Portable Combustible Gas Leak Detector

Model: ES20C-KS-EX



Product Structure

The device consists of a plastic housing, metal sampling probe,

LCD display, control buttons, buzzer, USB port, and other components.

The combustible gas sensor is integrated into the front sampling head

and connected to the main unit via a flexible gooseneck tube.

Address: 17G, Kechuang Building, Shasong Road, Houting, Shajing Subdistrict, Bao'an District, Shenzhen;

Tel/WhatsApp: +86 15302610197 Email: op01@szeyesky.com

Product Overview

Featuring a durable plastic housing, an imported brand-name sensor, and a 32-bit low-power processor, this gas detector delivers high sensitivity, reliable performance, and excellent interference resistance. Its 4-layer PCB design, high-precision imported AD chip, and advanced signal-processing algorithm ensure accurate and stable measurements. The 2.5-inch dot-matrix LCD provides clear, intuitive readings.

The detector is suitable for hazardous industrial environments and a wide range of applications, including metallurgy, oil and gas, chemical processing, municipal utilities, biopharmaceuticals, laboratories, and automotive industries.

Product Features

◆ Equipped with high-performance combustible gas sensors from overseas, featuring a short response time and stable data;

◆ A user-friendly interface with five-button navigation that fully embodies a human-centered and international design approach;

◆ Supports seamless switching between Chinese and English interfaces;

◆ Can store up to 300,000 sets of data with date and time identifiers (optional);

◆ Intelligent temperature and humidity control and zero-point compensation algorithms, along with a fully software-based automatic calibration function, ensure the accuracy of measurement results;

◆ Upon startup, automatically detect the operating status of all sensors and components;

◆ 2700 mAh high-capacity lithium battery with a continuous operating time exceeding 20 hours; universal USB port for mobile phone charging;

◆ A scientifically sound and rational sound and light alarm system provides timely alerts when limits are exceeded, thereby protecting personal safety.

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Product Operating Environment

It can be applied in a wide range of hazardous industrial settings; the product is extensively used in metallurgy, petroleum and petrochemicals, municipal services, chemical engineering, biopharmaceuticals, home and environmental protection, school laboratories, automotive exhaust systems, and other fields.

Operative Norm

1. GB 15322.3-2003 Combustible Gas Detectors – Part 3: Portable Combustible Gas Detectors
2. GB3836.1-2010 "Explosive atmospheres — Part 1: General requirements for equipment" GB3836.1-2010 "Explosive atmospheres — Part 1: General requirements for equipment"
3. GB3836.2-2010 "Explosive atmospheres – Part 2: Equipment protected by an explosion-proof enclosure'd'" GB3836.2-2010 "Explosive atmospheres – Part 2: Equipment protected by an explosion-proof enclosure'd'"
4. GB3836.2-2010 "Explosive atmospheres — Part 4: Equipment protected by intrinsically safe 'i'"GB3836.2-2010 "Explosive atmospheres — Part 4: Equipment protected by intrinsically safe 'i'"

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Technical Parameter

Project	Specific Parameters
product model	ES20C
tracer gas	Combustible gas (CH4)
Detection Principle	Semiconductor Principles
measuring range	0-10000PPM
sample mode	Diffuse
indicating error	≤±5% FS
repetitiveness	≤±3%
response time	≤8 seconds (T90)
recovery time	≤20 seconds
size	Length: 135 mm × Height: 65 mm × Width: 35 mm
Shell material	Plastic material
weight	0.26kg
cell	High-capacity rechargeable lithium battery: 2,700 mAh; continuous operating time exceeds 20 hours; charging time is under 7 hours; supports power supply and charging via a portable power bank; compatible with standard USB mobile phone chargers.
charger	USB high-current 5 V 2.1 A fast charger;
Alarm method	Sound alarm: 95 dB at 30 cm; red LED alarm light

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Alarm Point Configuration	K1 alarm threshold and K2 alarm threshold; both can be set independently.
display screen	2.5-inch dot-matrix display
be in a poor light	Manual; automatic during an alarm
direct reading	Measured value, time, battery status, gas name, unit
data logging	Automatic, manual, and single-point storage; storage intervals are customizable; supports continuous storage of up to 300,000 date-and-time records.
Data Download	Supports USB download of measurement data (optional)
calibration	Calibration and calibration values can be configured, enabling one-touch zeroing.
anti-hazard classification	Explosion-proof certification number: CNEx21.4014X
levels of protection	IP54
operator schema	Two operating modes are available for selection: User mode and Administrator mode.
ambient pressure	86kPa ~ 120kPa
ambient temperature	-20 °C to +55 °C (typical value)
ambient humidity	10%–95% RH (no condensation)
operative norm	GB 12358-2006、GB 3836.1-2010、GB 3836.4-2010
quality assurance	The warranty period is one year; free repairs are provided during this period.

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