

Infrared Gas Sensors

Platinum Series Refrigerant Gas Sensor



- Measures refrigerant gases in the LFL range with a resolution of 0.05% (500ppm)
- Ex d IIC Certified (also available in non certified models)
- 5 year warranty
- Fail safe operation

Description

Dynamment gas sensors are designed with nondispersive infrared technology for the detection and measurement of the presence of refrigerant gases. To meet the growing need for lower global warming potential (GWP) refrigerant gases, Dynamment offers sensors for both flammable (A3, A2, A2L) and non-flammable (A1) refrigerants. The Dynamment Platinum NDIR sensor has a twenty-year history of meeting and exceeding gas detection needs in the most challenging of environmental applications.

The Platinum series platform provides a linearized, high resolution measurement of refrigerant gases over the lower explosive limit range.

Specifications

Operating Voltage Range	3.0-5.0 VDC
Linearity	±10 of the applied gas, or +/- 0.05 % volume, whichever is greater
Accuracy	±2 % at 20 °C, 1 bar atmospheric pressure, calibration gas applied
Pressure	± 5 % of the calibration pressure to maintain the accuracy limits
Warm up time	To final zero ± 2 % full-scale: approximately 10 minutes, some sensors may take longer
Response time T90	< 30s
Zero repeatability	± 0.05 % volume
Span repeatability	± 2 % full scale @ 20 °C (68 °F), 1 bar pressure, at calibration point
Long term zero drift	±5 % of full scale / month
Operating and storage temperature range	
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: 40 °C to +75 °C (-40 °F to 167 °F):	
± 0.1 % volume or ± 10 % of reading up to 50 % of full scale, ± 15 % of reading from 50 % to 100 % of full scale, or 2 % of full scale whichever is greater	
Long term zero drift	± 0.05 % volume per month



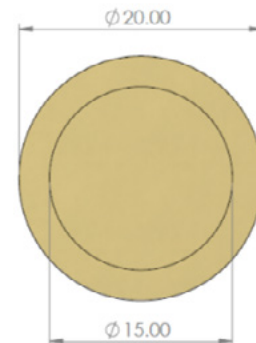
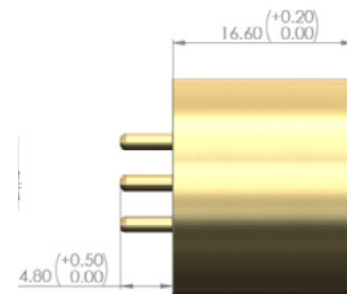
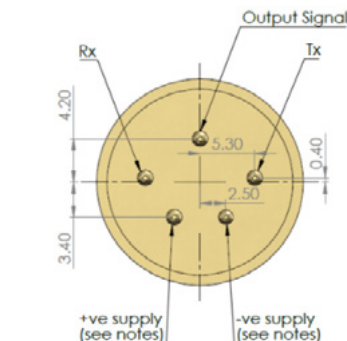
Storage temperature range	-20 °C to +50 °C (-4 °F to 122 °F) -40 °C to +75 °C (-40 °F to 167 °F) for XTR version		
Humidity range	0 to 95% RH non condensing		
Digital signal format	8 data bits, 1 stop bit, no parity. 2.8V logic level		
Standard baud rates	38,400, 19,200, 9600, 4800		
Warranty	5 years		
Weight	15 grams		
Refrigerant Gases and Ranges			
Gas Type	Range	Resolution	Safety Classification
R32	0-15%vol	0.05% vol. 500ppm	A2L
R454B	0-12%vol	0.05% vol. 500ppm	A2L
R454C	0-8%vol	0.05% vol. 500ppm	A2L
R290	0-2%vol	0.01% vol. 100ppm	A3
R744	0-5%vol	0.01% vol. 100ppm	A1
R744	0-500pm	10ppm	A1
Additional ranges and gases available upon request.			

Dimensions and Wiring Diagram

Safety Classifications Explanation*			
Toxicity	Flammability	LFL	Flame Propagation
A: Lower Toxicity	1: Non flammable	N/A	No flame propagation
	2: Lower flammability	>3.5% vol.	Exhibit flame propagation
B: Higher Toxicity	2L: Lower flammability	>3.5% vol.	Exhibit flame propagation**
	3: Higher flammability	≤3.5% vol.	Exhibit flame propagation

*Flame propagation testing conducted at 60°C and 101.3kpa

**Exhibit flame propagation & maximum burning velocity of ≤ 10 cm/s when tested at 23°C and 101.3 kPa



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

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.