DUOTESI

Household combustible gas detector

product specification

Version number: V 1. 0

technical parameter

Product model	DTS-S02
Operative norm	GB15322.2-2019
Applicable gas	carbon monoxide
Range	0-500ppm
Consumed power	≤3W
Alarm mode	Sound and light alarm
Input voltage	AC220V 50Hz
Ambient temperature	-10 ℃～+55 ℃
Alarm concentrati	150ppm
Outline dimension	L90*W90*H38(mm)
Life length	3 years
Alarm volume	≥70dB
Output contacts	1 set of DC12V pulse signals

Product overview

Thank you for using the series of household gas detectors produced by our company.

This product is a high-stability carbon monoxide detector designed to monitor hazardous gases such as carbon monoxide. The alarm uses an advanced electrochemical carbon monoxide sensor, featuring high stability and minimal sensitivity drift. Suitable for residential areas, villas, hotels, apartments, and other places where carbon monoxide is present, this product provides safety monitoring. It continuously monitors the concentration of carbon monoxide gas and immediately triggers audio-visual alarms when the concentration exceeds the limit, alerting users.

functional characteristics

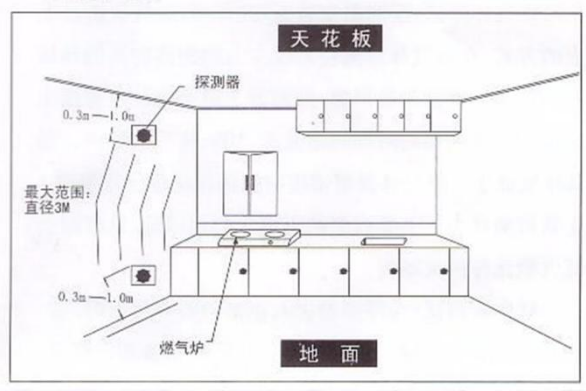
- Electrochemical sensor, high stability
- High sensitivity to gas
- Control by microprocessor
- Sound and light alarm
- Self-reset
- Automatic fault detection indicator
- It is manufactured by SMT process and has good stability
- Life monitoring function

Installation and wiring

1. First, determine whether the gas to be tested is heavier or lighter than air. Gas heavier than air: liquefied petroleum gas, etc.; gas lighter than air: natural gas, artificial gas, biogas, etc.

2. Install alarms in appropriate places according to the weight of the gas.

For gases heavier than air, install 0.3-1.0 meters above the ground and within 1.5 meters of the gas source; for gases lighter than air, install 0.3-1.0 meters below the ceiling and within 1.5 meters of the gas source (see the figure below).



3. Install screws on the wall and hang the alarm.

4. When installing at home, note that the installation location should not be too close to gas appliances to prevent the alarm from being scorched by the appliances flame; it should not be installed in areas with high smoke and oil emissions to avoid false alarms or obstructed air intake of the alarm, which can affect its sensitivity; it should also not be installed near exhaust fans, windows, doors, or areas with high humidity in bathrooms.

5. All wiring installations must comply with national and local effective regulations and standards. The thickness of the wire cores should be appropriate, and wires connecting alarms and other auxiliary devices should have color markings to prevent incorrect connections. Inappropriate connections can result in the alarm failing to sound when a gas leak occurs.

Network interface of detector:

1. The detector has a network interface connected to the control and indication equipment, which can output signals corresponding to its measured concentration, as well as normal monitoring, fault, alarm and life status signals of the detector.

2. Signal type: serial port signal;

3. Parameters: communication rate 4800bps;

Physical characteristics of the internal read interface of the detector:

1. Electrical characteristics:

Use a four-pin single row pin with a spacing of 2.54mm, defined as follows:

order number	1	2	3	4
Marking / PCB screen printing	GND/G	Up/U	TXD/T	RXD/R
Note instructions	reference level	Interface power output	Data sending end	Data receiving end

2. Level specification:

The interface adopts TTL negative logic serial communication signal level, and the communication signal level rules are as follows:

Low level (binary "1")	High level (binary "0")
Input: ≤ 0.8 V	Input: ≥ 2 V
output:0V~0.4V	output:2.4V~Up

Communications method of the detector:

The reading device and the detector use master-slave, half-duplex communication mode, the reading mode is master station, the detector is slave station; (see Appendix A of GB15322.2-2019 for detailed protocol)

Maximum number of records for each type of detector:

Items	Number of records
Alarm record	200
Alarm recovery record	200
Fault record	100
Sensor failure record	1
Power failure record	50
Power-on record	50
Fault recovery record	100

operation declaration

The front panel of the alarm has three indicator lights, which are as follows: The button is a manual self-test button.

Green light (power supply)	Red light (alarm)	Yellow light (fail/age)
Warm-up state: shiny	Alarm status: red flashing	Fault status: Yellow light is always on Life expired: Yellow light flashes
Monitoring status: always on		

1. Install the alarm in the appropriate position and plug the power into the power outlet.

2. Connect the alarm power supply, the buzzer "beeps", and the circuit enters the preheating state. At this time, the green power light flashes. When the green light is on, it indicates that the alarm enters the normal working state.

3. Manually press the alarm self-test button, three lights flash at the same time, and the buzzer emits a "beep-beep-beep" alarm sound. The test is normal.

4. When the alarm detects gas, the corresponding red alarm light flashes and the buzzer emits a "beep-beep-beep" alarm sound. After the gas is removed, the alarm automatically returns to the monitoring state.

5. The yellow fault light is on for a long time, indicating an internal fault in the alarm.

6. When the life lamp is lit, it indicates that the detectors life has expired and please replace the detector.

7. When the alarm is faulty, turn off the alarm power first, then turn it on again. The alarm will self-check again, but still report the fault. Please cut off the power and contact the after-sales service center.

Police response

When the concentration value of the detected gas in the ambient air reaches or exceeds the alarm set concentration value, the alarm will automatically enter a continuous alarm state. At this time, you should:

1. Close the pipeline valve immediately.
2. Open the Windows immediately to ventilate the room.
3. Extinguish all sources of fire and avoid using anything that can produce sparks (such as opening a lighter, lighting matches, etc.).
4. Avoid switching on and off electrical appliances.
5. Check the cause of gas leakage and notify relevant departments and professionals to deal with it in time. If the alarm is false after inspection, the user should check whether the installation position of the alarm is appropriate.

maintenance overhaul

After long-term use of the alarm, some oil stains will stick to the gas convection window, affecting the sensitivity of gas sensing. It is recommended that users clean the gas convection window around them every three months (or when pollution occurs) with a brush mixed with a small amount of cleaning agent. Do not let the cleaning liquid enter the machine body. After cleaning, retest the product.

matters need attention

1. The product must have the correct wiring and the correct power supply. If the power supply is lost for any reason, the alarm will not work.
2. This product must be maintained regularly according to the requirements of the manual.
3. The alarm cannot have an infinite life, so it should be tested once every six months. If the failure is found, it must be repaired or replaced as soon as possible.
4. This product can reduce the occurrence of accidents, but it cannot ensure that nothing will happen. For your safety, in addition to the correct use of this product, you should also be vigilant and strengthen the awareness of safety prevention in daily life.

after-sale service

1. The warranty period of this product is 12 months under normal use conditions, and the maintenance and service costs generated outside the warranty period shall be borne by the customer.
2. The following conditions do not apply to the warranty during the warranty period:

① Product failure and damage caused by not operating according to the product manual;

② The shell is obviously damaged by human during installation and use;

③ Faults and damages caused by unauthorized disassembly, modification or replacement of other manufacturers accessories or attachments.