

GASGUARD LEL COMBUSTIBLE GAS SENSOR



Key Features

- Useful for activation of electrical shunt-trip, ventilation or fuel supply shutoff
- Industry standard linear 4/20 mA output
- Calibrated for desired combustible gas 0-100% LEL (specify target gas)
- Sensing element designed for long life in harsh industrial environments
- Class I, Div 1, Groups B, C and D explosion-proof housing
- Designed to perform in temperatures of -40°F to +150°F
- Real-time continuous monitoring

Explosion prevention.

The GasGuard LEL is the last line of defense against catastrophic failure.

The GasGuard LEL utilizes catalytic-bead sensor technology with a matched pair of detector elements. When combustible vapors enter the sensor, the passive bead remains unchanged while the active detector bead catalyzes the oxidation of gas, generating heat and changing its resistance. The resulting change in resistance is accurately measured across the bridge circuit.

The GasGuard LEL sensor provides an industry standard linear 4/20 mA output signal proportional to 0-100% LEL of the target gas. The transmitter is compatible with most gas detection systems and PLCs. Long sensor life with minimal span adjustment can be expected in most applications. The sensor is designed for simple calibration and is field replaceable.

Applications

- Mechanical Rooms
- Boiler Rooms
- Heat Treatment
- Tank Rooms
- Sea Vessels
- Refrigeration Systems
- Cold Storage
- Pulp and Paper
- Chemical Plants
- Breweries
- Refineries
- Maintenance Garages

Benefits

- Low cost explosion protection
- Long sensor life (5 yrs typical)
- Simple operation & calibration

GASGUARD LEL

The **GasGuard LEL** is designed to detect and monitor potentially explosive levels of combustible gas vapors in air over the range of 0-100% LEL.

A 3/4" NPT threaded conduit entrance is provided on the side of the transmitter housing for mounting and support of the **GasGuard LEL**. Long sensor life can be expected in most mechanical room applications. Typical sensor life is 5 years. Field replaceable sensor element keeps long term maintenance simple and low cost.

Measureable gases:

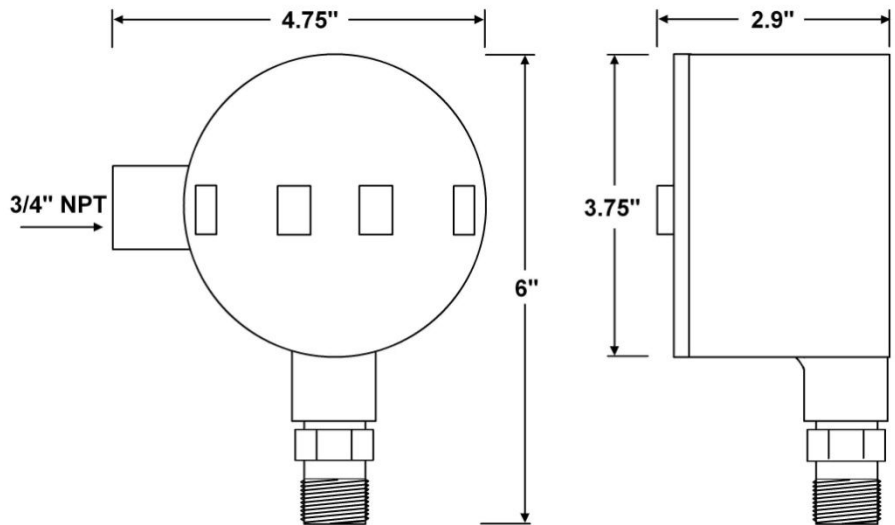
Methane (CH₄)
Hydrogen (H₂)
Propane (C₃H₈)
Butane (C₄H₁₀)
Ethane (C₂H₆)
Ethanol (C₂H₆O)
Methanol (CH₄O)
Isopropyl Alcohol (C₃H₈O)

Ordering Information

The **GasGuard LEL** is delivered calibrated 0-100% LEL for your target gas and ready to install. The assembly includes sensor and transmitter mounted inside the explosion proof housing. Use the model numbers below to order.

GG-LEL-xxxx (specify target gas)

GG-LEL-RS (replacement sensor)



SPECIFICATIONS

DUE TO ONGOING RESEARCH AND PRODUCT IMPROVEMENT, SPECIFICATIONS ARE SUBJECT TO CHANGE

DETECTION PRINCIPLE:

Catalytic-Bead

DETECTION METHOD:

Diffusion

GASES:

Methane, n-Butane, Ethane, Propane, Hydrogen, Methanol, Ethanol, Isopropyl Alcohol, Acetone, Benzene, Toluene, Di-ethyl Ether, n-Pentane and n-Hexane

RANGE:

0/100% LEL

OUTPUT SIGNAL:

Linear 4/20 mA (max input impedance: 700 Ohms)

POWER SUPPLY:

+24 VDC, 100 mA

RESPONSE TIME:

T₅₀ = less than 5 seconds

T₉₀ = less than 15 seconds

ACCURACY:

+/- 5% of value, but dependant on calibration gas accuracy

ZERO DRIFT:

Less than 0.3% of full-scale per month

SPAN DRIFT:

Application dependant, but generally less than 3% per month

LINEARITY:

+/- 0.5% of full-scale

WARRANTY:

1 year (transmitter and sensor element)

REPEATABILITY:

+/- 1% of full-scale

SENSITIVITY:

1% LEL

WIRING CONNECTIONS:

3 conductor, shielded, stranded, 20 AWG cable (General Cable C2525A or equivalent) up to 1500 ft.

ENCLOSURE:

Explosion proof. Class I, Div 1, Groups B, C & D CSA, UL approved

TEMPERATURE RANGE:

-40°F to +150°F (-40°C to +66°C)

WEIGHT:

4 lbs