

## INFRARED GAS SENSORS PLATINUM SERIES

**PST**  
PROCESS SENSING  
TECHNOLOGIES

**DYNAMENT**  
INFRARED GAS SENSORS  
A PST BRAND

## 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

<b>Operating Voltage</b>	
3.0 - 5.0VDC	
<b>Operating current / power (@3VDC)</b>	
Low Power	Regular Power
15mA / 45mW	80mA / 240mW
<b>Accuracy</b> at 20°C, 1 bar atmospheric pressure, calibration gas applied	
±2%	
<b>Pressure</b>	
Accuracy limits are maintained at pressures within ± 5% of the calibration pressure.	
<b>Warm up time</b>	
To final zero ± 2% full-scale: approximately 1 minute, some sensors may take longer.	
<b>Response time (T90)</b>	
<30s	
<b>Operating and storage temperature range</b>	
-20°C to +50°C (-4°F to +122°F)	
<b>Temperature performance</b>	
*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, whichever is greater.	
<b>Humidity range</b>	
0 to 95% RH non-condensing	
<b>Digital signal format</b>	
8 data bits, 1 stop bit, no parity. 2.8V logic level	
<b>Standard baud rates</b>	
38,400 / 19,200 / 9,600 / 4,800	
<b>MTBF</b>	
>5 years	
<b>Weight</b>	
15 grams	
<b>Warranty</b>	
5 years	

## Compliance and Regulations



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

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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## Hydrocarbon Channel Specification

<b>Linearity</b>
The output is linear within ± 10% of the applied gas, or ±0.05% volume, whichever is greater.
<b>Zero repeatability</b>
±0.05% vol. CH4 / ±0.03% vol. C3H8
<b>Span repeatability</b>
For 0-5% vol. CH4: ±0.1% vol.
For 0-100% vol. CH4: ±2% vol.
For 0-2% vol. C3H8: ±0.06% vol.
<b>Long term zero drift</b>
±0.05% vol. CH4 / ±0.03% vol. C3H8 / month

## Carbon Dioxide Channel Specification

<b>Linearity</b>	
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.
<b>Zero repeatability</b>	
±2% of full scale	
<b>Span repeatability</b>	
±2% of full scale	
<b>Long term zero drift</b>	
±1% of full scale / month	

## Mechanical Detail

