SMART SENSOR AS8909

Portable H2 Gas Detector User Manual

Model: AS8909
Brand: SMART SENSOR

1. Introduction

This user manual provides essential information for the safe and effective operation of your SMART SENSOR AS8909 Portable H2 Gas Detector. This device is designed for accurately detecting hydrogen gas (H2) concentrations in various environments, ensuring safety by alerting users to potentially hazardous levels. Please read this manual thoroughly before using the device and keep it for future reference.

2. Safety Information

WARNING: Failure to follow these safety instructions may result in serious injury or death.

- Always operate the device in accordance with the instructions provided in this manual.
- Do not attempt to modify or repair the device. Refer all servicing to qualified personnel.
- Ensure the device is regularly calibrated to maintain accuracy. Inaccurate readings can lead to dangerous situations.
- This device is designed to detect hydrogen gas. It may not detect other hazardous gases.
- The device is certified with GB3836 series anti-explosion standard, ensuring its safe operation in potentially explosive atmospheres. However, always exercise extreme caution in such environments.
- Keep the device away from strong electromagnetic fields, extreme temperatures, and corrosive substances.

3. Product Overview

The SMART SENSOR AS8909 is a compact and portable hydrogen gas detector featuring a high-sensitivity electrochemical sensor and a clear LCD display.

3.1. Device Components

Figure 3.1: Front view of the AS8909 H2 Gas Detector.

Figure 3.2: Labeled diagram showing key components including the high sensitive sensor, sampling pump connecting port, high density LCD screen with backlight, down button, up button, sound alarm, light alarm, confirm button, power on/off button, and battery charging port.

- **High Sensitive Sensor:** Located at the top, responsible for detecting H2 gas.
- **Sampling Pump Connecting Port:** For attaching an external sampling pump if needed.
- **High Density LCD Screen:** Displays H2 concentration, battery status, and other information. Features a backlight for visibility in dark conditions.
- **Control Buttons:** Includes Up, Down, Confirm, and Power On/Off buttons for navigation and settings adjustment.
- **Alarm Indicators:** Integrated sound alarm, light alarm, and vibration alarm to alert users to gas presence.
- **Battery Charging Port:** Located at the bottom for recharging the built-in Li-battery.

3.2. Dimensions and Portability

Figure 3.3: The AS8909 detector measures approximately 120.2mm (height) x 64.5mm (width) x 38.3mm (depth), making it compact and easy to carry.

Figure 3.4: The compact design and unique clip allow for convenient portability, fitting comfortably in hand.

3.3. Alarm Features

Figure 3.5: The device features three distinct alarm types: audible (sound alarm), visual (light alarm), and tactile (vibration alarm). It differentiates between low and high alarm values with varying frequencies of alarming noise.

3.4. Key Features

Figure 3.6: Detailed views of the soft, comfortable buttons, the imported electrochemical sensor for accurate detection, the integrated rechargeable Li-battery, and the large, clear LCD screen.

3.5. Packing List

Figure 3.7: The standard package includes the H2 gas monitor, user manual, charging adaptor, USB cable, hand carry case, calibration certificate, CNEX certificate, and a gift paper box.

3.6. Product Unboxing Video

Video 3.1: This video demonstrates the unboxing and contents of the AS8909 H2 Gas Detector package, showing the device and its accessories.

4. Setup

4.1. Initial Charging

1. Connect the provided USB cable to the charging adaptor.
2. Plug the charging adaptor into a standard power outlet.
3. Connect the USB cable to the battery charging port at the bottom of the detector.
4. Allow the device to charge fully before first use. The battery indicator on the LCD screen will show charging status. A full charge typically provides 10-12 hours of continuous operation.

4.2. Powering On for the First Time

1. Press and hold the Power On/Off button until the LCD screen illuminates.
2. The device will perform a self-test and warm-up sequence. During this time, avoid exposing it to gas.
3. Once the self-test is complete, the display will show '0 PPM' or the current ambient H2 concentration, indicating it is ready for use.

5. Operating Instructions

5.1. Power On/Off

- **To Power On:** Press and hold the Power On/Off button for approximately 3 seconds until the screen lights up.
- **To Power Off:** Press and hold the Power On/Off button for approximately 3 seconds. The screen will display a countdown or a power-off message before shutting down.

5.2. Taking Measurements

- Once powered on and warmed up, the device continuously monitors the H2 gas concentration in its immediate environment.
- The real-time H2 concentration (in PPM) is displayed prominently on the LCD screen.
- For specific areas, hold the detector steadily in the desired location. If using a sampling pump, ensure it is correctly attached and functioning.

5.3. Alarm Settings and Response

The AS8909 features adjustable high and low alarm values. Factory preset low alarm value is 50ppm, and high alarm value is 100ppm.

1. **Adjusting Alarm Values:** Refer to the detailed instructions in the full user manual (provided in the package) for navigating the menu using the Up, Down, and Confirm buttons to set custom alarm thresholds.
2. **Alarm Activation:** When the detected H2 concentration reaches or exceeds the preset low or high alarm values, the device will activate its alarms: audible sound (up to 80dB), flashing light, and vibration.
3. **Responding to Alarms:** If an alarm sounds, immediately take appropriate safety measures, such as evacuating the area, ventilating the space, and identifying the source of the gas leak. Do not re-enter the area until the H2 concentration has returned to safe levels.

6. Maintenance

6.1. Cleaning

- Wipe the exterior of the device with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- Ensure no liquid enters the sensor opening or charging port.

6.2. Battery Care

- Recharge the battery when the low battery indicator appears on the LCD screen.
- Avoid completely draining the battery frequently, as this can reduce its lifespan.
- If storing the device for an extended period, charge the battery to approximately 50% and recharge every 3-6 months to prevent deep discharge.

6.3. Calibration

Regular calibration is crucial for maintaining the accuracy and reliability of your gas detector. It is recommended to have the device calibrated by a qualified professional at least once a year, or more frequently depending on usage and environmental conditions. Refer to the calibration certificate included in your package for details.

7. Troubleshooting

Problem	Possible Cause	Solution
Device does not power on.	Low or depleted battery.	Charge the device fully using the provided charger.
Inaccurate or fluctuating readings.	Sensor contamination or damage; device needs calibration.	Clean the sensor area carefully. Contact professional service for calibration or repair.
Alarm does not sound/light/vibrate.	Alarm settings are off; speaker/LED/vibrator malfunction.	Check alarm settings in the menu. If problem persists, contact support.
Device freezes or becomes unresponsive.	Software glitch.	Perform a soft reset by holding the power button until it shuts down, then restart. If unresponsive, allow battery to drain completely then recharge.

If you encounter issues not listed here or if the suggested solutions do not resolve the problem, please contact customer support.

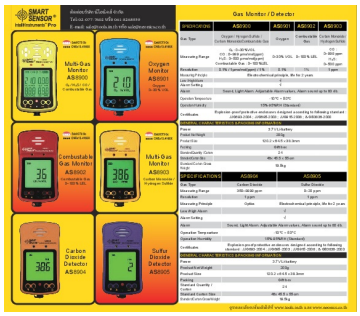
8. Specifications

Feature	Specification
Brand	SMART SENSOR
Model	AS8909
Gas Type	Hydrogen gas (H2)
Gas Measurement Range	0~1000ppm
Resolution	1ppm
Working Principle	Electrochemical sensor
Alarm Type	Sound, Light, Vibration (adjustable values)
Alarm Sound Level	Up to 80dB
Operating Temperature	-10~50°C

Feature	Specification
Operating Humidity	15~95%RH (standard)
Storage Temperature	0~40°C
Power Source	3.7V rechargeable Li-battery (Built-in)
Operation Current	160mA
Short Circuit Current	<3A
Protection Level	IP65
Outer Enclosure Material	ABS plastic
Product Net Weight	200g
Dimensions	120.2 x 64.5 x 38.3mm
UPC	785197913837

9. Warranty and Support

Your SMART SENSOR AS8909 Portable H2 Gas Detector comes with a standard manufacturer's warranty. Please refer to the warranty card included in your product package for specific terms and conditions, including the warranty period and coverage details.
For technical support, troubleshooting assistance, or warranty claims, please contact SMART SENSOR customer service. Contact information can typically be found on the product packaging, the official SMART SENSOR website, or the included warranty card.
It is recommended to register your product online (if applicable) to facilitate warranty service and receive important product updates.



[pdf] User Manual Specifications Catalog

[redacted] Gas Leak Detector [redacted] Smart Sensor [redacted] Certificate [redacted] Tools in th Explosion proof protective enclosures designed according to following standard JJG693 2004 JJG695 2003 JJG915 2008 GB3836 2000 GENERAL SmartSensor Catalog tools manual 80

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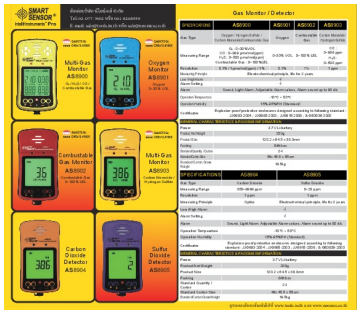

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[redacted] Gas Leak Detector [redacted] Smart Sensor [redacted] Certificate [redacted] Monitor Carbon Monoxide AS8907 Hydrogen AS8909 Nitrogen Dioxide AS8906 Ozone AS8908 AS8700A 1~1000 PPM SPECIFICATIONS Type SmartSensor GAS Catalog neonics co th catalog |||

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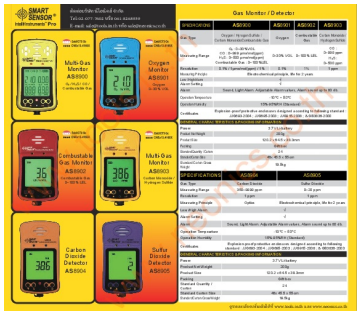

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