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H2scan Introduces HY-GUARD™: Hydrogen Monitoring System for Battery Safety Applications

VALENCIA, CA – [November 20, 2025] – As data centers, telecommunication providers, utilities and industrial facilities expand their reliance on standby power systems, the safety risk posed by hydrogen buildup in battery charging environments has become more urgent. Hydrogen gas can accumulate undetected when charging aqueous electrolyte batteries (including lead-acid and NiCad), creating serious safety concerns. Existing hydrogen detectors often fail to meet these safety challenges by drifting out of calibration, expiring or providing false readings that can result in operational disruptions or concealed hazardous conditions.

H2scan (www.h2scan.com), a global leader in hydrogen sensor technology, announced the launch of the HY-GUARD™ All-in-One Hydrogen Area Monitor, a new monitoring system engineered specifically for battery applications. [HY-GUARD](#) builds on H2scan's proven success in monitoring hydrogen in mission critical applications such as transformer, process analyzer and industrial safety monitoring applications, bringing their leading reliability to the battery sector at an accessible cost point.

"Traditional gas detection solutions in battery charging environments often provide a false sense of security that can result in critical consequences," said David Meyers, CEO of H2scan. "HY-GUARD is designed from the ground up for battery rooms and surpasses competitive products by providing high accuracy and no maintenance for the life of the battery system."

How HY-GUARD Delivers Value

- **Superior Reliability** – Unlike catalytic sensors, the HY-GUARD sensors have no wear-out mechanisms, eliminating measurement drift, false alarms and the need for periodic sensor replacement. Our mission-critical self-monitoring eliminates the false sense of comfort commonly seen in competing products.



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- **Zero Maintenance Operation** – HY-GUARD continuously self-calibrates throughout its service life, at least as long as the battery systems, without the need for calibration gases.
- **All-in-One Compact Design** – The integrated electronics, multiple output interfaces and universal mounting options support all known installations, simplifying cabling and reducing the required number of accessories. The modular design also allows user to select and pay only for the capabilities they need.
- **Hydrogen-Specific Proven Technology** – H2scan's patented sensor technology is immune to other gases and chemicals that competing technologies typically trigger, further eliminating false alarms.

Addressing Critical Safety

Hydrogen management in battery charging applications is not optional. The NFPA, IEC and IEEE fire safety regulations for stationary battery applications are driving stricter compliance. HY-GUARD foresaw those changes, allowing facilities to confidently and reliably meet the demanding needs in current and planned standards – improving operational safety.

Developed with direct input from battery room safety integrators, HY-GUARD fills a critical market gap between low-performance detectors that generate nuisance alarms and high-complexity systems that are cost-prohibitive. The result is a practical, dependable hydrogen safeguard for virtually any battery installation.

About H2scan

H2scan, a pioneer in the development of hydrogen sensing technology, has been at the forefront of innovation for over two decades. Building on a strong foundation of research and development, H2scan has established itself as the preferred provider of leading hydrogen sensors, analyzers and systems. The operating life of their sensors surpasses that of other commercially available systems, and the company's new Gen.5 solutions with self-calibration offer unparalleled accuracy, maintenance-free operation and cost-effectiveness.

Trusted by industry giants like ABB, ExxonMobil, NASA and others, its products are integral in shaping the new Hydrogen Economy for a clean, secure and affordable energy future. H2scan products are also used by power utilities for transformer fleet monitoring, by the petroleum and chemical industries to optimize hydrogen-based processes, and for safety monitoring in enclosed areas susceptible to hydrogen leaks.

Built on solid-state technology pioneered at Sandia National Laboratory and the U.S. Department of Energy, H2scan holds 44 patents covering its core technology, software and product innovations. For more information, visit www.h2scan.com.