TX3180E

Standalone Heat 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

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1 General

TX3180E standalone heat fire detector (AR) (hereinafter referred as to alarm) not only monitors fixed temperature alarm, but also monitors temperature rise rate. The alarm is powered by two 1.5V batteries.High-performance and high-integrated microprocessor and intelligent software algorithm are built in to analyze and estimate data collected by temperature sensor, and monitor environment temperature value and rate.This product can match with household fire alarm controller of our company, which is applicable to hotels, houses, apartments or places with much dust.

2 Characteristics

1. Powered by external batteries.
2. 360° status indication.
3. Low monitoring current and alarm current.
4. It has self-check function, with sound-light indication.
5. It has battery under-voltage prompt function.
6. It has the function of constant temperature and differential temperature detection.
7. LoRa wireless communication technology is used, without wiring.

3 Technical Parameters

Operating voltage: DC3.0V (two batteries, 1.5V FR14505/AA)
Operating current:
Monitoring current: <40uA
Alarm current: <40mA
Alarm type: AR
Alarm sound pressure level: the sound changes from low to high and is 45dB～75dB (A-weighted) at 3m right ahead.
Maximum communication distance: 1000m in open air
Alarm status indication:
Normal monitoring status: green indicator light flashes once every 50s and the buzzer does not sound.
Fault status: yellow indicator light flashes once every 50s and the buzzer sends a short alarm.
Alarm status: red indicator light is normally on and the buzzer sends an alarm.
Operating environment: temperature -10 ℃ ～ +50 ℃ , relative humidity ⩽ 95%RH, without condensation
Color: pearl white
Installation type: screwed into the base
Weight: about 125g (with base and battery)
Outline dimension: diameter :100.3mm, height :51mm (including base)
Standard: GB 30122-2013 independent type heat fire detector
GA 1151-2014 General requirements for wireless communication function of fire alarm system

4 Structural features and operating principle

4.1 Alarm outline dimension diagram as shown in Fig. 1 (unit: mm)

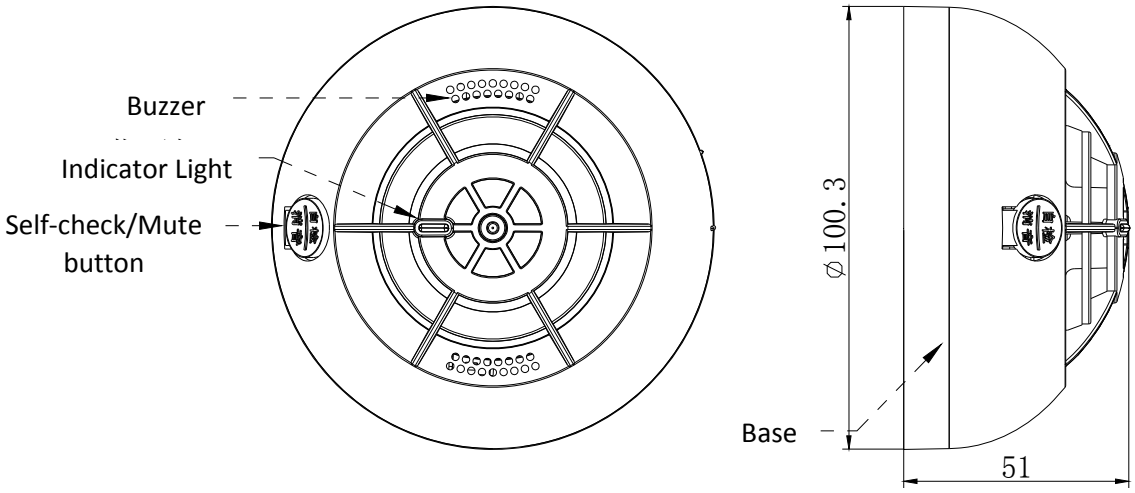

Fig 1 Product appearance diagram

4.2 Alarm base dimension diagram as shown in Fig.2 (unit: mm)

Installation position and the number shall be determined according to GB 50116 Code for design of automatic fire alarm system. The alarm shall be installed in matched base.

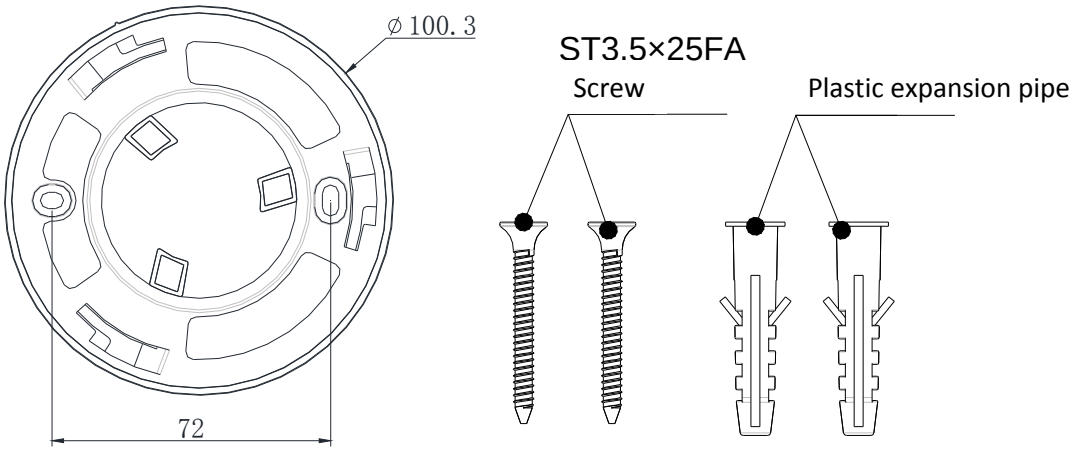

Fig. 2 Base and fixed accessories

4.3 Operating principle

This alarm detects fire according to the principle that thermosensitive components change with the temperature. Thermistor is that of negative temperature coefficient. When the temperature rises, thermistor value reduces and sampling signal value of the processor becomes low. The processor treats the signals by intelligent algorithm. If fire conditions are met, sound-light alarm signals will be sent.

5 Installation instructions

1. Appropriate installation position: installation position of the alarm refers to Fig. 3. TX6934 handheld equipment is used to detect network signal. The alarm is installed where network signal is best.

Fig. 3 Alarm installation position diagram

2. Installation position avoided

2.1 Installation position avoided: places where the temperature is lower than minus 10℃ and higher than 50℃ or relative temperature is >95%RH.

2.2 Near the places with quick temperature change, such as water heater, heating and cooling air conditioner, and furnace, the alarm may send a false signal.

3. Alarm installation

3.1 Alarm installation diagram is as shown in Fig. 4. According to Fig.4, the alarm is fastened on the roof by plastic expansion pipe and 3.5×25FA screw. Installation hole spacing is as shown in Fig. 2.

3.2 Push two batteries in the alarm battery case. Power on the alarm, and the alarm is in normal monitoring status.

3.3 Self-check test: press self-check button, and red, green and yellow indicator lights flash alternately. Now the alarm works normally. If not, check if the battery is installed correctly or the voltage is too low.

3.4 After testing is qualified, rotate the alarm into the base and then fasten it clockwise.

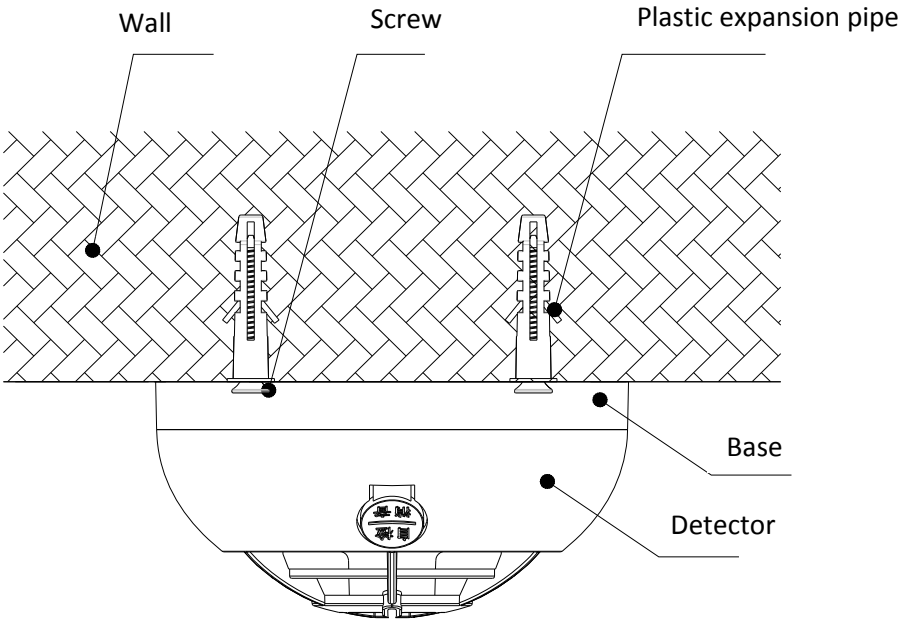

Fig. 4 Alarm installation diagram

6 Usage and Operation

6.1 Registering and networking

LoRa configuration software is used to add alarm ID for registering and networking. Power on the alarm, and then the alarm clicks twice. After yellow indicator light is on for 8s, it means networking is successful. In LoRa configuration software registering column, successful networking of the alarm can be indicated.

6.2 Delete equipment

On LoRa configuration software, delete equipment start checkbox, click “Issue” and delete the alarm from wireless transmitting module.

Self-check test: after the battery is placed in the alarm, the alarm can work normally. Press self-check button and release it in 1 second, the buzzer sends an alarm, with red, green and yellow indicator lights flashing alternately. After the alarm sound stops, the alarm returns to normal working status.

Mute: when fire conditions are met, red indicator light of the alarm is normally on and the buzzer sends an alarm. Press “self-check/mute” key to eliminate the sound.

7 Product notes

1. Make alarm function test on the alarm periodically.
2. In the environment with high temperature, high humidity, and high electromagnetic interference, service life of the battery will be shortened. When the alarm battery is low, yellow indicator light flashes once every 50s, with short “click”. Please replace with a new battery and throw the old battery into the dustbin for recycling batteries.
3. After the alarm is put into use formally, function test shall be made periodically.
4. When the alarm is maintained, logic control function in maintenance area shall be shut off to avoid unnecessary alarm linkage.

8 Notes for battery safety

1. The battery used for this product is not rechargeable. It is forbidden to recharge or short the battery;
2. It is forbidden to over-discharge, squeeze or burn the battery;
3. It is forbidden to use seriously damaged or deformed battery;
4. It is forbidden to use or heat the battery beyond allowed temperature range;
5. The user is forbidden to remove the battery voluntarily;
6. It is forbidden to weld the battery surface directly

9 Common fault and troubleshooting

Problem	Troubleshooting
Short press for “self-check/mute” button does not respond	Check if the battery is installed correctly
Yellow indicator light flashes once every 50S, with one “click” alarm	Replace with a new battery
When the user cooks or takes a shower, a false alarm may occur.	Install the alarm away from kitchen or bathroom.