HYDROGEN AREA MONITOR

HY-GUARD®

H2scan®
Monitor. Manage. Momentum.

Continuous hydrogen monitoring that turns early detection into confident action

A hydrogen area monitor system, HY-GUARD with self-calibration in standby power & energy storage battery applications automatically triggers ventilation, shutdown or alarm systems before an abnormality becomes an outage. Giving you earlier warning, long-term stability and confidence in your response.

ALWAYS ALERT

CONTINUOUS HYDROGEN MONITORING

Continuously monitors hydrogen with self-calibration technology through real-time concentration with no cross-sensitivity to other gases.

LONG LIFE ACCURACY

REAL-TIME MEASUREMENT

Delivers accurate, real-time hydrogen measurement with fast response using self-calibration solid-state sensor technology with 10+ year service life.

WIRED TO RESPOND

RELAY OUTPUTS FOR SAFETY SYSTEMS

Configurable relay outputs drive ventilation, equipment shutdown, and other safety systems automatically, turning into immediate action.

PROACTIVE WARNING

VISIBLE AND AUDIBLE AT THE POINT OF RISK

Vibrant LEDs and audible signal give clear local alarm indication the moment hydrogen levels begin to climb.

WORKS WITH YOUR SETUP

FULL SYSTEM INTEGRATION

Modbus RTU support integrates directly with PLCs, SCADA, and FM systems, and aggregates through HY-SIGHT to reach the people who need it.

BUILT TO LAST 10+ YEARS

RELIABLE AND LOW MAINTENANCE

Infrastructure-grade safety runs uninterrupted without consumables, site visits or added workload, so operations keep moving.

POWER & COMMUNICATION

- AC and/or DC Power Input
- 4-20 mA Analog Output
- Modbus RTU/RS-485 and Dry Contact

INSTALL ANYWHERE

However your battery cabinet or room is designed, **HY-GUARD** installs in minutes.

- PUNCH OUT
- DIN RAIL*
- JUNCTION BOX
- SURFACE MOUNT*
- WALL MOUNT*

* Requires additional universal adapter plate accessory.

H2scan brings situational intelligence to hydrogen-critical environments. Continuous monitoring, self-calibration and zero false alarms turn hydrogen data into operational confidence with fewer interruptions, less downtime, and more momentum.

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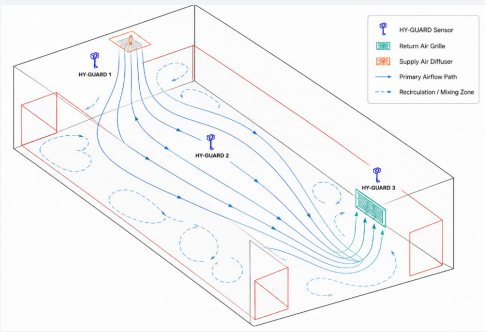
HY-GUARD®

Continuous monitoring to protect personnel, equipment and critical infrastructure in battery rooms, energy storage systems, electrolyzers, fueling stations and other hydrogen applications. With more than 15 years of R&D and a decade of field verification, our patented solid-state sensing technology runs continuously in harsh, contaminated environments. A continuous data stream you can trust and build on, year after year with a long-lifespan over 10+ years.

Self-calibrating technology with no calibration gases, no bump testing, and no drift or cross-sensitivity to other gases. Configurable relays and Modbus integration connect to ventilation, shutdown, alarms, BMS, and SCADA, turning an early signal into a fast, automatic response across every area you monitor.

HY-GUARD PLACEMENT TOOL

Sensor placement recommendations are available through H2scan's HY-GUARD Placement Tool to optimize coverage and system performance.



SYSTEM ARCHITECTURE WITH HY-SIGHT™

HY-SIGHT is the Modbus master and polls up to four (4) HY-GUARD sensors. Communication: Modbus over RS-485 (2-wire)

SPECIFICATIONS

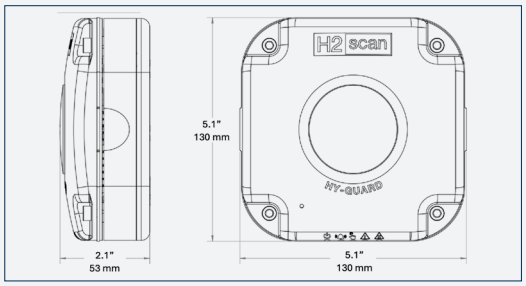
H_2 Range	0.4–5%
Accuracy[1]	±0.3% H_2 (Absolute Error)
Response Time[2]	30 seconds
Operational Temp	-25°C to 50°C (-13°F to 122°F)
Rated Temp	15°C to 40°C (59°F to 104°F)
Storage Temp	-40°C to 70°C (-40°F to 158°F)
Humidity	0–95% RH non-condensing
Connector Type	Relay 1%, Relay 2%, Fault, RS–485, 4–20 mA, AC & DC
Voltage	AC: 110–240 VAC DC: 15–60 VDC
Power	10 W Max
Communication	Analog Output: 4–20 nominal RS–485: Modbus two-wire
Dimensions	5.1 x 5.1 x 2.1 in
Buzzer	Audible output for local indication
Certifications	IEC 61010, CE, FCC Part 15, REACH, RoHS, UL 2075[3]

[1]Concentrations >2% have an accuracy of ±1%. Prolonged exposure to hydrogen concentrations >5% may damage the sensor
[2]Time to trigger first alarm when transitioning from air to 5% H_2
[3]UL 2075 certification pending

ALARM LEVELS

Alarm 1 (Low)	1.0% H_2
Alarm 2 (High)	2.0% H_2
Fault	Sensor / System Fault

DIMENSIONS



ORDERING INFORMATION

Description	Part Number
HY-GUARD	108111
HY-SIGHT	108250
4x HY-GUARD & HY-SIGHT	108412
Validation Shield Assy, HY-GUARD	50000201
H2scan Standard Bump Kit	105923-KIT
H2scan Standard Bump Kit Gas Replacement	105924-KIT

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