

【Before installation and application of the product, please read the Instruction Manual for Installation and Application】

Instruction Manual for Installation and Application of JTW-ZOM-TC5162 Addressable Rate of Rise and Fixed Temperature Heat Detector

(Ver 2.0)

 **YINGKOU TIANCHENG FIRE PROTECTION EQUIPMENT CO., LTD.**

I General

JTW-ZOM-TC5162 Addressable Rate of Rise and Fixed Temperature Heat Detector (Detector) uses advanced SCM technology. According to a variety of advanced fire criterion, detector can accurately and timely detect the changes of ambient temperature and determine fire and then alarm.

With novel structure and attractive appearance, convenient and reliable installation, the detector is suitable in places where may have smokeless fire, lots of dust or smoke and steam retained under normal circumstances, such as indoor garages, kitchens, boiler rooms, generator rooms, drying rooms, power generation, dehydrating workshop, etc.

II Features

1. Non-polarized signal 2-wire.
2. The detector can be addressed in field by using *Hand-Held Encoder*, easy and reliable for commissioning.
3. Thermal sensitive element improves the response speed of temperature variation.

III Technical Specifications

1. Class: A2R
2. Operating voltage
Signal bus voltage: loop 24V (18.5V~26V)
3. Operating current
Standby current: $\leq 0.3\text{mA}$
Alarm current: $\leq 0.8\text{mA}$
4. Indicator
Red. Flashes when polling, and illuminates in alarming.
5. Encoding method
Electronically coding (code range: one address within 1~255).
6. Wiring
Non-polarized signal 2-wire
7. Operating environment
Temperature: $-10^{\circ}\text{C}\sim+50^{\circ}\text{C}$
Relative Humidity: $\leq 95\%$, non-condensing

8. Dimension

Diameter: 100mm Height: 50mm (with base)

4. Ingress protection rating: IP33 (Not tested to EN54 standard)

Material and color of enclosure: ABS; milky white

5. Weight: about 110g

6. Mounting hole distance: 60mm

7. Standard: EN 54-5:2017+A1:2018

IV Structure and Operation Principle

1. Appearance of the detector is shown in Fig. 1.

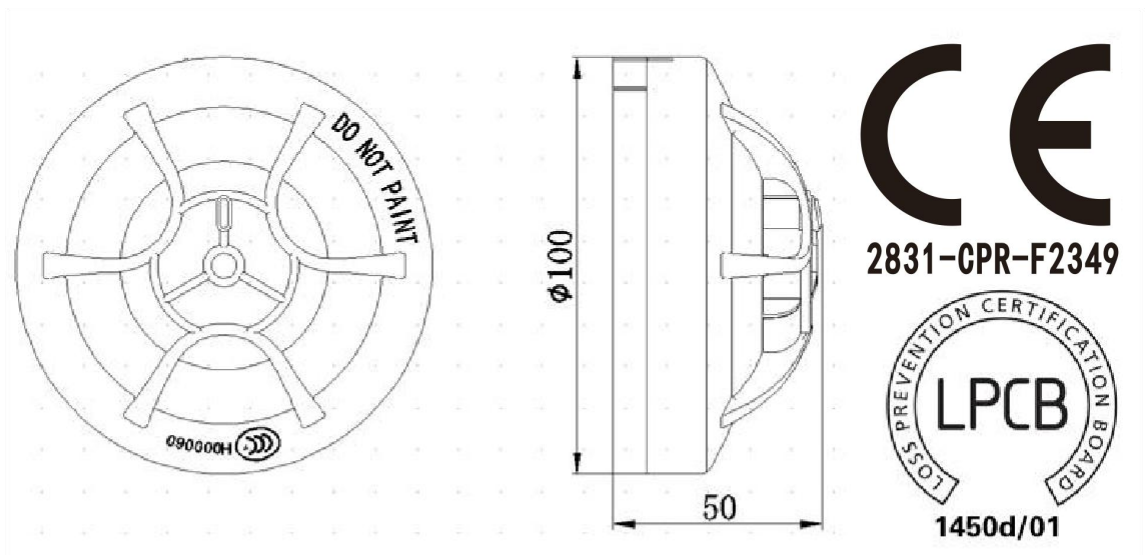


Fig. 1

2. Operation principle

The detector uses thermistor as its sensor and transmits the signal to a single chip which, after voltage transfer, processes the signal using intelligent arithmetic and sends any fire alarm to the FACP. The LED indicators will then be lit by the control panel.

V Mounting and Wiring

1. Mounting

Installation of the detector is shown in Fig. 2.

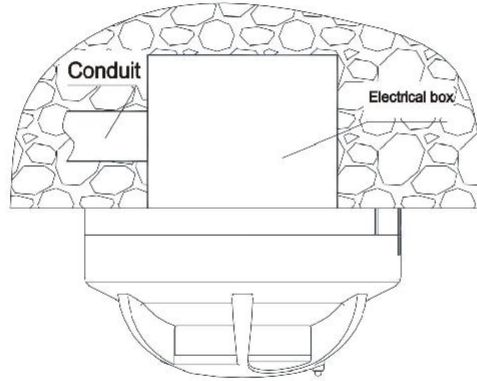


Fig. 2

3. Base of the detector is shown in Fig. 3. Fix the base with two tapping screws, and then connect loop to terminals (polarity-insensitive). After the base is fixed firmly, rotate the bottom of detector and base clockwise, and then the detector will be fitted to the base.

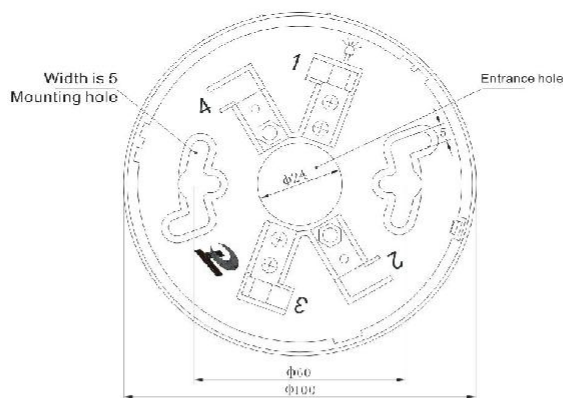


Fig. 3

3 Recommended Wiring

1.0mm² or above fire cable, subject to local codes.

4 Warning

Before testing, please ensure that the detector has been installed correctly and powered up.

VI Testing

1. The detector must be tested after installation and periodical maintenance.

2. Testing content:

- 1).Registration: After confirming the installation and wiring is correct, register devices to the fire alarm control panel, and check whether the numbers of installed detectors and registered detectors are consistent.
- 2).Fire simulation test: After registration, choose one detector arbitrarily, and fit it to meet fire conditions to check whether the detector generates fire normally.
- 3).After testing, reset the detector. Notify the proper authorities that the system returns to normal state.
- 4).Clean the failure detector in the test according to Maintenance, and test it again. If it is still fail to pass, please return it to repair.

3. Do not connect to the power supply before all detectors been installed.

VII Usage and Operation

1 Electronically coding for the detector makes it easy and convenient. TCBM5023 hand-held encoder made by TC is used for field coding. When coding, connect the encoder with detector loop terminal (non-polarity) and write or read the address code.

2 Coding step: press “2” in the main menu of the encoder to enter into “(2) mode setup” and choose “(1) TC5000” in the sub menu. Press “(5), (6), or (7)” to choose ascending number coding, normal coding or descending number coding. Easy application (default is TC5000, normal coding) and chosen complete, press “erase/roll page” to enter into coding interface and press exit to return to main page. Press “1” for “(1) write address” and connect the encoder with the detector loop terminal L1 and L2. At standby status, input detector address (1 to 255) and press “write address”. “OK” means write-in success and “fail” means not.

VIII Fault and maintenance

4. Wrong address

Check whether *Hand-Held Encoder* works normally, and whether battery discharge. Check whether connection is correct, or there is a fault in circuit.

5. Cannot register

Check whether loop connection is correct, and loop voltage is 18-24V in normal. Plug firmly or there is a fault in circuit.

6. Report fault

Read code with *Hand-Held Encider*, if code is correct in a state of polarity intermodulation, the detector works normally. And then check connection or there is a fault in circuit.

4. False alarm

Check whether there is short circuit in the thermistor.

IX Maintenance

1. The detector should be installed just before commission and kept well before installation, taken corresponding measures for dust-proof, damp-proof and corrosion-proof.
2. The dust-proof cover should not be removed until the project plunged into usage.
3. Clean the detectors regularly, at least once a year to ensure normal operation of the system.
4. Before cleaning, notify the proper authorities that the system is under maintenance and will temporarily be out of service. Disable the automatic controls relating to the zone or system under maintenance to avoid unwanted actions.
5. The detector should be tested after re-installed to ensure normal operation.
6. Fire simulation test should be done to the detector at least every 6 months.

X Cautions

1. There should be no barrier around the detector within 0.5m.
2. The horizontal distance between detector and the air conditioner's outlet should be at least 1.5 meters.
3. The horizontal distance between detector and wall, and edge beam should be at least 0.5 meters.
4. The detector shall be horizontally installed. If it has to be installed on an inclined plane, the inclination angle shall not be over 45°.
5. The base should be fixed firmly, and reliable wiring.
6. During maintenance, personals should be careful to avoid damage to the detector.
7. Used in internal corridor's ceiling and the width of internal corridor is less than 3m, heat detector should be arranged centered, and the mounting distance should not be more than 10m.
8. Heat detector should not be used in places where may produce smoldering fire.

XI Packaging Document and Maintenance

- 1 Packaging document: packaging list: one

WEEE Information



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.

X Limited Warranty

1. Tiancheng warrants that the product will be free of charge for repairing or replacing from defects in design, materials and workmanship during the warranty period. This warranty shall not apply to any product that is found to have been improperly installed or used in any way not in accordance with the instructions supplied with the product. Anybody, including the agents, distributors or employees, is not in the position to amend the contents of this warranty. Please contact your local distributor for products not covered by this warranty.

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