

| MGD SERIES

A2L REFRIGERANT LEAK SENSOR

The Sensata MGD series of refrigerant leak detection sensors delivers a compact embedded module which is optimized to meet demanding OEM requirements and be easily designed into HVAC & Refrigeration Equipment with an integral connector.

Featuring the innovative Speed of Sound technology with high accuracy and fast response times, the MGD series is compatible with R32, R454 series, and R455 series refrigerants, including systems which can detect any of 2 or 3 refrigerants with the same part number - simplifying inventory and engineering processes.

As with all Sensata Resonix™ sensors, the MGD series offers superior resistance to overexposure and poisoning, high temperature (working temperatures up to 95 °C) and humidity resistance, and a lifetime greater than 15 years with no need to calibrate - making the MGD the ideal leak detection component for A2L HVAC&R systems.



Features

- Widest operating temperature range : -40°C to 95°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 false alarms due to fouling gases
- Recognized to UL 60335-2-40

Applications

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

SPECIFICATIONS

Mechanical

Material	PA66 + 25% GF
Dimensions	58 x 35 x 18 mm
Operational Tempertaure	-40°C to 95 °C
Storage Temperature	-40°C to 105 °C

Electrical

Supply voltage	5 VDC
Current requirement	30 mA
Output	RS485 with integral connector

Recommended Mating Connector Components

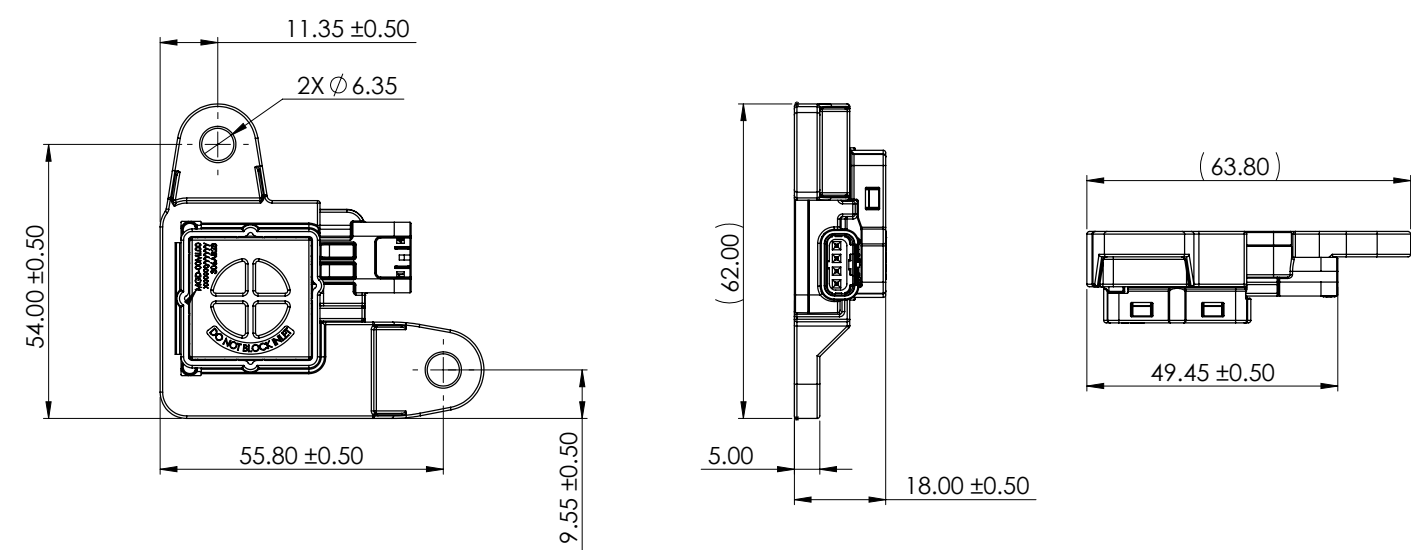
Housing	TE 2443729-4
Terminal	TE 2321921-1
Rear wire seal	TE 2321922-4
Perimeter seal plug	TE 2321920-4
Terminal position assurance	TE 2321919-4

Environmental/Performance

Target Gases	Single refrigerant: R32, R454B, R454C, R454A, R1234yf,R455A Dual refrigerants: R32, R454B Triple refrigerants: R454A, R454C, R455A
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 95 °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

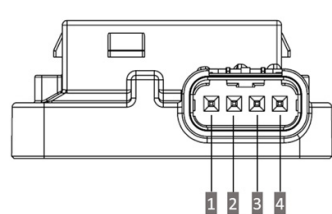
DIMENSIONS

Dimensions in mm



PIN OUT DIAGRAM

No	Description
1	RS485 Data -
2	GND
3	RS485 Data +
4	Vin



ORDERING OPTIONS

Example : MGD-20ML00

MGD

-

20

M

L

00

Series

MGD= Mini Gas Detection Sensors

Refrigerant

00= R32
01= R1234yf
02= R454B
03= R454C
04= R454A
10= R455
20= R32+R454B
30=R454A+R454C+R455A

Output Type

M = Modbus RTU

Input Voltage

L= 5VDC

Connector Type

00= TE 2443727-4

DTLV Values

MGD-20ML00	R32	14.5% LFL
	R454B	12% LFL
MGD-30ML00	R454A	15.5% LFL
	R454C	14% LFL
	R455A	9.6% LFL

AGENCY APPROVALS & CERTIFICATIONS



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