

MODEL3500 Series Hydrogen Sensor in Transformer Oil



Thin-film Technology of Solid-state Palladium Alloy

The optimized doping ratios and process methods ensure excellent long-term stability and sensitivity



Specific Coating Technology

Ensure that the sensor can work reliably in harsh environment including CO, H2, CH etc., even directly applied to hydrogen monitoring in transformer oil



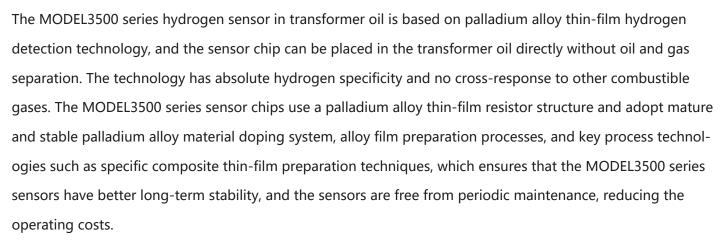
Hydrogen Online Monitoring under Different Background Gases

Meet the online monitoring of hydrogen with different background gases such as N2, inert gases etc.



Adjusting Working Temperature Automatically

The working temperature can be adjusted automatically by the thin-film temperature sensor and heater integrated on the chip surface, no need external temperature and flow control devices.



MODEL3500								
Model	Measuring Range(H2)	Minimum Detection Limit(H2)	Response Time(H2)	Accuracy(H2)	Moisture	Oil Pressure		
Model3500	0~10000ppm	15ppm	10min (150ppm)	±20% reading or ±20ppm (whichever is greater)	NA	NA		
Model3503	0~10000ppm	15ppm	10min (150ppm)	±20% reading or ±20ppm (whichever is greater)	AVL	NA		
Model3504	0~10000ppm	15ppm	10min (150ppm)	±20% reading or ±20ppm (whichever is greater)	AVL	AVL		

^{1.} The sensor can only be used for hydrogen measurement in oil with concentration below 10000ppm. Exceeding this range may cause the sensor chip deviation or even failure.

^{2.} The response time is specific to certain hydrogen concentration. As the hydrogen concentration increases, the response rate accelerates and the response time shortens.

^{3.} The accuracy data test is completed under normal temperature conditions

Technical Parameters

Main Performance Indicators

	Measurement Range	0~10000ppm		
	Measurement Accuracy	±20% or ±20ppm (whichever is greater)		
Dissolved Hydrogen	Repeatability	±5% or ±10ppm (whichever is greater)		
	Minimum Detection Limit	15ppm		
	Oil Temperature	-40~105° C		
	Response Time(t50)	< 30min		
	Sensor	Pd alloy thin-film hydrogen sensor		
	Measurement Range	0~100%RS		
	Measurement Accuracy	0~90%RS	±2%RS	
Moisture	(20°C)	90~100%RS	±3%RS	
	Response Time(t90)	< 10min		
Oil Temperature	Measurement Range	-40~120 °C		
	Measurement Accuracy	±0.2° C		
	Measurement Range	0~1MPa		
Oil Pressure	Measurement Accuracy	±1%F.S.		
Oli i lessure	Resolution	0.1kPa		
	Overload Capacity	3МРа		

Electrical Characteristics and Others

Power Supply	24VDC±10%, 0.5A (max)		
Digital Output	RS-485		
Communication Protocol	Modbus_RTU		
Ingress Protection	IP67		
Data Storage	Data storage interval:30min, data retention period:5 years		
Life Expectancy	10years		

Outline Dimension

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