



FIRE  TEK[®]

Smoke & Heat Alarms



pdl.co.nz/featured-ranges-hub/smoke-alarms

Why Home Fire Safety Matters

Home fires are fast, deadly and often under protected, working smoke & heat alarms give families the early warning time they need.



Early warning can help save lives.

A fire can take hold quickly. Fire and Emergency NZ advises that a fire can take hold in three minutes, and working smoke alarms are an important part of helping people get out safely.

When a fire starts at night, early warning becomes even more important. Fire and Emergency NZ has warned that people cannot rely on smell while sleeping, and working smoke alarms are critical because a person may not wake up to smoke without an alarm.

Working alarms make a difference

People are four times more likely to survive a house fire if they have working smoke alarms.

But many homes are not protected properly

Fire and Emergency New Zealand reports that 40% of residential fires attended last year did not have smoke alarms installed.

Quick Safety Check:

Walk through your home and ask yourself:

- Is there a working smoke alarm on every level?
- Are sleeping areas protected?
- Are alarms clean and tested?
- Are any alarms more than 10 years old?
- Do kitchens, garages or laundries need a different alarm type?
- Have you asked a licensed electrician to review your setup?

Latest Regulations and Compliance Updates

New Zealand Building Code

From 1 August 2026, new building consent applications must follow the latest New Zealand Building Code requirements. New homes and relevant consented renovations require an interconnected smoke alarm system that complies with NZS 4514:2021.

NZS 4514:2021 sets requirements for alarm selection, placement, installation, testing and maintenance, helping ensure dependable coverage and warning across the home.

Key Requirements

- Install smoke alarms in all bedrooms, living spaces, hallways and landings.
- Provide alarm coverage on every level of the home.
- Use wired or wireless interconnection so all connected alarms sound together.
- Use an approved power option, such as 230 V mains or a sealed 10-year battery.
- Include test and hush functionality.
- Install a kitchen-suitable alarm, such as a heat alarm, in an enclosed kitchen or scullery where required.
- Follow manufacturer instructions and applicable New Zealand Building Code requirements.



Rental Properties

Rental homes must have working smoke alarms in every sleeping room or within 3 metres of each bedroom door, with at least one alarm on every level of a multi-level home.

Check Your Project Requirements

Requirements vary by property type, occupancy and renovation scope. Always confirm the applicable Building Code pathway and use a licensed electrical worker for mains-powered installations.

Smoke Alarms

What do they do?

Purpose

- Detects smoke particles in the air as an early sign of fire
- Provides an early warning before fire spreads or becomes dangerous
- Alerts occupants with a loud alarm so they can evacuate quickly

Why it's important

- Gives people more time to escape during a fire
- Helps protect occupants, especially when sleeping
- Detects smouldering fires, such as electrical faults or furniture fires
- Supports home and building fire safety compliance

How does it work?

Detection Process

1. Smoke enters the internal sensing chamber through hidden vents or airflow gaps.
2. When smoke enters, smoke particles scatter the LED light.
3. The scattered light reaches the photodiode.
4. The photodiode triggers the alarm circuit, activating the loud warning sound.



Key Features

Internal

- **Photoelectric Chamber:** Where smoke detection occurs
- **Light source / LED:** Produces the light beam inside the chamber
- **Light sensor / photodiode:** Detects scattered light caused by smoke
- **Alarm circuit:** Powers the siren

External

- **Test / Hush Button:** Used to test the alarm. Can temporarily silence nuisance alarms
- **Indicator Light:** Shows power, operating status, alarm mode, or fault condition
- **Outer Cover:** Protects the internal electronics & helps guide air into the internal sensing chamber
- **Mounting Base:** Secures the smoke alarm to the ceiling or wall

Heat Alarms

What do they do?

Purpose

- Does not detect smoke
- Designed to detect heat caused by fire
- Activates when a heat condition reaches the alarm's trigger point, either a rapid rise in temperature or a high-temperature threshold
- Provides fire detection in areas where smoke alarms may not be suitable

Why it's important

- Useful where smoke, dust, steam or fumes may cause nuisance alarms
- Helps reduce false alarms in environments such as: kitchens, garages, laundries and dusty or humid areas
- Adds another layer of fire protection when used with smoke alarms
- Helps detect fires that create significant heat, especially in higher-risk utility areas

How does it work?

Detection Process

1. Heat from a fire enters the alarm through the heat sensor vent
2. Internal thermal sensor monitors the air temperature around the alarm
3. Alarm can activate in 2 ways:
 - High temp threshold: 54°C - 62°C **OR**
 - Rapid temp rise: increases unusually quickly over a short period
4. Once the heat condition reaches the trigger point, alarm circuit activates the siren



Key Features

- **Thermal Sensor:** Detects high temp or rapid temperature rise
- **Heat Sensor Vent:** Allows hot air to reach the internal thermal sensor
- **Alarm Circuit:** Processes the sensor signal and decides when to activate the alarm
- **Siren:** Produces the loud warning sound
- **Test / Hush Button:** Used to test the device or temporarily silence the alarm



Why they work best together

Each alarm has a limitation

- Smoke alarms can false trigger in areas with steam, dust or cooking fumes
- Heat alarms reduce nuisance alarms, but only respond later until the heat condition is reached

Importance of Interconnection

- When one alarm detects danger, every connected alarm sounds at the same time
- This helps alert people wherever they are in the home, including bedrooms, closed rooms or distant areas
- Result: faster whole-home warning, giving occupants more time to respond and evacuate

Where should they be placed?

Alarm type	Best suited for	Why
Smoke alarms	Bedrooms, hallways and living areas	Early smoke detection in areas where people need fast warning.
Heat alarms	Kitchens, garages and laundries	Helps reduce nuisance alarms caused by cooking fumes, steam or dust.
Smoke + heat alarms, interconnected	Multi-level homes, larger floorplans and new builds	Helps create a stronger whole-home warning system, so when one alarm sounds, other connected alarms can also sound across different areas of the home.

Early warning

(Smoke Alarm)

+

Protection in high nuisance areas

(Heat Alarm)

=

Safer & smarter home protection

Interconnected system to alert the entire household

Note: Heat alarms should not be used as a direct replacement for required smoke alarms unless local legislation, building codes and installation standards allow that application.

Why PDL?

Easy to chose: PDL has a strong presence in home electrical safety and is recognised for reliable, standards-led products.

Trusted safety choice: PDL is a recognised brand offering reliable, standards-led solutions for home electrical safety.

Fewer nuisance alarms: Heat alarms help reduce false alarms in areas where smoke alarms may be triggered by cooking fumes, steam or dust.

Designed for modern homes: Updated product design, surface-mount and flush-mount options, and a cleaner look help PDL alarms suit today's interiors.

Lower maintenance options: Selected models include 10-year lithium battery backup to reduce ongoing battery handling.

Electrician supported: PDL alarms are designed to support electricians with installation flexibility, interconnection options and compatibility with selected existing PDL bases.



PDL Range

FireTek® Smoke and Heat Alarm Range

Alarms	Product	Key Features
NEW Heat Alarm (755HA5L)		• Standalone heat alarm for areas unsuitable for smoke alarms • 230V powered with 10-year battery backup • Wireless connection to existing PDL smoke alarms • Compatible with existing smoke alarm installation bases • 10-year warranty
Smoke Alarm 240V (755PSMA5)		• Direct replacement for 755PSMA4 • Photoelectric smoke alarm for residential homes • New robust design with upgraded dual-emission smoke chamber • Interconnectable (wired or wireless) • Compatible with existing PDL mounting base 755RFB2
Smoke Alarm 240V 10-Year Lithium Battery (755PSMA5L)		• Replacement for 755RLPSMA4 • Sealed 10-year lithium battery • Photoelectric smoke detection • New robust design and upgraded smoke chamber • Interconnectable (wired or wireless) • Compatible with existing PDL mounting base 755RFB2 • 10-year warranty
Smoke Alarm (755LPSMA4)		• Surface mounting • Lithium Battery powered, 10 year sealed lithium battery backup • Built in wireless • Interconnectable up to 40 wireless devices • 5 year warranty
Smoke Alarm (755PFM4)		• Recessed mounting • 9V replaceable battery backup • Interconnectable up to 40 wired devices • 5 year warranty

PDL Range

Wiser® Smoke Alarm Specifications

New Offer	Product	Key Features
Wiser 240V Round Smoke Alarm (755WSA)		• Fits onto existing PDL Fire Tek® bases. • When used with Wiser® it can provide push notification alerts and trigger automations. • Dual spectrum photoelectric sensing technology helps to mitigate false alarms for added confidence. • Lithium 10yr battery backup. • Can be wired or wireless interconnected to all PDL smoke alarms.
Wiser 240V Square Smoke Alarm (CLP599WSA)		• When used with Wiser® it can provide push notification alerts and trigger automations. • Dual spectrum photoelectric sensing technology helps to mitigate false alarms for added confidence. • Lithium 10yr battery backup. • Can be wired or wireless interconnected to all PDL smoke alarms.
Wiser Lithium battery powered Smoke Alarm (PDL599WSAL)		• When used with Wiser® it can provide push notification alerts and trigger automations. • Dual spectrum photoelectric sensing technology helps to mitigate false alarms for added confidence. • Powered by a 10-year sealed-in lithium battery. • Can be wireless interconnected to Wiser® smoke alarms and the 755RFB2 and 755LPSMA4 Fire Tek® smoke alarm



Accessory Specifications

New Offer	Product	Key Features
Relay Base for 240V Smoke Alarms (755RB5)		• Replacement for 755RB • Enables compatible smoke alarms to interface with external devices and systems. • Improved markings support easier installation and maintenance • Built-in 10-year battery backup
Wireless Mounting Base for Smoke Alarm (755RFB2)		• Enables 755PSMA5 and 755PSMA5L smoke alarms to be wirelessly interconnected. • Ideal for upgrades, extensions, or installations where cabling is difficult. • Supports systems with up to 40 compatible interconnected alarms. • A remote test/hush input to allow testing or silencing from a momentary wall switch.

Maintenance

Keep your alarms ready

Installing the right alarms is only the first step. Alarms need to be maintained so they are ready when they are needed.

Fire and Emergency New Zealand recommends testing smoke alarms monthly, vacuuming or dusting alarms every six months, checking expiry dates yearly, and replacing all smoke alarms every 10 years.

Simple checklist

Monthly

- Test each alarm using the test/hush button.
- Clean around the alarm to help prevent dust or insect build-up.
- Check battery backup operation according to product instructions.

Yearly

- Replace 9V backup batteries where required.
- Use a memorable date, such as daylight saving or a household reminder, to stay on track.

Every 10 years

- Replace the entire alarm once it reaches the end of its service life.



A working alarm is only working if it is tested, clean and in date

Do not ignore beeping, damage, expiry dates or missing alarms. If in doubt, speak with a licensed electrician.



Ready to make your home safer?

Home fire safety should be simple to understand and easy to act on. With PDL smoke and heat alarms, homeowners can feel confident they are choosing a trusted, standards-led solution designed for modern homes.



Speak to your licensed electrician

Your electrician can help you select the right combination of smoke and heat alarms for your home, renovation, rental property or new build.

Ask about:

- Which alarm type is right for each area
- Whether your current alarms need replacing
- Interconnection options
- 10-year lithium battery options
- Local compliance requirements

Learn More

Visit <https://www.pdl.co.nz/featured-ranges-hub/smoke-alarms> or speak to your local PDL or Schneider Electric partner



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