Platinum Series Hydrocarbon and Carbon Dioxide Sensor

For detection and measurement of hydrocarbons and carbon dioxide

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.

Key Features

- Available in 3 power variants, 140mA, 80mA and 15mA
- Industrial Ex d IIC Certified, Mining M 1 Certified available for all variants
- SIL 1 certification available for all variants
- All sensors carry a 5 year warranty
- Measures methane from 0 to 100% volume with a resolution of 0.01 % for 0.5% volume methane and 0.1% for 5-100% volume
- Multiple gas ranges enable the accurate detection of 0-100% vol methane, 0.2% volume propane and 0-100% volume carbon dioxide with one sensor
- Measures carbon dioxide from 0 to 5% volume with a resolution of 0.01% or 0.1% for 5-100% volume
- Configuration available specifically for biogas measurement
- Offers reduced response times when compared with earlier versions
- 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
- Enhanced EMC protection

General Specifications

Operating Voltage

3.0 - 5.0VDC

Operating current / power (@3VDC)

Low Power	Regular Power
15mA / 45mW	80mA / 240mW

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

±2%

Pressure

Accuracy limits are maintained at pressures within ± 5% of the calibration pressure.

Warm up time

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

Response time (T90)

<30s

Operating and storage temperature range

-20°C to +50°C (-4°F to +122°F)

Temperature performance
*May not be applicable when using gas cross-reference factors

±0.1% vol. or ±10% of applied gas up to 50% of full scale, ±15% of applied gas from 50% to 100% of full scale, or 2% of full scale, which ever 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

Compliance and Regulations

Hydrocarbon Channel Specification

Linearity

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

Zero repeatability

±0.05% vol. CH4 / ±0.03% vol. C3H8

Span repeatability

For 0-5% vol. CH4: ±0.1% vol.

For 0-100% vol. CH4: ±2% vol.

For 0-2% vol. C3H8: ±0.06% vol.

Long term zero drift

±0.05% vol. CH4 / ±0.03% vol. C3H8 / month

Carbon Dioxide Channel Specification

Linearity

Low Range CO2	High Range CO2
The output is linear within ±10% of the applied gas, or ±0.05% volume, whichever is greater.	The output is linear within ±10% of applied gas up to 80% full scale and ±15% of applied gas from 80% to 100% full scale, or ±3% of full scale, whichever is greater.

Zero repeatability

±2% of full scale

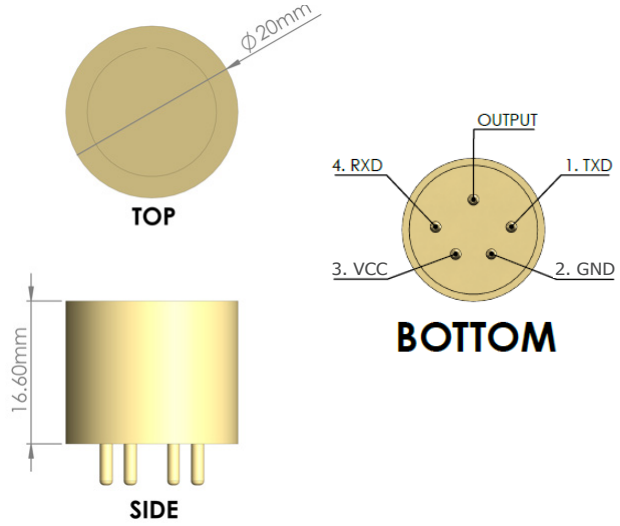
Span repeatability

±2% of full scale

Long term zero drift

±1% of full scale / month

Mechanical Detail



Do not calibrate with a mixture of CH4 and CO2. Calibrations must be performed with target gas/balance nitrogen to achieve the best results. Sensors which are not calibrated in this manner cannot be held to the specifications in this datasheet

Dynament 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:
sensors@processsensing.com

HERMITAGE LANE INDUSTRIAL ESTATE, KINGS MILL WAY, MANSFIELD, NOTTINGHAMSHIRE, NG18 5ER | TEL: 44 (0) 1623 663636