

# Infrared Gas Sensors

## Platinum Series Hydrocarbon Sensor



- 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
- Offers reduced response times when compared with earlier versions

### Description

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.

### Specifications

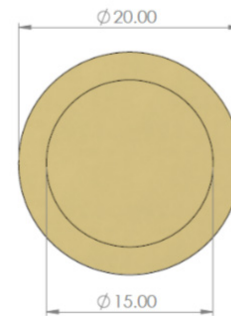
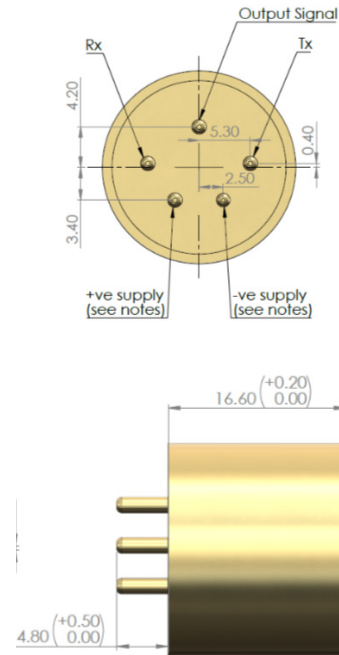
<b>Operating Voltage Range</b>	3.0-5.0 VDC
<b>Operating current / power (@3VDC)</b>	
Low Power 2	8mA/24mW
Low Power	15mA/45mW
Regular Power	80mA/240mW
High Power	140mA/420mW
<b>Linearity</b>	
Low Range HC	The output is linear within $\pm 10\%$ of the applied gas, or $\pm 0.05\%$ volume, whichever is greater.
High Range HC	The output is linear within $\pm 2\%$ of the full scale or $\pm 10\%$ of the applied gas, 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.
<b>Response time</b>	
T50	<10s
T90	<30s



<b>Span repeatability</b>	
Low Range HC	For 0-5% vol. CH4: $\pm 0.1\%$ vol.
	For 0-100% vol. CH4: $\pm 2\%$ vol.
	For 0-2% vol. C3H8: $\pm 0.06\%$ vol.
High Range HC	For 0-100% vol. C3H8: $\pm 2\%$ vol. $\pm 1\%$ vol. C3H8
<b>Zero repeatability</b>	
Low Range HC	$\pm 0.05\%$ vol. CH4
	$\pm 0.03\%$ vol. C3H8
High Range HC	$\pm 1\%$ vol. C3H8
<b>Long term zero drift</b>	
Low Range HC	$\pm 0.05\%$ vol. CH4
	$\pm 0.03\%$ vol. C3H8
High Range HC	$\pm 2\%$ vol. C3H8
<b>Operating and storage temperature range</b>	
Standard	-20°C to +50°C
	-4°F to +122°F
Extended (XTR)	-40°C to +75°C
	-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, 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
Warranty	5 years

Hydrocarbon Ranges		
Gas Type	Range	Resolution
Methane	0-5% vol.	0.01%
Methane	0-100% vol.	0.1%
Methane	0-5-100% vol.	0-5% vol: 0.01%, 5-100% vol:0.1%
Propane	0-2% vol.	0.01%
Propane	0-100% vol.	0.1%
Methane & Propane	0-5-100% vol.	0-5% vol CH <sub>4</sub> :0.01%
	CH <sub>4</sub> 0-2% vol.	5-100% vol CH <sub>4</sub> :0.1%
	C <sub>3</sub> H <sub>8</sub>	0-2% vol C <sub>3</sub> H <sub>8</sub> :0.01%

## Dimensions and Wiring Diagram



Dynament is part of Dwyer Omega (DO)

As customer applications are outside of DO's control, the information provided is given without legal responsibility. Customers should test the equipment under their own conditions to ensure it 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@dwyeromega.com](mailto:sensors@dwyeromega.com)

### Notes

1. Tolerance : +/- 0.15 unless otherwise stated.
2. Recommended PCB socket Wearnes Cambion Ltd code 450-3326-01-06-00
3. Use anti-static precautions when handling.
4. Do not cut pins.
5. Do not solder directly to pins.
6. The labelling adds up to 0.2mm to the outer diameter and up to 0.2mm to the overall height.

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