

Platinum Series Refrigerant Gas Sensors

For detection and measurement of refrigerant gases



Dynamment gas sensors are designed with patented 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.

FEATURES

- Successfully passed all performance tests conducted in an independent study by AHRTI with full results available through the published report, *Refrigerant Detector Characteristics for Use in HVACR Equipment, March 2020*
- Measures refrigerant gases in the LFL range with a resolution of 0.05% (500ppm)
- Ex d IIC Certified (also available in non-certified models)
- Fail-safe operation
- 5-year warranty
- Choice of output format – digital (floating point and binary), direct pellistor replacement and industry standard 0.4 to 2 volts
- Manual calibration option can be performed without digital commands
- Output can be scaled in % volume, % LEL, or PPM; gas dependent
- User configurable using USB powered Premier Configuration Unit
- Enhanced EMC protection

Dynamment Limited

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SPECIFICATION @ 20°C (68°F) ambient temperature

Operating Voltage Range:	3.0 – 5.0 VDC
Measuring ranges:	See gases and ranges table
Resolution:	0.05%
Linearity:	± 10% of the applied gas, or +/-0.05% volume, whichever is greater.
Accuracy:	Accuracy limits are maintained within ±5% of the calibration pressure
Pressure	± 5% of the calibration pressure to maintain the accuracy limits
Warm up time:	To final zero ± 2% full-scale: approximately 1 minute, some sensors may take longer.
Response Time T50:	<10s
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:	± 0.05% volume per month
Operating temperature range:	-20°C to +50°C (-4°F to 122°F) -40°C to +75°C (-40°F to 167°F) for XTR
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
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% volume	0.05% vol. 500ppm	A2L
R454B	0 – 12% volume	0.05% vol. 500ppm	A2L
R454C	0 – 15% volume	0.05% vol. 500ppm	A2L
R290	0 – 2% volume	0.01% vol. 100ppm	A3
R744	0 – 5% volume	0.01% vol. 100ppm	A1
R744	0 – 500ppm	10ppm	A1

Additional ranges and gases available upon request.

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

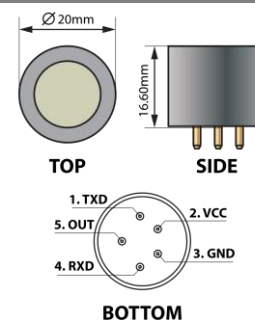
*Flame propagation testing conducted at 60°C and 101.3kpa

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

COMPLIANCE AND REGULATIONS



MECHANICAL DETAIL



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