

## GASGUARD H<sub>2</sub>-1% HYDROGEN SENSOR



### Key Features

- Hydrogen selective catalytic bead sensor technology for long life
- Industry standard linear 4/20 mA output
- Corrosion, weather and chemical resistant polycarbonate sensor enclosure
- Intelligent-design enclosure temperature control for improved cell life
- Sensor designed to adapt to any harsh environment from -40°F to +120°F
- Real-time continuous monitoring for early detection of explosive concentrations.
- Detectable range: 0-1% (10,000 ppm or 25% LEL)
- Absolutely no Zero drift compared to other catalytic bead type sensors

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Energy savings plus prevention of explosive hydrogen gas build-up.  
The perfect solution for battery room ventilation.

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The GasGuard H2-1% utilizes hydrogen selective catalytic bead sensor technology for fast and accurate detection. The standard detection range provides real-time continuous monitoring of hydrogen concentrations accurately down to 500 ppm, with no false alarms.

The intelligent internal temperature control of the GasGuard H2-1% provides optimum temperature control for extended cell life. The high-quality injection-molded polycarbonate enclosure offers excellent chemical corrosion protection and high impact resistance.

The GasGuard H2-1% provides an industry standard linear 4/20 mA output signal compatible with most gas detection systems and PLCs. The output signal is not affected by drastic temperature variations or other atmospheric conditions.

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### Applications

- Battery Charging Rooms
- Steel industry
- Refineries
- Perimeter Monitoring
- Heat treatment
- Sea Vessels

### Benefits

- Simple operation
- Rugged and reliable
- Energy savings
- Long-life sensor

# GASGUARD H<sub>2</sub>-1%

The International Fire Code section 608.6.1 states “the ventilation system shall be designed to limit the maximum concentration of hydrogen to 1% (25%LEL) of the total volume of the room” or “continuous ventilation shall be provided at a rate of not less than 1 cfm per square foot of floor area in the room”.

When using the **GasGuard H2-1%** in combination with any of our GasGuardian controller line (or any other 4/20 mA input device), exhaust fan activation will prevent dangerous accumulation of explosive hydrogen gas concentrations. Since continuous ventilation in refrigerated areas can add up to huge costs, activating exhaust fans only when necessary can amount to thousands of dollars a year in energy savings for your company.

Every circuit board is sealed forever in potting compound, protecting electronic components and copper tracing from corrosion. A specially vented chemical-resistant polycarbonate enclosure protects the sensor from accidental damage, weather and direct hose-hits from clean-up crews.

## Ordering Information

The **GasGuard H2-1%** is delivered calibrated and ready to install. Use the model numbers below to order.

**GG-H2-1%**  
**GG-H2-1%-RS** (replacement sensor)



## SPECIFICATIONS

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

### DETECTION PRINCIPLE:

Catalytic Bead

### DETECTION METHOD:

Diffusion

### GASES:

Hydrogen (H<sub>2</sub>)

### RANGES:

0/1% (10,000 ppm) (25% LEL)

### OUTPUT SIGNAL:

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

### POWER SUPPLY:

+24 VDC, 250 mA

### RESPONSE TIME:

T<sub>50</sub> = less than 30 seconds

T<sub>90</sub> = less than 60 seconds

### ACCURACY:

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

### ZERO DRIFT:

Less than 0.1% of full-scale per month, non-cumulative

### SPAN DRIFT:

Less than 2% per month

### LINEARITY:

+/- 0.5% of full-scale

### REPEATABILITY:

+/- 1% of full-scale

### WIRING CONNECTIONS:

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

### ENCLOSURE:

Injection-molded NEMA 4X polycarbonate enclosure. Captive screw in hinged lid. For non-classified areas.

### TEMPERATURE RANGE:

-40°F to +120°F (-40°C to +49°C)

### HUMIDITY RANGE:

5% to 100% condensing

### DIMENSIONS:

7.5" high x 6.5" wide x 3.75" deep

### WEIGHT:

3 lbs