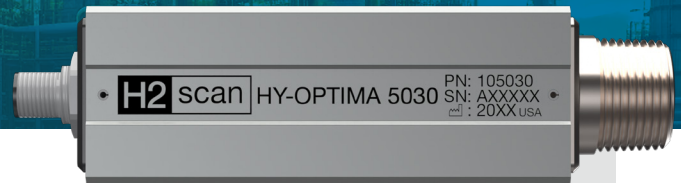


HY-OPTIMA[®] 5030 Series

IN-LINE HYDROGEN PROCESS ANALYZER



General Purpose In-line Hydrogen Process Analyzer

The HY-OPTIMA[®] 5030 Series is a robust, compact hydrogen specific in-line process analyzer providing accurate real-time hydrogen measurements. The novel sensor design stands up to harsh gas streams and its self-calibrating technology eliminates periodic calibration to provide maintenance free operation. This improves process efficiencies, increase yields, reduces maintenance costs, and supports the hydrogen economy. The compact design allows for use as a stand-alone device or easily integrated into OEM analytical instruments.

Robust Design

The solid-state design has no moving parts and does not degrade over time, ensuring high reliability. Once installed and field calibrated, H2scan's patented self-calibrating feature eliminates drift and the need for periodic calibrations, requiring no further maintenance. The unit communicates via Modbus over RS485, or analog 4-20 mA with optional accessories available.

Performance and Safety

The HY-OPTIMA 5030 series analyzers are CE approved for safe general purpose operation. Model 5031, 5033, and 5034 analyzers are intended for use in dry gas streams where hydrogen is always present. The model 5032 is for use in processes where hydrogen is occasionally or intermittently present, such as in the event of a leak or an upset condition. For hazardous location applications, H2scan recently announced its intrinsically safe HY-OPTIMA 5330 series analyzers with added interfaces to simplify application.

Applications

Refining:

- Catalytic reforming
- Hydrodesulfurization
- Tail gas treating units
- Flare Monitoring Fuel gas

Natural Gas:

- Wobbe index or calorific value
- Blending and injection points
- Compressor stations

Hydrogen Economy:

- Fuel cells and electrolyzers

Petrochemical:

- Polymer feeds and flare gas process streams

Industrial Gas Supply and Hydrogen Production:

- Air separation stream
methane reforming



Operating Conditions

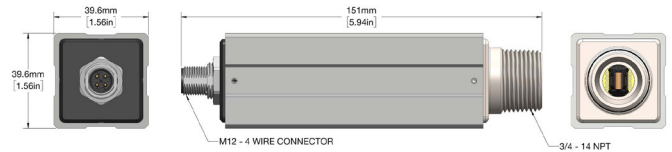
Environmental	
Ingress Protection	IP68
Operating Temperature (Ambient)	-20°C to 70°C (-4°F to 158°F)
Storage Temperature	-20°C to 105°C (-4°F to 221°F)
Mechanical	
Dimensions H x W x D	149.8 x 40.64 x 40.64 mm (5.89 x 1.6 x 1.6 in)
Weight	0.4 kg (0.8 lbs)
Fittings	M12 4-wire. Fitting 3/4" - 14 MNPT
Electrical	
Input Voltage	12-30 VDC
Input Power	10 W
Communication	
Digital	RS485, 2-wire; 19200 baud, 8 bit data, 2 stop bits, no parity; Modbus protocol
Analog	4-20 mA available via optional accessory
Performance	
Recommended Operating Pressure	0.95-1.1 ATM Absolute (14.0-16.1 psia)
Maximum Operating Pressure	10 ATM Absolute
Flow Rate	0.1 to 10 slpm (1/4" tube)
Operating Humidity	95% RH (non-condensing)
Calibration	Periodic calibration not required
Performance	

CE, FCC, RoHS, WEE, Conflict Minerals

Accuracy/Repeatability Specifications

Model	Hydrogen Range	Accuracy	Repeatability
5031	LDL-0.5%	0.05%	0.05%
	0.5%-2%	0.1%	0.1%
	2%-5%	0.15%	0.15%
	5%-10%	0.2%	0.2%
Model	Hydrogen Range	Accuracy	Repeatability
5032	LDL-5%	0.3%	0.3%
Model	Hydrogen Range	Accuracy	Repeatability
5033 5034	LDL-10%	0.4%	0.2%
	10%-30%	0.7%	0.3%
	30%-70%	1.0%	0.4%
	70%-100%	1.2%	0.5%

HY-OPTIMA 5030 Dimensions



Product Selection

Model	Hydrogen Range		CO Limit	H2S Limit	T90 Response Time (sec)	Process Gas Temperature
	Low	High				
5031	0.03%	10%	<100 ppm	<20 ppm	<90	-20°C to 60°C (-4°F to 140°F)
5032	0.4%	5%	0	0	<60	-20°C to 60°C (-4°F to 140°F)
5033	0.5%	100%	<100 ppm	<1000 ppm	<60	-20°C to 60°C (-4°F to 140°F)
5034	0.5%	100%	20%	3%	<90	-20°C to 50°C (-4°F to 122°F)