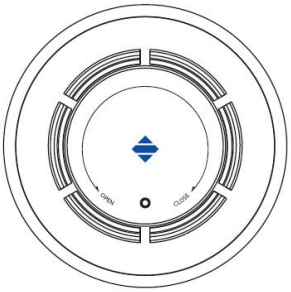
Please read this Manual carefully before installing and using the product .

JTY-GD-A30KE Point-type Photoelectric Smoke Detector

1 Product overview

1.1 JTY-GD-A30KE point-type photoelectric smoke detector (detector hereunder) is a two-wire switching quantity (current type) smoke detector. Detector built-in microprocessor, non-polar two-wire connection, can be used in the compatible traditional switch quantity (current type) alarm control system and monitoring alarm system, and can also be connected to the intelligent fire alarm control system through the input module. The detector collects on-site smoke concentration data in real-time, and the detector alarms when it reaches the threshold value (the working current of the detector increases by orders of magnitude).



1.2 The detector is suitable for industrial and civil buildings such as restaurants, hotels, teaching buildings, office buildings, computer rooms, communication rooms, libraries, archives and other industrial and civil buildings where a large amount of smoke is generated when a fire occurs, and there is no smoke under normal circumstances. However, it does not apply to places where there is a large amount of dust and water mist retention, places where steam and oil mist may be produced, and places where there is smoke retention under normal circumstances.

2 Product features

2.1 Designed with an upper cover and a lower cover and installed on an independent base, it can be installed, debugged and maintained conveniently.

2.2 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.

2.3 It has a temperature, humidity and dust accumulation drift compensation function and a sensor fault detection function (fault reporting to fire alarm control panel).

3 Technical parameters

3.1

Items	Parameters
Executive standard	GB 4715-2005
Weight	about 75g (with base)
Product dimensions	diameter: 105mm, height:43mm (With base)
Installation height	≤12m
Wiring method	non-polarity two-wire bus
Operating voltage	Loop 24V
Operating current	inspection status: ＜50uA alarm status:1mA～20mA (It is related to the current limiting resistance of the loop)
Temperature	-10°C～+50°C RH≤95% (40 °C±2°C, without condensation)
Working indicator	The red indicator of monitoring status blinks once every 6 seconds, and the red indicator of sensor failure status blinks every 6 seconds 2 times, The alarm status red light is steady on
Protection area	specific reference to the national standard GB 50116-2013 "Code for Design of automatic fire alarm system" relevant provisions

Matched host machine	used with the input module and the fire alarm control panel/fire linkage control panel

4 Product appearance and size (see Fig.1)

4.1

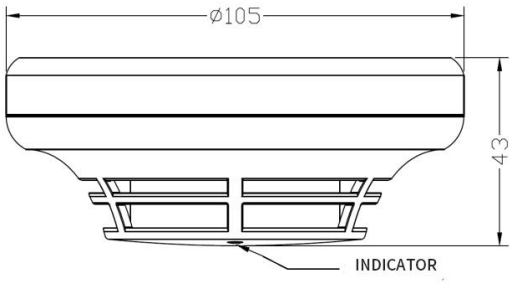


Fig.1（Unit: mm）

5 Use and engineering application

5.1 Schematic diagram of detector base (DZ-A16K), as shown in Fig.2:

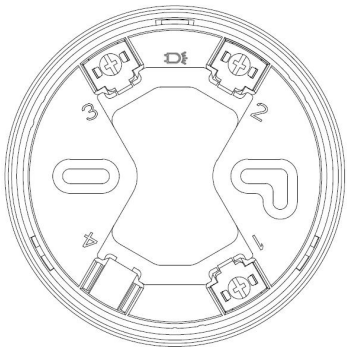


Fig.2

Terminal definition (Non-polarity two-bus system)

1 -- Signal Terminal L2(Common Port)

2 -- Signal Terminal L1(to next cascade)

3 -- Signal Terminal L1(to upper cascade)

4 -- Null

Note: Pins 2 and 3 are shorted through the inside of the detector and cooperate with the controller to detect whether the detector is online (see Fig.3).

5.2 Wiring method:

a. The detector access to the Conventional Fire Alarm Control Panel wiring diagram, as shown in Fig.3:

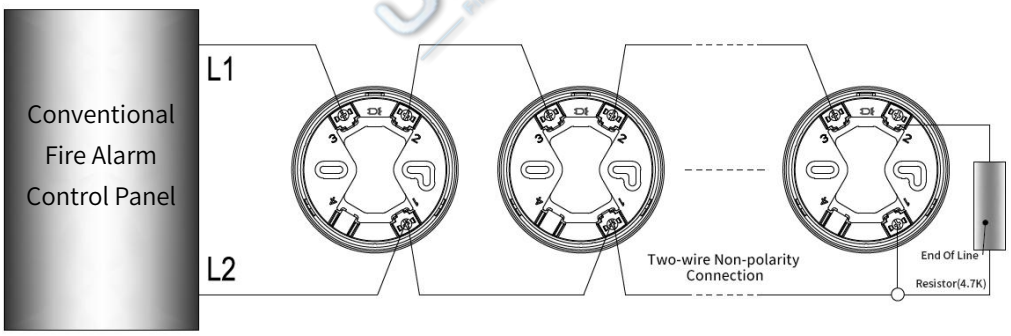


Fig.3

b. The detector connects to the Addressable Fire Alarm Control Panel through the input module, as shown in Fig.4:

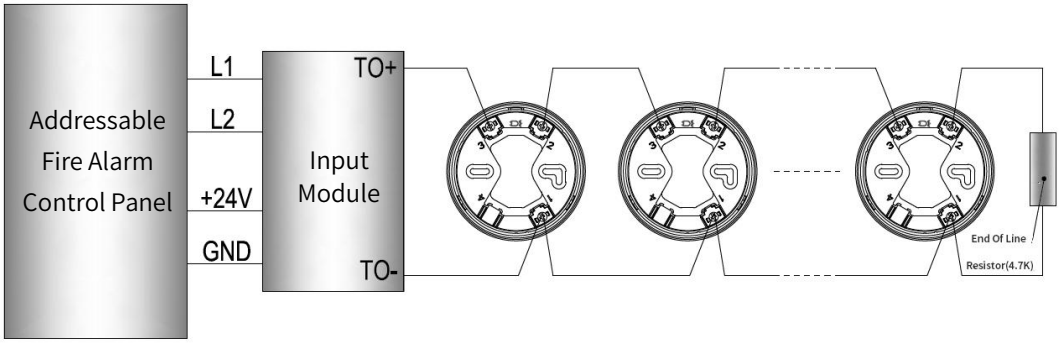


Fig.4

6 Installation and debugging

6.1 According to the national standard GB 50116-2013 "Code for Design of Automatic Fire Alarm System" and the national standard GB 50166-2019 "Standard for Construction and Acceptance of Automatic Fire Alarm System" in the relevant provisions and requirements to determine the installation position, installation spacing and number of detectors in the protected area.

The installation of the detector requires the use of a supporting base. The supporting base is shown in Fig.5. The external dimension is 105mm × 13mm(diameter × thickness), the fixed hole diameter is 4.5mm, and the spacing of fixed holes is 45mm ~ 65mm

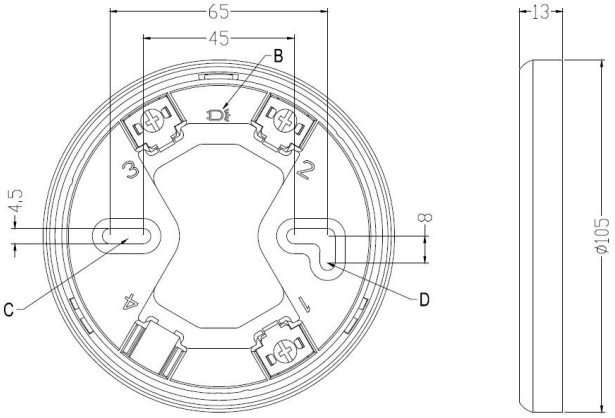


Fig.5

Wiring requirements: It is proper to use RVS twisted pairs with a section area of equal to or larger than 1.0mm² for the signal buses L1 and L2.

6.2 The specific methods of installation and debugging are as follows:

a. Secure the base to the specified position using two M4 screws through holes C and D shown in Fig.5 according to the construction drawings. Ensure that the base is securely installed;

b. Verify that the detector type matches the type of the host machine of the fire alarm control panel;

c. Disconnect the power supply of the control panel and connect the detector correctly according to the construction drawings;

d. Align the indicator light at detector A (as shown in Fig.1) with the pattern at base B (as shown in Fig.5), insert the detector into the base, and turn the detector clockwise until it is locked in place;

e. After all products are installed and confirmed, switch on the controller power supply;

f. After the detector is powered on, the red indicator blinks once, indicating that the detector has started monitoring work.

g. Finally, use special tools or direct smoke blowing to test the detector alarm. After the detector alarm, the indicator light will be steady on, and the controller will give the corresponding alarm information. After the test, the controller is restored and the device reset detector is returned to the monitoring state.

7 Precautions

7.1 When the detector is tested separately, a current limiting resistor of 3K should be connected in series in the test loop. It is not allowed to connect DC 24V directly to the detector, otherwise, the alarm test will cause the detector to be damaged.

7.2 When the detector is connected to the intelligent automatic fire alarm control system through the input module, the number of cascades should be less than 25.

7.3 The protection area and quantity of the detectors should comply with relevant provisions and regulations of the local codes.

7.4 The detector installation shall comply with the relevant provisions of GB 50116-2013 "Code for Design of Automatic Fire Alarm System" and the national standard GB 50166-2019 "Standard for Construction and Acceptance of Automatic Fire Alarm System".

8 Maintenance

8.1 ⚠**Warning: Before the detector is maintained, the relevant management department should be notified that the system will be maintained and the monitoring will be temporarily stopped. At the same time, the logical control function of the area or system to be maintained should be cut off, so as not to cause unnecessary alarm linkage. After the test is over, notify the management department to restore the system to normal.**

8.2 For a detector, at least semi-annual tests should be done according to related provisions and regulations of the local codes; for a detector that has been installed and used, it is recommended to have it cleaned and maintained once every two years.

8.3 The working environment has a great impact on the performance of the detector, and the installation and use of the detector in the environment such as dust or high wind speed should shorten its maintenance cycle.

8.4 Within the warranty period agreed on in the contract, the detector used normally according to the prescribed requirements should fail due to defects in materials or manufacturing processes, we will be responsible for free repair or replacement. If the detector fails due to artificial damage, improper use or self-adjustment, modification or disassembly, it does not belong to the scope of the warranty, and the company will not be responsible for all consequences caused by it.

8.5 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.

9 Fault analysis and troubleshooting

9.1

Fault	Possible causes	Troubleshooting method	Remarks
The detector reports a fire alarm after login.	There is a great deal of smoke dust or steam in the room.	Log in again after the smoke, dust or the steam is eliminated.	
	The internal circuit has failed.	Send the detector back to the factory for repair.	
	The labyrinth is seriously contaminated.	Clean the labyrinth of the detector.	
It does not work after being powered on and the indicator light is off	The indicator light is broken or the internal circuit is damaged	Send the detector back to the factory for repair.	
	Poor line contact	Check rewiring	
After power-on, the indicator blinks twice every six seconds	Sensor failure	Send the detector back to the factory for repair.	
No fire alarm for the test	The internal circuit has failed.	Send the detector back to the factory for repair.	

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