

Axiom 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 NDIR sensing technology has a twenty-year history of meeting and exceeding gas detection needs in the most challenging of environmental applications in many industries worldwide.

FEATURES

- Measures refrigerant gases in the LFL range with a resolution of 0.05% (500ppm)
- Fail-safe operation
- Immune to poisoning
- 10+ year lifetime
- 10+ year calibration interval
- Digital, Analog, and Open Collector outputs
- Sensor End-of-Life (EOL) fault
- USB-C connector [rated IP68] allows for off-the shelf cabling option
- Onboard heater and software algorithm to prevent the impact of condensation
- USB PC diagnostic tool for service and maintenance support



USB SERVICE DIAGNOSTIC TOOL

Gas Type R32
Status **ALARM**
Gas Reading 28 %LFL
Fault Code ---
Fault Description



Axiom Service Diagnostic Tool (SDT) requires simple USB-C to USB PC cable connection and the diagnostic tool is available through File Explorer. Axiom SDT provides real-time gas reading and fault information to assist with service and maintenance.

Dynamment Limited

Hermitage Lane Industrial Estate, Kings Mill Way, Mansfield, Nottinghamshire, NG18 5ER, UK.

Tel: 44 (0)1623 663636

Email: sales@dynamment.com • www.dynamment.com • www.processsensing.com



DYNAMENT

INFRARED GAS SENSORS

A PST BRAND

Product Datasheet

DS0006

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

Operating Voltage	5.0 VDC
Operating Power	0.5W average
Measuring Ranges	See gases and ranges table
Alarm Level	5% LFL (for flammable gas)
Linearity	± 10% of the applied gas, or +/-0.05% volume, whichever is greater.
Accuracy @25%LFL	± 3%
Pressure	± 5% of the calibration pressure
Warm up time	<60s
Response Time T50	<10s
Response Time T90	<30s
Operating temperature range	-40°C to +75°C (-40°F to 167°F)
Humidity range	0 to 95% RH non-condensing
Digital Outputs	RS485 Modbus, RS232 UART, USB 2.0
Analog Outputs	4-20mA, 0.4-5V, Open Collector
Calibration Interval	10 years
Weight	50 grams
Sensor Life	10 years

Refrigerant Gases and Ranges

Gas Type	Range	Resolution	Safety Classification
R32	0-14.4% volume	0.05% vol. 500ppm	A2L
R454B	0-11.5% volume	0.05% vol. 500ppm	A2L
R454C	0-7.7% volume	0.05% vol. 500ppm	A2L
R290 (Propane)	0-2% volume	0.01% vol. 100ppm	A3
R744 (CO2)	0-5% volume	0.01% vol. 100ppm	A1
R744 (CO2)	0-500ppm	10ppm	A1
R744 (CO2)	0-5000ppm	10ppm	A1

Additional ranges and gases available upon request.

Safety Classifications Explanation*

Toxicity	Flammability	LFL	Flame Propagation
	1: Non-flammable	N/A	No flame propagation
A: Lower Toxicity	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

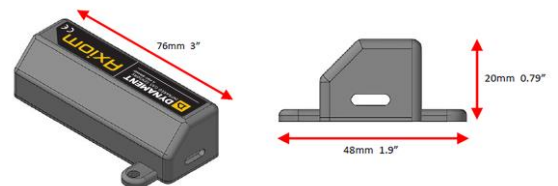
** Exhibit flame propagation & maximum burning velocity of ≤ 10 cm/s when tested at 23°C and 101.3 kPa

COMPLIANCE AND REGULATIONS



Designed to meet the UL60335-2-40 Edition 4 and IEC60335-2-40 Edition 7

MECHANICAL DETAIL



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