


# ProSense Overview: Empowering Safety Through Advanced Gas Sensing Technology

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## Relations Instruments

Listed on the National Equities Exchange and Quotations (NEEQ) in May 2015 (Stock Code: 832606). The Group is a nationally recognized “Specialized, Sophisticated, and Innovative” enterprise and a National High-Tech Enterprise, dedicated to the research, development, and application of intelligent high-end gas sensors and application systems, intelligent gas treatment integrated equipment, and specialized gas services.



 **HQ · Zhengzhou,  
Henan Province**

 **Established in 1997**

 **Founder: Mr. Li Jianguo Mr.  
Wang Xianzhong**

## Affiliates(Partial)

| Tongxing Co-creation

| System-Instruments

| ProSense

| SF6 Relations

| Kotron

| Other subsidiaries

# About Us



## Pioneering Advanced Gas Sensing Solutions through R&D Excellence and Precision Manufacturing

At ProSense, we deliver advanced sensing solutions for customers worldwide. Through sustained investment in core technologies and a strong focus on addressing the industry's most critical challenges, we drive value-creating innovation that enable customers achieve operational excellence and long-term sustainable growth.

## Fully integrated in-house Technology Platform

By building a fully integrated, in-house R&D capability—from core sensing materials to end-use applications—we drive continuous innovation and transforms technical challenges into high-performance, reliable product solutions.

## Core Technology Deployment Across Specialized Vertical Markets

Our portfolio covers toxic, combustible, and environmental gas detection, providing differentiated solutions across diverse application. Multiple innovative sensor products have become core sensing components in vertical markets such as smart fire protection, industrial fire safety, and energy storage safety—enabling consumers and industrial customers to effectively detect, assess, and mitigate safety risks.



**Empowering Safety Through Advanced Gas Sensing Technology**

## Engineering Excellence: Defining the New Global Benchmark in Gas Sensing Technology

Led by gas sensing experts with over 20 years of industry experience and supported by a highly experienced cross-disciplinary R&D team, ProSense drives systematic innovation across core materials, product design, and manufacturing processes, reinforcing its leadership in gas sensing technology.

## Autonomous Kilogram-Capacity R&D Hub: Advancing Next-Generation Catalyst Synthesis

Leveraging an in-house kilogram-scale catalyst R&D platform, the company develops long-life, highly stable, and interference-resistant gas-sensing materials to support reliable sensor performance.

## From Scalable Advanced Manufacturing to Precision Calibration: Empowering Excellence Across the Value Chain

Fully automated production, accelerated aging, and individual gas calibration ensure consistent sensor performance, long-term stability, and high reliability at scale.

# A Journey Through Our History

2015

## ProSense Founded

Founder: Ms. Zhao Li



2016

- Became the sole global authorized manufacturer for DART Sensors (UK)
- Commenced a joint venture and cooperative operations with Relations Instruments Group in November, 2016.



2021

- Released the Energy Storage Fire Sensor (0-2% range) for BESS thermal runaway gas detection.
- Recognized as a Qualified Supplier for Midea Group.
- Long-life Hydrogen (H<sub>2</sub>) Sensors became the preferred choice for transformer condition monitoring



2024

FC-CO-5000 achieved  
UL 2075 Certification



2019年

- Officially accredited as a National High-Tech Enterprise
- Introduced the self-developed WZ series formaldehyde sensors, featuring advanced anti-interference technology



2022

- Released the Energy Storage Fire Sensor (0-2% range) for BESS thermal runaway gas detection (0-1000ppm)
- Recognized as a Qualified Supplier of PHILIPS and ECOVACS



2025

- Standardization Leadership: Appointed to the UL Standards Technical Committees for UL 2075, 2034, and 2201
- Certification Milestone: Secured UL 2075 certification for our comprehensive series of carbon monoxide (CO) and hydrogen (H<sub>2</sub>) sensors.
- Next-Gen Innovation: Commenced field testing of Solid-State Battery H<sub>2</sub> S sensors in collaboration with Tier-1 battery manufacturers.
- Strategic Ecosystem: Established strategic partnerships with industry leaders including Holtek, X-SENSE, as well as premier European and American brands.



2020年

- Launched Introduced long-life livestock monitoring sensors for smart agriculture, high-precision toilet environment sensors for odor detection, and high-stability electrochemical VOC sensors
- Recognized as a Qualified Supplier for A.O. Smith and LEXY



2023

- Bulk adoption of ESS (Energy Storage System) fire safety sensors by domestic industry leaders
- total sensor shipments surpassed 1.5 million units.



# Intellectual Property & Patent Portfolio



**49** CNIPA-granted  
patents



**9** Standards  
Development  
Involvement



**3** Registered  
Software  
Copyrights



**2** UL  
Certifications

Distinguished as the sole member in Asia appointed to  
three ULSE Standards Technical Committees for gas sensing



# International Technical Recognition



## Sole Entity in China

The Sole enterprise and sensor manufacturer appointed on UL2075 TC

## Sole Entity in China

The Sole enterprise and sensor manufacturer appointed on UL2034 TC

## Sole Entity in Asia

The Sole enterprise and sensor manufacturer appointed on UL2021 TC

# Applications



Residential CO alarm



CO module for portable generator



CO detector for BESS



Industrial safety



Portable CO detector



● Data Center



● Production line



● Storage and shipment



● BESS



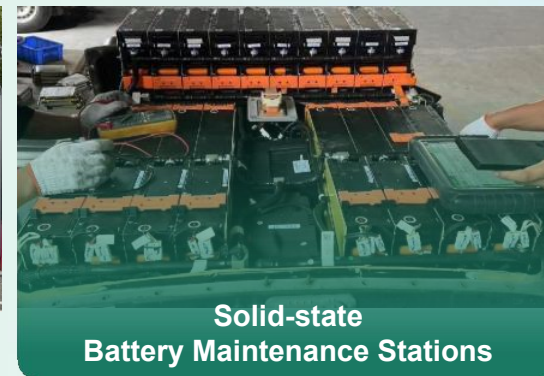
● H2 Gas station

# Applications

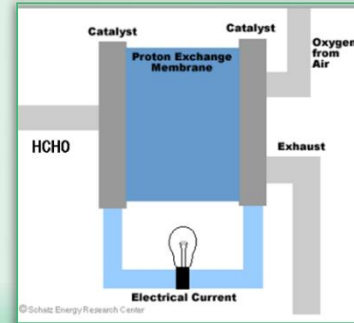
## Building Environmental Monitoring System



## Solid-state Battery



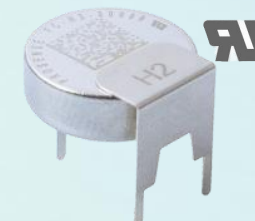
# Product Platform



- The First UL recognized button-type CO sensor in China
- Wide Operating Temp. Range: 40°C~85°C



- H<sub>2</sub> S Sensor for Soli-state Battery thermal runaway gas detection
- Wide Operating Temp. Range: 40~125°C;
- 15 years life-time
- Currently undergoing rigorous field validation (road testing) with Tier-1 battery manufacturers

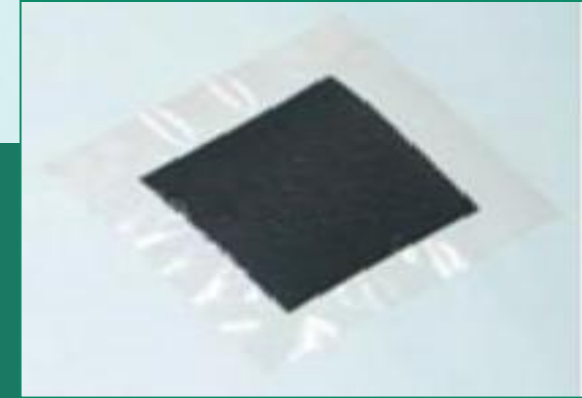
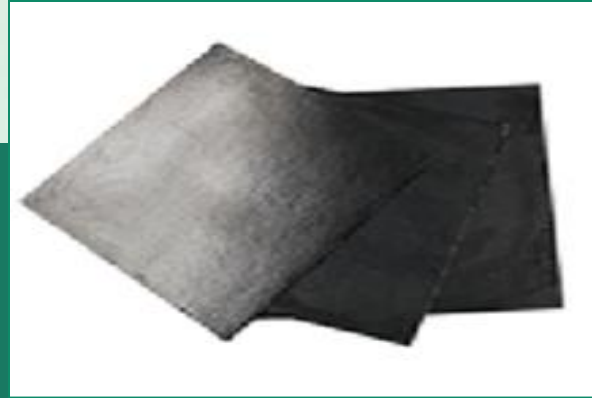


- The first UL2075 recognized Fuel-cell H<sub>2</sub> sensor
- Wide Operating Temp. Range: 40°C~85°C



- long lifetime Formaldehyde sensor
- Wide Operating Temp. Range: 40°C~85°C
- 6 years lifetime
- Capturing an industry-leading market share in excess of 70% in China

# Core Technologies

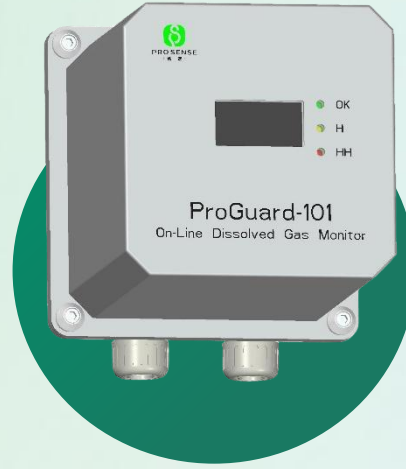
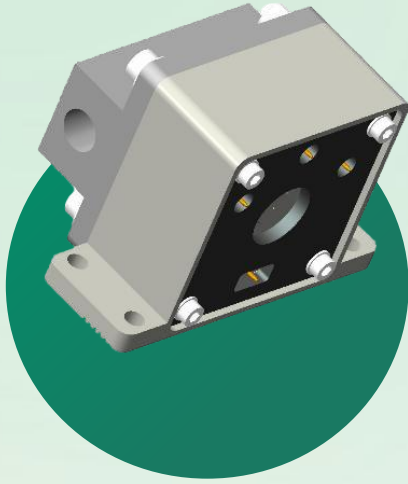


- ◆ **Targeted Reduction:** Utilizing **Targeted Remediation Technology** for precise environmental control
- ◆ Superior Dispersion: Demonstrating **Optimal Particle Dispersion** characteristics
- ◆ **Uniformity & Consistency:** Assured **Uniform Particle Morphology** (Consistent particle size distribution).
- ◆ **Enhanced Activity:** Delivering **Superior Catalytic Activity** and reaction efficiency.
- ◆ **Resilient Design:** Featuring a proprietary **Poison-Resistant Architecture** for extended service life.

- ◆ Robust Triple-Phase Interface (TPI) / Stabilized Reaction Zone
- ◆ Enhanced Water Repellency
- ◆ Uniform Material Composition
- ◆ Stringent Batch-to-Batch Precision
- ◆ Superior Operational Stability

- ◆ Exceptional Bonding Integrity
- ◆ Superior Proton Conductivity
- ◆ Robust Structural Durability
- ◆ Extreme Environmental Resilience
- ◆ Superior Lifecycle Reliability

# The Foundational Pillar of Core Technologies-CO & H2 Sensor



	Spec Requirement for Application	ProSense Product Performance (Actual Operation)
<b>Life Time</b>	Above 10 Years	Beyond 20 years
<b>Lower Limit of Detection(LLOD)</b>	10ppm	5ppm
<b>Operating Environment</b>	-20-60 °C & 10-90%RH	-40-70 °C & 10-95%RH
<b>Maintenance</b>	Low	No maintenance
<b>Interference Immunity Validation</b>	Selective Detection	Selective Detection
<b>Accuracy</b>	±20ppm or ±10%(Select Maximum)	±10ppm or ±5%(Select Maximum)

## CO Sensor

## H2 Sensor

## H2S Sensor



FC-CO-5000



FC-CO-5000L



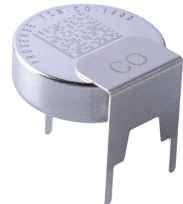
FCW-CO-5000-0X



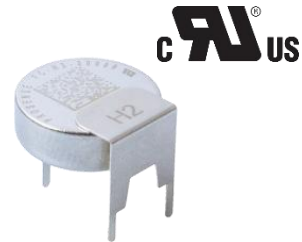
FCW-CO-5000-0X



FC-CO-100



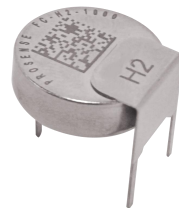
FCM-CO-1000



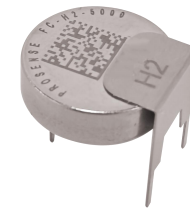
FC-H2-20000



FC-H2-20000L



FC-H2-1000



FC-H2-5000



FC-H2-100



FC0-H2S-100



FC0-H2S-5000

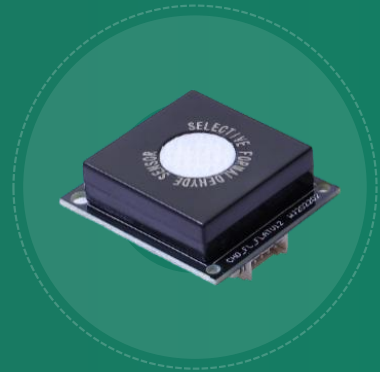


FC-H2S-2

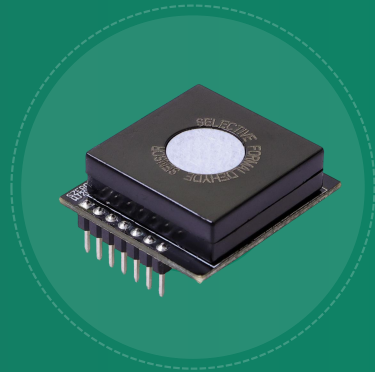


PS-H2S-2

## Formaldehyde Sensor



WZ-H3-N



WZ-H3-NK



WZ-S



WZ-S-K



DS-RF

# Why partner with ProSense?

02  
*Advantage*

02  
*Application*

01  
*Innovation*

In-depth understanding of vertical industry applications and international standards — a dual-driven approach of “Industry + Standards” to build comprehensive solutions.

Driven by mastery of core technologies and a commitment to the independent development of critical materials

Cumulatively holding 6 granted invention patents and 43 utility model patents.

01  
*Technology*

With more than 20 years expertise in fuel cell gas sensor technology

05  
*Recognition*

Recognized as a National High-Tech Enterprise

ProSense