red SMOKE ALARMS

MAINTENANCE AND TROUBLESHOOTING GUIDE

red SMOKE ALARMS

WARRANTY 10 YEARS

100% AUSTRALIAN OWNED AND OPERATED

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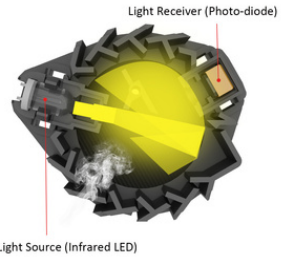
SMOKE ALARM CARE AND MAINTENANCE

Photoelectric Technology

How the photoelectric chamber works

- IR LED light emits a beam of light across an enclosed chamber.
- A photoelectric sensor inside the chamber receives refracted light when the IR LED light beam hits particles in the air



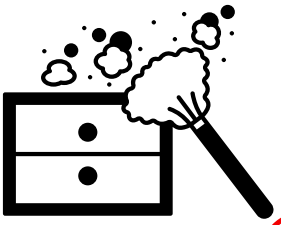
What are the main causes for photoelectric smoke alarms to trigger?

SMOKE & ASH

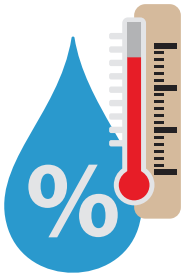
- Cotton
- Wood
- Heptane Chemical
- Flaming plastics (Polyurethane) fire

INSECTS

DUST & LINT

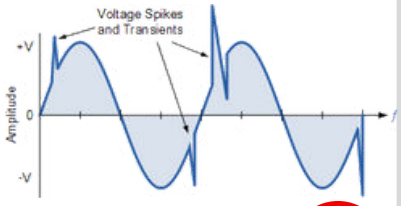


HUMIDITY

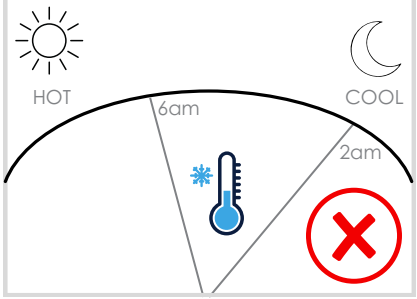


CONDENSATION

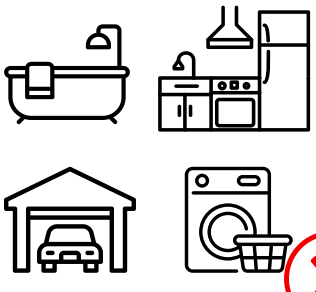
POWER DISRUPTIONS



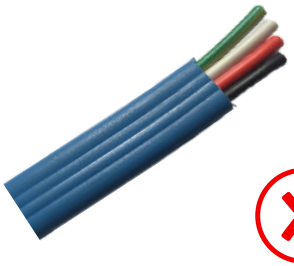
TEMPERATURE VARIANCE



WRONG LOCATION



INDUCED CURRENT 4 CORE CABLE



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SMOKE ALARM CARE AND MAINTENANCE

Thank you from Red Smoke Alarms

If your smoke alarm is operating correctly, the red LED will flash every 32-60 seconds. In the event of a triggering alarm, we suggest following our troubleshooting tips below.

Routine maintenance

Monthly testing

Test by pushing the 'test' button on the cover of the smoke alarm unit. This will sound the alarm if the electrical circuit, alarm and battery are working correctly. If no alarm sounds, the unit has a defective battery or another fault that needs immediate attention.

Monthly cleaning

Use a vacuum cleaner with a soft brush to vacuum all sides and the cover of the smoke alarm.

The battery

Your smoke alarm 'chirps' every 32-60 seconds, indicating a fault with your alarm such as a low battery.

Your smoke alarm will warn of a low battery for at least 30 days. Failure to replace the battery (or the smoke alarm) after this time could result in you not being alerted in the case of a fire.

Insects, dust or dirt

Insects and dust are a common cause for triggering smoke alarms.

The smoke alarm internal sensor can be triggered by dust and bugs inside the unit. Regularly dust and vacuum your smoke alarm as per our maintenance tips. As added protection, spray insect repellant onto a clean cloth and wipe the outside area of the alarm. DO NOT spray directly onto the alarm.

Correct position of your smoke alarm

Photoelectric smoke alarms are sensitive to high humidity, steam and dust so installation near areas such as bathrooms, kitchens, laundries, open windows, fans or air ducts can trigger alarms.

Smoke alarms should be installed as close to the centre of the ceiling where possible, and a minimum of 30cm from side walls. Smoke alarms suitable for wall mounting should be positioned a minimum of 30cm below and maximum 50cm from the ceiling. If in doubt, contact a professional installer.

Extreme weather conditions

High humidity and/or rapid changes in temperature will affect your smoke alarm.

Additional design measures have been taken to ensure smoke alarm reliability in humid conditions. However, smoke alarms can confuse dense humid air particles for smoke particles in extreme humidity. Rapid changes in temperature in the early hours of the morning can result in false alarms, due to the condensation and dew point effects. Correctly placing your smoke alarms away from external windows, doorways and hallways with air draughts will help reduce this. Smoke alarms are NOT designed for external applications including garages, patios and underneath the house.

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SMOKE ALARM TROUBLESHOOTING TIPS

Identify and hush smoke alarms

If your smoke alarm emits a false alarm and there isn't a fire emergency, take the following steps:

1. During an active alarm, the red LED on the triggering alarm will continuously flash.
2. Press HUSH/TEST button for 1-2 seconds to silence ALL smoke alarms.
3. The triggered alarm will flash RED.
   It will flash every 4 seconds for the next 72 hours.
4. Take note of this alarm to perform closer inspection and maintenance to prevent additional false alarms.

(i) The red LED may appear faint in a well lit room.
(ii) There may be a slight delay in silencing the smoke alarm if it is mid-way through the alarming sequence, due to the timing sequence of the Radio Frequency (RF) interconnection.

Smoke alarm controller

We recommend the installation of a Smoke Alarm Controller, which allows you to test, silence and locate triggered smoke alarms without the need to reach up to the alarms on the ceiling.

Red Smoke Alarms

During a triggered alarm, identify and hush smoke alarm with the Smoke Alarm Controller

1. **Press LOCATE**
   Pressing LOCATE will silence all alarms except the triggering smoke alarm.
2. Check the triggered alarm to ensure there is no immediate danger.
3. Press and hold the **SILENCE** button on the controller for 1-2 seconds. There may be a slight delay in silencing the alarm if it is mid-way through the alarming sequence. This will silence the alarm with reduced sensitivity for 10 mins while remaining fully operational, then return to normal. If a fire is present and smoke intensifies, it will continuously trigger. Please evacuate safely.

Note which smoke alarm has triggered in case you need to perform maintenance on that alarm or if a technician call-out is required. This may include correct location positioning.

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SMOKE ALARM BATTERY

The battery

If your smoke alarm 'chirps' every 32-60 seconds, this indicates a fault with your alarm such as a low battery.

Your smoke alarm will warn of a low battery for at least 30 days. Failure to replace the battery (or the smoke alarm) after this time could result in you not being alerted in the case of a fire.

To replace the battery in your smoke alarm

Red R9 (9V battery alarms)

Open the unit and remove the 9V battery. Once the battery is removed, hold the TEST/HUSH button down for 3 seconds to drain any residual power from the unit. Then put the new battery in and reinstall. Test the alarm.

Red R240 & Red R240P (240V hardwire with 9V backup battery alarms)

Open the unit and remove the battery. Once the battery is removed, hold the TEST/HUSH button down for 3 seconds to drain any residual power from the unit. Then put the new battery in and close the unit back. Test the alarm.

Red R10 & Red R10RF (3V 10Yr Lithium battery alarms)

These smoke alarms are designed with a 3V Lithium battery that is non-rechargeable and non-replaceable to meet the Australian standards AS3786. If the alarm is older than the 10Yr service life, replacement of the complete alarm is required.

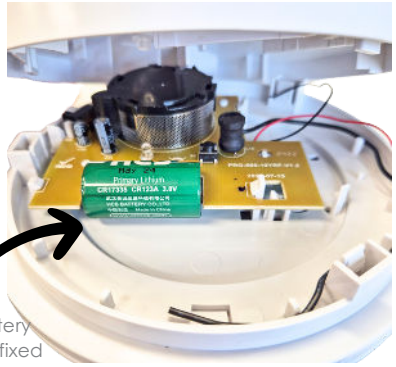
If the alarm is within the 10Yr service life, contact your smoke alarm service provider for advice.

9V battery

Types: Zinc carbon HD - 1 Yr
Alkaline - 3Yr standby life

Replace every 12 months

3V Lithium battery



Non-rechargeable
Non-replaceable

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SMOKE ALARM INSECTS DUST & DIRT CAUSING FALSE ALARMS

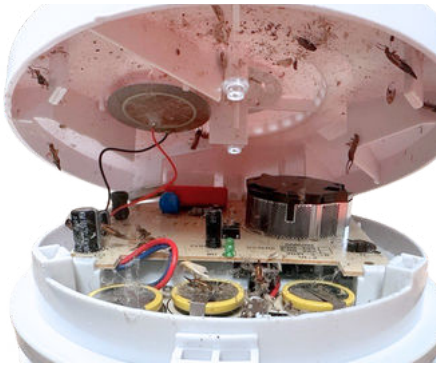
Insects and dust are a common cause for triggering smoke alarms

Photoelectric smoke alarms are highly sensitive and are designed to detect smoke particles using photoelectric technology. The LED light beam refracts when hitting particles in the air, and triggers the sensor. The most common cause of false alarms is fine particles that replicate smoke ash entering the detection chamber, such as dust and insects.

Insects commonly like to nest inside smoke alarms due to its enclosed housing with warm electrical circuit boards and lights. False alarming can occur at night when spiders and insects are most active and trigger the sensor. Renovations and dust build-up can enter the smoke detection chamber and collect, triggering your alarms

PREVENTION:

Smoke alarms require regular cleaning every 4-6 weeks



Insects nesting inside an alarm

Excessive dust inside alarm

Smoke alarms require regular cleaning

Smoke alarms require regular maintenance to ensure effective operation.

Proper maintenance can reduce the likelihood of false alarms. We recommend cleaning your smoke alarms every 4-6 weeks to remove dust, insects and cobwebs.

1. Vacuum the outer edge of the alarm with the soft brush attachment.
2. Apply insect spray onto a cloth, and wipe it around the outside of the alarm. **DO NOT** spray insect spray directly into the alarm, as this will activate it and leave an aerosol reside behind.
3. If spiders are nesting in your smoke alarms, the smoke alarm should be **replaced**.
4. Once cleaned, **test your smoke alarm** by pressing the test button. This ensures it is functioning correctly after cleaning.

Research and look for smoke alarms and stainless steel mesh for better protection. Our Red Professional series are an ideal option.

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SMOKE ALARM POSITIONING

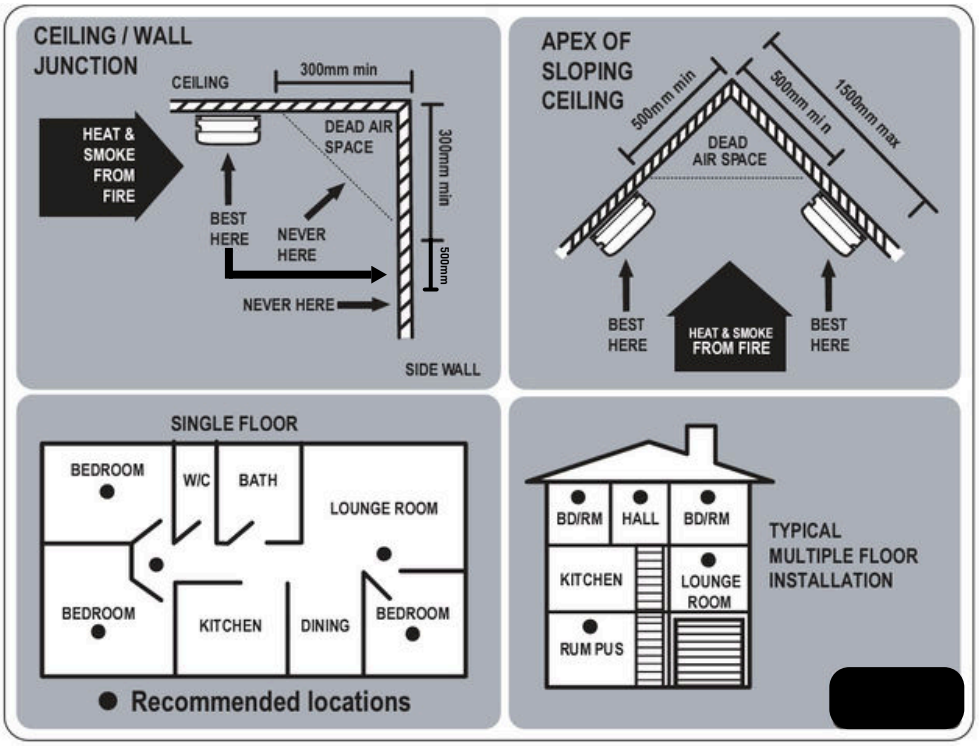
Correct position for your smoke alarm

Photoelectric smoke alarms are sensitive to high humidity, steam and dust so installation near areas such as bathrooms, kitchens, laundries, open windows, fans or air ducts can trigger alarms.
Smoke alarms should be installed as close to the centre of the ceiling where possible, and a minimum of 30cm from side walls.
Smoke alarms suitable for wall mounting should be positioned a minimum of 30cm below and maximum 50cm from the ceiling. If in doubt, contact a professional installer.

Air Movement:
High air movement can cause smoke alarms to react to normal air currents. Ensure that alarms are not placed near ceiling fans or air conditioning units. Smoking indoors, including cigarettes and vaping can also trigger false alarms.

Placement:
Smoke alarms should not be installed in areas like the laundry room, kitchen, or garage. These spaces are prone to unfavourable conditions—such as steam, cooking fumes, or vehicle exhaust—that can trigger false alarms.

Recommended installation guidelines



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SMOKE ALARMS AND EXTREME WEATHER CONDITIONS

Extreme weather conditions

High humidity and/or rapid changes in temperature will affect your photoelectric smoke alarm.
Additional design measures have been taken to ensure smoke alarm reliability in humid conditions. However, photoelectric smoke alarms will confuse dense humid air particles for smoke particles in extreme humidity due to the refraction of light through humid air, triggering the photoelectric sensor.

Rapid changes in temperature in the early hours of the morning can result in false alarms, due to the condensation caused by dew point effects. Correctly placing your smoke alarms away from external windows, doorways and hallways with air draughts subject to rapid temperature changes will help reduce false alarms.
Smoke alarms are NOT designed for external applications including garages, patios and underneath the house.

Humidity
If humidty levels exceed 85%, false alarms are likely to occur. The majority of false alarms in the early hours of the morning are from when the humid air cools and starts to condensate around the house.

Temperature
Red Smoke Alamrs perform in the temperature range of 0-45°C. Anything under or above can cause false alarming.

To combat this, ensure your home is well-ventilated, without draughts.

Red Smoke Alarms NEW **Professional** series is designed with temperature compensating firmware and stainless steel mesh that has improvements against these environmental conditions.

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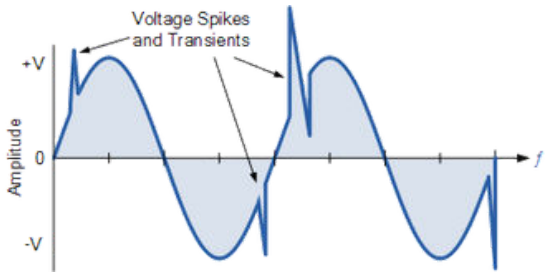
SMOKE ALARMS DUE TO POWER DISRUPTIONS

POWER DISRUPTIONS AND SPIKES
Hardwired 240V smoke alarms may brielfy alarm when power is interrupted

Unstable power interruptions can lead to electrical spikes that cause alarms to beep or sound.
Electrical suppliers may inject control signals into the network, which can cause interference or spikes in power that can trigger smoke alarms to false alarm. (This is also known as digital signals to remotely turn devices ON/OFF).
Power disruptions can occur when:

1. Electricity companies switch grids in the early hours of the morning.
2. There is an electricity spike/surge.
3. Electricity is interfered with due to a shared circuit (eg. lights or appliances that automatically cycle ON/OFF)

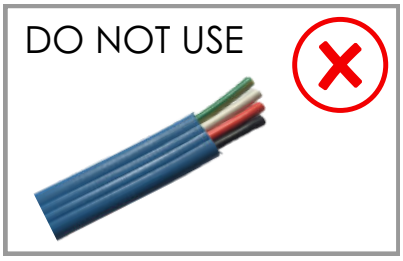
Installation of an EMI or ripple signal filter may help reduce electrical interference.
Ensure your smoke alarms are installed on their own independent circuit.



Incorrect 240V hardwire using 4 core cable

Installation of 240V smoke alarms must not be carried out with 4 core cable due to the induced currrent (IC) created through electromagnetism (Lenz's Law).

1. 240V smoke alarms must be installed with 3 core 1mm cable as per NCC guidelines.
2. The interconnect terminal between two alarms must use separate single core 1mm SDI cable.
3. This is required as the interconnect terminals and alarms are designed to function between 3V to 9V when operating on backup battery supply.
4. This low voltage can be simulated in a 4 core installation when the 240V current creates an Induced Current (IC) through the 4th core used for the interconnection (Lenz's Law)



4 core cable