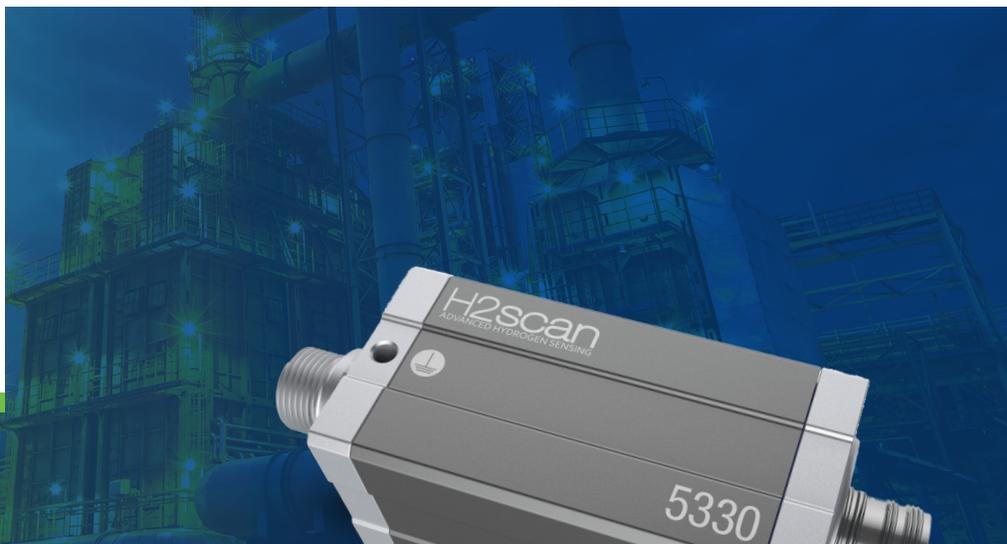


# HY-OPTIMA® 5330 IS Gen 5 Sensor Family

INTRINSICALLY SAFE  
HYDROGEN IN-LINE  
PROCESS ANALYZER



## Revolutionary Self-Calibrating Hydrogen Measurement for Industrial Applications

The intrinsically safe HY-OPTIMA® 5330 Sensor family delivers unparalleled reliability, robustness, and durability to hydrogen in-line monitoring across various industrial applications, from chemical facilities and refineries to the burgeoning green hydrogen economy. Built on H2scan's patented solid-state hydrogen sensing technology, it is the only hydrogen sensor capable of providing at least ten years of drift-correcting auto-calibration operation. The sensor's real-time, hydrogen-specific measurements enhance process efficiencies, improve yields, reduce maintenance costs, and support the green hydrogen economy.

### Intrinsically Safe Gen 5 Analyzer Enhances H2scan's Patented Hydrogen Sensing Technology

The IS Gen 5 provides continuous, hydrogen-specific monitoring without cross-sensitivity to other gases. Its compact design allows for easy installation, whether standalone or integrated into existing analyzer systems. The unit's self-calibrating capability ensures long-term accuracy for up to 10 years, significantly reducing the total cost of ownership and enhancing the reliability of hydrogen monitoring.

## Upgrade Your Hydrogen Safety Program with a Complete Solution

**Long-Term Reliability:** Enjoy up to 10 years of maintenance-free operation of the hydrogen-sensing element.

**Versatile Integration:** Easily install as a stand-alone hydrogen measurement device or integrate into existing OEM systems.

**Broad Applicability:** Ideal for various industries, including refineries, petrochemical plants, gas manufacturing, hydrogen-based process lines, hydrogen production and distribution, fuel cells, electrolyzers, and more.

**Cost-Effective:** Achieve comprehensive coverage while reducing the total cost of ownership by more than 40% over its lifespan.

**Improved Safety:** Enhance safety during hydrogen production or use with accurate hydrogen measurement.

**Easy In-line Integration:** Compact form factor fits seamlessly into processing gas streams.

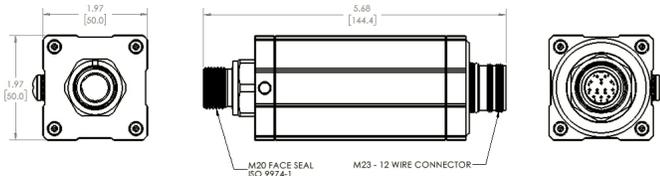
**Green Operations:** No consumables required, supporting environmentally friendly practices.



### Key Features and Benefits

- Autocalibration eliminates drift and maintains accuracy
- No consumables such as calibration gases are needed
- Zero reference or carrier gases are required
- Reliable lifespan of over 10 years
- No cross-sensitivity to other gases preventing false H2 issues
- Continuous, real-time, accurate monitoring without process downtimes
- Tolerant of various harsh background contaminants
- Accessible serial communication via integrated digital and analog capabilities
- Relays to trigger alarms in any safety system
- Compact design allows for versatile installation options

### HY-OPTIMA 5330 IS Gen 5 Sensor Family Dimensions



## Product Specifications

Operating Conditions	
Recommended Pressure	1-2 ATM Absolute
Maximum Pressure	0.1 to 10 ATM Absolute
Process Gas Temperature	-20 to 60° C (models 5331 and 5333) -20 to 50° C (model 5334) -20 to 80° C (model 5332)
Flow Rate	0.1 to 10 SLPM (1/4" TUBE)
Operating Humidity	< 95% RH (non-condensing)
Calibration	None (auto calibrating)
Output Signal	
Digital	MODBUS over RS-485, three-wire, half-duplex
Analog	4-20 mA
Power	
Input Voltage	9 to 15.6 VDC
Input Power	2 Watts
Physical	
Dimensions	144.4 mm x 50 mm x 50 mm [5.68 in x 1.97 in x 1.97 in]
Weight	748.43 grams [1.65 lbs]
Electrical Fitting	TWELVE-PIN, M23
Sensor Fitting	M20 FACE SEAL, ISO 9974-1
Environmental	
Ingress Protection	IP66
Operating Temperature	-20 to 80° C
Storage Temperature	-20 to 105° C
Certifications	
UL and Hazardous Location (coming soon)	

## Product Selection

MODEL	Hydrogen range low	Hydrogen range high	CO limit	H2S Limit	T90 Response Time (sec)	Accuracy Low to 10 H2	Accuracy 10 to 100% H2	Drift/Week	Repeatability Low to 10% H2	Repeatability 10 to 100% H2	Linearity Low to 10% H2	Linearity 10 to 100% H2
5331	0.03%	10%	100 ppm	20 ppm	<90	0.15%	N/A	None	0.15%	N/A	0.15%	N/A
5332	0.4%	5%	0	0	<60	0.3%	N/A	None	0.3%	N/A	0.3%	N/A
5333	0.5%	100%	100 ppm	1000 ppm	<60	0.3%	1%	None	0.2%	0.4%	0.2%	0.4%
5334	0.5%	100%	20%	3%	<90	0.3%	1%	None	0.2%	0.4%	0.2%	0.4%

Specifications are subject to change without notice.  
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