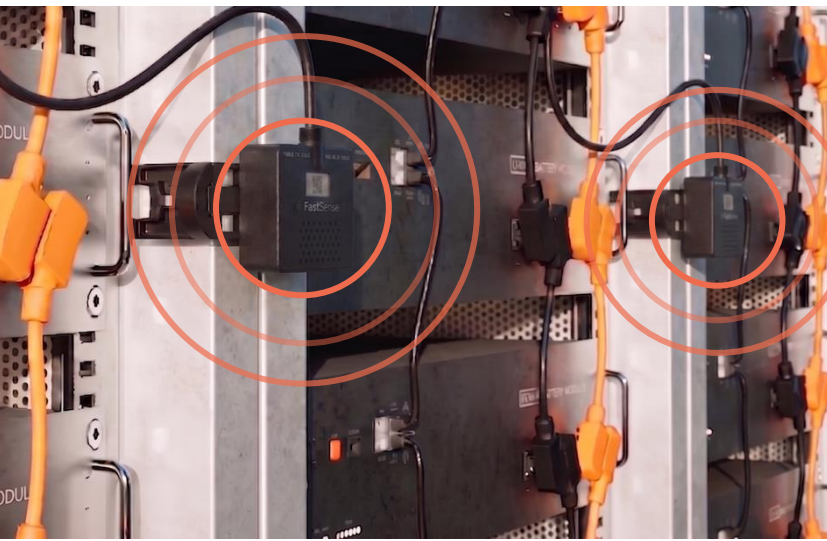


Catch battery failure before it takes your energy storage down.

Fast Sense—the earliest warning of battery off-gassing, on a chip.



Using data and molecular detection for early intervention in battery safety & asset longevity

1. Detect abnormalities
2. Determine degradation
3. Disconnect power



Pre Smoke – Battery Off-Gassing

Start with what matters most: molecules.

Fast Sense brings real-time chemical intelligence directly to the battery cell, module, or pack. By continuously measuring off-gas composition—alongside temperature and voltage—we detect early degradation and the first vent events before conventional monitoring methods.

Available in two form factors:

Embeddable Gas Analysis Chip – ultra-small sensor integrated directly onto the battery package.

Standalone Monitoring Unit – external module for continuous battery health and safety monitoring.

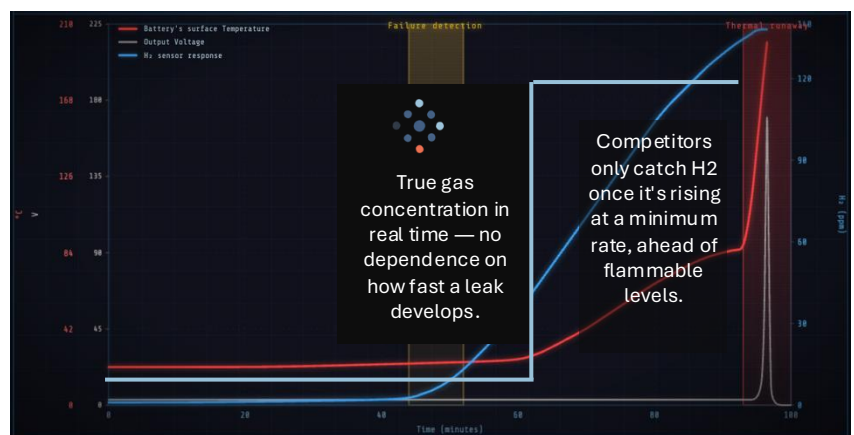
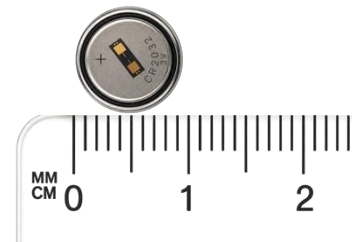
Supports compliance with major safety standards, including IFC, NFPA 1, NFPA 2, OSHA 1910, and IEC 62485-2.

Flexible installation options, including peel-and-stick mounting, junction box, DIN rail, wall mount, magnetic mount, or CAN-connected installations.

Communication interfaces: Dry (potential-free) contacts, LoRaWAN, 4–20 mA, Modbus RTU (RS-485), UART, Bluetooth® Low Energy (BLE), Wi-Fi, and Cellular.

Our core works for:

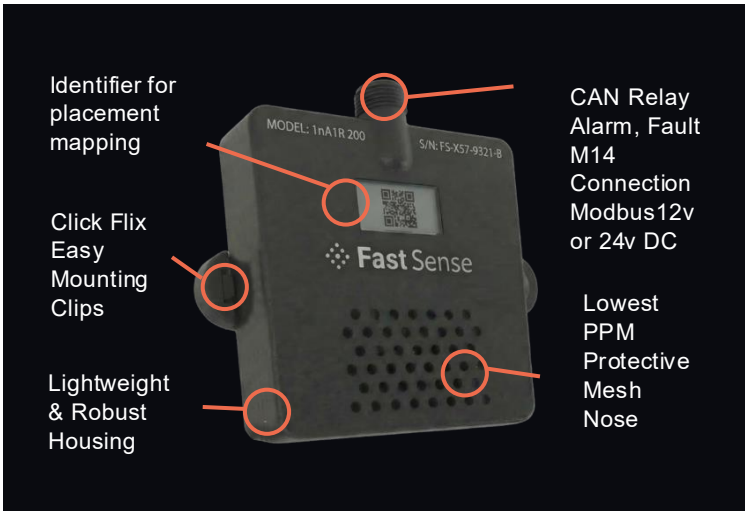
- BESS
- Pack Enclosures
- Data Centre's
- Robotics
- UPS battery rooms
- Residential batteries
- Cabinets
- Suppression systems
- Colocation/shared rack battery monitoring
- Transformer & electrical-room early warning



Our sensor works with LFP batteries regardless of how slowly the gas built up, and theirs doesn't.

Core Sensor Capabilities	LOD	10 ppm H ₂
	Range	0–50,000 ppm
	Accuracy	<3% of reading
	Resolution	5 ppm
Electrical Characteristics	Supply power (RS-485)	12/24 V
	Supply power (Equipment)	2.7–30 V (9V or 12V recommended)
	Power consumption (Average)	<0.05 W
	Power consumption (Peak)	<0.1 W
Environmental Spec	Operating Temperature	-20°C to +80°C
	Storage Temperature	-20°C to +85°C
	Operating Humidity	Up to 95% RH, non-condensing
	Pressure	Atmospheric (<100 mbar)
Maintenance	Warranty	10 years
	Bump testing	Every 6 months (VOC/electrolyte-vapor models) or every 12 months (H ₂ /CO models)
Auxiliary Sensors — VOC	Range	0–500 VOC
	Target	Li-ion electrolyte off-gas (DMC, DEC, EMC)
Auxiliary Sensors — CO	Range	0–500 ppm
	LOD	2 ppm
	Resolution	1 ppm
	T90	<30 s
	Accuracy	<3% of reading
Auxiliary Sensors — CH ₄	Detection range	0–100% LEL
	Output sensitivity (ΔVout)	Methane: 10–18 mV @ 5,000 ppm; Iso-butane: 5–11 mV @ 1,800 ppm
	Conditioning period	≤30 s
	Operating conditions	-10°C to +70°C, ≤95% RH, non-condensing
	Storage conditions	-10°C to +80°C, ≤95% RH, non-condensing
Key Features	Wide operating hydrogen concentration range (and humidity range)	Fastest, lowest detection limit with high sensitivity
	High selectivity against common interfering gases (CH ₄ , CO)	Low power consumption, suitable for embedded systems
	Compatible with external digital or analog readout electronics	Compact, robust package for industrial environments

Mount. Scan. Monitor





Clip to mount & press to self-calibrate instantly



Scan QR code to align sensor location automatically



View live data and monitor assets on dashboard

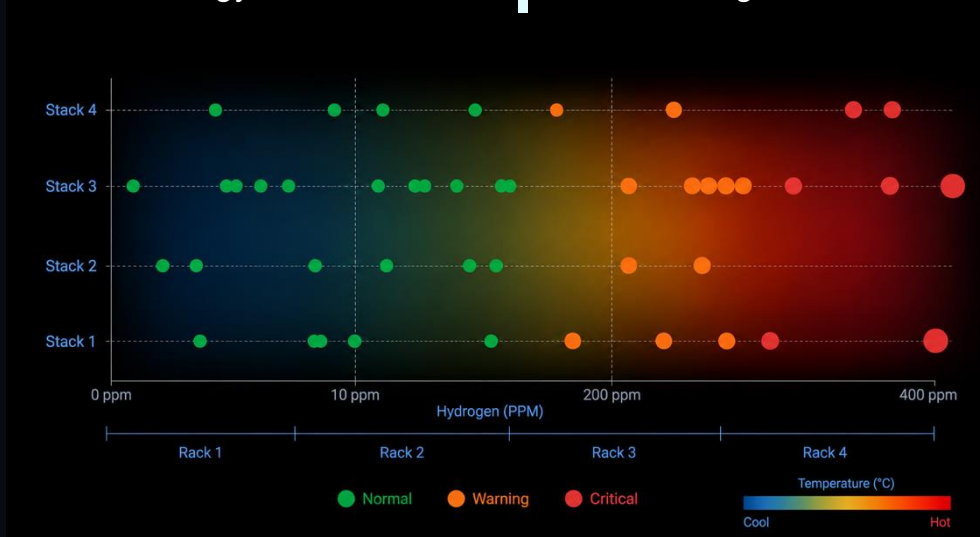
Fast Sense provides an AI fail-safe battery framework that collects data, detects and localizes the **earliest signs of battery off-gassing to maximise usage keeping pack safe**

Platform Benefits

Better State-of-Safety (SOS) insights
Earlier shutdown or isolate pack
Faster fire-suppression activation
Reduced recalls & insurance exposure
Safer fleets and energy assets

Difference

Ultra-low power (no heater)
Molecular quantification
High selectivity against common interfering gases
Accurate across temperature & humidity
Small enough to embed inside modules



Lifecycle Management State of Safety (SOS) Dashboard

Using distributed hydrogen sensing combined with thermal and impedance correlation, the Fast Sense platform creates a live digital heat map of the entire BESS installation — from cell and module level all the way to rack and pack level. Operators can instantly visualize abnormal gas generation, identify the exact location of first venting, and understand how failure conditions propagate across the system in real time.

Specifications and design are subject to change without notice.



Real-Time Rack Pack Intel Nodes

Chemical-first detection enables early alerts while prioritizing rapid response & simple system integration, maximizing equipment lifespan, reduce costly downtime, and ensure safe, efficient operations.