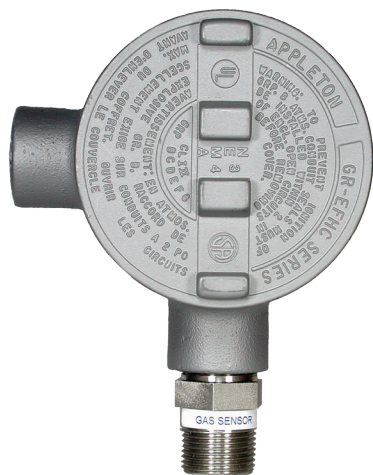


GASGUARD LEL

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

Benefits

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



The **GasGuard LEL** is designed to detect and monitor potentially explosive levels of combustible gas vapors in air within 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 with a typical sensor life of 5 years. Field replaceable sensor element keeps long term maintenance simple and low cost.

Measurable gases:

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

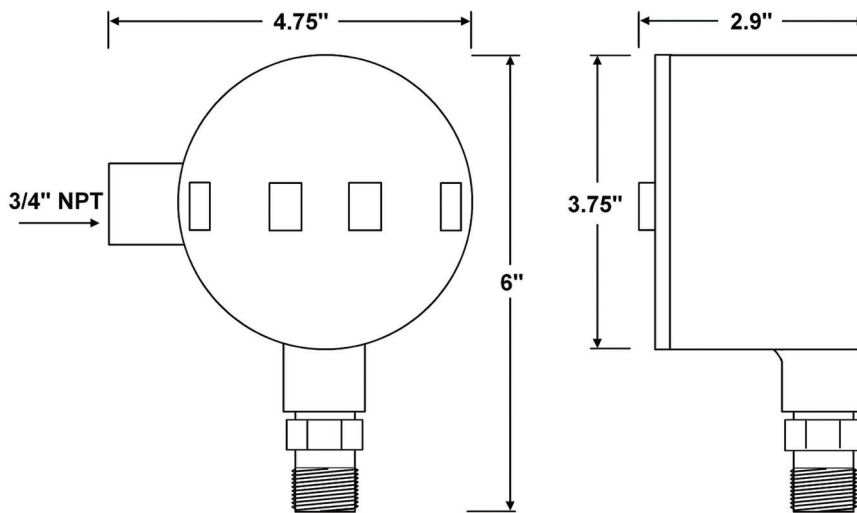
many other gases not listed

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.

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

Input Power:

+24 VDC, 100 mA

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)

Linearity:

+/- 0.5% of full-scale

Repeatability:

+/- 1% of full-scale

Response Time:

T50 = less than 5 seconds
T90 = less than 15 seconds

Accuracy:

+/- 5% of value, but dependent on calibration gas accuracy and time since last calibration

Zero Drift:

Less than 0.3% of full-scale per month, non-cumulative

Span Drift:

Application dependent, but generally less than 3% per month

Temperature Range:

-40°F to +150°F (-40°C to +66°C)

Humidity Range:

5% to 100% condensing

Wiring Connections:

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

Terminal Block Plugs (Field Wiring):

12-26 AWG, torque 4 lbs-in

Enclosure:

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

Dimensions:

7.5" high x 6.5" wide x 3.75" deep

Weight:

3 lbs

Warranty:

2 years (including replacement cell)