

H₂ SPECIFIC SENSOR/TRANSMITTER

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RKI offers unique proprietary sensor technologies for hydrogen specific detection in either the % LEL or PPM ranges. By utilizing a proprietary molecular sieve coating that is built into both our catalytic or solid state sensors, false alarms from typical hydrocarbon interfering gases are essentially eliminated.

For the LEL range, a special catalytic sensor is coated with a molecular sieve that eliminates the response to common background gases like IPA, methane, gasoline, etc. while providing a detection range of 0 – 100% LEL for hydrogen.

The hydrogen PPM sensor can reliably detect leaks 20 times smaller than a standard catalytic sensor. This solid state sensor has a molecular sieve coating on the sensing element, which filters out interference from other gases and provides a 0 – 2,000 PPM range. Both the LEL and PPM range sensors are available with 24 VDC transmitters with linear 4-20 mA outputs.



Features

- Operates with or without a controller
- Tri-color visual alarm display: Green=Normal, Yellow=Alarm 1, Red=Alarm 2
- Large easy to read digital display
- Three power options: 115 VAC, 24 VDC, or 2 AA alkaline batteries
- Operates up to 1 year on one set of AA alkaline batteries
- Remote mount sensor cable available
- Compact wall mount design
- Explosion proof housing and sensor design
- H₂ specific solid state sensor for 0 - 2000 ppm
- H₂ specific catalytic sensor for 0 - 100%LEL
- Molecular sieve filter built in; highly specific to H₂
- Eliminates false alarms from IPA and other gases
- 4-20 mA transmitter, 24VDC

Applications

- Semiconductor
- Power Plants
- Fuel Cell Industry
- R & D applications
- Gas plants

H ₂ Specific Specifications		
	H2 Specific LEL	H2 Specific ppm
Detection Range	0 - 100% LEL	0 - 2000 ppm
Min Operating Voltage	11 VDC	
Max Operating Voltage	30 VDC	
Max Current Draw	200 mA (power wires) 25 mA (signal wires) 3 wires	100 mA (power wires) 25 mA (signal wires) 3 wires
Signal Output	4 mA at 0% LEL 20 mA at 100% LEL Linear Output	4 mA @ 0 ppm 20 mA @ 2000 ppm Linear Output
Response Time	20 Seconds to 90% concentration	20 Seconds to 90% concentration

Operating Environment		
Location	Indoor or outdoor. Explosion proof for Class I, Div. 1, Groups B, C, and D.	
Temperature	-40 to 180° F	15 to 110° F
Humidity	5-95% RH non-condensing	
Housing	Enclosure: Aluminum Explosion Proof	Sensor: Stainless steel and aluminum
Sensor		
Type	Catalytic combustion with molecular sieve	Metal oxide semiconductor with molecular sieve
Life Expectancy	Over 3 years typical	Over 5 years typical
Controls		
Sensor Current	Factory set and sealed	
Zero	Sets transmitter output to 4 mA with 0% LEL output from combustible sensor	Sets transmitter output to 4 mA with 0 ppm output from sensor
Span	Sets transmitter output to 20 mA with 100% Span LEL output from combustible sensor	Sets transmitter output to 20 mA with 2000 ppm Hydrogen output from sensor
Tools Needed	Calibration kit, Screwdriver, and voltmeter used to make adjustments.	
Calibration Frequency	6 Months	12 Months
Warranty	One year on electronics and sensors.	