

## GG-LEL2

## 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 +140°F
- Real-time continuous monitoring

## Explosion prevention.

The GG-LEL2 is the last line of defense against catastrophic failure.

The GG-LEL2 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 GG-LEL2 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
- Process Areas

## Benefits

- Low cost explosion protection
- Long sensor life (5-7 yrs typical)
- Simple operation & calibration

**AUTHORIZED DISTRIBUTOR:**  
 GasDetectorsUSA.com  
 Houston, Texas USA  
 sales@GasDetectorsUSA.com  
 832-615-3588



The **GG-LEL2** 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 top of the transmitter housing. Mounting tabs are provided for support of the **GG-LEL2**. Long sensor life can be expected in most mechanical room applications with a typical sensor life of 5-8 years. Field replaceable sensor element keeps long term maintenance simple and low cost.

Measurable gases	Order # suffix
Ethane	C2H6
Ethylene	C2H4
Hydrogen	H2
Methane	CH4
N-butane	C4H10
N-hexane	C6H14
N-pentane	C5H12
Propane	C3H8

*other gases not listed*

## Ordering Information

The **GG-LEL2** 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-LEL2-xxx](#) (specify target gas)  
[GG-LEL2-NH3-RS](#) (replacement sensor for ammonia)  
[GG-LEL2-RS](#) (replacement sensor for all other gases)



replacement sensor element



## SPECIFICATIONS

Due to ongoing research and product improvement, specifications are subject to change

### Input Power:

+24 VDC, 80 mA

### Detection Principle:

Catalytic-Bead

### Detection Method:

Diffusion

### Gases:

Combustible gases listed above

### 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 20 seconds

T90 = less than 45 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 1% per month

### Temperature Range:

-40°F to +140°F (-40°C to +60°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

### Weight:

3.5 lbs

### Warranty:

2 years (including replacement sensor head)

### Enclosure:

Copper-free aluminum body, epoxy powder coat finish, neoprene gasket, for hazardous areas.

NEC/CEC:

Class I, Division 1, Groups B, C, D

Class II, Division 1, Groups E, F, G

Class II, Division 2, Groups F, G

Class III

NEMA/EEMAC: 3, 4, 4X, 7BCD, 9EFG

UL Standard: 1203

CSA Standard: C22.2 No. 30

FM Classification No.: 3615

ATEX Certificate KEMA 02 ATEX 2265U

IEC Standards EN:60079-0, EN:60079-1, EN:60529

### Sensor Head:

Stainless steel flameproof enclosure constructed with an integral stainless steel sinter filter for the safe entry of the atmosphere being detected.

ATEX Certificate CESI 01 ATEX 066 U

### Warranty:

2 years (including sensor element)