汉威科技集团
Hanwei Electronics Group Corporation

JL269(LCD) Portable Gas Leak Detector

Operation manual

Version: 20220520

Read this manual carefully before using the device.

Safety Information

Before using the device, please first read the below safety information carefully and follow the operation instruction strictly.

- Don't use the defective detector. Before using, check if there is crack or spare part missing. If yes, please contact with the seller.
- Only spare parts which are specified for JL269 or permitted by the seller are allowed to be used.
- Only the charger which is specified for JL269 is allowed to be used to charge the device. It's forbidden to charge the device in the dangerous environment.
- Don't expose the device with detection unit of "ppm" or "LEL" to the over-range gas for long time. Otherwise, it will badly influence the performance and even damage the device.
- If exposed to the environment consisting of lead compounds, sulfocompound, organic phosphorous compound or silicon, the gas sensor will be poisoned.
- Don't expose the device to the environment which consists of hydrogen sulfide, hydrocarbons gas or high corrosive gas for long time. Otherwise, it will restrain the response of the gas sensor and reduce the sensitivity. If the device has to be used in the above environment, please carry out the Bump Test before using it.
- Don't expose the device to the environment which has electric shock, strong magnetic field or serious continuous mechanic shocking.
- There is a Lithium battery inside the device. Please don't place the useless battery together with the rubbish. The useless battery should be discarded by qualified with-drawers.
- After 2 years of using or 300 times of recharging, the batteries will not be able to used. Please replace it with a new one.
- Batteries must not be use or put beside fire or heaters or other

high temperature places, which may cause battery leakage, overheat, pop open, and even burn.

- Don't throw the battery into fire, because it will burn and burst.
- If battery leakage, strange smell, abnormal heating up, color changing or deformation is found during using, charging or storing, please stop using the battery immediately in case of burn or burst.
- Direct sunlight, sun exposure or high temperature environment should be avoid.
- Device if long time not used, please charge the battery full before storing up, and keep charging one time each half year.
- It's forbidden to disassemble, adjust or repair the device privately.
- Device should be avoided falling from high place or serious shocking.
- Any other operation or operation failure beyond this manual, please contact the seller.

1. Brief Introduction

JL269 (LCD) gas detector has a fast and stable performance and wide detecting range. It can be used to detect methane, propane, natural gas, LPG, and hydrogen gas, It will help you to find out the gas leakage sources easily.

2. Technical features

- LCD screen display
- High sensitivity to the gas leakage
- Flexible lengthened goose-neck and adjustable displaying unit
- Low voltage alert and automatic turning off function in under-voltage situation

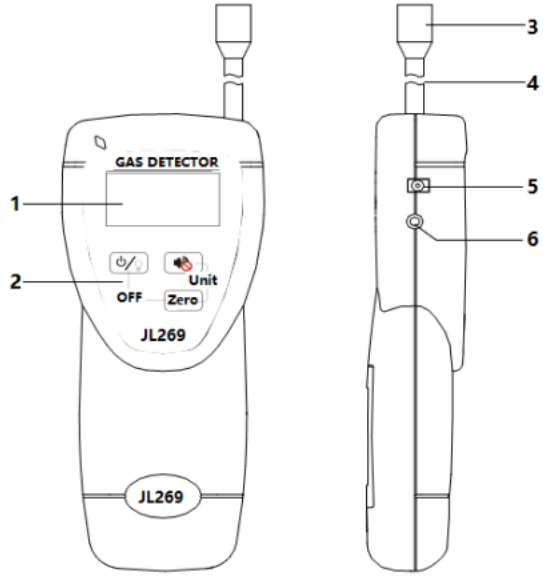
- Sensor fault testing
- Short warm up time and response time
- Audio alarm with different frequency according to the gas level
- Automatic zero adjustment, easy to operate
- Progressing bar indication of gas concentration

3. Specification

Detecting gas	Detecting range
CH_4	0～30000ppm (0～60%LEL; 0～3.0%VOL)
C_3H_8	0～20000ppm (0～95%LEL; 0～2.0%VOL)
H_2	0～10000ppm (0～25%LEL; 0～1.0%VOL)

Sensor type: Semi-conductor gas sensor
Sampling method: Diffuse naturally
Response time: ≤5S
Sensitivity: Better than 50ppm
Working temperature. -10℃-55℃ humidity: ≤93% RH
Storage temperature. -30℃-60℃ humidity: ≤93% RH
Indication: LCD screen progress bar and figure reading display, sounds with variable tones and rhythm
Power supply: 3.7V 2200mAh rechargeable Lithium battery
Charging time: 4 to 7 hours
Working Time: >8h (working continuously in normal working status)
Sensor life: 2 years
Dimension: 180mm×72mm×35.5mm
Weight: About 300g

4. Structure & function



NO.	Function	NO.	Function
1	LCD screen	4	Goose-neck
2	Buttons	5	Charge port
3	Sensor part	6	Earphone port

5. Displayed icon explanation

The device will test the battery power when power on, the meanings of the displayed battery icons are as below:

	Full voltage		Too low. Please charge it.
	Voltage left		No voltage and will turn off.

	Low voltage		

6. Operation instruction

6.1 Power-on and warm-up

In power-off status, press and hold  button for more than 2 seconds, the detector enters into welcome interface. On the screen, it will first display detector model number and software version number, and then it starts self test on the functions, including LCM screen, buzzer, sensor, backlight etc. After self test, it starts a 5-second warm-up period. If gas sensor finish translation in 5s, it will display the zero calibration information and then enter into detecting status. If sensor is faulty or translation can not be finished within 5s due to long time storage, please wait patiently until it finishes.

6.2 Bump test

Before using the detector every day, please carry out the Bump Test once so as to make sure the device work normally. Procedure is as below:

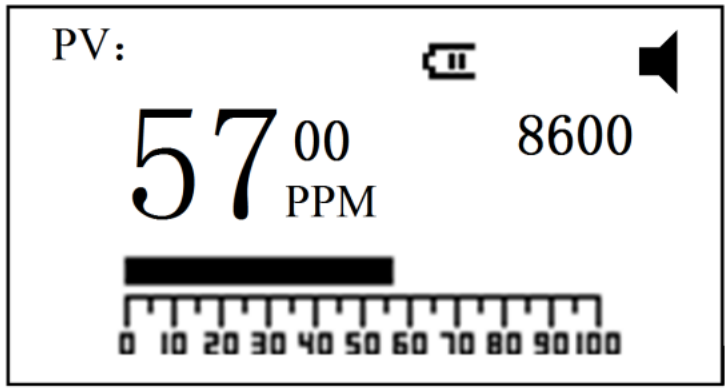
(1) Power on the device and put it into the gas container which concentration is higher than the H-alarm level or standard gas.

(2) If the display, alarming and buttons work normally, then it can be used to detect the gas leakage.

(3) If the device doesn't response to the gas or displays abnormally, please contact the seller for solution.

6.3 Screen display

After the detector entering into the detecting interface, the screen displays as below drawing.



Processing bar --- Proportion of detected gas vs full detecting range.
"PV": Gas concentration that the processing bar means.
"00": The detecting range rate
"**PPM**": Displaying unit.
"MAX": figure under the battery icon means the maximum value of the detected gas after the detector is turned on this time.(in above drawing, it is 8600).

For example, in the above drawing, the current gas concentration is 57 × 100 = 5700ppm.

6.4 Detection
Carry the gas detector and move it to the place where the gas possibly leaks. By checking the black bar and alarm sound, the user can know if there is gas leakage. The longer black bar and the higher frequency of the sound alarm means more gas leakage. Also the gas concentration value will be displayed on the screen.

According to the real demand, the displaying unit can be changed by pressing both the button  and "**Zero**" button at the same time.

6.5 Turn on / turn off the back light

In detecting status, the user can turn on or off the back light by pressing  button.

6.6 Turn on / turn off the indication tone

In detecting status, the initial audible alarming function is on. The higher the leakage is, the louder the buzzer will sound. If the working place is quite noisy, the user can use the earphone which is purchased by himself.

By pressing  button, user can turn on or turn off the audible alarming function. When it is turned on, the icon on the screen is  . When turned off, it is  .

6.7 Displaying unit selection

There are 3 displaying units of the detector: ppm, %LEL and %VOL.

In the detecting status, by pressing the sound button  and "**Zero**" button at the same time, the user can select the unit he needs. After selection, the unit will be saved when the user turn on the detector again next time.

6.8 Zero calibration

In the clean air, if the displayed gas value is not zero, user can make zero calibration by pressing "**Zero**" button.

6.9 Power off

Press both  and "**Zero**" buttons, the detector will turn off.

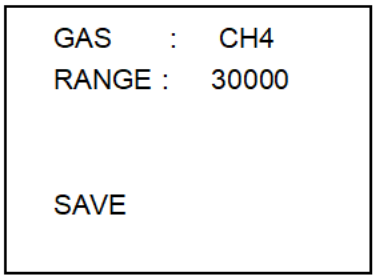
7. Calibration instruction

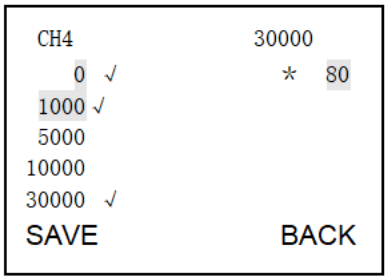
In order to ensure the accuracy, we recommend the user re-calibrate the device once every 180 days (six months) maximum. Calibration procedure is as below.

(1) Press  and  buttons at the same time, the device will power on and the LCD screen will show “DEMARCATE”.

(2) After several seconds, it will start 3-minute warm-up. The screen shows the remaining warm up time in the way of counting down.

(3) After warm-up finish, it will enter the selecting interface for target gas and detecting range as shown in below drawings.





(4) In selecting interface, choose the gas type by pressing  . Choose the detecting range by pressing “**Zero**” button. Then press

 to enter the calibration interface.

(5) This device can be calibrated in multi points (for calibration points quantity please refer to the real device. Operation method is similar), and calibration sequence is not limited. The calibration point which is marked by "√ "must be calibrated for sure. Other calibrating points are optional.

(6) In the calibration interface, select any calibration point by pressing "**Zero**" button, and then put the detector into the standard calibration gas. When the A/D value (shown behind the calibration point) is stable, press  button to save the calibration point temporarily. The screen will show "*" character at the left side of the value. If there is slight change of the environment, A/D value may still change a little bit and refresh. The user can press  button again if he wants to update the A/D value.

(7) If the A/D value is too much different with its theoretical value, screen will display "ERROR" in the right downside corner of the screen, which means calibration fail.

(8) After all the essential calibration points are calibrated, the user can press "**Zero**" button to move the focal point to "SAVE", then press  button, "OK!" will appear on the right downside corner of the screen, which means calibration is completed. After short time, the detector will turn off automatically.

8. Charging

Normally, it takes 4 to 6 hours to charge the battery full. When the screen display "CHARGING OVER!", it means the charging is

completed. Please unplug the charger from the power source.

Notices:

- Please don't charge the detector in dangerous places. Otherwise, it will possibly damage the detector or cause fire or explosion.
- During charging, the battery compartment will be possibly heating which is normal situation.
- After the detector turns off automatically, please charge it in time within 12 hours, so as to avoid that the detector cannot work normally due to low voltage.
- If the detector will not be used for long time, please take out the batteries from the battery compartment and place them in dry environment. Please prevent short circuit of the anode and cathode.
- Please don't put non-rechargeable batteries into the battery compartment and charge it. Otherwise, it will possibly cause battery leakage, explosion or fire.

9. Sensor replacement

In the normal working environment, the sensor life is 2 years. When sensor life is overdue or sensor fault occurs and it needs replacement, please contact the seller. Only under the professional instruction, the user can replace the sensor.

10. Trouble shooting guidance

Possible fault	Reasons	Solution
Cannot power on or power off automatically	Battery voltage is too low	Charge it in time or replace it with a new one

No response to the target gas	Warm-up is not completed or calibration is not completed	Wait till it finishes and then test it again
	Sensor fault	Replace the sensor
“SENSOR FAIL!” displayed on the screen	Sensor fault	Replace the sensor

Hanwei Electronics Group Corporation

Address: No.169, Xuesong Road, Hi-Tech Zone,

Zhengzhou 450001, China

Tel.: 0086-371-67169080

Fax: 0086-371-67169090

E-mail: sales@hwsensor.com

Website: www.hwsensor.com