

Mini Smoke Detector (Mini-SD)

Manufacturer: Climax Technology CO., LTD.
No. 258, Xinhu 2nd Rd., Neihu Dist., Taipei
114, Taiwan (R.O.C.)
Version 1.0

General Information

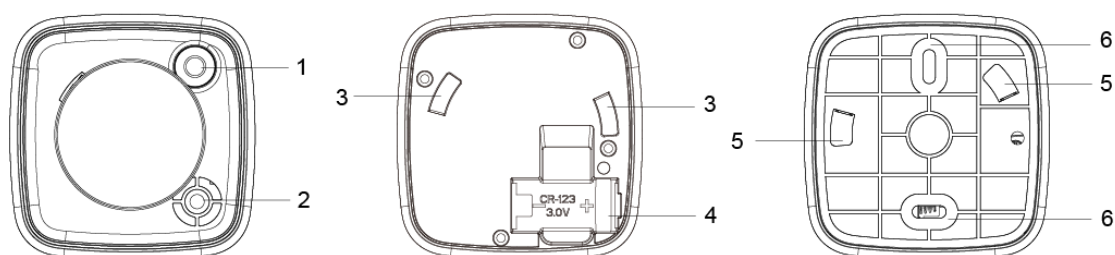
Before installation of the Mini Smoke Detector, please read through this instruction manual thoroughly to understand the Mini Smoke Detector functions, responses and the guidelines to installing the Mini Smoke Detector. Please leave this manual with the user of the Mini Smoke Detector.

General Description

When the Mini Smoke Detector is triggered, the built-in buzzer will start a local alarm siren of 85dB (in compliance with the UL Standard 217) and the Red LED will flash quickly as a local warning. The Mini Smoke Detector will continuously check the smoke concentration and turn the local warning on if smoke concentration does not drop below the set value. The local alarm siren will continue to siren until the smoke condition is cleared to reset the Mini Smoke Detector. The test button of the Mini Smoke Detector can be pressed to silence the alarm for 9 minutes.

Mounting the Mini Smoke Detector is simplified with the mounting bracket, where the mounting bracket is fixed to the surface using screws and dowels. The Mini Smoke Detector is then fixed to the mounting bracket by hooking itself onto the mounting bracket.

Identifying the Parts



1. LED Indicator & Test Button

Red LED

- Quick flash: Smoke Alarm
- Flashes every 2 seconds: Mini Smoke Detector under warmup and calibration process.
- Flashes every 4 seconds: battery exhausted.
- On briefly: Test Button pressed

Orange LED

- Flashes every second: Calibration Failure
- Flashes every 4 seconds: battery exhausted.
- Flashes every 45 seconds: Low battery condition

Test Button

- Press the button once to:
 - Check smoke detection chamber.
 - Silence alarm.

2. Buzzer

3. Mounting Holes

4. Battery compartment

5. Hooks

6. Mounting Holes

Features

● **Battery**

- A 3V CR123A Lithium Battery is used to supply power to the Mini Smoke Detector. If replacement batteries are required, please contact the Mini Smoke Detector supplier.
- The Mini Smoke Detector has a foolproof mechanism which prohibits cover closure without first installing battery.
- When the Mini Smoke Detector battery voltage is low, the Orange LED will flash with accompanying low-volume beep once every 45 seconds. Low Battery warning typically starts 1 month before complete exhaustion.
- If the battery is not replaced after low battery voltage is detected and the battery is exhausted, the Mini Smoke Detector will stop all operation. Both Red and Orange LED will flash every 4 seconds to indicate Smoke Detector is inactive.

<NOTE>

- ☞ When changing the battery, after removing the old battery, press the Test Button twice to fully discharge before inserting new battery.

● **Testing the Mini Smoke Detector**

The Mini Smoke Detector should be tested every week after installation to ensure its performance.

Press the Test Button on the Mini Smoke Detector to test if the Mini Smoke Detector is functioning normally.

- If the Mini Smoke Detector functions normally, the Red LED will turn on for 2 seconds followed by a 2-tone beep.
- If the buzzer sounds 2-tone beeps 3 times, the “**Optical Chamber**” on the Mini Smoke Detector is either dirty or out-of-order.
- If the Red LED does not respond and no beep is sounded, it means the Mini Smoke Detector is out-of-order.

● **Operation**

● **Smoke Detection:**

- When smoke concentration exceeds the set alarm threshold value, the Mini Smoke Detector will activate the buzzer and the Red LED will flash rapidly to indicate alarm. The alarm volume is 85db and in compliance with the UL Standard.
- If Smoke Detector is under low battery voltage when alarm is activated, it will sound a low-volume alarm instead.
- The Mini Smoke Detector performs smoke concentration check every 8 seconds. If the smoke concentration still exceeds alarm threshold, the Mini Smoke Detector will continue to sound alarm.
- When the smoke concentration drops below alarm threshold, the alarm will stop automatically. The alarm can also be stopped temporarily by using the “Alarm Silence” function.

● **Alarm Silence:**

- When the Mini Smoke Detector is alarming, pressing the Test button will put the Mini Smoke Detector into Alarm Silence mode to silence the alarm for 9 minutes. In compliance with the UL Standard, the buzzer will only stop sounding after the alarm has been activated for at least 1-minute. If the button is pressed before alarm time reaches 1 minute, the Mini Smoke Detector will wait until alarm time has reach 1 minute before silencing the alarm.
- During the 9-minute Alarm Silence period, the Red LED will flash once per second. The Mini Smoke Detector will continue to monitor smoke concentration during the alarm silence period:
 - After the 9-minute Alarm Silence period has expired, if the smoke concentration has dropped below alarm threshold, the Mini Smoke Detector will emit a 2-tone beep and return to normal operation without sounding alarm. If smoke concentration still exceeds alarm threshold, the Mini Smoke Detector will start alarming again.
 - If smoke concentration continues to rise during Alarm Silence period and exceeds a second alarm threshold, the Mini Smoke Detector will start alarming again. An alarm activated by exceeding the second alarm threshold could not be silenced by pressing the test button.

● **Operating Temperature:**

The Mini Smoke Detector may be deployed in indoor environment with 4.4°C to 37.8°C normal ambient temperature.

● **Smoke Detection Limitation:**

The Mini Smoke Detector is not fool-proof, it will not be able to sense every kind of fire in time without fail. The Mini Smoke Detector's performance may be reduced in the following situations, which may prevent the Mini Smoke Detector from activating alarm correctly and timely.

- The Mini Smoke Detector should not be installed at locations where smoke or dust presence is common, such as kitchen, garage or attic. These locations are likely to cause false alarm from the Mini Smoke Detector.
- The Mini Smoke Detector will not be able to respond to Fire where smoke is blocked from the Mini Smoke Detector by obstacles, such as closed door. Install multiple Mini Smoke Detectors in different rooms to increase detection coverage and prevent fire from going unnoticed.
- The Mini Smoke Detector is less effective against some Fire situation with intense flame and little initial smoke, e.g. fire started by chemical material.
- The Mini Smoke Detector has built-in buzzer which will be activated upon smoke detection, however the sound of alarm may not always be able to warn the occupant of the fire. If the Mini Smoke Detector is not located at the same room with the occupant and/or is separated by obstacles, the alarm sound may fail to attract attention. If the occupant is in deep slumber, under influence of drug or alcohol, or has impaired listening ability, the alarm sound may also fail to notify them. It is the responsibility of every individual in the household to provide assistance to others whenever possible to safely evacuate in case of fire.

● **Recalibration**

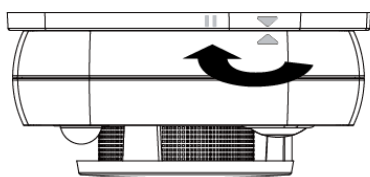
As the operation condition of the Mini Smoke Detector may vary after being installed for some time, you may wish to recalibrate the Mini Smoke Detector to take a new smoke detection threshold value and ensure optimal performance of the Mini Smoke Detector. To do this:

- Press and hold the Test Button for 10 seconds and release when the Mini Smoke Detector emits 2 beeps. The device will sound another beep after 5 seconds and enter calibration process. The Red LED will flash every 2 seconds to indicate.
- Calibration process lasts 1~9 minute.
- When the calibration is finished. The Mini Smoke Detector will sound a two-tone beep. The Red LED will stop flashing to indicate it has returned to normal mode.
- If calibration fails, the Mini Smoke Detector will beep continuously. The Orange LED will flash every second. Please remove the battery, press the Test Button twice to fully discharge the battery, then reinsert the battery to restart Mini Smoke Detector.

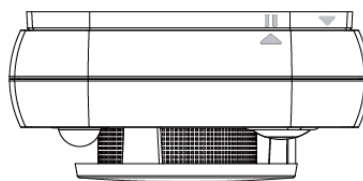
Installation Procedures

THIS EQUIPMENT SHOULD BE INSTALLED IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION'S STANDARD 72

- Step 1.** Insert a battery into the battery compartment. Orient the batteries according to the battery compartment polarity indication. If the battery is not installed, the battery compartment could not be closed and the Mini Smoke Detector could not be installed.
- Step 2.** After the battery is inserted, the Mini Smoke Detector will sound 2 short beeps.
- Step 3.** Place the Mini Smoke Detector at desired mounting location.
- Step 4.** The Mini Smoke Detector has a mounting bracket for ceiling installation. Use the holes on the bracket as template; mark the mounting location on ceiling.
- Step 5.** Screw the mounting bracket onto the ceiling based on the marked locations, drill holes and insert wall plugs if required.
- Step 6.** Align the mounting holes on Mini Smoke Detector with the hooks on the mounting bracket. Fit the Mini Smoke Detector onto bracket.
- Step 7.** The imprinted marks provide an easy identification for installation. Make sure the two triangle marks are aligned with each other, as shown in **Figure A**.
- Step 8.** Rotate clockwise to lock the hook.
- Step 9.** When the pause mark is aligned with the triangle mark, as shown in **Figure B**, the installation is now complete.



(Figure A)

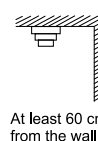


(Figure B)

● Installation Note

Please refer to Appendix - The National Fire Alarm Code, NFPA 72 section for detail information on Smoke Detector install locations.

- It is recommended to install the Smoke Detector near center the ceiling, with at least 60 cm space from the wall.
- Do not locate the detector in the following locations:
 - The Kitchen, garage or close to fireplace where smoke may cause false alarm.
 - Dusty or very humid location.
 - Near a ventilating fan, florescent lamp or air-conditioning equipment – air drafts from them may affect the sensitivity of the detector.
 - Near ceiling beams or over a cabinet – stagnant air in these areas may affect the sensitivity of the detector.
 - In the peak of an "A" frame type of ceiling.



Appendix

The National Fire Alarm Code, NFPA 72

For your information, the National Fire Alarm Code, NFPA 72, reads as follows:

"11.5.1 *Required Detection."

*Where required by applicable laws, codes, or standards for a specific type of occupancy, approved single- and multiple-station smoke alarms shall be installed as follows:

- (1) *In all sleeping rooms and guest rooms
- (2) *Outside of each separate dwelling unit sleeping area, within 6.4 m (21 ft) of any door to a sleeping room, the distance measured along a path of travel
- (3) On every level of a dwelling unit, including basements
- (4) On every level of a residential board and care occupancy (small facility), including basements and excluding crawl spaces and unfinished attics
- (5) *In the living area(s) of a guest suite
- (6) In the living area(s) of a residential board and care occupancy

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Service

If technical service of the Mini Smoke Detector is required, please contact the manufacturer:

Climax Technology CO., LTD.

No. 258, Xinhua 2nd Rd., Neihu Dist., Taipei 114, Taiwan (R.O.C.)

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and*
- (2) This device must accept any interference received, including interference that may cause undesired operation.*