

# MODEL 4000 Dissolved Hydrogen Sensor in Water



## Product Overview

MODEL 4000 Dissolved Hydrogen Sensor in Water is based on Pd alloy thin-film hydrogen detection technology. The sensor chip can be directly immersed in water without the need to separate hydrogen from water. This technology features absolute hydrogen specificity and no cross-response to other flammable gases. Meanwhile, the sensor chip of MODEL 4000 adopts a Pd alloy-oxide semiconductor field-effect transistor (MODFET) structure, combined with high-sensitivity Pd alloy doping & thin-film preparation technology, and PTFE composite insulating thin-film preparation technology, allowing MODEL 4000 hydrogen sensor achieves superior long-term stability and eliminates the need for period maintenance.

## Functional Features

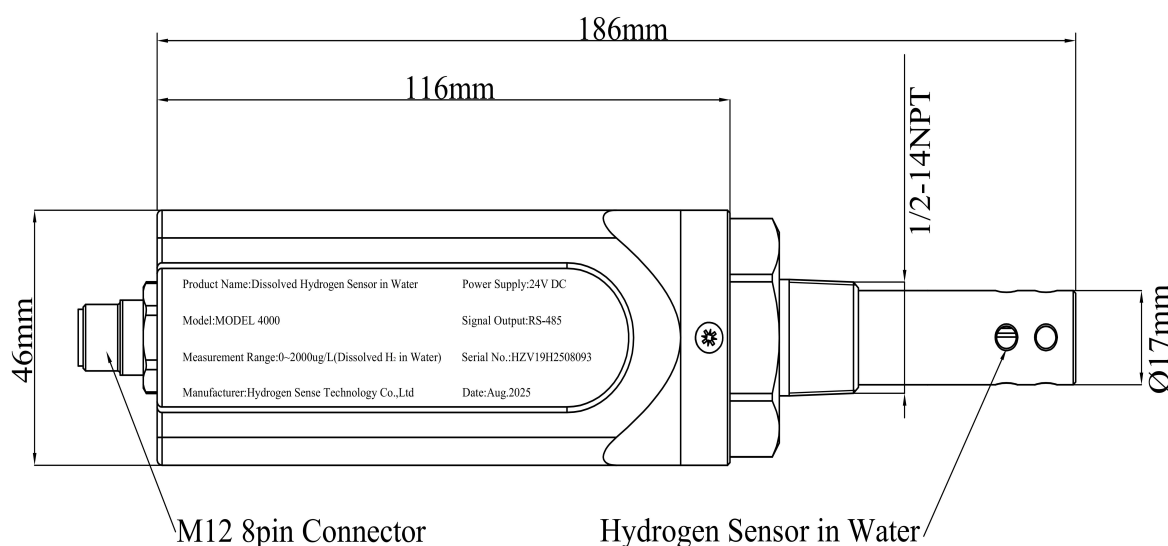
- Solid-state Pd alloy thin-film technology based on proprietary intellectual property.
- The probe can be directly immersed in water, with no need for gas-water separation
- Excellent hydrogen specificity with no cross-sensitivity.
- Does not consume hydrogen, oxygen or other carrier gases are not required.
- Long sensor service life, up to 10 years or more.
- Real-time continuous online monitoring with a 1-second frequency.
- Simple structure, easy installation and maintenance-free.
- High accuracy and excellent long-term stability.

## Main Performance Indicators

| Main Indicators(Dissolved H <sub>2</sub> ) |                                                |
|--------------------------------------------|------------------------------------------------|
| Measurement Range (H <sub>2</sub> )        | 0~2000ug/L (Dissolved H <sub>2</sub> in water) |
| Measurement Accuracy(H <sub>2</sub> )      | ±10% reading or ±1ug/L (whichever is greater)  |
| Repeatability(H <sub>2</sub> )             | ±5% reading or ±1ug/L (whichever is greater)   |
| Minimum Detection Limit                    | 1ug/L                                          |
| Response Time                              | <5min ( 60ug/L )                               |
| Applicable Water Temperature               | 10 ~ 65                                        |
| Operation Environment                      |                                                |
| Operating Temperature                      | -40 ~ 70                                       |
| Storage Temperature                        | -40 ~ 85                                       |
| Operating Humidity                         | 0 ~ 95%RH                                      |

| Data Acquisition         |                                             |
|--------------------------|---------------------------------------------|
| Sampling Interval        | Minimum 1s, adjustable and configurable     |
| Data Storage Time        | 3 Years (at intervals greater than 30min)   |
| Communication and Output |                                             |
| Serial Interface         | RS232(configuration and diagnostics) ,RS485 |
| Communication Protocol   | Modbus_RTU                                  |
| Power Supply             |                                             |
| Operating Voltage        | 24V DC ( ±10% )                             |
| Mechanical Interface     |                                             |
| Thread Specification     | External Thread                             |
| Material                 | 316L                                        |

## Product Dimension Drawing



## Hydrogen SensorTechnology Co.,Ltd

Suzhou Address: Room 338, Building 20, Suzhou Nano City, No.99 Jinji Lake Avenue, Suzhou Industrial Park, Suzhou, China.  
 Changsha R&D and Manufacturing Center: Innovation & Design Industrial Park, No. 579, Zhenhua Rd, Yuhua District, Changsha, China.

Tel : (86)731 88166361

Website : [www.thin-film-sensor.net](http://www.thin-film-sensor.net)

After-sales Service: [info@thin-film-sensor.com](mailto:info@thin-film-sensor.com)