

We do all for safety, for a safe world!

Please read the instruction manual before using and installing:



**Jiangxi Aware Fire Technology Co., Ltd**

**THERMAL ACTIVATION DEVICE**  
**INSTALLATION MANUAL**



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# 1 BRIEF INTRODUCTION

1.1 Thermal activation device, also named “thermal activation generator” or “thermal generator”, it is a new type of temperature sensing and starting element.

1.2 It senses the changes of ambient temperature, and generates pulse current through the principle of electromagnetic induction, to activate the fire suppression system, at the same time, it transmits feedback signals to the fire control panel; it can work standalone and work with fire suppression device directly; it can directly connect with our aerosol fire suppression system, super-fine ABC dry chemical powder fire suppression system other suppression system.

1.3 Its advantages are: High temperature sensing accuracy, low error rate, long life span, Strong ability to adapt to the environment, Strong explosion-proof capability, Work independently; At the same time, no external power supply such as battery is required; It widely used in: vehicles, wind turbines, Power supply, plants, warehouses, mining, electrical cabinets etc.

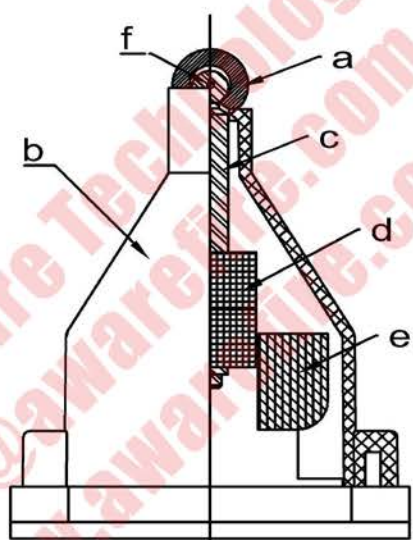
1.4 After startup it can be used again, but need to change new thermal elements, normally we replace for them the whole product directly.

## 2 PARAMETERS AND TECHNICAL DATA SHEET

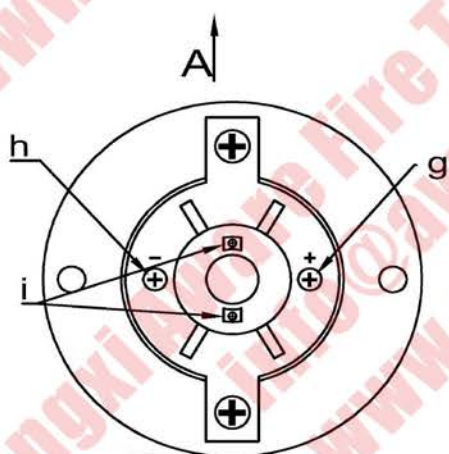
MODEL		AW-101
Dimension(mm)	Diameter	65±1
	Height	84±2
Weight (g)		170±4
Effective Power generation time(s)		≥2ms
Rated Temperature(°C)		72±5, 93±5, 110±5
Ambient Temperature(°C)		-50°C to +85°C
Life Span		≥10 Y
Feedback Signal		Passive contact signal: Normal open, after action closed(optional)  Passive contact signal: Normal closed, after action open(optional)

### 3 STRUCTURE AND WORKING PRESSURE

#### 3.1 Structure



- a- Thermal Element
- b- Shell
- c- Moving Rod/Moving Pole
- d- Magnet
- e- Induction Coil
- f- Safety pin



- g- Positive output terminal
- h- Negative output terminal
- i- Feedback signal terminal

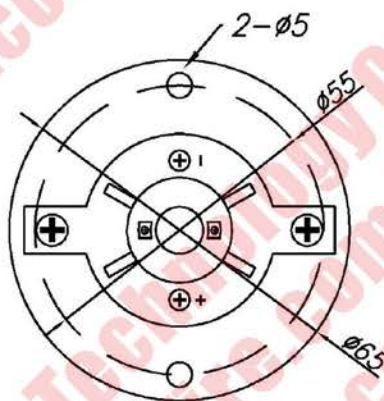
#### 3.2 Working Principle

- When the ambient temperature exceeds the rated temperature, the thermal element fusible metal began to deform, and release the moving pole with spring.
- Under the action of spring, the magnet in the moving pole passes through the induction coil and make the coil generate current.
- The pulse current is output to the fire extinguishing device through the output terminal, and the feedback signal terminal which is non-polarity changes from normal open state to normal closed state.

### 4 INSTALLATION AND COMMONSSIONG

before do installation job please red installation manual carefully, and inspect each thermal activation generator one by one according to the following methods, and can be put into use after confirmation:

- **Inspection method:** check the integrity of housing, the housing or shell shall be free of obvious indentation, deformation and fracture; the thermal element (fusible metal) shall not all off or deform; accessories should be complete.
- **Installation method:** Wire and cable connection to the activation terminal and signal feedback terminal, it should be connected by using of “o” shape crimping terminal to connect; pull out the safety pin carefully, and install the device, and install it in the specified location; connect the wire or cable with the fire extinguishing system; installation size as per INSTALLATION MANUAL.



- **Installation Precautions:** 1. Forbidden to use violence to pull out the safety pin; 2. After pull out the safety pin, check whether the thermal element is fastened, forbidden to use in case of serious looseness; 3. the wire (cable) should be shielded flame retardant wire; 4. forbidden to pull out the safety pin after wire connection, should be before wire connection; 5. During installation and use, forbidden to touch the thermal element(fusible metal).

## 5 TRANSPORTATION AND PRESERVATION

- During transportation the original factory package, all means of transport are available.
- During transportation and preservation, please take measures to avoid mechanical damage, avoid heat, avoid rain, avoid moisture, avoid corrosion.
- It is allowed to store in a place without heating equipment, and ambient temperature between -50 to +50 °C.

## 6 TRANSPORTATION AND PRESERVATION

- Do not use it, if the case and thermal element are damaged.
- Do not perform any installation or maintenance work on the TAD while the fire extinguisher is connected.
- During installation and use, it is strictly forbidden to use hard objects to touch the thermal element.
- During the installation process, the thermal activation device should avoid heat sources such as air-conditioning ports and lighting facilities.

- All tests are prohibited without the permission of the manufacturer's representative.

## **7 MAINTENANCE AND REPAIR**

Dust and dirt shall be removed regularly according to the environment, if any damage is found, it shall be replaced in time; don't hit or touch the thermal element (fusible metal) during cleaning.

- In the service lift time, it is not necessary to carry out quality inspection for it.
- The life time of the device is 10 years, during this validity period it is maintenance.

## **8 OTHERS**

- This product is qualified to leave the factory and could be put into use.
- The product can be reused after startup, but need to replace new thermal element (fusible metal).

For more details or any questions please feel free to contact us directly.

**JIANGXI AWARE FIRE TECHNOLOGY CO.,LTD**

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 Please consider the environment before using the paper!