Infrared Gas Sensors

Platinum Series Hydrocarbon and Carbon Dioxide Sensor

DYNAMENT
INFRARED GAS SENSORS
a DwyerOmega brand

- 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

Platinum series sensors contain all the necessary optics, electronics and firmware to provide a linearized, temperature-compensated output.

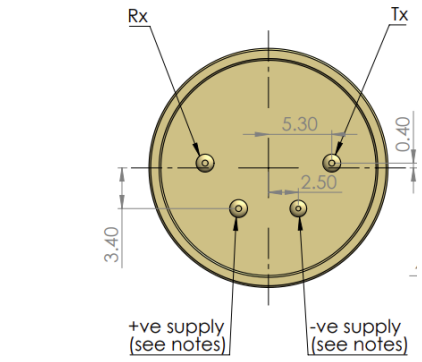
Within the Platinum series are low-power options and dual-gas, high resolution methane / carbon dioxide sensor that provides the capability to simultaneously monitor methane and carbon dioxide in a single sensor package, consuming the power of a single infrared sensor.

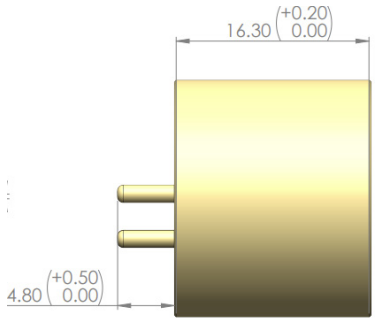
Specifications

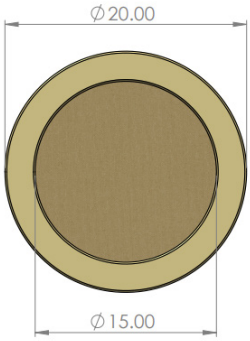
Operating Voltage Range	3.0-5.0 VDC
Operating current / power (@3VDC)	
Low Power	15mA / 45mW
Regular Power	80mA/240mW
Accuracy at 20°C, 1 bar atmospheric pressure, calibration gas applied	± 2%
Pressure	Accuracy limits are maintained at pressures within ± 5% of the calibration pressure.
Warm up time	To 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

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 CO_2	The output is linear within ±10% of the applied gas, or ±0.05% volume, whichever is greater.
High Range CO_2	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

Dimensions and Wiring Diagram







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.

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

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