

HY-ALERTA® Series

FIXED AREA HYDROGEN SAFETY MONITORS

H2scan®
Advanced Hydrogen Sensing



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: Hydrogen monitoring during lead acid battery charging

Control Rooms/Analyzer Buildings: Detection of potentially flammable hydrogen 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 hydrogen 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



Product Selection

Specifications	HY-ALERTA 600B General Purpose	HY-ALERTA 1600 Intrinsically Safe	HY-ALERTA 2620 Explosion Proof
Measuring Range	0.4 to 5% (10 to 125% LEL)	0.4 to 5% (10 to 125% LEL)	0.4 to 5% (10 to 125% LEL)
T90 Response	<60 Seconds	<60 Seconds	<60 Seconds
Accuracy	±(0.03 x indication + 0.2)% H ₂	±(0.03 x indication + 0.2)% H ₂	±(0.03 x indication + 0.2)% H ₂
Operating Temperature	-20°C to 55°C (40°F for 131°F)	-20°C to 55°C (40°F for 131°F)	-20°C to 55°C (40°F for 131°F)
Operating Humidity	< 95% RH (non-condensing)	< 95% RH (non-condensing)	< 95% RH (non-condensing)
Calibration Background	Air	Air	Air
Gas	N/A	N/A	N/A
Calibration Interval	90 Days	90 Days	90 Days
Storage Temperature	40°C to 80°C (50°F for 176°F)	40°C to 80°C (50°F for 176°F)	40°C to 80°C (50°F for 176°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 ¹	Available ²	5A/240 VDC SPDT ³
Input Voltage	10-26 VDC	20-28 VDC	90-240 VAC
Input Power	10 W	10 W	15 W
Dimensions	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	 	Ex ia II (H ₂) 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 (H ₂) T3 Ga; Class I Zone 0 AEx db+db IIB T3 Ga Ex ib II (H ₂) 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 (H ₂) T3 Gb; Class I Zone 1 AEx db IIB T3 Gb II 1 G Ex ia IIB+H ₂ T3 Ga / Ex db+db IIB T3 Ga II 2 G Ex ib IIB+H ₂ T3 Gb / Ex ib db IIB T3 Gb Certificate numbers ITS07ATEX25634X, ITS21UKEX0491X LC20.18552, LC20CA18552	   <p>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</p>

1. Two program relays with both NO & NC contacts and one programmable relay with NC contact only

2. Two SPST programmable relays included with 4-20 mA output barrier

3. Three programmable relays with both NO and NC contacts