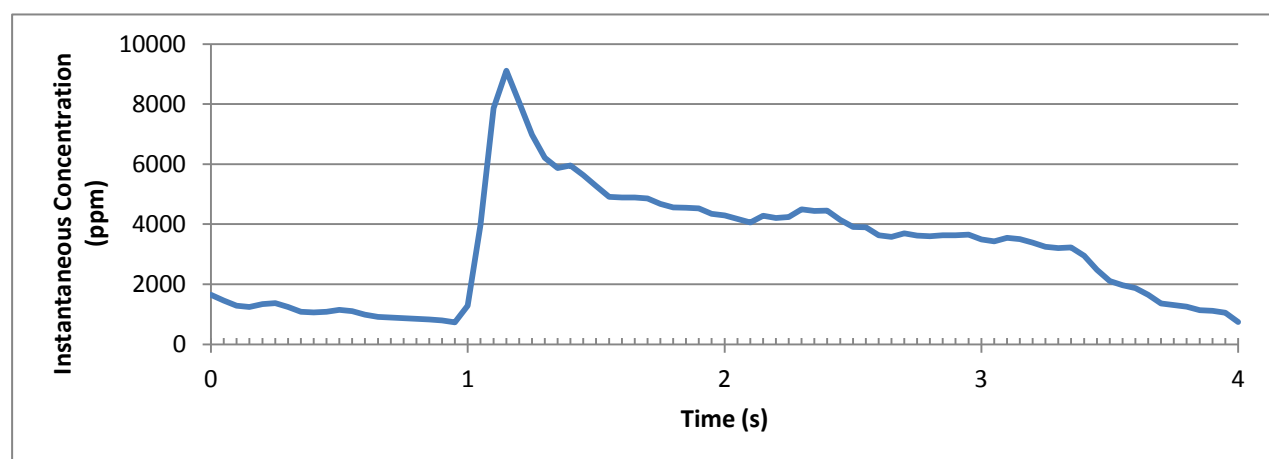
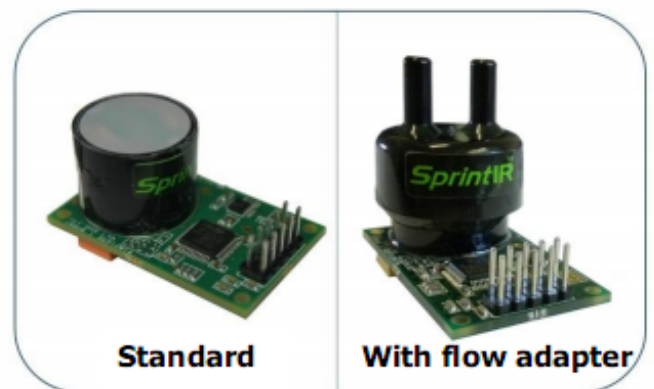


## SprintIR™

### High Speed Carbon Dioxide Sensor

SprintIR is a high speed (20 Hz) CO<sub>2</sub> sensor, ideally suited for applications which require capture of rapidly changing CO<sub>2</sub> 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 <sub>2</sub> Measurement	
<b>Sensing Method</b>	Non-dispersive infrared (NDIR) absorption Patented Gold-plated optics Patented Solid-state source and detector
<b>Sample Method</b>	Diffusion(Standard) / Flow through (with flow-through adaptor)
<b>Measurement Range</b>	0-5%, 0-20%, 0-60%, 0-100%
<b>Accuracy</b>	±70 ppm +/- 5% of reading <sup>1</sup>
<b>Measurement Noise</b>	<10% of reading with no digital filtering
<b>Non Linearity</b>	< 1% of FS
<b>Pressure Dependence</b>	0.1% of reading per mbar in normal atmospheric conditions
<b>Operating Pressure Range</b>	950 mbar to 10 bar <sup>2</sup>

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## General Performance

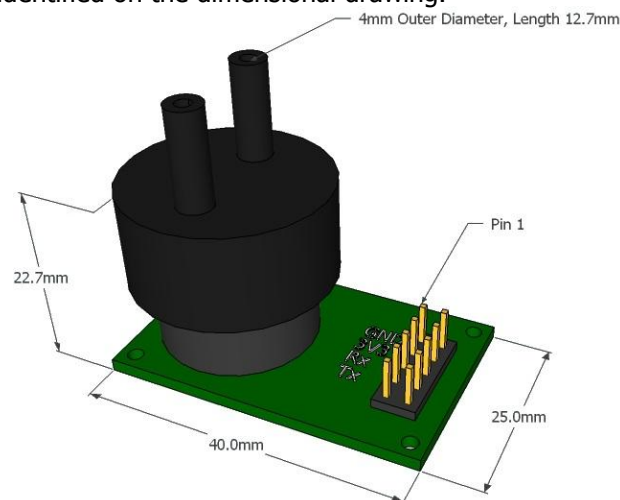
Warm-up Time	< 1 minute
Operating Conditions	0°C to 50°C (Standard) -25°C to 55°C (Extended range) 0 to 95% RH, non-condensing
Recommended Storage	-30°C to +70°C

## Electrical/ Mechanical

Power Input	<ul style="list-style-type: none"> <li>3.2 to 5V. (3.3V recommended)</li> <li>Peak current 100mA</li> <li>Average Current &lt;15mA</li> </ul>
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<sub>h</sub> 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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