



## H<sub>2</sub>Sense Model 3100 Hydrogen in oil DGA Module

The H<sub>2</sub>Sense Model 3100 is designed for online Hydrogen in oil DGA measurement for oil immersed transformer and other oil filled equipment.

Our patent solid state palladium alloy hydrogen thin film sensor is hydrogen specific and does not have cross sensitivity with other gas. Capable of measuring the H<sub>2</sub> in both oil and gas phases of power transformer and other oil filled equipment. Its lowest price in the industry makes it affordable down to network transformers, other distribution transformers, special transformers and LTCs.

Thanks to its compact size and integration friendly design, it can be integrated into any system without too much additional work, it works well with any kind of communication system through digital output.

### Advantages:

Compact design fits into small installation space

Long life time (10+ years)

Sensor working directly in oil

No cross sensitivity to other gases

No membrane & no need for routine maintenance

No sensor degradation

\* We can also make customized design for special needs and applications.

## H<sub>2</sub>Sense Model 3100 Technical Data Sheet

<b>Measurement Range (H<sub>2</sub> in oil)</b>	0 ~ 5000 ppm
<b>Minimum Detection limit</b>	20 ppm
<b>Sensor</b>	Palladium alloy thin film solid-state sensor
<b>Accuracy (H<sub>2</sub> in oil)</b>	15% of reading or 20 ppm, whichever is greater
<b>Repeatability (H<sub>2</sub> in oil)</b>	5% of reading or 10 ppm, whichever is greater
<b>Response Time (T<sub>50</sub>)</b>	< 60 minutes (50% of step change)
<b>Operating Temperature (Ambient)</b>	-40 ~ 55 °C
<b>Operating Temperature (in oil)</b>	-40 ~ 85 °C
<b>Operating Humidity</b>	0 ~ 95% RH
<b>Measurement Range (Oil Temperature)</b>	-40 ~ 105 °C
<b>Accuracy (Temperature)</b>	± 1 °C
<b>Power Input</b>	6V DC, 0.5 A
<b>Analog Output</b>	0 ~ 5 V
<b>Digital Output</b>	RS485 (Modbus_RTU)
<b>Connector</b>	8 pin connector, S8B-PHDSS(LF)(SN)
<b>Expected life</b>	> 10 years

### Wire connection, input & output of sensor module

<b>2</b>	<b>4</b>	<b>6</b>	<b>8</b>
Power (ground)	RS485B	Serial RXD (TTL)	Analog output (0...5V)
<b>1</b>	<b>3</b>	<b>5</b>	<b>7</b>
Power + (6V)	RS485A	Serial TXD (TTL)	P 2.2