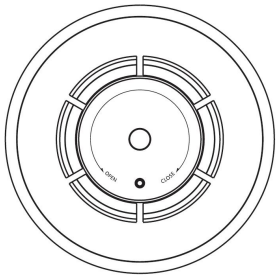
Please read this Manual carefully before installing and using the product .

JTW-ZD-A20E Point-type Heat Fire Detector

1 Product overview



1.1 JTW-ZD-A20E point-type heat fire detector (A2) (after this referred to as detector) is a compatible fire alarm control system connected by a two-wire bus, which is a two-bus working mode. The detector has a built-in microprocessor that supports electrical coding. The detector collects on-site temperature information in real-time, transmits the data to the fire alarm control system, and can also receive and execute the control command. In the inspection state, the detector indicator lights up. When a fire breaks out in the monitored area and the temperature rises to the alarm threshold, the control system confirms the fire alarm according to the received detector information and lights the detector indicator to indicate that there is a fire alarm.

1.2 The detector is suitable for places where a lot of heat is generated when a fire occurs, such as kitchens, boiler rooms, generator rooms, drying workshops, smoking rooms and other industrial and civil buildings. It is not applicable to places where a large amount of smoke and a small amount of heat are generated when a fire occurs.

2 Product features

2.1

a. It can realize electronic coding and rewrite the address via coder in situ.

b. Within a single-chip microcomputer, it can realize real-time data acquisition and processing, realize a curve tracing for the field situation.

c. It has a temperature compensation function and a sensor fault detection function (fault reporting to fire alarm control panel).

d. Non-polar two-bus connection, easy installation and maintenance, connection lines do not need to distinguish colors.

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

3 Technical parameters

3.1

Items	Parameters
Executive standard	GB 4716-2005
Product category	A2 (operating temperature: 54°C ~ 70°C)
Working voltage	DC24V (pulse modulation)
Working current	monitoring state < 300uA, alarm state < 1.5mA
Weight	about 60 g
Dimensions	Diameter 105mm, height 43mm (with base)
Installation heigh	≤8m
Wiring method	non-polar two-bus system (L1, L2)
Use environment	indoor, temperature -10°C ~ +50°C, relative humidity ≤95%(40°C±2°C no condensation)
Coding mode	The encoder can be coded in the field, and the address range is 1 ~ 324
Working indicator	the red indicator of the monitoring state blinks, and the red indicator of the alarm state is steady on
Protection area	specific reference to the national standard GB 50116-2013 "Code for Design of automatic fire

	alarm system" relevant provisions
Connecting host	fire alarm control panel, fire linkage control panel

4 Appearance and dimensions(see Figure 1)

4.1

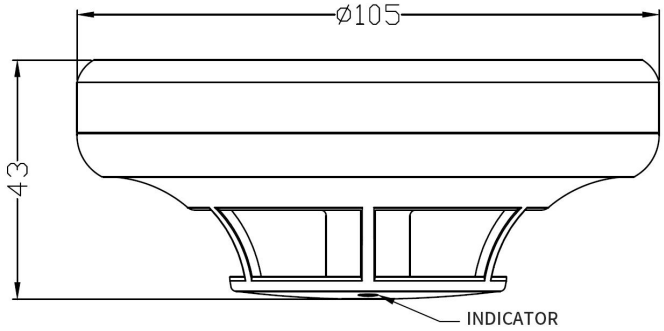


Figure.1（Unit: mm）

5 Use and engineering application

5.1 The terminal diagram of detector base (DZ-A16) is shown in Figure 2:

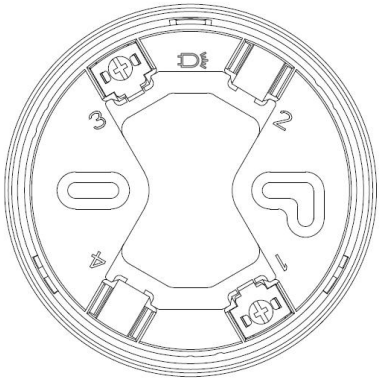


Figure 2

Terminal definition (non-polar two-wire system) :

1 -- Signal terminal (L1)

2 -- Null

3 -- Signal terminal(L2)

4 -- Null

5.2 Wiring mode: The detector is connected to the compatible fire alarm control panel via the two-wire bus, and the non-polar connection is adopted. The L1 and L2 of the two-wire bus are connected to the terminal 1 and 3 of the mounting base. The wiring diagram of multiple detectors and control panel is shown in Figure 3.

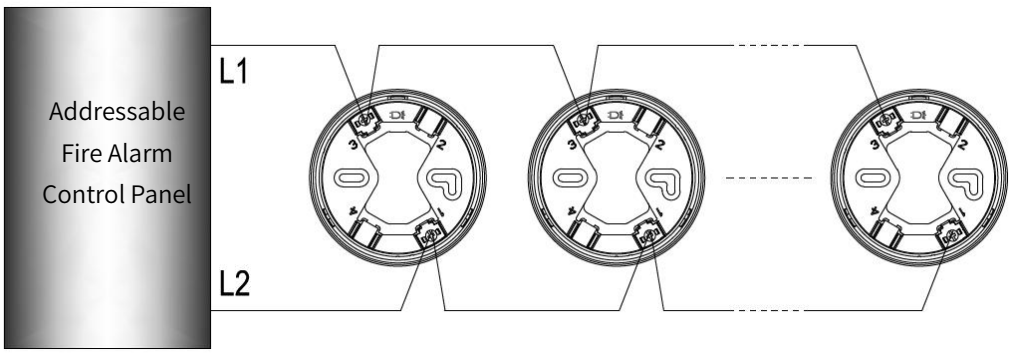


Figure 3

5.3 Coding address: As shown in Figure 4, connect the detector to the encoder, L1 and L2 use a non-polar connection, set the encoder as the coding function, prepare the correct address code, and press the "Run" key to complete the address coding Settings.

Note: *Please refer to the encoder manual for detailed operation.*

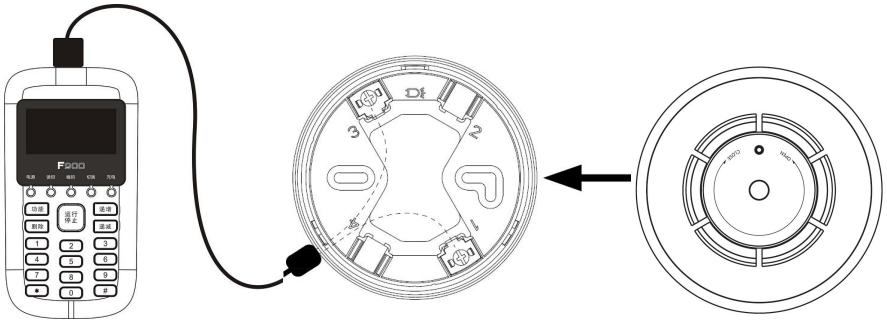


Figure 4

6 Installation and debugging

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

A supporting base is required to install the detector, as shown in Figure 5. The external dimension is 105mm × 13mm(diameter × thickness), the diameter of the fixed holes is 4.5mm, and the spacing of the fixed holes is 45mm ~ 65mm.

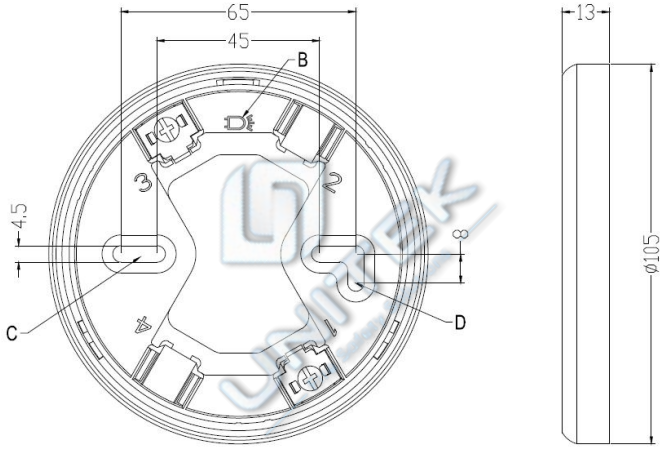


Figure 5

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.

The installation and commissioning methods are as follows:

a. Verify that the detector type matches the controller host type.

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

c. According to the detector address number marked on the construction drawing, use the encoder to code the detector;

d. Disconnect the power supply of the controller and connect the detector correctly according to the construction drawings;

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

f. After all products are installed and confirmed, power on the controller and perform automatic login operation;

g. After the automatic login is normal, the red indicator of the detector blinks once every 12 seconds, indicating that the detector has started to work typically;

h. Finally, use special tools or a hot air blower to blow the detector alarm test. After the detector alarm, the indicator

light will steady, and the controller will give the corresponding alarm information. After the test, restore the controller to return the detector to the monitoring state.

7 Maintenance Matters Needing Attention ⚠

7.1

a. In the same bus loop, the detector cannot use the same address with other devices to avoid address conflict.

b. Do not remove the protective cover delivered with the detector before it is put into use after the onsite installation. Otherwise, the detector may be contaminated.

c. It is not allowed to use an open flame (such as a lighter, etc.) to warm the temperature sensing device during the alarm test not to damage the detector. Using heating equipment such as hot air ducts for analog alarm testing is recommended.

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

8 Care and 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 that will be maintained should be cut off to avoid unnecessary alarm linkage. After the test, notify the management department to restore the system to normal.**

a. The detector should use a particular testing instrument every quarter to test the operation and confirm the lamp display. You are advised to maintain the installed detectors every two years.

b. Within the warranty period agreed on in the contract, the detector used regularly 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 warranty, and the company will not be responsible for all consequences caused by it.

c. The company is responsible for the paid maintenance of products not covered by the Warranty. If you need to repair, please get in touch with us. At the same time, we would like to get some vital information about the product you want to fix, such as the product failure situation and possible reasons, so that we can find the problem in the shortest time, but also to provide a reference for our future product development and improvement.

9 Fault analysis and troubleshooting

9.1

Fault phenomenon	Possible cause analysis	Elimination method	Remarks
The detector can’ t be coded.	The internal circuit is damaged.	Send the detector back to the factory for repair.	
The detector can’ t be logged into normally.	The detector has no address or has a coincident code.	Recode the detector.	
The detector reports a fault after login.	The contact with the base is poor	Inspect and reinstall the base.	
	The internal circuit is damaged.	Send the detector back to the factory for repair.	
The detector reports a fire alarm after login.	The internal circuit has failed.	Send the detector back to the factory for repair.	

The detector can’ t send out fire alarm signal during an alarm test.	The internal circuit is damaged.	Send the detector back to the factory for repair.	

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