in)	**5**	**6**	0V
Sensor Tx (out)	**7**	**8**	Zero N
N/C	**9**	**10**	Zero Air

Pin 2 should not be connected. Pins 4 and 6 do not require connection and are internally connected to GND.

The zeroing options are for hardware zeroing (both active low). These functions can also be implemented by sending a serial command (recommended).

Typical connections for digital interface are GND, 3.3V, Rx and Tx. Note that the Vh for the serial Tx line will be 3V regardless of the supply voltage.

Note 1: All measurements are at STP unless otherwise stated.
Note 2: External Pressure calibration required.
Note 3: User Configurable Filter Response.

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