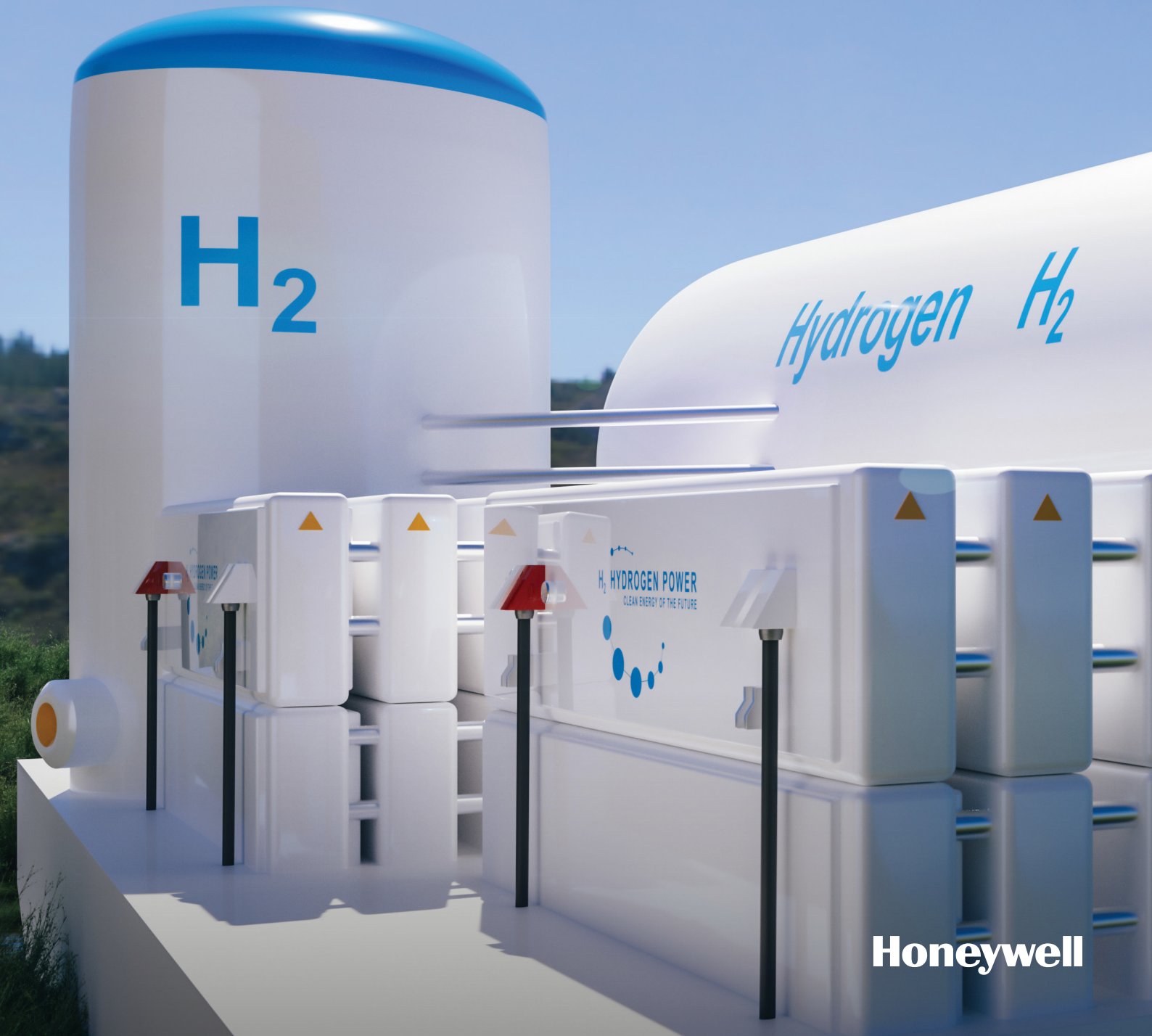
HELPING THE HYDROGEN ECONOMY STAY SAFE WITH GAS DETECTION

Reference Guide



Honeywell

Hydrogen is the clean energy source that, perhaps more than any other, has the potential to fully decarbonize our economy. It is the missing link to a reliable and sustainable energy infrastructure that powers every home, industry, and mode of transport.

HYDROGEN IS THE FUTURE

- The cost of producing hydrogen from renewable energy is predicted to fall by 30% by 2030[1].
- The clean hydrogen market is set to grow from $894.3 million today to over $2.5 billion by 2028[2].

HYDROGEN IS ALREADY HAPPENING

- Major hydrogen infrastructure, under construction in the UK, is set to eliminate 10 million tons of CO_2 emissions per year[3].
- Germany is planning a nation-wide, publicly accessible hydrogen network[4].

BUT HYDROGEN ISN'T WITHOUT RISKS

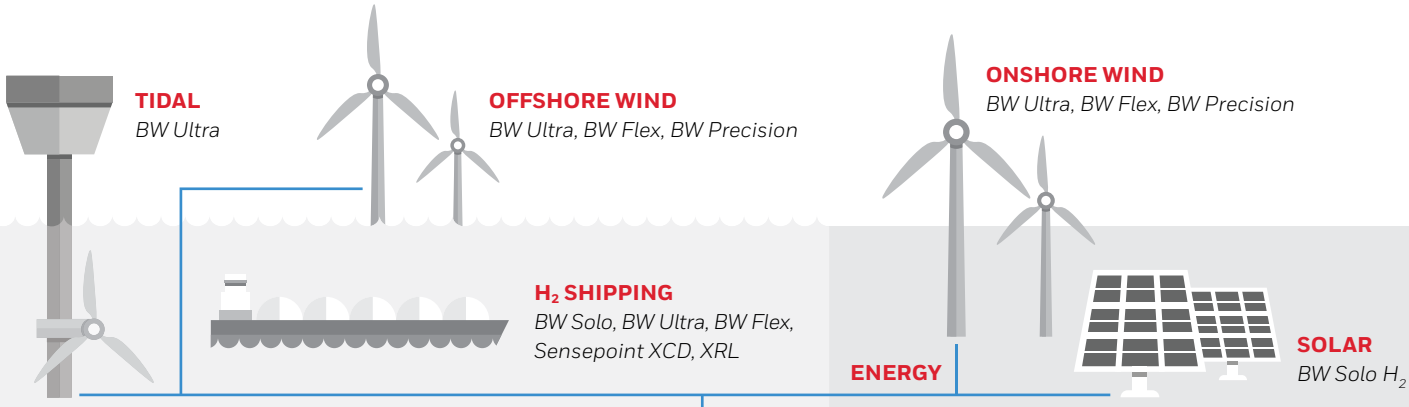
Main risks associated with hydrogen production, storage, and distribution include:

- **Asphyxiation** – hydrogen can displace oxygen
- **Fires and explosions** – hydrogen is highly flammable

1 IEA, https://www.iea.org/reports/the-future-of-hydrogen The Future of Hydrogen, June, 2019 [Accessed March 25, 2021]
2 Reports and Data, https://www.globenewswire.com/news-release/2021/02/10/2173454/0/en/Green-Hydrogen-Market-Size-Worth-2-569-7-Million-By-2028-The-Alkaline-ALK-electrolyzer-segment-accounted-for-the-largest-revenue-share-among-the-technology-segments-Reports-and-Dat.html#:~:text=The%20global%20green%20hydrogen%20market,report%20by%20Reports%20and%20Data. Green Hydrogen Market Size, Share & Analysis, February, 2021 [Accessed March 25, 2021]
3 HyNet North West, https://hynet.co.uk/news/hynet-north-west-awarded-substantial-funding/ HyNet North West awarded substantial funding, March, 17, 2021 [Accessed March 25, 2021]
4 OGE, https://oge.net/en/us/projects/our-hydrogen-projects Our hydrogen projects: Initiatives for the energy transition, 2021 [Accessed March 25, 2021]

THE HYDROGEN ECONOMY: THE CLEAN ENERGY JOURNEY

Hydrogen will transform our economy. And for every hydrogen application, there needs to be a gas detection solution.



TIDAL
BW Ultra

OFFSHORE WIND
BW Ultra, BW Flex, BW Precision

ONSHORE WIND
BW Ultra, BW Flex, BW Precision

H_2 SHIPPING
BW Solo, BW Ultra, BW Flex, Sensepoint XCD, XRL

ENERGY

SOLAR
BW Solo H_2

ELECTROLYSERS
BW Ultra, XNX, XCD, Series 3000, Sensepoint Flam / Toxic, TPPL

H_2 COMPRESSION
BW Solo, BW Flex, Searchzone Sonik™, FS24X Plus™, XNX, XCD, Series 3000, TPPL

H_2 STORAGE
BW Solo, BW Flex, XNX, XCD, Series 3000, Sensepoint Flam / Toxic, Searchzone Sonik™

H_2 PIPELINES
BW Solo

H_2 TRUCKS
BW Solo, Sensepoint XRL

H_2 FUELING STATIONS
BW Solo, BW Flex, BW Precision, Sensepoint XRL

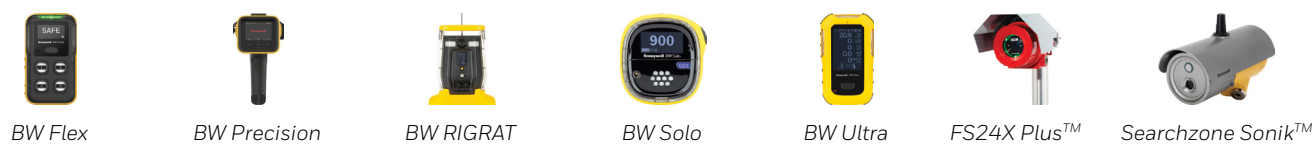
H_2 FUEL VEHICLES
Sensepoint XCL

HOMES
Sensepoint XCL

INDUSTRY
BW Solo, BW Flex, BW Precision, XNX, XCD, Series 3000, FS24X Plus™, Sensepoint Flam / Toxic, TPPL

GAS TANKS
BW Solo, BW Ultra, BW RIGRAT

HYDROGEN FUEL VEHICLE MANUFACTURING (TEST STAND)
BW Ultra, Sensepoint Flam / Toxic, Searchzone Sonik™, TPPL



BW Flex | *BW Precision* | *BW RIGRAT* | *BW Solo* | *BW Ultra* | *FS24X Plus™* | *Searchzone Sonik™*

Sensepoint Flammable | *Sensepoint XCD* | *Sensepoint XCL* | *Sensepoint XRL* | *Series 3000* | *TPPL* | *XNX*

KEEP HYDROGEN MONITORED WITH HONEYWELL GAS DETECTION SOLUTIONS

PORTABLE SOLUTIONS

Honeywell BW™ Solo single-gas detector
- Easy to use and maintain
- BLE connectivity enables real-time gas monitoring

Honeywell BW™ Ultra 5-gas detector
- Specifically designed for confined spaces
- Advanced sensor technology for enhanced accuracy and reliability

Honeywell BW™ Flex 4-gas detector
- Choice of more than 15 sensors to detect up to 4 gases simultaneously
- 2 months of battery runtime on a 4.5-hour charge

Honeywell BW™ Precision *coming soon
- Handheld confined-space-entry accessory that is compatible with BW Flex and converts into a motorized pump device
- Connectivity into Safety Suite for real time readings and gas analysis

Honeywell BW™ RIGRAT transportable multi-gas area monitoring
- Easy to use, with one-button operation
- 8 weeks of runtime on a single charge

FIXED SOLUTIONS

Sensepoint Flammable and Toxic Gas Detector
- Easy to install and durable

Sensepoint XRL/XCL fixed point gas detector
- Easy to install, commission, and maintain via smartphone
- Simple yet robust mechanical housing

Sensepoint XCD explosion-proof transmitter
- Ideal for hard-to-reach locations
- Monitors combustible and toxic gases in potentially explosive atmospheres

Series 3000 intrinsically-safe transmitter
- Explosion proof and intrinsically safe
- Ideal for both new and retrofit installations

XNX™ Universal Transmitter
- Low-maintenance universal platform, compatible with other safety equipment
- Compliant with Class 1/Class 2 intrinsically-safe, explosion-proof requirements

Searchzone Sonik™ ultrasonic gas leak detector
- Fast, reliable gas leak detection, even in noisy environments
- Doesn't need calibration and can withstand harsh weather conditions

FSX Plus™ flame detector *coming soon
- Can detect hydrocarbon and non-hydrocarbon fuel fires even in harsh environmental conditions
- FS24X Plus™ combines H_2 and HC (Liquid and Gas) detection eliminating the need for multiple devices

HONEYWELL ENHANCED MONITORING - MORE THAN JUST GAS DETECTION

- Network of expert service engineers
- SafetySuite Device Software for effective gas detection fleet management
- Rebellion GCI intelligent gas cloud monitoring system
- Touchpoint™ Plus (TPPL) easy-to-configure and use controller

For more information
https://sps.honeywell.com

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THE FUTURE IS WHAT WE MAKE IT

Honeywell