GVZ components
Your Sensing Solutions

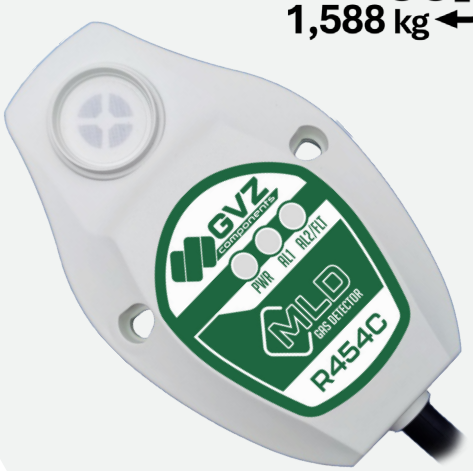
MLD GAS DETECTOR

with NevadaNano MPS™ Technology inside

CO_2 1,588 kg

Molecular Leakage Detector

For Refrigerants A1 - A2L
in HVAC-R applications



The MLD is a cost effective, long life refrigerant gas detector, based on MPS technology, that reduces maintenance needs and allows the customer to have highly reliable product with the latest technology.

Highly flexible and reliable, this detector combines the Molecular Property Spectrometry technology with a specific electronic to provide the Modbus and the analog 4-20mA output .

It is also equipped with two relays (Alarm 1 and Alarm 2/Malfunction) to offer a clean signal that can be managed in an intuitive way.
It comes with 1,5 or 3 meters cable, without connector.

Part Number Definition

MLD-MN022-3

Part Series

Sensors Type
S4 = NevadaNano Type S4
MN = NevadaNano Type MINI

Gas configuration
03 = (A2L) R32
04 = (A2L) R454B
05 = (A2L) R454C
10 = (A1) R410A
12 = (A2L) R1234ze
14 = (A2L) R454A

Power Supply
1 = 12VDC
2 = 24VDC

Cable Lenght
Blank = 1.5m
3 = 3.0m

Features & Benefits

- No field calibration needed
- Immunity to poisoning
- No cross sensitivity
- Fail Safe (built in diagnostic)
- Long life (+15 years without calibration)
- Wide Temperature working range
- High accuracy with built-in Temperature, humidity and pressure sensors
- T - Rh - P values available as signals (Modbus)
- Multiple digital and analog output (Modbus, 4-20mA, 0,4-2Volt, Alarm Relays)

Applications

- HVAC Systems
- Refrigeration
- Cool Store
- Hotels ventilation system
- Home & Building automation
- Mobile HVAC units
- Railway conditioning

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TECHNICAL FEATURES

Sensor Performances

Technology	**Molecular Property Spectrometry by NevadaNano**	
Gas detected	**A1** R410A	**A2L** R32, R454A/B/C, R1234ze
Measurament range	1700-130.000ppm (static* condition) 5100-130.000 (dynamic condition)	3-100% LEL
Accuracy ISO817/ASHRAE 34	±11%	±3% LEL (R32 - R454A - R1234ze) ±5% LEL (R454B - R454C)
Accuracy UL 60335-2-40 **≤25% LEL 20°C, 50%RH**	--	±2,5% LEL
Response Time	<12 sec.	<12 sec.
Response Time (T90)	<20 sec.	<20 sec. (R32 - R454B - R454C) <30 sec. (R454A - R1234ze)
Resolution	130ppm	0,1% LEL
Lifetime	15+ years	

Detector Operating Features

Signals Output	Gas concentration, Status, Prealarm, Alarm, Fault, Lifetime, Pressure, Humidity, Temperature
Measurament Output	Modbus | 4-20mA | 0,1-2,9V | 2x Relays
Visual Information	3x LED (Status, Prealarm, Alarm/Fault)
Supply Voltage	12-24VDC ±10%
Power Consumption	Avg. 50mA Peak: 60mA (12VDC) | 80mA (24VDC)
Operating Temperature	-40° to +70°C (12VDC) | -40° to +60°C (24VDC)
Operating Humidity	0 - 100% RH
Operating Pressure	80 to 120 kPa
Protection grade	IP65
Dimensions MLD-MN	13 x 8 x 2,5 cm
Dimensions MLD-S4	13 x 8 x 4,0 cm
Certifications & Approvals	CE, EMC, Rohs, IEC60335-2-40, EN60079-0, EN60079-11, ATEX

(*) Static conditions defined as temperature magnitude change rate < 3 °C/min. or relative humidity magnitude change rate < 3 %RH/min

Carbon Footprint:
The CO2 equivalent emissions in the production of a single MLD device is 1,588 kg.
The carbon footprint of the MLDs is calculated by using the cradle-to-gate LCA (Life Cycle Assessment) method.
This means that the system boundary include all greenhouse gas emissions that occur from the input of raw materials (cradle) to the end of the product's production (gate).

CO_2 1,588 kg

+39 02 3340 0846 www.gvzcomp.it Via Magenta 77/16A Rho

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