

Portable Biogas Analyzer: Multi-Gas Detection System



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Are you struggling to obtain accurate, on-the-spot readings of biogas composition in challenging field or lab environments? Tired of bulky equipment, slow sensor response, and data that's difficult to capture and export? The **MSSKY8000-X-M4SWISS Portable Biogas Analyzer** is the definitive solution for researchers and technicians who demand reliable, real-time gas analysis. This advanced, rugged **portable biogas analyzer** is engineered to deliver precise measurements of methane (CH_4), carbon dioxide (CO_2), hydrogen sulfide (H_2S), and oxygen (O_2) with laboratory-grade confidence in a compact, go-anywhere package. Designed for applications from anaerobic digestion monitoring to environmental research, this **multi-gas analyzer** transforms complex gas analysis into a streamlined, efficient process, giving you immediate insights to optimize processes and ensure safety.

For professionals who require dependable data beyond the four walls of a traditional lab, the **Portable Biogas Analyzer: Multi-Gas Detection System** is the essential tool

for modern gas analysis.

Solve Key Field and Lab Analysis Challenges

Obtaining reliable gas data in real-world conditions is fraught with obstacles.

The **MSSKY8000-X-M4SWISS Portable Biogas Analyzer** is specifically designed to overcome the most common pain points faced by researchers and engineers.

- **Eliminate Tedious, Error-Prone Manual Sampling:** Traditional methods requiring off-site lab analysis cause delays and risk sample degradation. This **biogas analyzer** features a **built-in sampling pump** for instant, direct analysis, delivering results in seconds right at the source and eliminating guesswork.
- **Conquer Harsh and Variable Environments:** Field conditions can ruin sensitive instruments. With an operating temperature range of **-40° to +70°**, IP66 ingress protection, and optional high-humidity filters, this rugged **portable gas analyzer** is built to perform reliably in demanding conditions from cold digesters to hot composting sites.
- **Simplify Data Management and Compliance Reporting:** Manually transcribing data is inefficient and risky. The integrated 32GB SD card and USB export function automatically log all measurements with timestamps, creating an audit trail for easy reporting, trend analysis, and regulatory compliance.
- **Gain Comprehensive Process Insights:** Understanding just one gas parameter isn't enough. The ability to monitor up to four critical biogas components (CH₄, CO₂, H₂S, O₂) simultaneously with one **compact biogas analyzer** provides a complete picture of gas production quality, process efficiency, and potential corrosion risks.

Core Benefits: How This Analyzer Enhances Your Research & Monitoring

The **Portable Biogas Analyzer: Multi-Gas Detection System** delivers tangible advantages that improve accuracy, boost productivity, and ensure safety.

- **Extended Field Deployment with Minimal Downtime:** Powered by a large 5200mAh lithium battery, this **portable biogas analyzer** offers exceptional operational longevity. You can rely on **over 32 hours of continuous operation** on a single charge for single-gas monitoring, ensuring it lasts through the longest field campaigns or monitoring shifts without interruption.
- **Intuitive Operation with Clear Data Visualization:** The 3.5-inch color LCD displays real-time numerical values and trend charts simultaneously, making it easy to interpret data on the fly. This user-friendly interface of the **biogas analyzer** minimizes training time and helps operators quickly identify trends or issues.
- **Built-In Protection for Sensor Longevity and Accuracy:** The integrated multi-

layer filtration system protects the sensitive infrared and electrochemical sensors from oil, water vapor, and dust. This critical feature of the **field-ready portable gas analyzer** ensures consistent accuracy, reduces maintenance costs, and extends the overall life of the instrument.

- **Flexible Data Output for Seamless Workflow Integration:** With optional RS485, USB, Bluetooth, and Wi-Fi connectivity, this device fits into any data ecosystem. The optional built-in or Bluetooth printer provides immediate hardcopy reports, making our **versatile multi-parameter gas analyzer** an indispensable tool for both solo field work and integrated monitoring systems.

Detailed Technical Specifications

The **MSSKY8000-X-M4SWISS Portable Biogas Analyzer** is defined by precision engineering. Below is a clear, detailed listing of its performance metrics and capabilities.

- **Detected Gases:** Methane (CH₄), Carbon Dioxide (CO₂), Hydrogen Sulfide (H₂S), Oxygen (O₂).
- **Detection Principle:** Non-Dispersive Infrared (NDIR) for CH₄ and CO₂; Electrochemical for H₂S and O₂.
- **Measurement Range:** CH₄: 0-100% VOL; CO₂: 0-100% VOL; H₂S: 0-5000 ppm; O₂: 0-25% VOL.
- **Resolution:** CH₄: 0.01% VOL; CO₂: 0.01% VOL; H₂S: 1 ppm; O₂: 0.1% VOL.
- **Precision:** ±5% F.S. (Higher precision customization available).
- **Sampling Method:** Built-in pump with adjustable flow rate (500 mL/min standard).
- **Data Storage:** Standard 32GB SD card for automatic data logging with customizable intervals.
- **Display:** 3.5-inch high-definition color LCD (320 x 480 pixels).
- **Battery & Operation Time:** 5200mAh rechargeable Li-ion; >32 hours (single gas), >24 hours (multi-gas).
- **Charging:** Standard Micro-USB port (9V/2A charger included).
- **Environmental Rating:** IP66 (dust-tight, protected against powerful water jets).
- **Operating Temperature:** -40°C to +70°C.
- **Operating Humidity:** 0 to 95% RH (non-condensing).
- **Communication (Optional):** USB, RS485, Bluetooth, Wi-Fi (outdoor range <500m), LoRa.
- **Printer (Optional):** Supports internal thermal printer or external Bluetooth printer.

- **Dimensions:** 260 mm (H) x 230 mm (W) x 120 mm (D).
- **Weight:** 3.7 kg.
- **Warranty:** 12 months.

Optimize Your Biogas Analysis with Confidence Today

Stop compromising on data quality or operational flexibility.

The **MSSKY8000-X-M4SWISS Portable Biogas Analyzer** is more than a tool—it's a strategic partner for advancing your research, optimizing biogas plant performance, and ensuring environmental compliance with unwavering confidence.