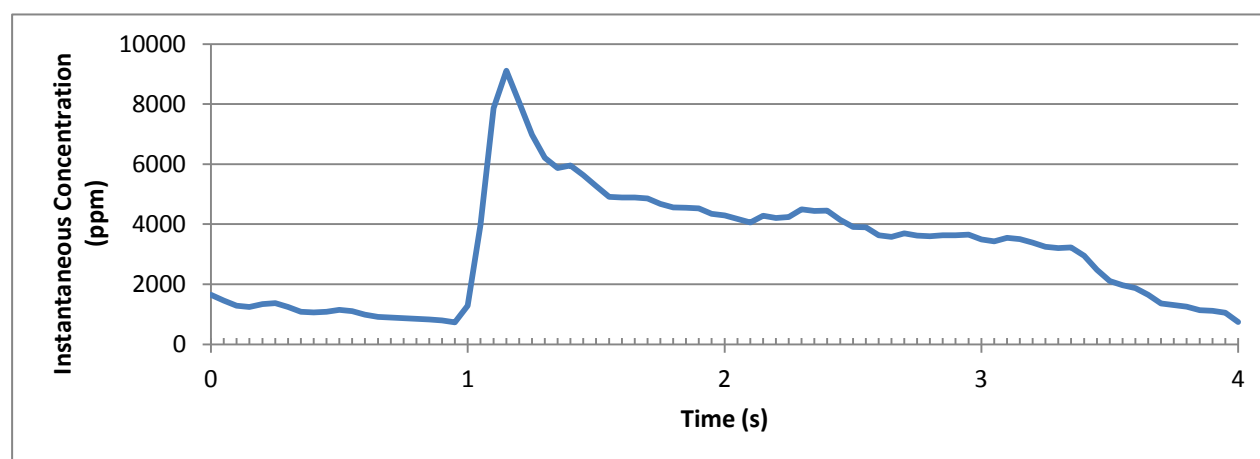
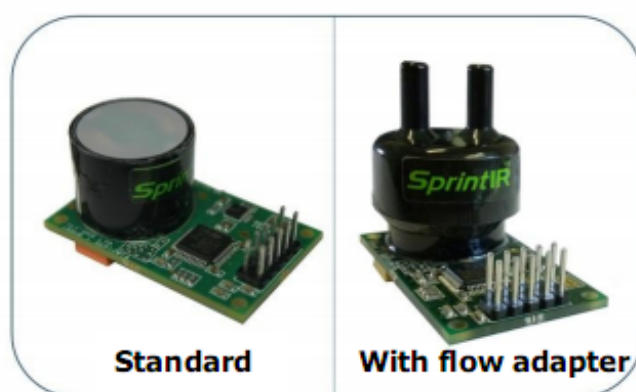


SprintIR™

High Speed Carbon Dioxide Sensor

SprintIR is a high speed (20 Hz) CO₂ 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 (Optional)



Specifications

CO ₂ Measurement	
Sensing Method	Non-dispersive infrared (NDIR) absorption Patented Gold-plated optics Patented Solid-state source and detector
Sample Method	Diffusion(Standard) / Flow through (with flow-through adapter)
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

General Performance

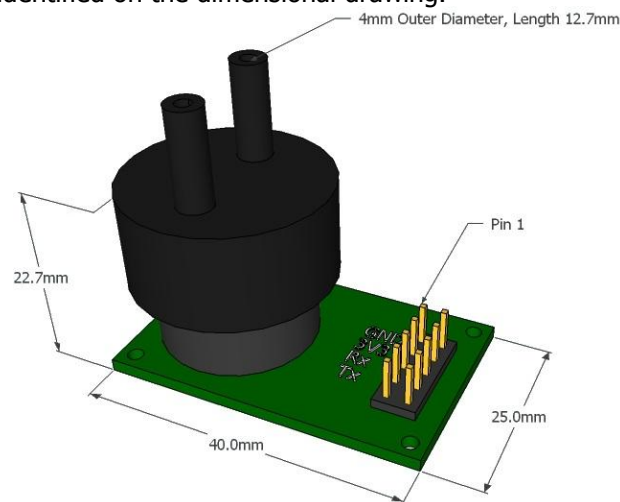
Warm-up Time	< 1 minute
Operating Conditions	0°C to 50°C (Standard) -25°C to 55°C (Extended range) 0 to 95% RH, non-condensing
Recommended Storage	-30°C to +70°C

Electrical/ Mechanical

Power Input	<ul style="list-style-type: none"> • 3.2 to 5V. (3.3V recommended) • Peak current 100mA • Average Current <15mA
Power Consumption	35 mW
Output	UART only

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 V_h 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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