



HLD FAQ

This infographic provides a clear overview to help address common questions and objectives when discussing the Hydrogen Leak Detector (HLD) Sensor with customers. It serves as a valuable tool to guide conversations, ensuring key points are covered effectively.

1.

What is "Hydrogen Leak Detector" and what problem does it solve for me?

The Honeywell Hydrogen Leak Detector is designed and packaged for usage in many applications. The sensor uses Thermal Conductivity Detection (TCD) technology for stable and reliable performance.

In addition, TCD presents the advantage of being reproducible with low part-to-part variability and environmental robustness against poisoning. The long-term stability of the Honeywell sensor over environmental conditions like altitude and temperature eliminates the need for sensor calibration or replacement.

2.

How does H₂ Leak Sensor make money for me?

The H₂ leak sensor utilizes TCD technology, boasting a sensor lifespan estimated at 10 years. In contrast, alternative technologies such as Catalytic Beads necessitate sensor replacement every five years. Furthermore, the H₂ Leak Sensor eliminates the need for field calibration updates, thereby minimizing downtime and operational interruptions. This feature contributes to a superior total cost of ownership compared to other H₂ leak detection methods.

3.

How does H₂ Leak Sensor compare to how I solve this problem today?

Compared to existing market technologies like Catalytic Bead, TCD stands out in several key aspects. Take, for instance, the Honeywell sensor, which boasts a longer sensor lifespan, enhanced accuracy, and a more economical total cost of ownership. Unlike Catalytic Bead, primarily tailored for industrial applications, TCD's versatility extends across various industries, meeting stringent automotive standards alongside other sectors.

4.

How does the HLD detect Hydrogen Leak?

Hydrogen gas leaks present significant safety concerns, primarily due to the highly flammable and explosive nature of hydrogen. Understanding the causes, detection methods, potential hazards, and safety measures associated with hydrogen gas leaks is crucial for industries and applications that utilize hydrogen. HLD uses TCD to measure the difference in temperature of the surroundings and provide Hydrogen level readings. The sensor can measure as low as 50 PPM level, which equates to .005% of the hydrogen level in the air.

5.

What are the features of Honeywell Hydrogen Leak Sensor?

- **Extended Range:** Measures hydrogen concentration up to 4%
- **Reliable and Accurate:** The sensor is highly resistant to chemical poisoning with an accuracy of +/- 10% (depending on operating conditions)
- **Has an extended sensor life** up to 10 years
- **Environmental Sealing:** Moisture ingress protection rated to IP67
- **The response time** of the sensor is <2 second
- **Output Configuration:** The sensor communicates via different methods of output CAN 2.0 (250K and 500K), voltage out reading (to come), and PWM (to come)

6.

Why did you create the HLD?

Hydrogen is increasingly viewed as a promising solution for achieving sustainable energy goals due to its potential to reduce greenhouse gas emissions and reliance on fossil fuels. At Honeywell, we are supporting the transition to new energy sources with ready-now solutions to help our customers mitigate safety risks as they expand their product portfolios.

7.

What are the target segments for HLD?

- **Automotive suppliers** – all FCEV fleets
- **Transportation** – HD Truck suppliers
- **Industrial** – Hydrogen-powered forklift suppliers
- **H₂ Storage** and transport suppliers
- **H₂ Powered** generator sets
- **Industrial Safety** products

8.

Where can I find more information?

Click here to visit the Honeywell website where you can find an overview and technical reports.