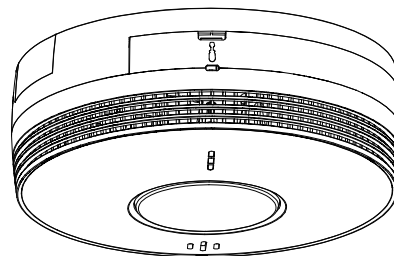


**User's Manual**

# Mains Powered Smoke Alarm



1.2.51.3.2.22775-000

## 1. Important Safeguards and Warnings

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

### Operation Requirements

#### **WARNING**

- Never ignore any alarm. Failure to respond may lead to serious injury or death.
- The alarm will activate after being fully mounted to the mounting bracket.

#### **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 to detect and indicate the presence of smoke, but it cannot detect gas, heat or flames.

### Installation Requirements

#### **WARNING**

- The Alarm **MUST NOT** be powered from a light dimmer circuit.
- The Alarm **MUST NOT** be connected when the house wiring insulation is being checked with high voltages. i.e. Do not use a high voltage insulation tester on the Alarm.
- Failure to properly install and operate this device will prevent proper operation of the device and will prevent its response to fire hazards.
- Before installation and removal, disconnect the Mains power supply.
- The device must be installed by a qualified electrician. There are no repairable parts inside.

- Strictly comply with the local electrical safety code and standards, and check whether the power supply is correct before operating the device.
- Do not connect the device to two or more kinds of power supplies, unless otherwise specified, to avoid damage to the device.
- The device must be installed in a location that only professionals can access, to avoid the risk of non-professionals becoming injured from accessing the area while the device is working. Professionals must have full knowledge of the safeguards and warnings of using the device.
- To prevent injury, this apparatus must be securely attached to the ceiling/wall in accordance with the installation instructions.

### **⚠ 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 centre if there is any problem.
- All installation and operations shall conform to your local electrical safety requirements, fire protection regulations, and other relevant regulations.
- The alarm doesn't need to be earthed. The device is a class II electrical appliance.
- This product must be installed by a licensed electrician in accordance with AS/NZS 3000.

### **Maintenance Requirements**

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

## **2. Introduction**

### **2.1 Product information**

Mains Powered Smoke Alarm (hereinafter referred to as the device) is designed to continuously monitor smoke concentration. Using a new split-spectrum, dual-sensing photoelectric chamber and a built-in high-volume buzzer, it is sensitive, responds quickly, and provides stable performance with few false alarms. Once the surrounding smoke concentration reaches the alarm value, it will promptly activate visual and audible alarm signals to remind the user to take immediate action. Up to 24 alarms can be interconnected. Once one device triggers an alarm, the alarm signal will be pushed to every alarm in the interconnected network, and they will all trigger an alarm together.

This product is designed for residential applications such as family homes, townhouses or apartments, for locations such as living rooms, studies, bedrooms and corridors/hallways.

### **2.2 Product profile**

Figure 2-1 Mains smoke alarm with replaceable battery back-up

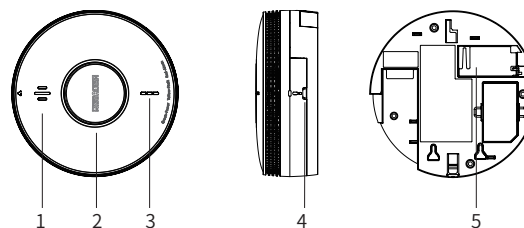
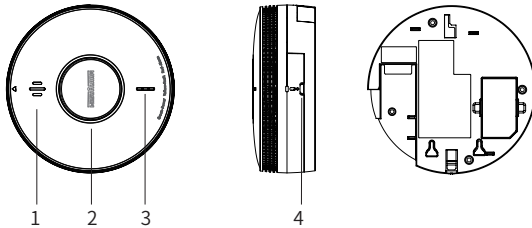


Figure 2-2 Mains smoke alarm with rechargeable battery back-up



No.	Name	Introduction
1	Buzzer	Alarm Sound: 85 dB (A) at 3 m (9.84 ft)
2	Test/Silence Button	<ul style="list-style-type: none"> <li>• Verify normal operation</li> <li>• Stop the alarm sound</li> </ul>
3	Indicator	<ul style="list-style-type: none"> <li>• Power on: Red indicator flashes once</li> <li>• Standby: Green indicator is constantly on</li> <li>• Alarm: Red indicator flashes once per second</li> <li>• Sensor fault: Yellow indicator flashes twice per minute</li> <li>• Low battery backup fault: Yellow indicator flashes once per minute</li> </ul>
4	Alarm Removal Latch	Remove the alarm from the mounting plate
5	Battery Compartment (Optional)	User-replaceable 9 V Alkaline battery

### 3. Technical Information

Specification	Introduction
Sensor Type	Photoelectric
Supply Voltage	AC 100V - 250V, 50Hz/60Hz, 0.25W
Alarm Method	Visual and audible alarm
Pre-Set Alarm Value	0.2 dB/m-0.3 dB/m
Maximum Number of Interconnected Units	24 hardwire interconnected
Operating Temperature	-10°C to +55°C (+14°F to +131°F)
Operating Humidity	≤95% RH (non condensing)
Detecting Area	When the height of the space is less than 8 m (26.25 ft), the protection area of a device is 20 m <sup>2</sup> -40 m <sup>2</sup>
Dimensions	Φ148.6mm × H55.5mm (Φ5.85" × H2.19")
Weight (with battery)	330 g (0.73 lb)
Compliance Standard	EN 14604:2005+AC: 2008, AS/NZS 3786:2014 + A1:2015 + A2:2018

## 4. Device Installation and Removal

### 4.1 Installation principle

The advice here follows the guidance in British Standard BS 5839-6:2019 or the building code of Australian, state and territory building regulation and AS 1670.1 in general (for further information refer to the relevant standards).

#### **⚠ WARNING**

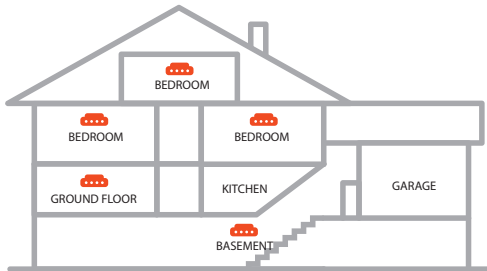
- Mains-operated alarms must be installed and interconnected by a licensed electrician in accordance with AS/NZS 3000. Failure to install this alarm correctly may expose the user to shock or fire hazards and damage the product.
- The alarm must be continuously powered throughout the day. Do not connect the device to a circuit that can be turned off by a switch.
- Avoid installation in new or renovated buildings until all work is completed.

### 4.2 Installation position

#### **⚠ CAUTION**

This device is intended for use in ordinary indoor locations of residential accommodation. 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 500 mm (20 inches) away from the corners of the room, or at least 300mm from any light fitting or decorative object which might obstruct smoke entering the alarm unit.

Figure 4-2 Installation position (1)

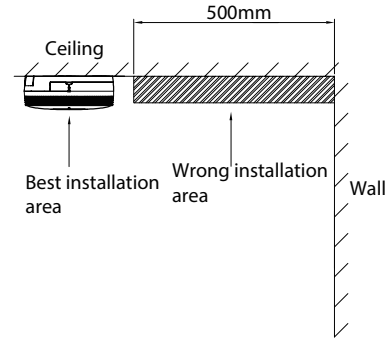
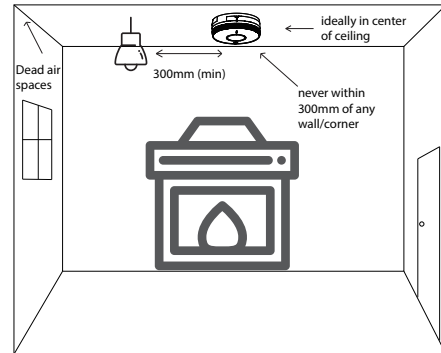


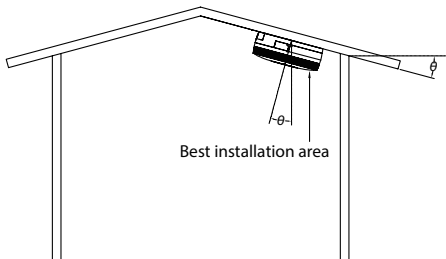
Figure 4-3 Installation position (2)



### ● Installed on the sloping roof.

When the slope is less than 45°, the appropriate distance is 20 inches (500 mm).

Figure 4-4 Installation position (3)



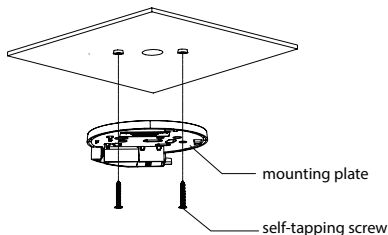
## 4.3 Installation steps

Follow below steps to install the device properly.

**Step 1** Disconnect the AC mains supply from the circuit that will be used.

**Step 2** Choose suitable place to install mounting plate complying with the advice in previous sections.

Figure 4-5 installation (1)



**Step 3** Insert screwdriver to lift off wiring cover.



The wiring must be connected to the terminal block on the mounting plate as follows:

- L: Live - connect to the house wires coloured brown or marked L.
- N: Neutral - connect to the house wires coloured blue or marked N.
- IC: Interconnect – connect all circuit terminals for alarm interconnection (see Section 5 Interconnection).

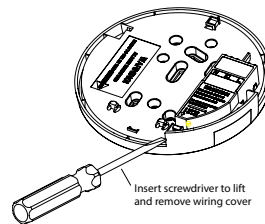
### ⚠ CAUTION

- Wiring must be installed in compliance with AS/NZS 3000.
- Checking for Live and Neutral using a two-probe tester is recommended.
- Checking for Live using a neon tester is recommended.
- Make sure that the Interconnect wire is **NOT** connected to Live, or Neutral. Do not use an Earth wire to connect the interconnect terminal (IC terminal) for the interconnection.

### ⚠ WARNING

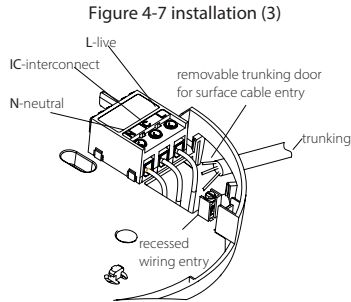
Mixing (or poorly terminating) the Live and Neutral connections during interconnection may damage all alarms. Please use wires of the same colour throughout the premises for Live, Neutral and Interconnect wires.

Figure 4-6 installation (2)



**Step 4** Connect the power cables to the terminal block and tighten the screws.

- 1) If the mains wires are recessed, bring the wires through the rear hole in the mounting plate.

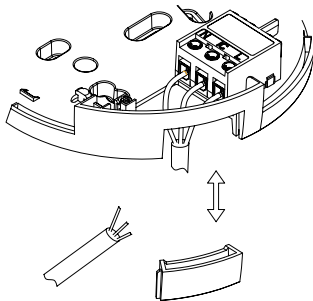


- 2) If the mains wires are mounted on the surface, take the removable section out for wiring.

**CAUTION**

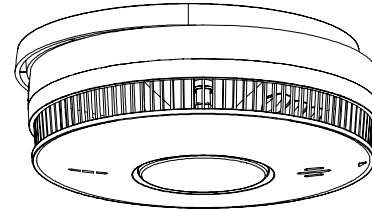
If you are not using surface wiring, the removable section must be left in place for electrical safety reasons.

Figure 4-8 installation (4)



**Step 5** Install the wiring cover, write the installation date, and ensure that the alarm is properly aligned with the mounting plate before sliding it on according to the corresponding direction as shown in the mounting plate.

Figure 4-8 installation (5)



**Step 6** Connect the mains power to the alarm circuit. Verify that the green LED light on the front of the alarm illuminates.

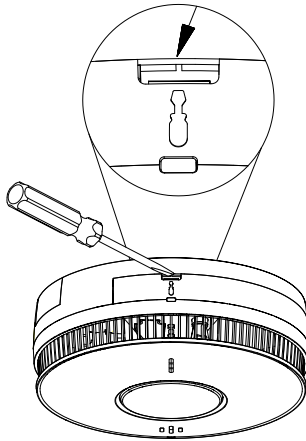
**Step 7** Press and hold the **Test/Silence** button for 10 seconds, the alarm will beep. Check that other interconnected alarms also beep within this period. Release the **Test/Silence** button, the buzzer stops beeping immediately.

#### 4.4 Removal steps

Locate the arrow on the front face of alarm. The slot is located directly above the arrow.

**Step 1** Insert a flat-bladed screwdriver horizontally about 10 mm into the centre of the removal slot.

Figure 4-9 Removal



**Step 2** With the screwdriver inserted, push the lower half of the alarm away from the screwdriver.

**Step 3** Hold the lower half of the alarm and remove it from the mounting plate by lowering it towards the ground.

The alarm will detach from the mounting plate. Make sure that you hold the alarm head consistently in case of dropping to the ground.

## 5. Interconnection

- Once one device triggers an alarm, all interconnected devices raise the alarm in unison.
- This device can be interconnected with Wisualarm interconnected alarms to construct a hybrid system containing CO / Heat / Smoke Alarms. A maximum of 24 heat/smoke/CO alarms can be interconnected.

### Prerequisite

- Make sure all wiring is firmly connected to ensure successful interconnection. Otherwise, the interconnection will fail or device malfunction may occur.
- All installation and operations shall conform to your local electrical safety requirements, fire protection regulations, and other relevant regulations.
- Avoid connecting the alarms to any other model manufactured by a different company. Such connections may cause damage to the alarms and pose risks of electric shock or fire hazards.

### How to interconnect

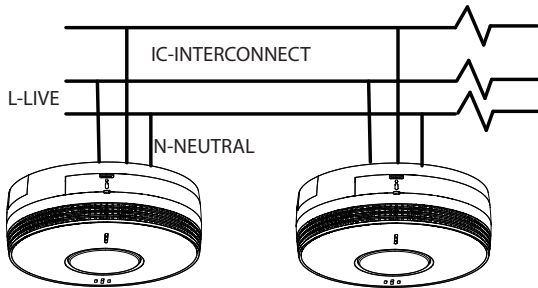
To interconnect two or more alarms, connect all the IC terminals together.



- The interconnecting wire (minimum 0.75 mm<sup>2</sup> cable) must be treated as if it were Live. It should be insulated and sheathed.
- Wiring must comply with AS/NZS 3000.
- Do not exceed 250 m of connecting wire per circuit.



Figure 5-1 Interconnection



## 6. Test and Maintenance

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

If any device defects are detected during the testing process, please refer to the "Frequently Asked Questions" and "Maintenance" section and retest the device. If it fails to complete the test successfully, please send the device to the manufacturer for repair.

### 6.1 For a single smoke alarm

#### Test

Press the **Test/Silence** button, the red LED indicator light will flash continuously for three times and two cycles.

### Silence/Pause the alarm

When the smoke concentration reaches a predetermined threshold, the LED indicator flashes, and the buzzer beeps (85 dB). Press the **Test/Silence** button to temporarily mute the alarm sound and the device will be in the silence mode for 9 minutes.

#### **⚠ WARNING** **NEVER IGNORE ANY ALARM.**

If an alarm is sounding, it is warning you of a potentially hazardous situation. Do not ignore it. Ignoring the alarm may result in injury or death. If your heat alarm activates and you are not absolutely certain of the source of fire, get everyone out of the house immediately.

### 6.2 For interconnected smoke alarms

#### Test

- Press and hold **Test/Silence** button on any interconnected smoke alarm until other interconnected smoke alarms in the network start to beep.  
The initiating device will beep continuously with the red LED indicator flashing. After receiving a signal, other interconnected devices in the network start beeping with the indicator lights flashing red and yellow alternately.
- Release **Test/Silence** button on initiating interconnected device, the initiating device stops flashing and beeping, and other interconnected devices stop testing soon.

#### Silence/Pause the alarm

Once the initiating device triggers an alarm, the device beeps with red LED indicator flashing once per second. After several seconds, other interconnected devices receive the alarm signal with the red LED indicator flashing and the buzzer beeping.

- Press **Test/Silence** button on initiating interconnected device. All interconnected devices are temporarily silenced.
- Press **Test/Silence** button on any other interconnected device.

The device that has been pressed is temporarily silenced, but the initiating interconnected device keeps beeping.

### 6.3 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.
- Do not paint the device. Paint will seal the vents and interfere with the sensor's ability to work normally.
- When the battery voltage is lower than a certain threshold, the LED indicator flashes and the buzzer beeps every minute until the battery is depleted. Please replace the device immediately or contact technical support for advice.



When the detector stops working properly, please contact your local dealer or retailer for help.

## 7. Frequently Asked Questions

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, you should allow a few seconds for the alarm to settle before testing.</li><li>● Make sure you push the test button firmly.</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 yellow 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 device/battery immediately.</li><li>● Please contact technical support for advice.</li></ul>

## 8. Indicator Summary Tables & Troubleshooting

### 8.1 Normal operation and alarm mode

Mode	State	Action	Green LED (Power)	Yellow LED (Fault)	Red LED (Alarm)	Buzzer
Normal operation	Power On	Slide onto mounting plate	-	-	Flash once	Beep once
	Standby	-	Constantly on	-	-	-
	Test	Press the <b>Test/Silence</b> button	Constantly on	-	Flash twice at an interval of 1 second and 2cycles	Beep twice at an interval of 1 second
	Interconnection test	Press and hold the <b>Test/Silence</b> button	Constantly on	-	Flash once every second	Beep once every second
	Interconnection test triggered by another alarm in interconnected network	Activated via interconnection	Constantly on	Flash red and yellow alternately every second	Flash red and yellow alternately every second	Beep once every second

Alarm	Alarm	-	Constantly on	-	Flash once every second	Beep once every second
	Alarm triggered by another smoke alarm in interconnected network	-	Constantly on	-	Flash three times every 3 seconds, at an interval of 1 second	Beep three times every 3 seconds, at an interval of 1 second
	Alarm triggered by another heat alarm in interconnected network	-	Constantly on	-	Flash twice every 2 seconds, at an interval of 1 second	Beep twice every 2 seconds, at an interval of 1 second
	Alarm triggered by another CO alarm in interconnected network	-	Constantly on	-	Flash four times every second, at an interval of 5.8 seconds	Beep four times every second, at an interval of 5.8 seconds
	Press the <b>Test/Silence</b> button on initial smoke alarm	-	Constantly on	-	Flash once every second	Silence for 9 minutes

Inter-connection	Press the Test/Silence button four times	-	-	-	Flash slowly	Beep once
	Press the Test/Silence button twice	-	-	-	Flash quickly	Beep once
	Interconnection succeeded	-	-	-	-	Beep once
Pairing with gateway	Press the Test/Silence button three times	-	-	-	-	Beep once
	Pairing succeeded	-	-	-	-	Beep once

## 8.2 Abnormal mode

Green LED (Power)	Yellow LED (Fault)	Red LED (Alarm)	Buzzer	Cause	Solution
-	-	Flash once per minute	-	AC mains off	Reconnect AC mains power
-	Flash once per minute	-	Beep once per minute	AC mains off Low battery backup	
Constantly on	Flash once per minute	-	Beep once per minute	Low battery backup	DHI-HY-SA5MB: Replace battery DHI-HY-SA5MA: Please refer to 8.3 Low battery backup fault
Constantly on	Flash twice per minute	-	Beep twice per minute	Sensor fault	Replace alarm

### 8.3 Low battery backup fault

If the battery backup supply is depleted, the buzzer will beep once accompanied by the yellow LED indicator flashing once every minute. Check and ensure that the green LED power indicator remains continuously illuminated. If it turns off or flashes every minute, the alarm is not powered by the standard 230 V AC mains power but is operating on the battery backup as its power source. To identify the cause of the power interruption, please check the fuses, circuit breakers, and wiring. If in doubt, seek assistance from a qualified electrician. Once the mains power is restored, low battery alarm will stop within 2 hours as the battery charges up. If the beeping persists for over 2 hours with the green LED indicator on, there may be other problems with the alarm. Please repair or replace the alarm.

#### CAUTION

Do not disassemble the device without professional instruction.

## 8.4 Sensor fault

The alarm regularly checks the optical smoke sensor for correct operation. If the alarm detects a sensor fault, it will emit 2 short chirps with the yellow LED indicator flashing twice every minute. In this case, please repair or replace the alarm.

## 9. Battery Replacement

There are two different types of battery backup:

- Mains powered with a rechargeable battery backup, which should be charging across the life span of the alarm.
- Mains powered with a 9V alkaline battery backup, which should be replaced after activating the alarm. When the device with a 9V alkaline battery backup gives a low battery warning, replace the battery immediately. It is recommended that you replace the battery every year. 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: NANFU 6LR61.

**Step 1** Turn off the mains power to the alarm.

**Step 2** Insert a flat-bladed screwdriver into the centre of the removal slot. Make sure you keep the screwdriver horizontal (i.e. parallel to the ceiling).

**Step 3** Slide the alarm off the mounting plate.

**Step 4** Replace the battery in the back of the alarm with a new 9 V Alkaline battery.



### CAUTION

When replace the battery, pay close attention to the positive and negative polarity markings (+ and -).

**Step 5** Slide the alarm back on its mounting plate.

**Step 6** Turn the power back on. The red LED indicator flashes once.

**Step 7** Test the alarm to ensure it is working correctly.

## 10. 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.

## 11. Warranty

If you need after-sales service, please contact your local dealer or retailer.

Western EU Importer: Dahua Europe B.V.

Address: Louis Braillelaan 80, 2719 EK Zoetermeer The Netherlands

Email address for service purposes: support.benelux@dahuatech.com

CEE & Nordic Importer: Dahua Technology Poland Sp. z o. o.

Address: ul. Salsy 2, 02-823 Warszawa

Email address for service purposes: partner@wisualarm.com

UK Importer: Dahua Technology UK Ltd.

Address: 3rd Floor, Quantum House, 60 Norden Road, Maidenhead, SL6 4AY

Email address for service purposes: support.uk@dahuatech.com

Germany Importer: Dahua Technology GmbH

Address: Niederkasseler Lohweg 185, 40547 Düsseldorf

Email address for service purpose: support.de@dahuatech.com

Australian Importer: Dahua Technology Australia

Address: Suite 1.02, 1 Epping Road, North Ryde NSW 2113

## 12. Documents

Hereby, Zhejiang Huaxiao Technology Co., Ltd. declares that the radio equipment type Smoke Alarm is in compliance with Directive 2014/53/EU.

The full text of the EU declarations of conformity and EU declarations of performance is available at the following internet address: <https://www.wisualarm.com/en/ServiceSupport/DownloadCenter>



For more information, please scan the QR code below or visit <https://www.wisualarm.com/en/Products/ALL>.