

| SENSATA RESONIX™

RGD SERIES REFRIGERANT LEAK SENSOR

The Sensata Resonix refrigerant leak detection sensor is a compact embedded module designed to meet demanding OEM requirements and be easily integrated into HVAC & Refrigeration Equipment. Featuring the innovative Speed of Sound technology with high accuracy and fast response times. Superior resistance to overexposure and poisoning, high temperature and humidity resistance, and a lifetime greater than 15 years with no need to calibrate make the Sensata Resonix the ideal, easy to maintain, solution for HVAC&R systems.



Features

- Widest operating temperature range : -40°C to 105°C
- Fastest response time: T28 of 2.5s, T60 of 5s (average)
- Low power consumption: <40 mA max
- Industry leading lifetime: >15 years
- Short warm up time: <5 seconds
- No calibration or re-zeroing required over lifetime
- Operating humidity: 0 to 100%RH (condensing)
- IP54
- Immune to poisoning
- No false alarms due to fouling gases
- Industry leading response and start-up time
- Recognized to UL 60335-2-40
- Compliant with UL 60335-2-89

Applications

- Residential and commercial air conditioning
- Heat Pumps
- Refrigeration equipment

SPECIFICATIONS

Mechanical

Materials	Housing: 33% Glass-reinforced PPA Resin Cable : PVC
Dimensions	50 x 80 x 18 mm
Vibrations	10 Hz to 31.5 Hz with 1.0 mm total excursion 31.5 Hz to 150 Hz with 2G acceleration peak
Weight (Approx.)	50 g

Electrical

	Modbus, 5 V input ("L")	Modbus, 24V input ("H")
Supply voltage	3.3 to 5 VDC	6 VDC to 30 VDC 15 VAC to 30 VAC
Current Requirement	40mA max.	10 mA (24 VDC), 22.23 mA (24 VAC)
Output	RS485, termination resistor not required	RS485, termination resistor not required

Environmental / Performance

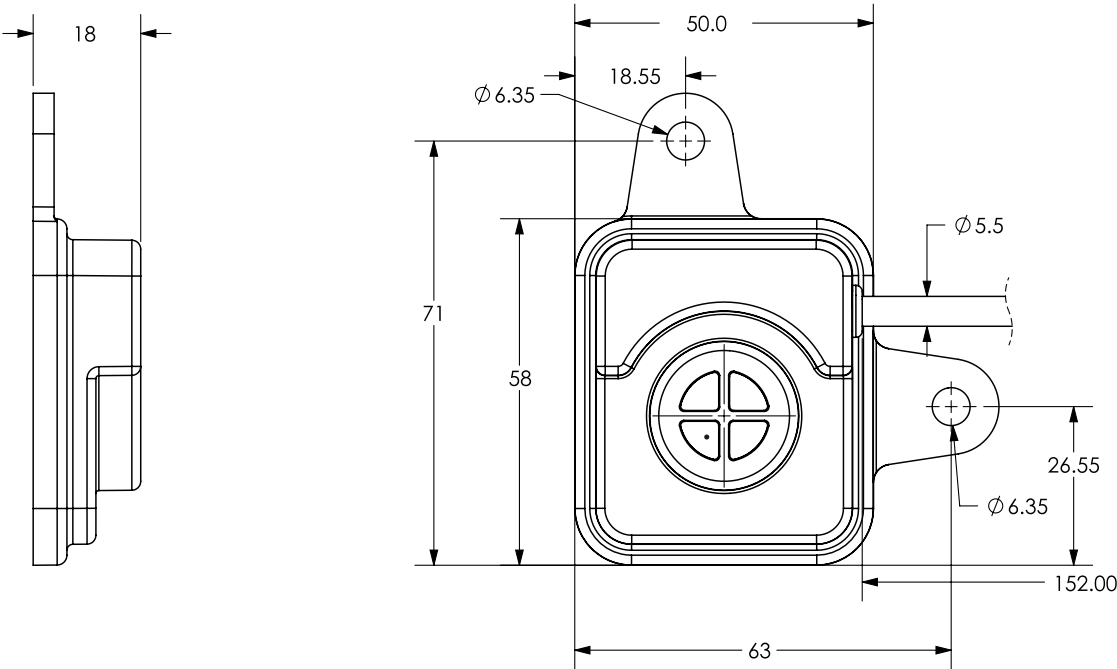
Target Gases	R32 + R454B(Dual option) R454A+ R454C+R455A(Triple option)
LFL Range	0 – 100%
Response Time	T28 of 2.5s, T60 of 5s (average)
Warm Up Time	< 5 seconds
Accuracy at nominal conditions	±2.5%LFL (-30°C - +75°C, 30-70%RH, 86-108kPa)
Accuracy outside nominal conditions	±5.0LFL
Working Temperature	-40°C to 105 °C
Storage Temperature	-40°C to 105 °C
Working Humidity	0 to 100% RH (condensing)
Working Pressure	70 to 120 KPa
Protection(EN 60529)	IP54
Fault Detection	Sensor out of range
Calibration	Factory calibration, no field calibration required
Compensation	Temperature and Humidity
Lifetime	>15 years
Conformity	UL 60335-2-40 ed.4 Annex LL, UL 60335-2-89, RoHS,REACH

DTLV Values

Product Variant	Target Refrigerants	DTLV Values
RGD-20ML00	R32	14.5% LFL
	R454B	12% LFL
RGD-30ML00	R454A	15.5% LFL
	R454C	14% LFL
	R455A	9.6% LFL

 DIMENSIONS

Dimensions in mm



ORDERING OPTIONS

Example : RGD-20ML00

	RGD	-	20	M	L	00
Series						
RGD - Resonix Gas Detection Sensor						
Refrigerant						
00= R32						
01= R1234yf						
02= R454B						
03= R454C						
04= R454A						
10= R455						
20= R32, R454B						
30= R454A,R454C,R455A						
Output Type						
M = RS485 MODBUS RTU						
Input Voltage						
L=5VDC						
H=24VDC						
Customer Specific						
00= 6 foot unshielded cable, unterminated						

AGENCY APPROVALS & CERTIFICATIONS



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