Installation Guide

NB Smoke Multi detektor SD-29
(P119602 / E6310096)

NookBox

Smart Home Security

# NB Smoke Multi detektor SD-29
(P119602 / E6310096)

SD-29 Series is a wireless smoke detector with built-in PIR motion sensor and heat detection capability. Designed to protect your family against potential fire hazards, the Smoke detector is also capable of detecting movements and reporting temperature to users.

The Smoke Detector can be interconnected with other Smoke Detectors in the alarm system, and will raise alarm when any Smoke Detector in the system is triggered (SD-29-HME-SC only). The interconnected Smoke Detectors can also be controlled by the system panel to turn on their white LEDs.

The Smoke Detector includes the following models:

Model Name	Heat Detection	PIR Motion Sensor	Emergency Light	Interconnection
SD-29-H	●			
SD-29-HM	●	●		
SD-29-HME	●	●	●	
SD-29-HME-SC	●	●	●	●

Parts Identification
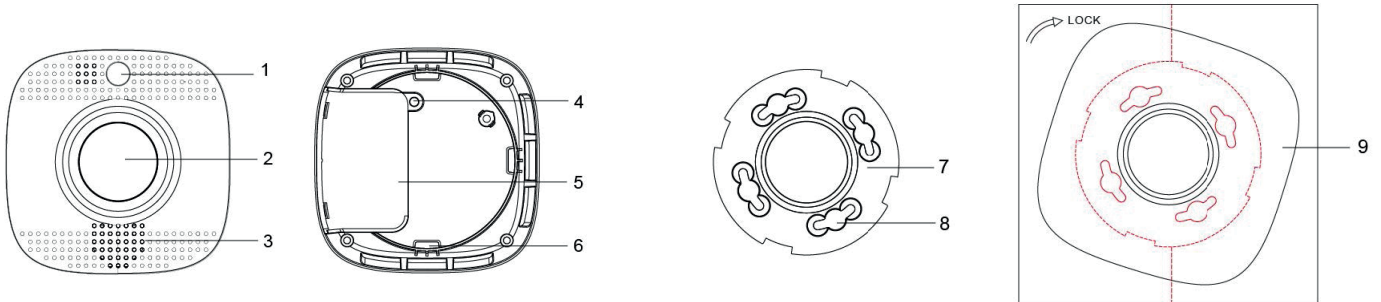
1. LED Indicator / Test Button / Emergency Light

Red LED

- Quick flash: Alarming.
- Flashes every 1 second: Smoke Detector under Alarm Silence Mode.
- Flashes every 2 seconds: Smoke Detector under warmup and calibration process.
- Flashes every 4 seconds with Orange LED: battery exhausted.
- Flashes briefly: When Learn Button is pressed to see if the device is functioning normally.
- Turns ON briefly: Transmitting signal.

Orange LED

- Flash every second: Device power on/Calibration failed.
- Flashes every 4 seconds with RED LED: battery exhausted.
- Flashes every 5 seconds: Detecting smoke failed or device malfunctioning.
- Flashes every 45 seconds: Low battery condition.

Learn/Test Button

- Press the button once to:

  - » Send a supervision / test signal.
  - » Check smoke detection chamber.
  - » Silence alarm.

- Press and hold the button for 10 seconds to enter calibration process.

White LED (Emergency Light)

- The emergency light will begin to flash slowly to alert uses that the system is alarming. (SD-29-HME only)
- The LED light will turn in for 60 seconds upon any movement detection.
- For interconnected Smoke Detectors, their white LEDs can be controlled by the system panel according to set Home Automation Rules.

2. IR Lens (SD-29-HM/SD-29-HME only)

3. Buzzer

4. Battery Compartment Fixing Screw

5. Battery Compartment

6. Hooks

7. Mounting Bracket

8. Mounting Holes

- The Hooks of the Mounting Bracket can hook into this Mounting Hole.

9. Mounting Sheet

Features

Battery

- Three CR123 3V Lithium batteries are used to supply power to the Smoke Detector.
- The Smoke Detector has a foolproof mechanism which prohibits cover closure without first installing battery.
  Press down on the tab and insert three new batteries into the compartment.
- When the Smoke Detector is low on battery, a low battery signal will be transmitted along with regular signal transmissions.
  The Orange LED will flash with accompanying low-volume beep once every 45 seconds.
- The Red and Orange LED will flash once every 4 seconds when the battery is exhausted.

<NOTE>
When changing the battery, after removing the old battery, press the Test Button twice to fully discharge before inserting new battery.

Getting Started

Step 1. Put Control Panel into learning mode. Refer to Control Panel manual for details.

Step 2. Insert three CR123 3V Lithium batteries to power on the Smoke Detector.
Orient the battery according to the battery compartment polarity before insertion.

Step 3. The Smoke Detector will emit 2 short beeps and begin warm up for 1 minute. The Red LED will flash every 2 seconds.

Step 4. During the 1 minute period, learn in the Smoke Detector.

> **For SC model (SD-29-HME-SC)**
> » Press and hold the Learn/Test button for 3 seconds to transmit a Smoke/Temperature sensor learn code.
> » Press the Learn/Test button once to transmit an IR sensor learn code.
>
> **For non-SC model (SD-29-H/SD-29-HM/SD-29-HME)**
> » Press the Learn/Test button once to transmit a learn code.
>
> If the Control Panel receives the signal, the Smoke Detector will emit a 2-tone beep.
> Refer to Control Panel manual to complete learning process.

Step 5. When the Smoke Detector completes warm-up, it will emit a beep to indicate it has entered calibration mode.
The calibration mode lasts for 1~9 minutes. The Red LED will continue to flash every two seconds during calibration.
Learning the Smoke Detector is prohibited during this period.

Step 6. When calibration is completed, the Smoke Detector will emit 2 short beeps and turn off LED to return to normal mode.
If the Smoke Detector is not learnt into panel previously, press the Learn/Test button now to complete learning.

Testing the Smoke Detector

By pressing the Test Button on the Smoke Detector, you can test if the Smoke Detector is functioning normally.

- If the Smoke Detector functions normally, the Red LED will be on for 2 seconds followed by a 2-tone beep.
- If the buzzer sounds 2-tone beeps 3 times, the "**Optical Chamber**" on the Smoke Detector is either dirty or out-of-order.

Test Mode for IR Function

- The Smoke Detector can be put into Test mode by pressing the Test Button. Every time the Test Button is pressed,
  the Smoke Detector will transmit a test signal to the Control Panel for radio range test and enter the test mode for 3 mins.
  It will exit Test Mode automatically after 3 minutes and return to normal mode. In Test mode, the sleep timer is disabled,
  and the LED indicator will flash every time a movement is detected.

Supervision

- The Smoke Detector will transmit a supervision signal to report its condition regularly according to user setting.
  The factory default interval is 30~50 minutes. The user can also press the Test Button once to transmit a supervision signal manually.

Temperature Detection (SD-29-H/SD-29-HM/SD-29-HME only)

- The Temperature Sensor measures temperature every 10 seconds, and transmits temperature reading to the Control Panel every 30~33 minutes.
- Users can also press the Test Button once to transmit current temperature reading manually.

Alarm Activation

The Smoke Detector will activate fire alarm when either of its smoke detection or high heat detection function is triggered. When an alarm is activated, the Smoke Detector will transmit alarm signal and raise alarm with its built-in buzzer.

Smoke Detection:

- The Smoke Detector checks smoke concentration every 8 seconds
- The alarm is activated whenever the smoke concentration exceeds the detection threshold, and will continue until the smoke concentration drops below alarm threshold.
- The Red LED will flash quickly during alarm.

Heat Detection:

- The Smoke Detector checks temperature every 10 seconds. The alarm will be activated in the following conditions:
    - » When the temperature rises by 8.25°C per minute (Rate of Rise).
    - » When the temperature exceeds 57.25°C (High Heat).
- The Red LED will flash every second during alarm. The Smoke Detector will only stop alarming if the temperature drops below alarm threshold.
- If the alarm was triggered by Rate of Rise condition (8.25°C per minute or more), the temperature must drop to 4°C below highest temperature detected for the detector to stop alarming.
- If the alarm was triggered by High Heat condition (57.25°C), the temperature must drop below 49°C for the Smoke Detector to stop alarming.
- The Smoke Detector will transmit a restore signal if no smoke or high heat is detected for 160 seconds.
- If the alarm condition persists, the Smoke Detector will resend alarm signal every 2 minutes.

IR Detection: (SD-29-HM/SD-29-HME only)

- The Smoke Detector will transmit signal to the Control Panel if any movement is picked up within the IR detection coverage. The white LED will light up for 60 seconds upon movement detection.

Emergency Light (White LED) (SD-29-HME only)

- The Smoke Detector has a built-in emergency light that can provide visual alerts in case of emergency. When the Smoke Detector is activated, the emergency light will begin to flash slowly to indicate the system is alarming.
- When any movement is picked up within the IR detection coverage, the white LED will light up for 60 seconds.

Interconnection (SD-29-HME-SC only)

- The Smoke Detector is interconnected with other Smoke Detector in the alarm system. When a Smoke Detector activates alarm, the Control Panel will notify other Smoke Detectors to also raise alarm even if they have not detected smoke yet. The alarm length will be in accordance with the Control Panel's setting.
- You cannot press the function button to silence alarm activated by other Smoke Detectors.
- Alarm will be restored only after 3 minutes timeout or until the other Smoke Detector which triggers alarm transmits a restore signal.
- The interconnected Smoke Detectors can be controlled by the system panel to turn on their white LEDs according to the set Home Automation Rules.

Alarm Silence

- When the Smoke Detector is alarming, pressing the Test button will put the Smoke Detector into Alarm Silence mode to silence the alarm for 9 minutes. 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 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 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 Smoke Detector will emit a 2-tone beep and return to normal operation without sounding alarm.
- If smoke concentration still exceeds alarm threshold, the Smoke Detector will start alarming again.
- If smoke concentration continues to rise during Alarm Silence period and exceeds a second alarm threshold, the Smoke Detector will start alarming again. An alarm activated by exceeding the second alarm threshold could not be silenced by pressing the test button.

Recalibration

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

- Press and hold the Test Button for 10 seconds and release when the Smoke Detector emits 2 beeps. The device will sound another beep after 5 seconds and begin calibration. The Red LED will flash every 2 seconds to indicate.
- Calibration process lasts 1~9 minute.
- When calibration is finished, the 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 Smoke Detector will beep continuously, and the Orange LED will flash every second. Please remove the battery, press the Test Button twice to fully discharge, and then reinsert the batteries to restart Smoke Detector.
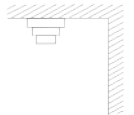
Installation

Installation Guideline

- It is recommended that the installation site be in the center area of the ceiling.

- Do not locate the detector in the following locations:

  » The Kitchen – Smoke from cooking might cause an unwanted alarm.
  » 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.

At the top of
a stairway

At least 60 cm
from the wall

Installation Recommendation

- It is recommended to install the Smoke Detector in the following locations.

  » In a ceiling area with full view of its detection coverage unobstructed by appliances and furniture.
  » Near the entrance of a room or house to monitor entry activity.

- Limitations

  » Do not install the Smoke Detector exposed to direct sunlight.
  » Avoid installing the Smoke Detector in areas where devices may cause rapid change of temperature in the detection area, i.e. air conditioner, heaters, etc.
  » Avoid large obstacles in the detection area.
  » Do not pointing directly at sources of heat e.g. Fires or boilers, and not above radiators.
  » Avoid moving objects in the detection area i.e. curtain, wall hanging etc.

- Press the Test Button to enter Test Mode. Walk around the protected area noting when the LED lights up and check that the detection coverage is adequate.

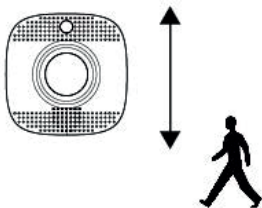- When detection coverage is found to be satisfying, installation is now completed.

Mounting the Smoke Detector

Step 1.   Place the Smoke Detector at desired mounting location and use the Range Test function to make sure the Smoke
Detector can be received by the Control Panel at mounting location.

Step 2.   Take out the mounting sheet included in the package. The picture's size equals the Smoke Detector's actual size and
the perforated design allows for easy tear-off after installation.

Step 3.   Position the sheet tight against the ceiling and use the four holes as template to drill holes and insert wall plugs if required.
Ensure the wall plugs are flush with the mounting surface.

Step 4.   Place the mounting bracket on top of the mounting sheet and screw it onto the wall.
The bracket provides bidirectional flexibility. Users can either rotate the bracket clockwise or counterclockwise to lock the hook.

Step 5.   The Smoke Detector has three notches on its back cover for easy identification.

Step 6.   Hold the Smoke Detector with extra care and align the three notches with the hooks on the mounting bracket.

Step 7.   Rotate clockwise to lock the hook.

Step 8.   Installation is now complete. You can now tear off the mounting sheet.

●   The Smoke Detector is designed to be mounted on the ceiling. The ideal mounting height for the Smoke Detector
is 2.7 meters to 3 meters. Mounting above 3 meters can affect detection performace. **(SD-29-HM/SD-29-HME only)**

●   The Smoke Detector provides detection coverage of a 360° circle with 5 meters in diameter.
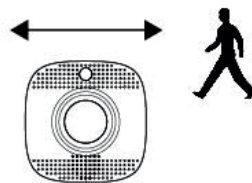Please refer to below figures for the installation details.
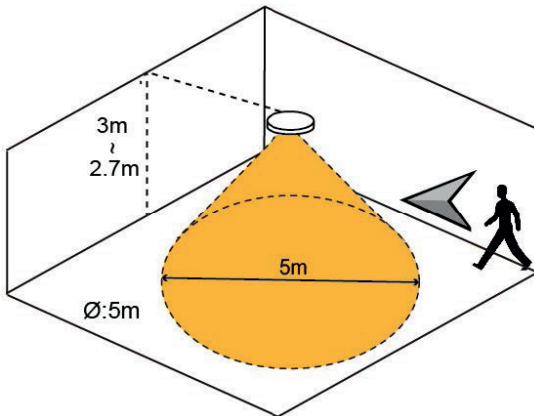
●   When mounted on the ceiling, the PIR has better detection performance against horizontal movement.

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