

## Combustible Gas Detector

### Instruction manual



### A. Introduction

Combustible gas (EX) detector is an instrument detecting gas leak concentration. It has a high-definition screen to displays measured values, and stable performance to ensure safety and reliability. With small and portable design, it is suitable for detection of gas pipelines, exhaust gas and fuel leaks, propane irrigation stations, flammable gas pipeline, etc.

### B. Functions

- ▶ HOLD data holding
- ▶ MAX maximum value / MIN minimum value
- ▶ Alarm setting
- ▶ Calibration
- ▶ On/Off (Timed Shutdown)

### C. Safety instruction

For your safety, please read this manual before operation.

⚠ : This operation may induce physical hazard to users.  
Please be careful.

⊘ : This operation may cause damage to the instrument.  
Please be careful.

⚠ Warning!

If there is explode accident happening:

- ▶ Cut off all the potential gas resource.
- ▶ Keep the rescuing area ventilated and no potential combustible gas existing.
- ▶ Switch off all the power connection.
- ▶ Evacuate all the people in the area.
- ▶ Report to the authorities immediately.

In daily work, please keep the work environment ventilated, for good ventilation can ensure that combustible gas will not accumulate.

### D. Warnings and Precautions

Improper operation or improper environment for usage may cause inaccurate measurement.

⚠ : The environments with high or low oxygen concentration may cause inaccurate measurement.

⊘ : Other impurities such as gas or water vapor may affect the normal measurement of combustible gas sensor.

⊘ : The sensor aperture must be kept clean, or impurities may cause inaccurate measurements.

⚠ : When replacing battery, be careful not to install batteries backwards, otherwise it may cause the danger of electric leakage and accidents.

⚠ : If the instrument breaks down, please turn to professional staff of our company for help, other people should not change components and wiring.

⚠ : Do not disassemble the instrument in hazardous environments.

⚠ : Do not disassemble the battery in explosive environments.

⚠ : This product complies with the following procedures

and calibration:

JJG693-2004, GB3836.1-2010

GB3836.4-2010, GB4208

### E. International safety knowledge

⚠ This operation must refer to instruction. Please be careful.

Ⓒ Complying with eu standard

Explosion-proof sign: Ex ib IIB T3 Gb

### F. Name of Each Component (Figure 1)

1. Power and backlight on/off button.
2. Measurement data holding and setting button.
3. Maximum/minimum value mode locking/ Up button.
4. Down button.
5. LCD display.
6. Sensor hole.
7. LED alarm light.
8. Sticker spot for nameplate.
9. Battery door.

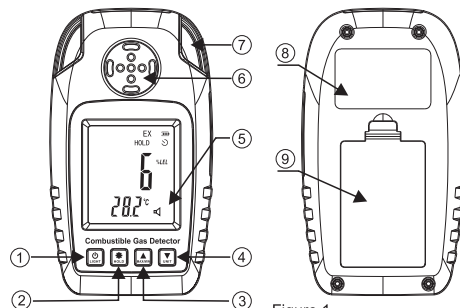


Figure 1

### G. LCD Display (Figure 2)

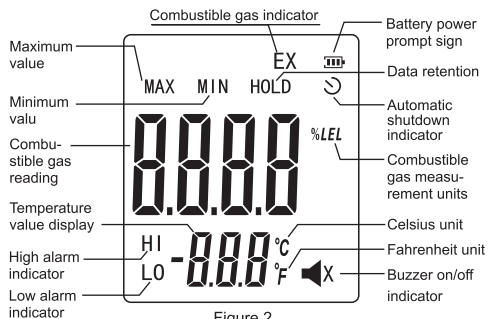


Figure 2

## H. Operating Instructions

- Power on/off: long press to start up, perform normal measurement after 10 seconds, long press to shut down.
- Data holding: Short press ; short press it again to exit.
- Maximum/minimum value mode: Short press for maximum value, short press it again for minimum value, short press it again to exit.
- Unit switch: No extra function.
- Setting: long press to enter setting mode, short press to switch setting items, short press and to switch on/off, long press to exit.
  - "ELE" temperature unit switch
  - "OFF" timed shutdown switch
  - "bu2" buzzer switch
  - "HI/LO" alarm value setting
  - "CAL" calibration

Note:

- Temperature refers to internal temperature of the instrument.
- Timed shutdown is set as 10 minutes.
- Buzzer switch refers to button pressing sound and alarm sound.
- Alarm value setting: Short press and to switch between high and low alarm point, long press to set alarm point value, short press to switch setting digit, short press and to set alarm value, long press to save and exit.
- This operation should be performed with sufficient battery power. Short press and to switch calibration point. User can

calibrates 0 point under airy environment (in normal temperature) by long pressing to start calibration. When calibration is finished, "PASS" will be displayed automatically; if not, "Err" will be displayed. "40" calibration point is calibrated by factory and needs to be operated in a closed environment filled with flammable gas. Press to start calibration. The display switches from "CAL" to ADC value. After the value is stable, long press again to complete the calibration. After successful calibration, long press to fine tune calibration value (by short pressing and ) and long press again to save calibration value.

- Lock: long press to lock the operation.
- Unlock: Under power off state, short press , , and at the same time to enter unlock interface. Short press to switch setting digit. Short press and to set value. User needs to ask original factory for password, and long press to unlock and restart.
- Charging:

- Under power off state, Charging "CHrg" shows up during charging. At this time, long press power button to turn on the instrument. "donE" is displayed when the instrument is fully charged.
- Under power on state, increasing grid in cycle indicates charging. Three grids indicate full power.
- "Err1" shows up when the battery is faulty.

Note: This instrument is equipped with a nickel-metal hydride rechargeable battery, please use after charging (power adapter specification: DC 5V/1A, i.e. ordinary mobile phone charger).

This instrument is not equipped with power adapter.

## I. Specifications

Measurement range	0~100%LEL
Sensor Type	Contact combustion type
Response time	About 10 s
Operating Voltage	3.6V
Alarm Limit	Lel 10% Of Methane <sup>11</sup>
Operating environment temperature	0~50°C (32~122°F)
Low battery indication	3.3V
Working current	200mA
Power supply	3x1.2V NIMH batteries (Weight 36.5g)
Dimensions / Weight	67.98*28.47*119.98mm / 11.9g(Without battery)

[1].LEL stands of low limit for explosion, the lowest content of a combustible gas in air that results in explosion, can be referred to as %LEL.

Warning: prohibit charging or disassembling batteries in an explosive environment.

## J. Others

1. Gas detecting:

The instrument is an advanced detection apparatus that can be used to test leakage of a variety of flammable gases.

2. Combustible gas:

The following list only shows partial gases can be detectable.

Natural gas	Propanol	CO	Spraying fuel
Propane	Ethanol	Sulfurated hydrogen	Industrial solvent
Butane	Ammonia	Smoke	Paint
Methane	Steam	Gasoline	Naphtha

3. Keep-up and maintenance:

1) Keep-up:

► Keep-up and replacement of battery:

Take out the battery from the unit which will not be operated for a long time less the leakage of battery damage and erode the battery contact metal.

► Case cleaning:

Use only the fresh water to clean the case of the product, forbidden to use any erosive liquid such as alcohol etc.

► Make sure the sensor is clean and use a soft brush to clean sensor aperture.

► Never impact it or operate and store it in humid environment.

► Do not store the product in the environment below:

- Humid or dusty environment.
- High density of salt or sulfur.
- Environment full of the other chemical gas.
- High temperature or humidity, or environment in direct sunlight.

2) Maintenance: Please refer to the warranty card offered.

Special Statement:

Our company shall hold no any responsibility resulting from using output from this product as an direct or indirect evidence. this company reserves the right of changing the product design and contents of instruction if changed the separate notice isn't given.

