H2scan
ADVANCED HYDROGEN SENSING

HY-ALERTA®

FIXED AREA
HYDROGEN
SAFETY
MONITORS

HY-ALERTA Fixed Area Hydrogen Safety Monitors

The H2scan HY-ALERTA fixed area monitors provide fast hydrogen-specific leak detection and safety monitoring from 0.4% to 5% hydrogen (10% to 125% of hydrogen's lower explosive limit). No cross-sensitivity to other combustible gases prevents false alarms and improves reliability. Capable of operating with or without air/oxygen present. A reliable, consistent hydrogen gas detector for industrial markets. H2scan uses a solid-state non-consumable sensor for direct hydrogen measurement in air or inert gases, with no cross sensitivity to other combustibles.

Advantages

- Highly reliable
- Low life cycle cost
- Easy to install and operate
- Minimal maintenance required
- No cross sensitivity to combustible gases
- Not vulnerable to poisoning like other detectors
- Wide hydrogen-specific detection range
- Works in air, oxygen, or inert gas background
- Does not degrade over time
- Non-consumable solid state technology
- Field-configurable settings
- Will not saturate with exposure to hydrogen

Applications

Battery Rooms: H2 monitoring during lead acid battery charging

Control Rooms/Analyzer Buildings: Detection of potentially flammable H2 buildup in occupied areas

Laboratories: General hydrogen safety monitoring

Alternative Energy: Hydrogen refueling station safety monitoring. Fuel cell and electrolyzer leak monitoring

Hydrogen Cooled Generation and Turbines: Leak detection during operation

Industrial Gas Supply and Hydrogen Production: Leak detection around H2 storage facilities and pipes

Furnaces and Manufacturing: Area monitoring for unburnt hydrogen

Other Applications: General area monitoring wherever there is a risk of hydrogen accumulation

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Ease of Use

With no moving parts, the analyzer is extremely reliable and easy to use. Once installed, it typically only requires a quick calibration every three months, using readily available bottled gas mixtures of 1% and 2% hydrogen in air. No other maintenance is necessary. Communication is either via an analog 4-20mA output or serial communication using RS232 or RS422, depending on the model.

Performance of Safety

The safety monitor is intended for use in an air, oxygen, or inert gas background where hydrogen is only occasionally present for short periods, as may occur if there is a leak or off gassing from batteries. The detection range is from 4000 ppm to 5% hydrogen, covering 10% to 125% of hydrogen's lower explosive limit. The monitors can be ceiling, wall, or pole mounted for optimal performance. H2scan offers general use, intrinsically safe, and explosion proof models to meet any safety monitoring need.

	HY-ALERTA 600B General Use	HY-ALERTA 1600 Intrinsically Safe	HY-ALERTA 2620 Explosion Proof
			
Measuring Range:	0.4 to 5% (10 to 125% LEL)		
T90 Response Time:	<60 Seconds		
Accuracy:	±(0.03xindication + 0.2)% H2		
Operating Temperature:	-20°C to +55 °C (40°F for 1600°F)		
Operating Humidity:	< 95% RH (non-condensing)		
Calibration Background Gas:	Air		
Calibration Interval:	90 Days		
Storage Temperature:	40 °C to 80 °C (50 °F for 1600°F)		
Usage:	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor (IP67 rated)
Analog Output:	4-20 mA	4-20 mA (requires analog barrier)	4-20 mA
Serial Output:	RS232 or RS422	RS422 (requires serial barrier)	RS232 or RS422
Relays:	1A/30 VDC SPDT Two program relays with both NO & NC contacts and one programmable relay with NC contact only	Available Two SPST programmable relays included with 4-20 mA output barrier	5A/240 VDC SPDT Three programmable relays with both NO and NC contacts
Input Voltage:	10-26 VDC	20-28 VDC	90-240 VAC
Input Power:	10 W	10 W	15 W
Dimensions L x W x D:	208.28 x 111.76 x 40.64 mm (8.2 x 4.4 x 1.6 in)	205.74 x 111.76 x 43.18 mm (8.1 x 4.4 x 1.6 in)	190.5 x 137.16 x 144.78 mm (7.5 x 5.4 x 5.7 in)
Safety Certifications	CE UL	Ex ia II (H2) T3 Ga, Class I Division 1 Group B T3; Ex db+db IIB T3 Ga, Class I Division 1 Group CD T3 Class I Zone 0 AEx ia II (H2) T3 Ga; Class I Zone 0 AEx db+db IIB T3 Ga Ex ib II (H2) T3 Gb, Class I Division 2 Group B T3; Ex db IIB T3 Gb, Class I Division 2 Group CD T3 Class I Zone 1 AEx ib II (H2) T3 Gb; Class I Zone 1 AEx db IIB T3 Gb II 1 G Ex ia IIB+H2 T3 Ga / Ex db+db IIB T3 Ga II 2 G Ex ib IIB+H2 T3 Gb / Ex ib db IIB T3 Gb Certificate numbers ITS07ATEX25634X, ITS21UKEX0491X LC20.18552, LC20CA18552 CE Ex UKCA LC	C/UL: Class I Div 1 Groups B C D ATEX: II 2 G Ex db IIB + H2 T4 Gb IECEX: Ex db IIB + H2 T4 Gb CE LC UL