



# **Revolutionary Self-Calibrating Hydrogen Measurement for Industrial Applications**

The intrinsically safe HY-OPTIMA™ 5330 Sensor family brings unparalleled reliability and robustness durability to hydrogen in-line monitoring for diverse applications within the industrial processing sector, from chemical facilities and refineries to the burgeoning green hydrogen economy. The unit is built on H2scan's patented, solid-state hydrogen sensing technology, which is the only hydrogen sensor on the market that can provide at least 10 years of auto-calibration operation. The units' real-time, hydrogen-specific measurements can enhance process plant efficiencies, improve yields, reduce maintenance costs and enable 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 form allows easy installation, alone or for OEM integration into existing analyzer systems. The unit's self-calibrating capability maintains long-term accuracy for up to 10 years of the analyzer's life, dramatically reducing the total cost of ownership and increasing the reliability of hydrogen monitoring.

### **Upgrade Your Hydrogen Safety Program with a Complete Solution**

5330

**Long-Term Reliability:** Up to 10 years of maintenance-free operation of the hydrogensensing element

**Versatile Integration:** Easy installation for stand-alone hydrogen measurement or as the hydrogen monitoring component within existing OEM devices

**Broad Applicability:** Ideal for industrial production facilities across myriad industries, including refineries, petrochemical plants, gas manufacturing, hydrogen-based process lines, hydrogen production and distribution, fuel/cells, electrolyzers, facilities and more

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

Improved Safety: Improves safety during hydrogen production or use with accurate hydrogen measurement

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

**Easy In-line Integration:** No consumables required, supporting greener operations

## **HY-OPTIMA** 5330 IS Gen 5 Sensor Family INTRINSICALLY SAFE HYDROGEN IN-LINE PROCESS ANALYZER

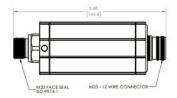


Improve worker safety, protect capital equipment and streamline processes with reliable and affordable hydrogen sensing technology. Highly dependable and robust with low life cycle costs.

- Zero manual calibration requirements
- Zero consumables like calibration gases
- Zero reference or carrier gases required
- Zero sensor replacements due to its up to 10-year lifespan
- No false alarms from cross-sensitivity to other gases
- 100% continuous real time, accurate monitoring with no process downtimes
- Tolerant of many harsh background contaminants
- Easy serial communication with unit via integrated digital and analog capabilities
- Relays to trigger alarms into any safety system
- Compact design for versatile installation options

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







#### **Performance**

Recommended	1-2 ATM Absolute							
Maximum	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 Temp	-20 to 80° C							
Storage Temp	-20 to 105° C							

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%

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