TR3106AE

Domestic Combustible Gas Detector

Installation and Operation Manual

Product Safety

To prevent severe injury and loss of life or property, read the instruction carefully before installing the detector to ensure proper and safe operation of the system.

European Union directive

2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points.

For more information please visit the website at www.recyclethis.info

I. General

JT-TR3106AE household combustible gas detector (hereinafter referred to as detector) can monitor indoor gas concentration continuously. When it detects gas concentration is up to the alarm setting, it sends sound-light alarm signal and outputs drive signal to control solenoid valve to cut off gas source so as to prevent serious gas leakage accident effectively. This product is applicable to general industry, household, hotels and apartments.

II. Characteristics

1. Provided with sound-light alarm function.
2. Provided with active output and passive output.
3. Automatic detection of sensor fault and life.
4. After alarming, when gas concentration is lower than alarm setting, the detector restores automatically (manual reset is required after the solenoid valve starts).
5. Provided with networking expansion interface.
6. History data recording and reading function.
7. Wall-mounted type installation is simple and easy for operation.

III. Technical parameters

- Operating voltage: AC220V 50Hz
- Power consumption: Normal monitoring status≤2.0W Alarm status≤2.5W
- Output type:

DC 12V (pulse output, output interface loading ability current ≤140mA), quantity: 1 group

On-off output (contact capacity DC30V/ 1A), quantity: 1 group

- Applicable gas: methane
- Range: 0~20%LEL
- Alarm set value: 10%LEL
- Service life of sensor: 5 years (typical value)
- Power-on preheating time: 20 minutes
- Status indication:

Preheating status: green indicator light is normally on.

Normal monitoring status: green indicator light flashes periodically (Flashing period is 2s).

Fault status: When the sensor has a fault, yellow indicator light is normally on and the buzzer sounds slowly and intermittently.

Service life of the sensor is expired: yellow indicator light flashes and the buzzer sounds slowly and intermittently, prompt to replace the sensor.

Fire alarm status: red indicator light flashes and the buzzer sound quickly and intermittently.

- Networking interface: output normal monitoring (output status information every 20 hours), alarm, alarm restore signal (for parameters, see table 1).

Table 1

Data format: ||||2|1|48|XXY|ZZZ|1|000|000|000|000
Note 1: XX.Y is concentration value, unit is %LEL。 Note 2: ZZZ is status command instruction, each status command: normal status 000; alarm 001; alarm restoring 013; sensor failure 025

- History: 200 pieces of alarm information, 200 pieces of alarm information restored, 100 pieces of failure information, 100 pieces of failure information restored, 50 power failure records, 50 power on records, one sensor failure record. The data can be read through external readout unit.
- Operating environment: temperature -10℃～+55℃, relative humidity ≤95%RH, without condensation
- Color: white
- Outline dimension : 85mm×85mm×35mm (including base)
- Weight: 145g

Standard: GB 15322.2-2019 Combustible Gas Detector Part 2: Household Combustible Gas Detector

IV. Structural features and operating principle

1. Detector outline dimension and installation dimension diagram as shown in Fig.1 and 2.

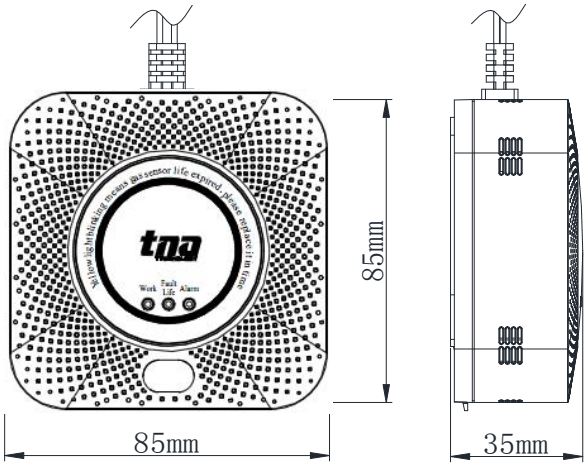

Fig. 1 JT-TR3106AE outline dimension diagram

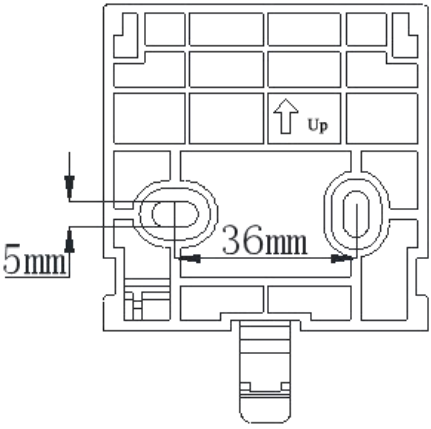

Fig. 2JT-TR3106AE Installation Dimension Diagram

2. Operating principle

This product detects combustible gas concentration in the environment through gas

sensor. When combustible gas concentration in the environment exceeds set alarm concentration, the detector will give sound-light alarm signal and start control output device, and can also transmit alarm information through networking interfaces.

V. Installation and wiring

Warning: before installing gas detector, Please disconnect main power supply and confirm that bases are reliably installed.

The detector shall be installed where detected gas may appear or gather. Refer to the following diagram. Install and operate it according to actual conditions.

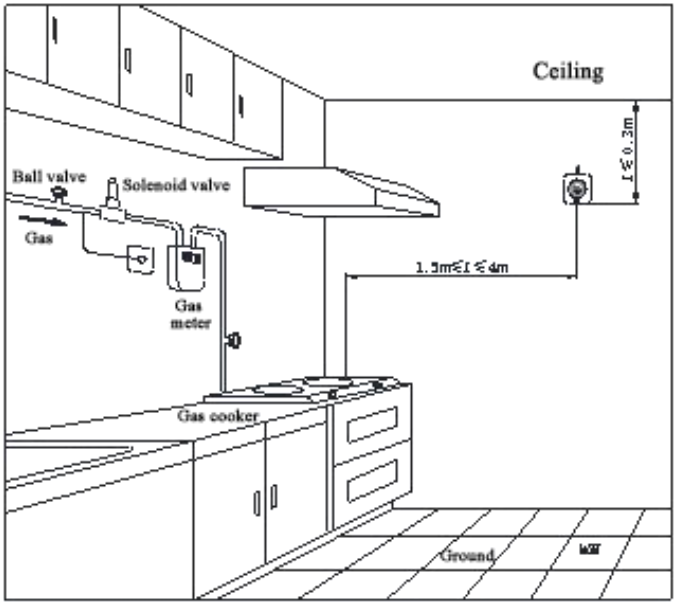

Fig. 3 JT-TR3106AE installation diagram

Installation method: detector installation method as shown in Fig. 4.

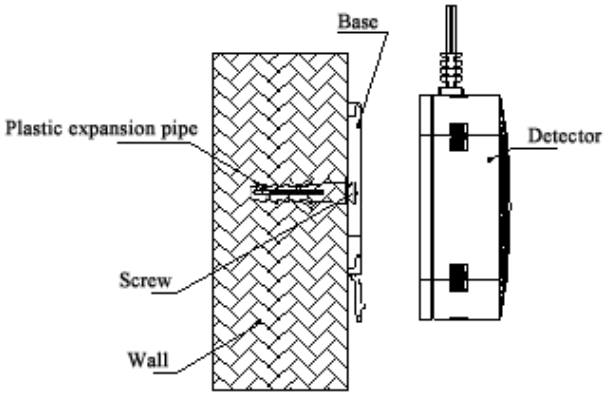

Fig. 4 JT-TR3106AE installation diagram

Wiring type as shown in Fig. 5.

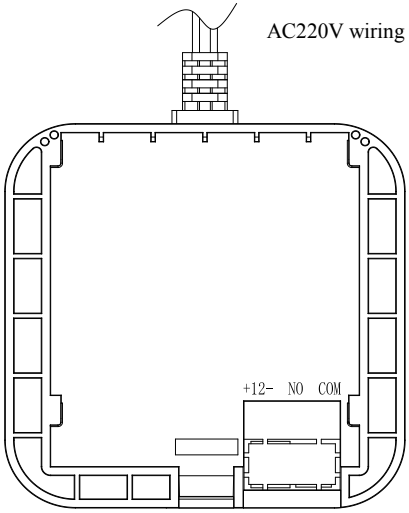

Fig. 5 JT-TR3106AE wiring diagram

Wiring description:

AC220V: power supply input line

+12 - : solenoid valve control interface, positive and negative poles shall conform to those of solenoid valve

COM NO: passive output interface, output capacity 220V/ 1A

VI. Usage and operation

1. Preheating, self-check and mute:

Power on the detector and preheat automatically for 20 minutes.

Normal monitoring status of the detector: short press for “self-check/mute”, red, yellow and green indicator lights flash three times and the buzzer also sounds three times.

Detector alarm status: short press for “self-check/mute”, stop alarming and go into mute status.

2. Common maintenance

- In order to ensure long reliability and accuracy of the detector, alarming performance of the detector shall be calibrated at least once every year;
- Air inlet shall not be covered by dust and oil stain. Air inflow shall go smooth so that the sensor can detect leaked gas;
- Do not let the detector be exposed to gas sample of high concentration, otherwise, reduce the sensor sensitiveness, shorten service life of the sensor, even damage the sensor directly;
- Provide stable power supply to the detector.

VII. Handling and storage

The equipment shall be transported, handled and stored with package. Handle with care to prevent it from being damaged. Storage environment shall be ventilated, dry. Do not store it in the open air.

VIII. Notes

It shall not be installed at the position with high air flow, such as air vent, ventilator and door etc., and above heat source and vapor;

Before installing and wiring, it is required to disconnect power supply to avoid electric shock. When connecting, differentiate positive and negative poles of the solenoid valve;

Within 20 minutes after power on, the detector is in preheating status. If preheating time is not enough, an alarm may be sent, but the alarming value is not correct. If the sensor has one fault, please make troubleshooting or replace with a new one in time;

If the fault cannot be eliminated, please contact our agent or the manufacturer.Do not disassemble the product without permission.