GVZ components

Your Sensing Solutions

Molecular Leakage Detector

For Refrigerant A3
in HVAC-R applications

MLD GAS DETECTOR

with NevadaNano MPS™ Technology inside

CO_2 1,588 kg

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-MN062-3

Part Series

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

Gas configuration
02 = R290 (wide range)
F2 = R290 (selective)
06 = A3 refrigerants
R50 (Methane), R170 (Ethane)
R290 (Propane), R600 (Butane)
R600a (Isobutane), R601 (Pentane)
R1270 (Propylene)
F6 = A3 refrigerants (In Flame start)

Power Supply
1 = 12VDC
2 = 24VDC

Cable Lenght
Blank = 1.5m
3 = 3.0m

Applications

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

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, 0-2,9Volt, Alarm Relays (programmable)

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TECHNICAL FEATURES

Sensor Performances	
Technology	Molecular Property Spectrometry by NevadaNano
Gas detected	A3 Refrigerants R50 (Methane), R170 (Ethane), R290 (Propane), R600 (Butane), R600a (Isobutane), R601(Pentane), R1270 (Propylene)
Measurament range	3-100% LEL
Accuracy ISO 10156 **0-50% LEL** **(across full environmental range)**	±3% LEL (R50) ±5% LEL (R170- R600/a-R1270) ±7% LEL (R290- R601)
Response Time	<12 sec.
Response Time (T90)	<20 sec.
Resolution	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 SIL1/2 according to IEC61508 / EN50402 / IEC 50271 / IEC 50270 (pending)

Release 012026

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).

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