GG-H_2-EC

HYDROGEN SENSOR

Key Features

- Hydrogen specific electrochemical sensor technology. Absolutely no false alarms
- 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 -20°F to +120°F
- Real-time continuous monitoring for early detection of explosive concentrations
- Detection ranges of 0-10,000 ppm (25% LEL) and 0-2,000 ppm (5% LEL) H2
- 2-year warranty

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

The GG-H2-EC utilizes proven electrochemical sensor technology for fast and accurate detection. The standard detection range provides real-time continuous monitoring of hydrogen concentrations accurately down to 200 ppm (0-2,000 ppm range), with no false alarms.

The intelligent internal temperature control of the GG-H2-EC 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 GG-H2-EC 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.

Applications

- Battery Charging Rooms
- Steel Industry
- Refineries
- Perimeter Monitoring
- Heat Treatment
- Sea Vessels

Benefits

- Simple operation
- Energy savings
- Rugged and reliable

CALIBRATION TECHNOLOGIES INC.
GAS DETECTION SPECIALISTS

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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 **GG-H2-EC** in combination with the CTI 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 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.

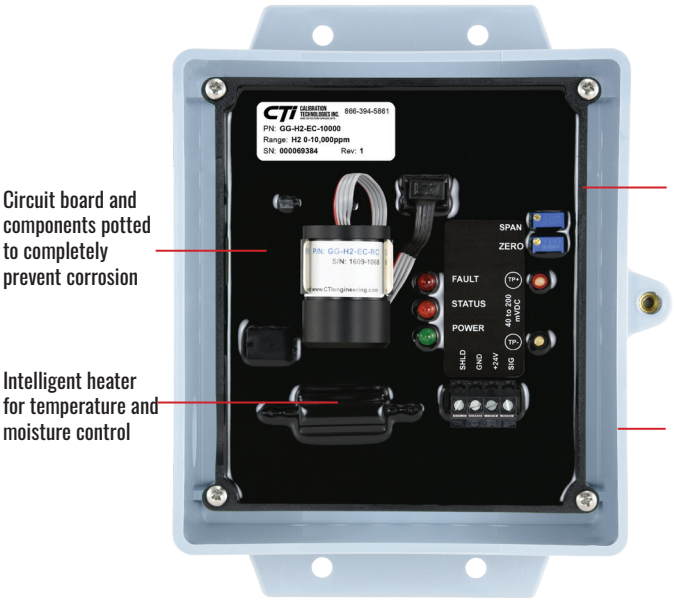
Every circuit board is sealed forever in potting compound, protecting electronic components and copper tracing from corrosion. A specially vented chemical-resistant polycarbonate enclosure protects the sensor from accidental damage, weather, and direct hose-hits from clean-up crews.

Ordering Information

The **GG-H2-EC** is delivered calibrated and ready to install. Use the model numbers below to order.

Order #: GG-H2-EC-10000 (standard)
GG-H2-EC-2000
GG-H2-EC-xxxx-ST (stainless enclosure)
GG-H2-EC-xxxx-DM (duct mount)
GG-H2-EC-RC (replacement cell)

Stainless steel enclosure option



SPECIFICATIONS

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

Input Power:
+24 VDC, 350 mA

Detection Principle:
Electrochemical

Detection Method:
Diffusion

Gases:
Hydrogen (H2)

Ranges:
0/2,000 ppm (0.2% Vol (5% LEL))
0/10,000 ppm (1.0% Vol (25% 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 10 seconds
T90 = less than 30 seconds

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

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

Span Drift:
Application dependent, but generally less than 3% per month

Temperature Range:
-20°F to +120°F (-28.9°C to +49°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:
NEMA 3RX injection-molded, washdown-duty polycarbonate sensor housing with hinged lid and captive screw. For non-classified areas. Optional 316 18 GA, NEMA 3RX washdown-duty stainless steel housing with hinged lid and captive screw. For non-classified areas

Dimensions:
7.5" high x 6.5" wide x 3.75" deep

Weight:
2.15 lbs

Certification:
SGS listed to UL 61010-1, and CSA C22.2 No. 61010-1-12

Warranty:
2-years (including sensor element)