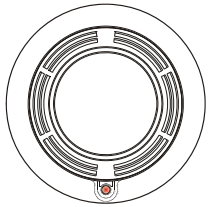
Instruction Manual of JTY-GD-930KE Point-type Photoelectric Smoke Detector

------ Please read this Manual carefully before installing and using the product. -----

I. Product overview

JTY-GD-930KE point-type photoelectric smoke detector (Detector hereunder) is a two-wire switch-type smoke-sensing detector. As a non-polar two-wire connection is adopted in the detector, it is compatible in conventional switch-type alarm control systems and monitoring alarm systems. The detector can also be connected with intelligent bus fire alarm control systems via the interface module. The detector monitors smoke concentration in the workplace in real time. While monitoring, the red indicator blinks and the working current is low. When the work site smoke concentration has exceeded the preset alarm threshold, the alarm detectors and the red indicator remain on, while the loop current is increased. The detector's alarm signal can be locked and is displayed by changes in the loop current. The alarm can only be reset by the instant power disconnection.



The detector is applicable in places where fire might generate volume smoke, i.e. in industrial and civil buildings such as in the restaurant, hotel, teaching building, office building, computer room, archives and stack room.

II. Product features

- ✓ Designed with an upper cover and a lower cover, it can be installed, debugged and maintained conveniently.
- ✓ Within a single-chip microcomputer, it can process the sampling data in real-time, save the latest 144 historical data and realize a curve tracing for the field situation.
- ✓ It has a temperature, humidity and dust accumulation drift compensation function.

III. Technical parameters

1. Executive standard: GB4715-2005
2. Operating voltage: DC24V ±20%
3. Operating current: During monitoring <50uA.
   In alarm mode 1mA~10mA (depends on the loop current limiting resistance).
4. Working indicator: During monitoring, the red indicator blinks once per 6 seconds.
   In sensor failure alarm, the red indicator blinks twice per 6 seconds
   In fire alarm mode, the red indicator remains on.
5. Weight: about 100g
6. External dimensions: diameter: 100mm, height: 55mm (with the base)
7. Wiring method: non-polarity two-bus system
8. Operating environment: Indoor, temperature: - 10℃ ~ +55℃; relative humidity: ≤95% (40℃ ±2℃, without condensation)
9. Installation height: ≤12m
10. Protection area: about 60m^2. For details, see related provisions in GB50116-98 *Code for Design of Automatic Fire Alarm System*
11. Matched host machine: conventional switch-type fire alarm control system, or intelligent bus fire alarm control system via the interface module.

IV. Appearance and dimensions (see Fig.1)

(Unit: mm)

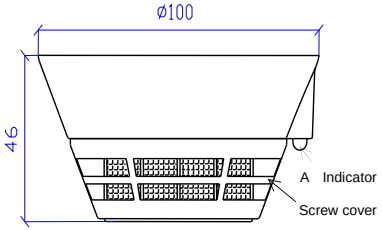


Fig.1

V. Use and engineering application

1. Fig.2 is the schematic diagram of the matched mounting base.

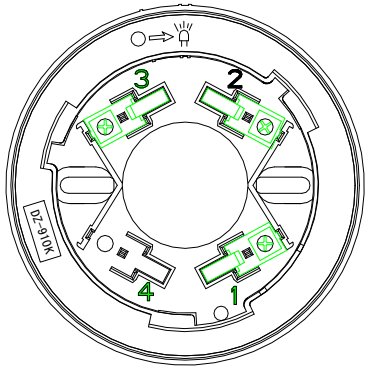


Fig.2

Definitions of terminals(non-polarity two-wire system):

1 – L2 Signal terminal
2 – L1 Signal terminal
3 – L1 Signal terminal
4 – No Pin

Notes：Terminal 2 and 3 are connected directly inside the detector. Connecting the detector with the controller as Fig.3, we can find the failures caused by dismounting the detector.

2. Wiring method:
   a. Fig.3 is a schematic diagram of the connection between multiple detectors with a conventional switch-type (current type)alarm control systems.

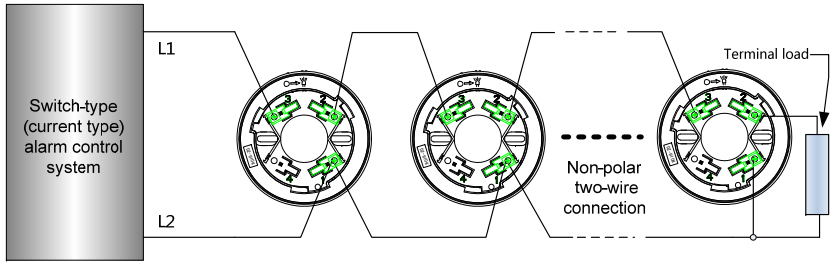


Fig.3

   b. Fig.4 is a schematic diagram of the connection between multiple detectors with intelligent two-bus fire alarm control system via the interface module.

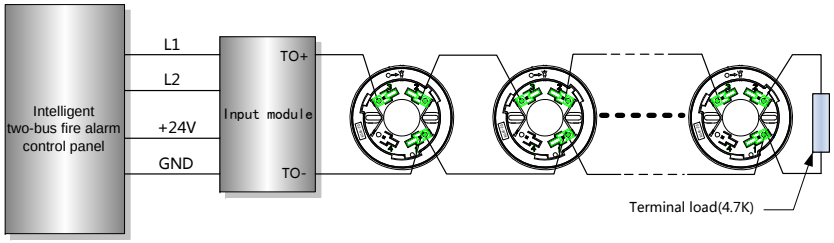


Fig.4

VI. Installation and debugging

Determine the location, mounting distance and numbers for mounting the detectors in the protection area according to relevant provisions and regulations of GB50116-98 *Code for Design of Automatic Fire Alarm System* and GB50166-2007 *Code for Installation and Acceptance of Fire Alarm System*.

A self-contained complete base is necessary during the installation of a detector. As shown in Fig.5, the model, the external dimensions, the mounting hole diameter and the mounting hole spacing of the base are DZ-910K, Φ100mm×22mm (diameter×thickness), Φ4.5mm and 44mm～65mm respectively.

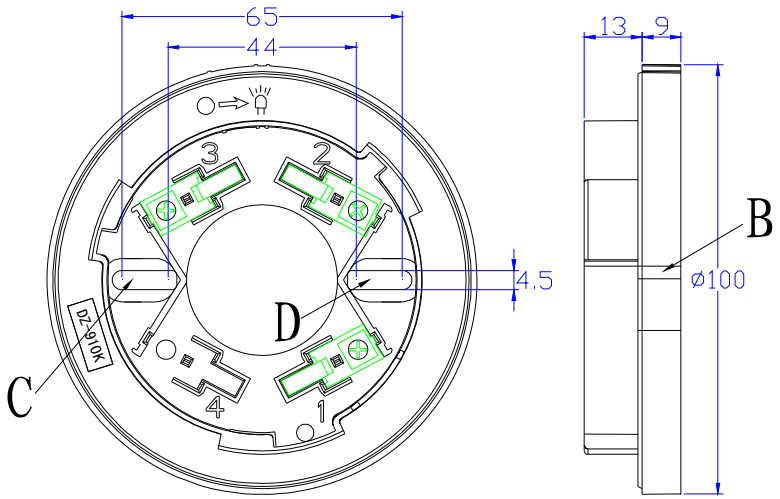


Fig.5

Wiring requirement: It is proper to use RVS twisted pairs with a section area of equal to or larger than 1.0mm^2 for the signal buses L1 and L2.

Details of the installation and commissioning are as following：

1. Use two M4 screws to fix the matched mounting base on the designated position via the mounting holes C and D shown in Fig.5, as instructed in the construction drawing and make sure the matched mounting base has been firmly installed.
2. Make sure the type of the detector matches the type of the host machine of the fire alarm control panel.
3. Disconnect the power supply of the fire alarm control panel and connect the detector correctly according to the construction drawing.
4. Place the indicator at position A of the detector (see Fig.1) and position B of the base (see Fig.5), align them with each other, insert the detector into the base and turn the detector clockwise until it is firmly locked.
5. After all the products are installed and checked, connect the power supply of the fire alarm control panel.
6. When the detector is powered up normally, the red indicator of the detector will blink once about every 3~6 seconds, which suggests that the detector has begun to operate normally.
7. Finally conduct an alarm test for the detector through some special tools or direct smoke blowing. After the detector gives a fire alarm, the indicator will remain lit and the fire alarm control panel will simultaneously show corresponding alarm prompt information. After the alarm test, reset the fire alarm control panel and restore to the monitoring status.

VII. Precautions ⚠

1. The connected detectors shall be 50 units max when the JTY-GD-930KE is connected with the intelligent fire alarm control systems via the interface module.
2. Never dismount the protective cover delivered with the detector too early after the field installation and before the use of the detector, or else the detector may be contaminated.
3. It is not permitted to use open flames (such as lighters) to firing thermistor during alarm tests, so as to avoid damage to the detector. It is recommended to use a hot air gun and other heating equipment in a simulation alarm test.
4. The protection area and quantity of the detectors should comply with relevant provisions in GB50116-98 *Code for Design of Automatic Fire Alarm System* and GB50166-2007 *Code for Installation and Acceptance of Fire Alarm System*.

VIII. Maintenance

⚠**Warning: Before conducting maintenance for a detector, inform the related management department that the monitoring will be stopped temporarily when the system maintenance. Meanwhile, disable the logic control function of the area or system to be maintained to avoid unnecessary alarm linkage. After the test, inform the management department to restore the normal functions of the system.**

1. According to the requirements of GB50166-2007 Code for Installation and Acceptance of Fire Alarm Systems, each quarter, some special testing instruments should be used to test the detector's operation and confirm the indication state of its indicators by batch and stage; for a detector that has been installed and used, It is recommended to have it maintained once every two years.
2. Operating environment has a great influence on the performance of the detector. If the detector is installed and used in a place where its normal use is easily affected by dust, high wind speed and other factors, its maintenance period should be shortened.
3. If a detector fails due to a material defect or a manufacturing process defect under normal conditions of use in one year following the date of its delivery, we shall repair or replace it for free. However, the faults of the detector due to artificial damage, improper use, or authorized adjustment, reconstruction or disassembly are not covered in the guarantee and we shall assume no responsibilities for any the consequence thereby caused.
4. We may provide paid repair service for products with any faults beyond the guarantee range. If you have such products that need repair, please contact us. When sending such a product to us for repair, you are expected to provide some important information about the product, such as the phenomenon and possible cause of the product fault, so that we can find out the cause of the fault in the shortest time and so the information may be used as a reference in our future product development and improvement.

IX. Fault analysis and troubleshooting

Failures	Causes	Methods	Remarks
Alarm after powered up	There is a great deal of smoke dust or steam in the room	Power up again after the smoke, dust or the steam is eliminated	
	Internal circuit is broken	Return to the manufacturer for repairs	
	The labyrinth is seriously contaminated	Clean the labyrinth of the detector	
Cannot work after powered up	Internal circuit is broken	Return to the manufacturer for repairs	
	Bad contact to the base	Inspect and reinstall the base	
The Indicator blinks twice per 6 seconds after powered up	The sensor has failed.	Return to the manufacturer for repairs	
Cannot alarm during test	Internal circuit is broken	Return to the manufacturer for repairs	

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