Portable Pump-Suction Helium Gas Detector

Model: ES20B-HE

Product Specifications

Descriptions:

The ES20B-HE Portable Pump-Suction Helium Gas Detector is a newly developed high-end device from Safewill. Featuring an aluminum alloy casing, it offers significant improvements in performance and specifications. Equipped with a brand-new, imported sensor and a 32-bit low-power processor, the detector ensures superior performance. The circuit employs a 4-layer design for enhanced weak signal processing and interference resistance. With a dedicated high-precision imported AD chip and Safewill's unique signal processing algorithm, the measurement accuracy is more stable and precise. It features a 2.5-inch dot-matrix display for intuitive and elegant readings. The state-of-the-art design guarantees unparalleled durability, making it suitable for use in various hazardous industrial environments.

Applications:

The product is widely used in industries such as petroleum, petrochemicals, chemical engineering, firefighting, environmental protection, coal mining, metallurgy, power, municipal services, pharmaceuticals, aviation, military, machinery manufacturing, agriculture, animal husbandry, 3D printing, glass processing, rubber, video inspection, anti-corrosion, disinfection, fertilizers, resins, adhesives and pesticides, waste treatment plants, greenhouse cultivation, warehousing logistics, brewing fermentation, workshops, laboratories, underground tunnels, emission testing, steel smelting, desulfurization and denitrification, exhaust gas treatment, shopping malls, kitchens, cement plant boiler rooms, and more.

Product Features:

- 👑 **Durable Build:** Aluminum alloy casing with a full-metal rose gold finish for a premium feel.
- 👑 **Built-in High-Performance Pump:** Provides stable flow and can be turned on/off as needed.
- 👑 **User-Friendly Navigation:** Five-key navigation buttons with an intuitive user interface.
- 👑 **Bilingual Support:** Supports both Chinese and English language options.
- 👑 **Large Data Storage:** Capable of storing up to 100,000 data records.
- 👑 **Accurate Measurement:** Intelligent algorithm with multi-point calibration and temperature compensation.
- 👑 **Long Battery Life:** Powered by a 2600mAh high-capacity lithium battery, offering over 20 hours of continuous operation.
- 👑 **Flexible Units:** Multiple units available, including %VOL, %LEL, mg/m³, ppm, pph, and ppb.
- 👑 **Audible and Visual Alarm:** Alerts when concentration exceeds safety thresholds.
- 👑 **Self-Check Function:** Automatically checks the status of sensors and components at startup.
- 👑 **High-Quality Sensor:** Imported high-performance sensor with a long service life.
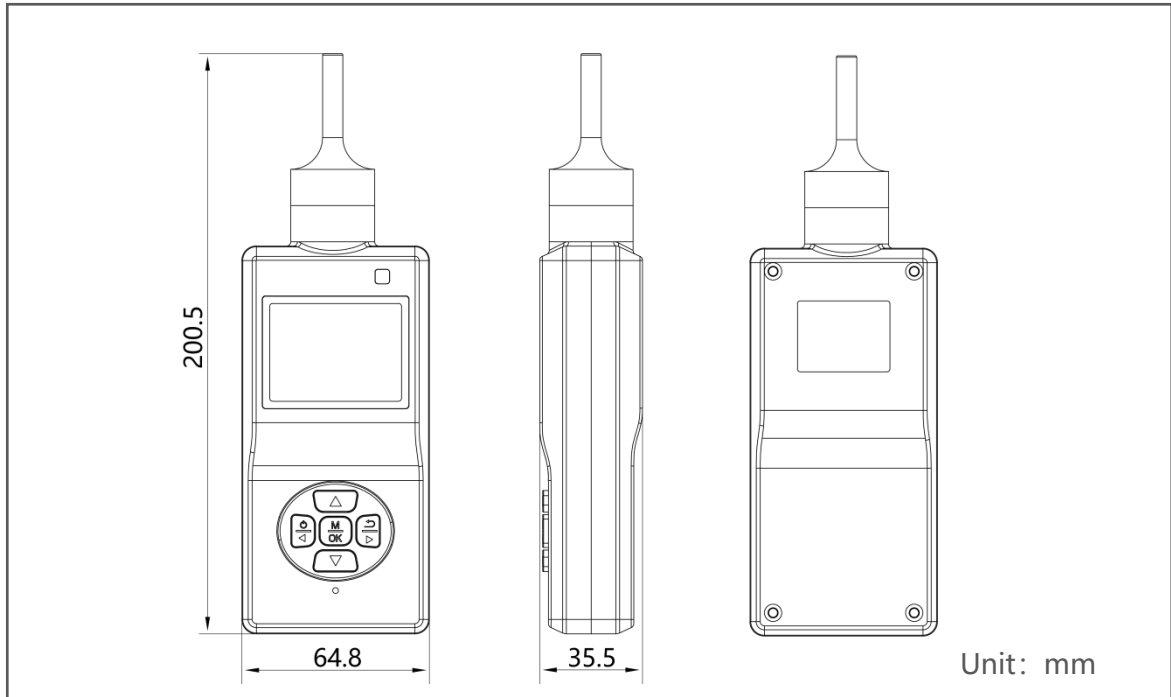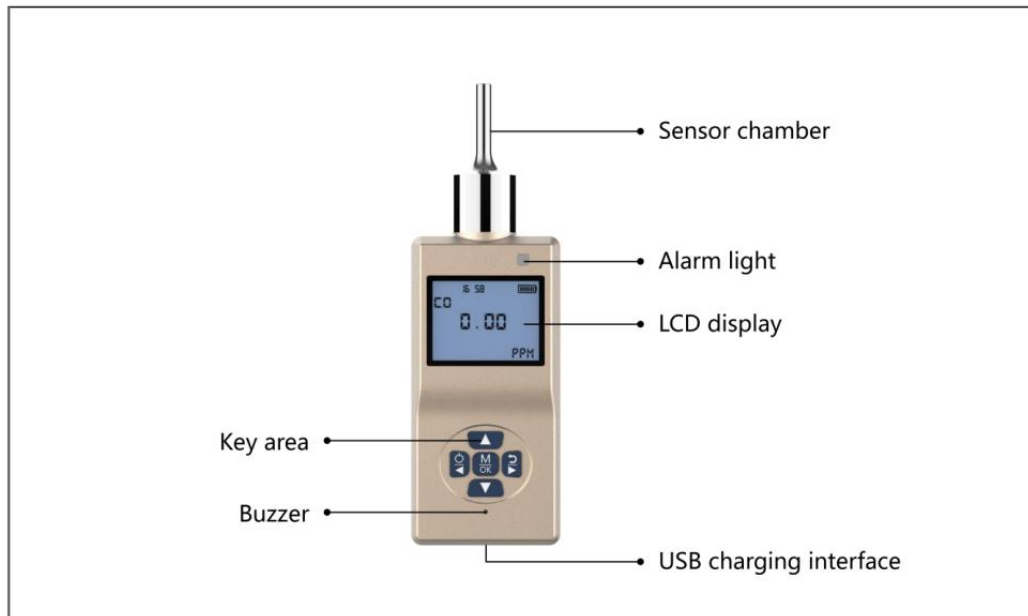
Product Series:

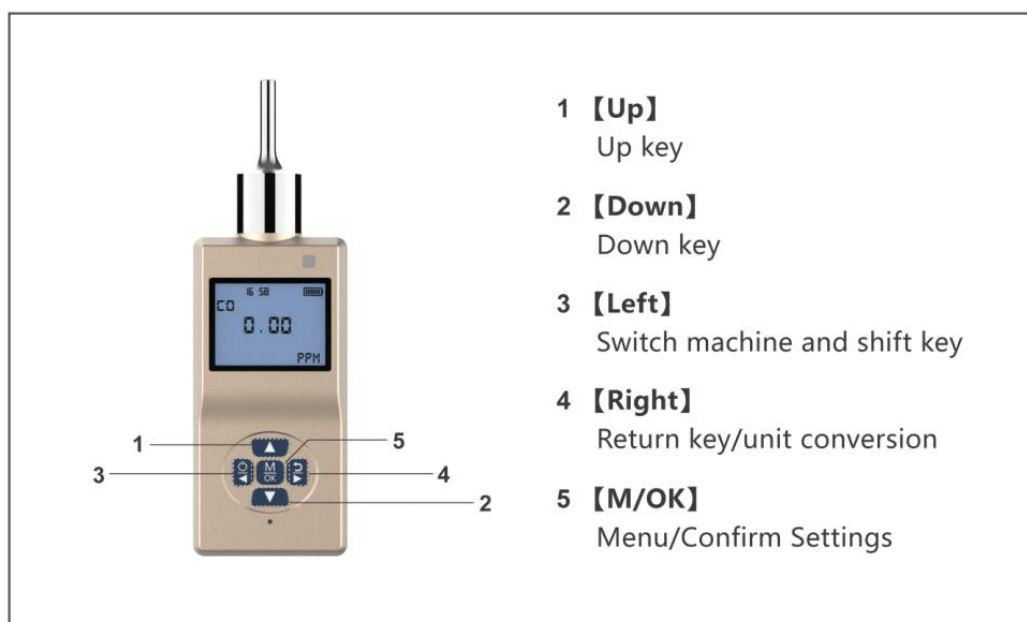**ES20B Aluminum Alloy Version**　　　　　　　　**ES20C Plastic Shell Version**

Dimensions:

200.5

64.8   35.5   Unit：mm

Product Appearance:

- Sensor chamber
- Alarm light
- LCD display

CO 0.00 PPM

- Key area
- Buzzer
- USB charging interface

Product key:

Technical Specifications

Item	Specific Parameters
Detected Gas	Helium (He)
Detection Principle	Thermal conductivity principle
Measurement Range	0~10%, 30%, 50%, 99.9%, 99.999%VOL; 0-1000PPM (optional, custom ranges available)
Resolution	0.1 %VOL, 0.01 %VOL, 1 PPM (optional)
Sampling Method	Active pump-suction with built-in pump; independent ON/OFF control; flow rate: 500 mL/min
Indication Error	≤ ±3% FS (higher accuracy available depending on sensor performance)
Repeatability	≤±1%
Zero Drift	≤±1%（FS/year）
Response Time	≤20 seconds(T90)higher requirements depend on sensor performance

Recovery Time	≤ 30 seconds; higher requirements depend on sensor performance
Battery	2600mAh high-capacity rechargeable lithium battery; >20 hours continuous operation; charging time <7 hours; supports power bank charging; compatible with standard USB phone chargers
Charger	USB fast charger (5V 2.1A)
Alarm Type	Audible alarm: 95 dB @ 30cm; red LED alarm indicator
Alarm Point Setting	Adjustable low and high alarm thresholds
Display	2.5-inch dot-matrix display
Backlight	Manual control; automatic during alarm
Buttons	5-key navigation buttons
Direct Reading	Measurement values, time, battery status, gas name, unit
Data Logging	Single-point storage; adjustable storage intervals; up to 100,000 data points with date and time
Data Download	USB-supported measurement data download
Calibration	Set calibration values; one-touch zeroing
Operating Modes	Two modes: User mode and Administrator mode
Ambient Pressure	80kPa ~ 120kPa
Ambient Temperature	-20℃ ~ +50℃ (typical)
Ambient Humidity	10%–95% RH (non-condensing)
Dimensions	135mm (L) × 65mm (H) × 35mm (W)
Shell Material	Aluminum alloy
Weight	0.26kg
Standards Compliance	GB 12358-2006、GB 3836.1-2010、GB 3836.4-2010
Product Certification	Explosion-proof certification: Ex ib IIC T4 Gb
Standard Accessories	Carrying case, certificate of conformity, warranty card, data cable, charger, PU tube, simple filter
Warranty	1-year warranty; free repairs within the warranty period