



# HydroPRO

TOTAL HYDROCARBONS IN H<sub>2</sub> ANALYZER  
PIONEERING PRECISION IN HYDROGEN PURITY

# HydroPRO THC IN H<sub>2</sub> ANALYZER

## PIONEERING PRECISION IN HYDROGEN PURITY

In the rapidly advancing world of hydrogen energy, the quest for purity is not just a standard; it's an imperative. As the industry strides towards a cleaner, more sustainable future, the HydroPRO emerges as a vital tool in this transformative journey.

This innovative sensor is a game-changer for technical professionals and decision-makers who demand the highest purity levels in hydrogen. With its cutting-edge technology, it ensures the most efficient and long-lasting operation of fuel cells. You can trust this sensor to consistently deliver optimal results.



### Fueling the future - ultrapure hydrogen for lasting fuel cell performance

The hydrogen transformation represents a significant shift towards cleaner, more sustainable energy solutions, with fuel cells playing a crucial role in this transition. For fuel cells to operate efficiently and have extended lifespans, the purity of the hydrogen they utilize is absolutely crucial.

Ultrapure hydrogen, free from contaminants such as total hydrocarbons (THC), ensures the optimal performance of these cells, reducing the risk of degradation and failure. Contaminants can poison the fuel cell catalysts, leading to reduced efficiency and, ultimately, premature cell failure. Therefore, maintaining ultrapure hydrogen not only enhances the operational efficiency of fuel cells, but also significantly prolongs their service life, making it a critical factor in the viability and success of hydrogen as a clean energy carrier.

This necessity underscores the importance of precise monitoring and control of hydrogen purity, where the advanced HydroPRO becomes indispensable in the hydrogen supply chain, from production to end-use.

### Technical excellence for unmatched purity

The HydroPRO stands alone in its class as the only sensor offering unparalleled sensitivity to total hydrocarbons (THC) in hydrogen. This unique capability is critical in maintaining the integrity of hydrogen used in fuel cells, directly impacting their performance and longevity.

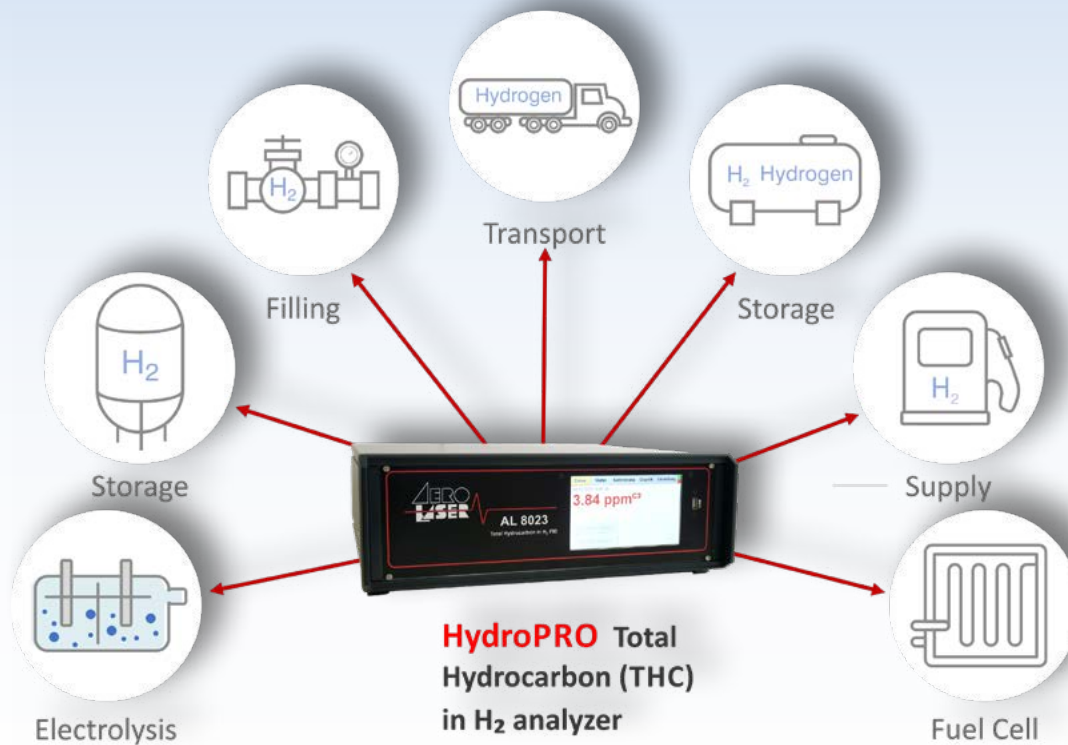
With continuous, fast and automated measurements, the analyzer offers real-time insights with precise time resolution, ensuring that the hydrogen supply remains uncompromised at every stage of its lifecycle—from production and transportation to storage and delivery.

Designed for versatility, the HydroPRO THC analyzer can be seamlessly integrated into existing systems or operate as a standalone unit. Its robust construction guarantees reliable operation even in the most challenging environments, while remote control and data storage features enhance accessibility and convenience, allowing for efficient monitoring and management of hydrogen purity.

### Elevating customer value through innovation

The HydroPRO is not merely an instrument; it is a guardian of process safety and quality control. By ensuring compliance with stringent purity standards such as ISO/DIN 14687 and DIN EN 17124, it safeguards the operational efficiency and extends the service life of fuel cells, marking a significant leap towards optimizing renewable energy resources.

Ease of operation and simple calibration procedures simplify the management of hydrogen purity, making the analyzer accessible to a wide range of users without the need for extensive training. This simplicity, combined with a high return on investment due to low total operating costs, underscores the analyzer's role as a prudent choice for stakeholders in the hydrogen economy.



## Transforming industries with precise hydrogen quality monitoring

As industries across the globe strive to reduce their carbon footprint and embrace cleaner energy solutions, the ability to ensure and maintain the purity of hydrogen becomes increasingly critical. The HydroPRO plays a vital role enhancing operational efficiencies and shaping a more sustainable and resilient energy future. It's applications span critical stages of the hydrogen supply chain, serving a diverse array of industries and sectors:

- ▶ Ultrapure Hydrogen production
- ▶ Fuel cell supply systems
- ▶ Transport and storage
- ▶ Research and development





## A catalyst for a sustainable future

The HydroPRO is more than a breakthrough in measurement technology; it is a catalyst for change in the renewable energy sector. By providing precise, reliable data on hydrogen purity, it empowers industries to not only meet but exceed the benchmarks of quality and sustainability. It's not just about adhering to present standards; it's about pioneering new horizons in hydrogen energy, ensuring that every sector it touches is equipped for success and poised for a greener tomorrow.

Select the HydroPRO: Where every measurement is a step towards a greener, more sustainable world.

## Specifications

Detection technique:	Continuous, using FiD (flame inization detector)
Detection limit:	30ppb
Linear range:	30ppb to 1000ppm (propane)
Noise:	<1%
Time resolution:	~5sec (10/90)
Sample:	Gas (1.3bar to max. 3bar)
Calibration:	Automatic (using gas standard)
Integration:	RS232 and LAN interface, data logging software available
Operation data visualization:	Graphic user interface (7" touch panel) and remote via RS232/ LAN
Data storage:	USB drive and internal data backup
Weight and dimension:	12kg, fit for 19" rack (whd: 45cm × 15cm × 56cm)
Power requirements:	110VAC / 220VAC, 180W, 24VDC on request



Gefördert durch:



aufgrund eines Beschlusses  
des Deutschen Bundestages

### AERO-LASER GmbH

Unterfeldstr. 12  
D-82467 Garmisch-Partenkirchen  
Germany

Tel: +49-8821-94386-0  
info@aero-laser.de  
www.aero-laser.de



Follow us on  
**LinkedIn**

