

Platinum Series Carbon Dioxide Sensor

For detection and measurement of carbon dioxide in ppm and % volume ranges



The Platinum series sensors contain all the necessary optics, electronics and firmware to provide a linearized, temperature-compensated output. Within the Platinum series are low-power options and dual-gas, high resolution methane / carbon dioxide sensor that provides the capability to simultaneously monitor methane and carbon dioxide in a single sensor package, consuming the power of a single infrared sensor.

The sensors are available in Industrial Ex d IIC Certified, Mining M1 Certified, UL Approved, and Non-Certified versions. Low power and EN50271 / SIL1 certified software versions are also available in most combinations.

Key Features

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| <ul style="list-style-type: none">• Available in 4 power variants, 140mA, 80mA, 15mA, 8mA• Industrial Ex d IIC Certified and Mining M1 Certified available for all variants• SIL1 certification available for most variants• All sensors carry a 5 year warranty• Measures carbon dioxide from 0 to 10,000ppm with a resolution of 10ppm• Measures carbon dioxide from 0 to 100% vol.. with a resolution as low as 0.01%• Offers reduced response times when compared with earlier versions• Enhanced EMC protection | <ul style="list-style-type: none">• Choice of output format digital output (floating point and binary), direct pellistor replacement or industry standard 0.4 to 2 volts• Manual calibration option can be performed without digital commands• User configurable using USB powered Premier Configuration Unit• Output can be scaled in % volume or % full scale• Internal Flash memory allowing sensor firmware updates via configuration unit |
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Specification @ 20 °C (68 °F) ambient temperature

Operating Voltage Range:

3.0-5.0 VDC

Operating current / power (@3VDC)

Low Power 2	Low Power	Regular Power	High Power
8mA/24mW	15mA/45mW	80mA/240mW	140mA/420mW

Linearity:

Low Range CO₂

The output is linear within $\pm 10\%$ of the applied gas, or $\pm 0.05\%$ volume, whichever is greater.

Mid Range CO₂

The output is linear within $\pm 10\%$ of the applied gas, or $\pm 2\%$ of full scale, whichever is greater.

High Range CO₂

The output is linear within $\pm 10\%$ of applied gas up to 80% full scale and $\pm 15\%$ of applied gas from 80% to 100% full scale, or $\pm 3\%$ of full scale, whichever is greater.

Accuracy at 20°C, 1 bar atmospheric pressure, calibration gas applied

 $\pm 2\%$

Pressure

Accuracy limits are maintained at pressures within $\pm 5\%$ of the calibration pressure.

Warm up time

To final zero $\pm 2\%$ full-scale: approximately 1 minute, some sensors may take longer.

Response time

T50

<10s

T90

<30s

Zero repeatability

 $\pm 2\%$ of full scale

Span repeatability

 $\pm 2\%$ of full scale

Long term zero drift

 $\pm 1\%$ of full scale / month

Operating and storage temperature range

Standard	Extended (XTR)
-20°C to +50°C	-40°C to +75°C
-4°F to +122°F	-40°F to +167°F

Temperature performance

$\pm 0.1\%$ vol. or $\pm 10\%$ of applied gas up to 50% of full scale, $\pm 15\%$ of applied gas from 50% to 100% of full scale, or 2% of full scale, whichever is greater.

Humidity range

0 to 95% RH non-condensing

Digital signal format

8 data bits, 1 stop bit, no parity. 2.8V logic level

Standard baud rates

38,400 / 19,200 / 9,600 / 4,800

MTBF

>5 years

Weight

15 grams

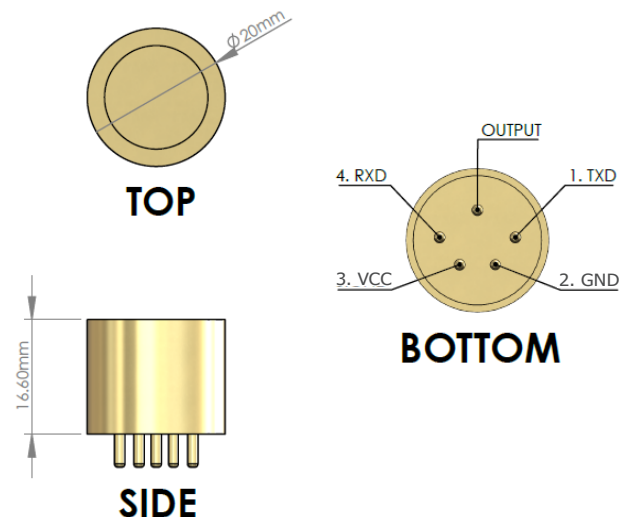
Warranty

5 years

Carbon Dioxide Ranges

Gas Type	Range	Resolution
CO ₂	0-1000ppm	10ppm
CO ₂	0-5000ppm	10ppm
CO ₂	0-2% vol.	0.01%
CO ₂	0-5% vol.	0.01%
MCO ₂	0-10% vol.	0.01%
HCO ₂	0-100% vol.	0.1%

Mechanical Detail



Compliance and Regulations



Dynamet is part of the Process Sensing Technologies Group (PST).

As customer applications are outside of PST control, the information provided is given without legal responsibility. Customers should test under their own conditions to ensure the equipment is suitable for the intended application(s). We adopt a continuous development program which sometimes necessitates specification changes without notice.

For technical assistance or enquiries about other options, please contact us here:

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