



# Smoke Alarm

## User's Manual



# 1. Important Safeguards and Warnings

This manual will help you to use the Device properly. Read the manual carefully before using the Device, and keep it well for future reference.

## Operation Requirements

 **WARNING**

Never ignore any alarm. Failure to respond may lead to serious injury or death.

 **CAUTION**

- Make sure that the power supply of the device works properly before use.
- Use the device according to the operating environment.
- Only use the device within the rated power range.
- Transport, use and store the device under allowed humidity and temperature conditions.
- Prevent liquids from splashing or dripping on the device. Make sure that there are no objects filled with liquid on top of the device to avoid liquids flowing into it.
- The smoke alarm is only designed for indicating the presence of smoke, but it cannot detect gas, heat or flames.

## Installation Requirements

 **WARNING**

- Strictly abide by local electrical safety standards, and make sure that the voltage in the area is steady and conforms to the power requirements of the device.
- Failure to properly install and operate this device will prevent proper operation of the Device and will prevent its response to fire hazards.

 **CAUTION**

- Observe all safety procedures and wear required protective equipment provided for your use while working at heights.
- Do not expose the device to direct sunlight or heat sources.
- Keep the original packing material well because you might need it to pack the device and send it back for repair.
- Make sure the application scenario conforms to installation requirements. Contact your local retailer or customer service center if there is any problem.
- All installation and operations shall conform to your local electrical safety requirements, fire protection regulations, and other relevant regulations.

## Maintenance Requirements

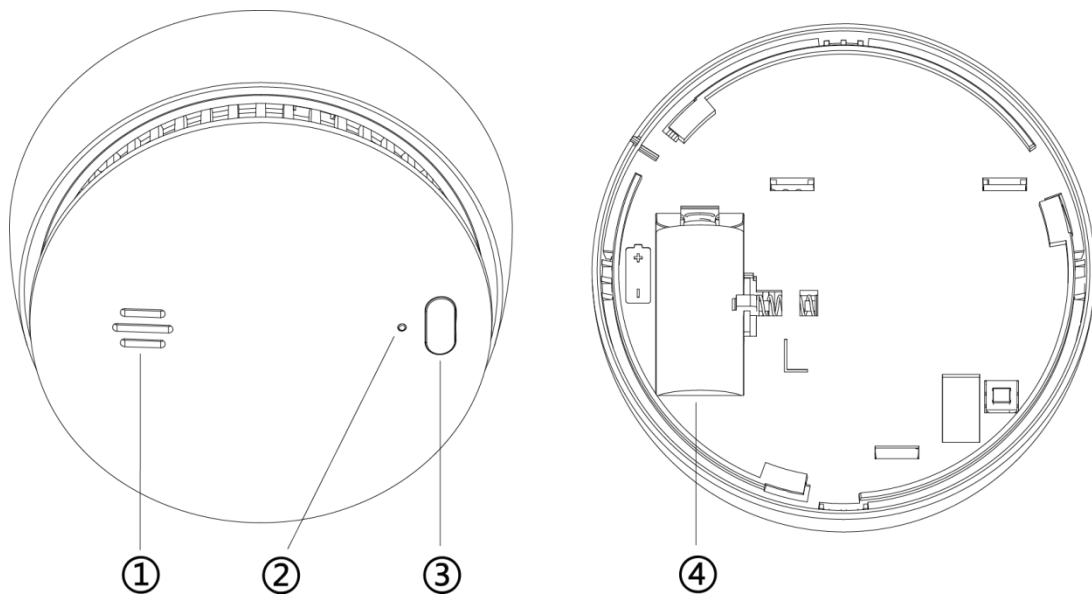
- Do not clean the device with any cleaning products.
- Do not paint the device. Paint will seal the bents and interfere with the sensor's ability to detect smoke.

## 2.Introduction

### 2.1 Product information

DHI-HY-SA20A Smoke Alarm (hereinafter referred to as the device) is designed to continuously monitor smoke concentration. Adopting new dual sensing photoelectric chamber and a built-in high-volume buzzer, it responds quickly and becomes highly sensitive with stable performance and low false alarm. Once the surrounding smoke concentration reaches the alarm value, it will promptly send out visual and audible alarm signal to remind the user to take immediate measures. This product is designed for household or similar residential application such as family home or apartment.

### 2.2 Product profile



No.	Name	Introduction
1	Buzzer	Alarm Sound: 85dB (A) at 3 m (9.84 ft)
2	Indicator	<ul style="list-style-type: none"> <li>Standby: Green indicator flashes once per minute</li> <li>Alarm: Red indicator flashes once per second</li> <li>Fault: Red indicator flashes once per minute</li> </ul>
3	Test/Silence Button	<ul style="list-style-type: none"> <li>Verify the normal working</li> <li>Stop the alarm sound</li> </ul>
4	Battery Compartment	Replace the battery

## 3. Technical Information

Specification	Introduction
Model	DHI-HY-SA20A
Sensor Type	Photoelectric
Supply Voltage	DC3V
Battery Life	10 years
Alarm Method	Visual and audible alarm
Operating Current	<ul style="list-style-type: none"> <li>● Monitoring current: <math>\leq 15\mu\text{A}</math></li> <li>● Alarm current: <math>\leq 35\text{mA}</math></li> </ul>
Operating Temperature	$-10^{\circ}\text{C}$ to $+55^{\circ}\text{C}$ ( $+14^{\circ}\text{F}$ to $+131^{\circ}\text{F}$ )
Operating Humidity	$\leq 95\%$ RH (non condensing)
Detecting Area	When the height of the space is less than 8 m (3.28 ft), the protection area of a device is $20\text{ m}^2$ – $30\text{ m}^2$
Dimensions	$\phi 98\text{mm} \times \text{H}43.1\text{mm}$ ( $\phi 3.85" \times \text{H}1.70"$ )
Weight (with battery)	136 g (0.30 lb)
Certification	EN 14604:2005+AC: 2008

# 4. Device Installation

## 4.1 Packing List

Check the package according to the following checklist. If you find device damage or any loss, contact the after-sales service.

Table 4-1 Checklist

Name	Quantity
Smoke Alarm	1
Positioning Map	1
Self-tapping Screw	2
Expansion Bolt	2
Mounting Plate	1
User's Manual	1

## 4.2 Installation Position



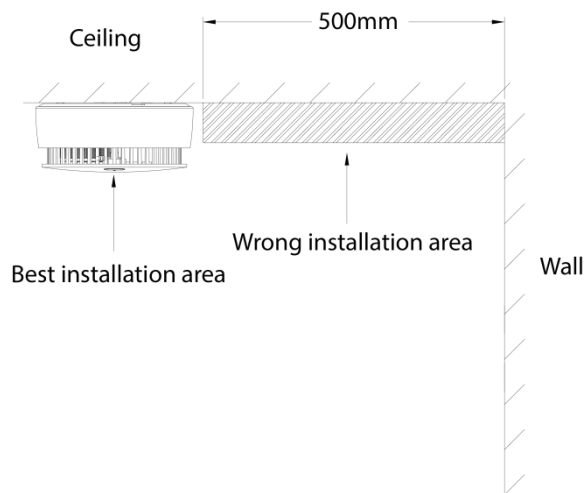
This device is intended for use in ordinary indoor locations of family living units. Construction and layout of individual dwellings will vary, so this should be regarded as a reference only. For further guidance, please check with your local fire station.

Figure 4-1 Overall layout



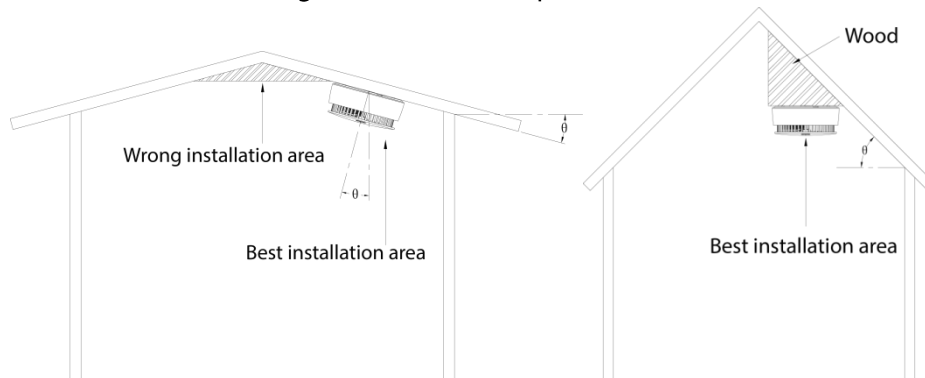
- Installed on the ceiling.  
If the device is installed on the ceiling, install at a distance of 20 inches (500 mm) away from the corners of the room.

Figure 4-2 Installation position (1)



- Installed on the sloping roof.  
When the slope is less than 45°, the appropriate distance is 20 inches (500 mm). When the slope is more than 45°, a wood should be installed.

Figure 4-3 Installation position (2)



## 4.3 Installation Steps

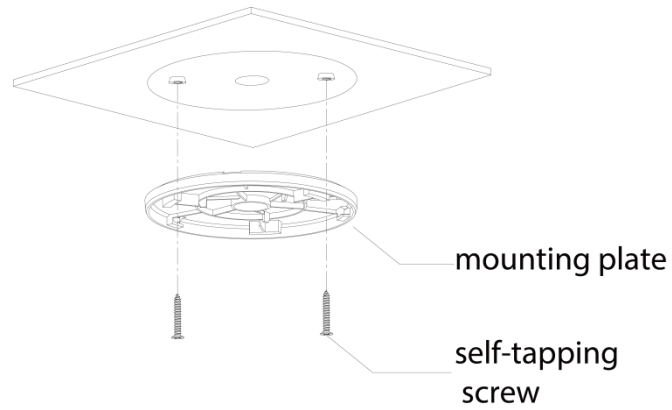
Follow below steps to install the device properly.

**Step 1** Choose suitable place to install positioning map.

**Step 2** Drill holes (Φ6 mm [0.24"]) on the wall as the positioning map shows, and then align the screw holes on the wall with the expansion bolts.

**Step 3** Fix the mounting plate with self-tapping screws.

Figure 4-4 Installation step (1)



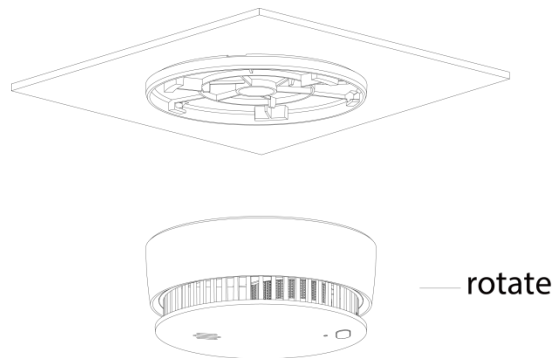
**Step 4** Install the Device.

- 1) Correctly insert the lead wires, install the battery into the battery compartment according to the marked positive and negative polarity, and arrange the wiring harness.
- 2) Rotate the device according to the corresponding position and direction as shown in the figure.



Please ensure it is firm.

Figure 4-5 Installation step (2)





## 5. Test and Maintenance

### 5.1 Test

After the installation of the Device or regular maintenance, a test must be carried out to confirm that the Device is operating properly.

During the testing process, the defective Device should be addressed according to "FAQ" and "Maintenance", and then tested again. If it fails to complete the test successfully, please send the Device to the manufacturer for repair.

#### Device self-test

Press the **Test/Silence** button, indicator light flashes quickly and buzzer beeps.

#### Alarm test

When the smoke concentration reaches predetermined threshold, the indicator light flashes and the Device sends out visual and audible alarm. Press **Test/Silence** button to stop alarm sound. When the concentration is lower than the predetermined value, the Device returns to its normal working state.

#### Low voltage

When the battery voltage is lower than a certain threshold, indicator flashes and the buzzer beeps every minute until the battery is depleted. Please immediately replace the battery with approved types. After replacing the battery, it is recommended to test your smoke alarm every week.

### 5.2 Maintenance

To keep your device in good working condition, please follow these requirements.

- Simulate fire alarm test: Test the device once a week.  
Under normal working conditions, press the **Test/Silence** button to ensure that the Device can work normally. If there is a malfunction, please repair it in time. After cleaning, please install the Device and test again.
- Clean the shell: Clean the device at least once per year (recommended).  
Keep the Device free of dust or inserts by gently vacuuming the shell with a soft brush attachment when required. Avoid cleaning solutions on the Device to prevent the possibility of contaminating the sensor.

## 6. Battery Replacement

When device has low battery warning, please replace battery immediately. Test the alarm for correct operation using test facility, whenever the battery is replaced. During the replacement, please pay attention to the positive and negative polarity markings. Only the following batteries can be replaced. Use of a battery other than those recommended below may have a detrimental effect on the device's operation.

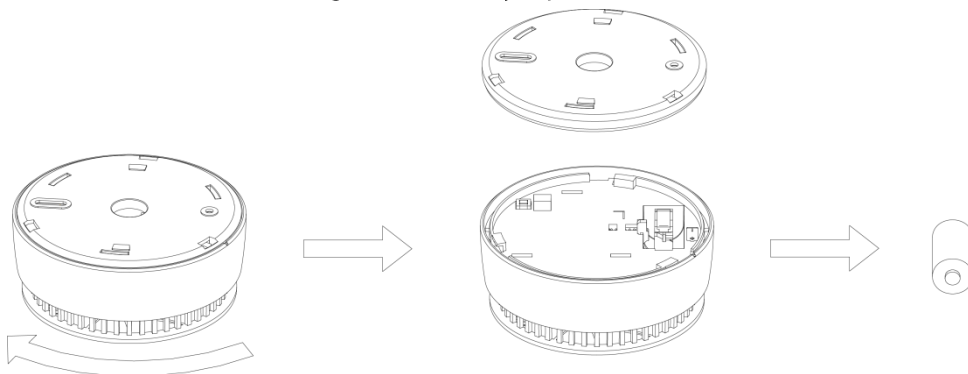


Recommended battery: EVE CR123A, PAIRDEER CR123A, RAMWAY CR123A, LISUN CR123A, HCB CR123A



Test the device for correct operation according to EN requirement every time after battery replacement.

Figure 6-1 Battery replacement



## 7.FAQ

Problem	Solutions
Your smoke alarm does not sound during testing	<ul style="list-style-type: none"> <li>● If testing immediately after first activating the alarm or replacing the batteries, you should allow a few seconds for the alarm to settle before testing.</li> <li>● Make sure you push the test button firmly.</li> <li>● Make sure you remove the transparent plastic cover of the battery.</li> </ul>
Your smoke alarm chirps intermittently	<ul style="list-style-type: none"> <li>● Check the location of your smoke alarm (see "Installation Position").</li> <li>● Clean the smoke alarm (see "Test and Maintenance").</li> </ul>
The LED indicator flashes red and the alarm sounds one beep every 60 seconds	<ul style="list-style-type: none"> <li>● The device is under low battery condition, please replace the battery immediately.</li> <li>● If the problem still exists after battery replacement, please contact technical support for advice.</li> </ul>

## 8.Disposal

Waste electrical products should not be disposed of your other household waste. Please dispose in an environmentally friendly manner, and strictly follow the local regulations regarding the disposal or recycling of the electrical device.



WARNING

Do not burn or dispose of in fire.

For User's Manual in other languages, please scan the QR code below or visit <https://www.wisualarm.com/en/Products/ALL> to select specific product and see the manual.

