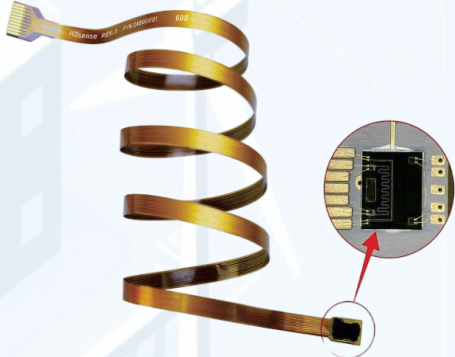


Product Overview

MODEL 5090 Thin-film Hydrogen Transmitter adopts FPC packaging. After packaging, the thickness of the sensor is less than 0.6mm, and the length of FPC is approximately 95cm, making it particularly suitable for environments with limited installation spaces. The sensor chip is based on our company's proprietary H2SENSE™ solid-state Pd alloy hydrogen detection technology—a true hydrogen-specific technology that can completely eliminate the problems of inaccurate measurement and false alarms commonly encountered by other hydrogen sensors, which are affected by background gases. The solid-state Pd alloy hydrogen sensor measures the partial pressure of hydrogen in mixed gases. It does not consume H during operation, nor does it require the participation of O, enabling it to detect H concentration in various background gases such as air, N, and inert gases.

The sensor chip of MODEL 5090 thin-film hydrogen transmitter is based on a structure of Pd alloy thin-film resistor. It adopts key process technologies, such as a mature and stable Pd alloy material doping system, alloy thin-film preparation process, and specific composite thin-film preparation technology. These technologies give the hydrogen sensor superior long-term stability, allowing it to be free from periodic maintenance and reducing operating costs. This sensor can measure hydrogen concentrations ranging from ppm level to 100% pure hydrogen, and the measurement range can also be selected and customized according to the user's application requirements.



Functional Features

- Excellent hydrogen specificity with no cross-sensitivity.
- Measure hydrogen concentration ranging from ppm level to 100% pure hydrogen.
- Suitable for installation in narrow spaces, with a packaged chip thickness of less than 0.6 mm.
- Split-type connection, with customized FPC length.
- Signal Output: RS485 and 4-20mA.

Product Performance Parameters

Main Indicators	
Measurement Range (H ₂)	0~ 100% (customizable)
Measurement Accuracy(H ₂) (Absolute Error)	±0.3%vol (0~10%vol)
	±1%vol (10~100%vol)
Minimum Detection Limit	1000ppm
Response Time (τ_{90})	< 30s
Medium Temperature	-40 ~ 60

Communication and Output	
Analog Output	24VDC±10%
Digital Signal	≤2.5W

Power Supply	
Supply Voltage	4~20mA
Power Consumption	RS-485 , Modbus_RTU

Physical Specifications and Others	
FPC Length	95cm(customizable)
Sensor Thickness after Packaging	< 0.6mm
Weight	80g

Product Physical Picture

