



Installation and User Guide

FA4150BW Mains Powered Bluetooth Smoke Alarm

FA4250BW Mains Powered Bluetooth Heat Alarm

FA4452BW Mains Powered Bluetooth Smoke and Heat Alarm

FA4451BW Mains Powered Bluetooth Heat and Carbon Monoxide Alarm

FA4453BW Mains Powered Bluetooth Smoke, Heat and Carbon Monoxide Alarm



TEST YOUR ALARM WEEKLY

PLEASE READ THIS GUIDE IN FULL BEFORE USING YOUR ALARM!

230V AC (V) 50 Hz mains powered alarm. Non replaceable 3V Panasonic rechargeable lithium battery backup. CLASS II apparatus. **WARNING:** Wiring should be installed by a qualified electrician in accordance with BS7671. We advise you to follow the new harmonized cable colour coding as specified in BS7671.

WARNING: Experience has shown that children may not be woken by fire alarm tones. It is important that children are never left alone in a house. Families should have a fire escape plan that is rehearsed, so that everyone knows how to escape when fire occurs. The immediate priority when fire occurs is to ensure that any sleeping children are woken from sleep and are immediately taken to a place of safety outside the property, along with all other occupants. The fire and rescue service should always be called without delay, no matter how small the fire.

This user guide is also available in large text and other formats.

Please call **0330 094 5830** for further information.

FA4150BW Smoke Alarm



FA4250BW Heat Alarm



FA4452BW Smoke & Heat Alarm



FA4451BW Heat & CO Alarm



FA4453BW Smoke, Heat & CO Alarm



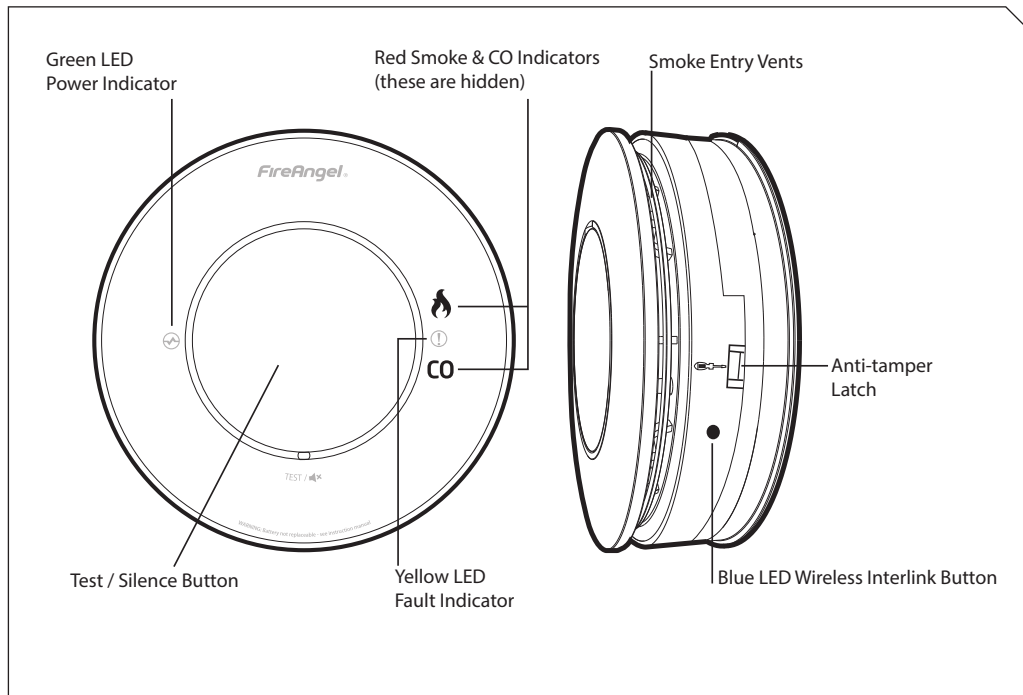
INSTALLER GUIDE

Introduction	5
System Grades and Categories	7
Positioning	8
Hardwire Installation	11
Anti-Tamper	13
Hardwire Interconnect	13
Bluetooth Wireless Interlink	14
Interlinking with the mobile app	15
Interlinking manually	15
Mixed Systems	16

USER GUIDE

Alarm Test	17
Alarm Smart Silence™	18
Low Battery Warning	19
Sleep Easy™	19
Fault Indication	19
End of Life	19
Nighttime Sensing	19
Alarm Memory	20
Fire Safety	21
CO Awareness	22
Product Indicators	24
Maintenance	26
Disposal	26
Technical Specifications	27
Warranty	28

Please note: This user guide covers a number of different models. Some of the illustrations may look different to your particular model. Please see model numbers below diagram for specific features.



FA4150BW Smoke Alarm - will display the red 🔥 LED indicator.

FA4250BW Heat Alarm - will display the red 🔥 LED indicator.

FA4452BW Smoke and Heat Alarm - will display the red 🔥 LED indicator.

FA4451BW Heat and Carbon Monoxide Alarm - will display the red 🔥 and ☠️ LED indicators.

FA4453BW Smoke, Heat and Carbon Monoxide Alarm - will display the red 🔥 and ☠️ LED indicators.

INTRODUCTION

✓ DO:

- Leave this guide with the end user.
- Connect the alarm as late as possible in an installation, particularly in new builds, to avoid contamination.
- Remove the dust cover before applying power.
- Ensure that after any building work or after repositioning large items of furniture (beds, sofas, shelving units etc.), you carry out an alarm test on all alarms to ensure they are still working.
- Test your alarm weekly as well as testing any other interconnected alarms.
- Make sure your alarm is situated in one of the recommended locations only.

✗ DO NOT:

- Expose this alarm to moisture, dripping, splashing, steam or condensation.
- Paint the alarm.
- Install heat alarms in escape routes instead of smoke alarms.
- Test your alarm with a naked flame. The test button tests the alarm's full functionality.
- Ignore any alarm in the network if it is sounding, it is warning you of a potentially hazardous situation.

SMOKE ALARM SENSOR TECHNOLOGY

Thermoptek® technology combines the very latest in optical sensing with a thermal enhancement providing a fast reaction to both fast flaming and slow smouldering fires in a single alarm. Thermoptek technology constantly monitors for temperature change. If a rate of temperature rise is detected the sensitivity of the smoke alarm is increased, providing a quicker response time to both fire types.

HEAT ALARM SENSOR TECHNOLOGY

Thermistek® technology constantly monitors for temperature change, if an increase in temperature is detected, the rate of rise is measured and if predicted to exceed a pre-determined threshold, will sound the alarm. This predictive quality provides a quicker response time in rapidly increasing temperatures.

ELECTROCHEMICAL CO SENSOR

An advanced electrochemical sensor designed to accurately measure levels of carbon monoxide (CO) provides an early warning of toxic CO levels in your home.

ULTRASENSE™ DUAL SENSOR CHAMBER TECHNOLOGY

Our smoke alarms (FA4150BW, FA4452BW, FA4453BW) include UltraSense™ dual sensor chamber technology, which replaces the need for two separate alarms (ionisation and optical). This technology covers all fire types, including early-stage smouldering fires, liquid fires, and flaming fires, offering faster response and broader detection capability, significantly outperforming single-technology alarms.

UltraSense™ uses two optical sensing channels, red visible light and infrared light, to improve detection across a wider range of smoke particle types. The red light channel is more responsive to smaller particles typically associated with early-stage or fast-flaming fires, while the infrared channel provides stable detection of larger, visible smoke particles often associated with dense smoke and smouldering fires.

DUST COMPENSATION

The alarm integrates dust compensation to keep the sensor stable in various environments.

BUG MESH

Your alarm has been designed with bug mesh included, which is designed to reduce nuisance alarms and improve longevity.

PANASONIC LITHIUM BATTERY

Your mains powered alarm has a built in, rechargeable, sealed for life Panasonic lithium battery (back-up); designed to power the alarm in the event of a mains failure. Fully charged, the battery will provide up to 3 months back-up without mains power, under normal working conditions.

SYSTEM GRADES AND CATEGORIES

The mains powered FireAngel alarms with 10 year life are suitable for Grade D1 systems. It is important to determine the correct alarm system grade and category for the dwelling prior to installation.

A Grade D1 system is required for:

- New or materially altered dwellings, up to three storeys with no floor exceeding 200m².
- Existing dwellings with poor or inadequate fire protection, up to three storeys with no floor exceeding 200m².
- Individual dwelling units of two or more rooms in Houses in Multiple Occupation (HMOs) of one or two-storeys, with no floor exceeding 200m².

There are three Levels of Detection (LD). Generally the greater the fire risk the more comprehensive the system should be.

LD1 = Maximum Protection. Alarms in all circulation spaces that form part of escape routes and all areas where a fire might start.

LD2 = Medium Protection. All circulation spaces and escape routes (e.g. hallways and landings) are covered together with a provision of higher fire risk areas (e.g. kitchen and living rooms).

LD3 = Minimum Protection. Alarms in all circulation spaces that form part of escape routes.

NOTE: Ensure that a Grade D1 system is adequate for the dwelling you are installing the alarms in. You can obtain further information from your local fire service or building control department at your local council offices.

POSITIONING

Locations of alarms must be compliant with either BS 5839-6 or relevant Building Regulations if in any doubt. This alarm is not intended for any non-residential, commercial or industrial application, nor for any other purpose other than described here. For the best protection, heat alarms should always be installed as part of a complete fire protection system that includes smoke alarms.

Multi-sensor alarms enhance safety and reduce false alarms by combining 2 or more detection technologies - such as optical smoke and heat sensors - into one unit. They are ideal for comprehensive, fast-acting protection in high-risk areas like hallways, living rooms, and kitchens. With the exception of bathrooms, multi-sensor smoke and CO alarms (FA4453BW) can be placed in most rooms of the house. Care should be taken if installing in a kitchen / garage to avoid false alarms, due to cooking fumes and contaminants. A multi-sensor heat and CO alarm (FA4451BW) may be more suitable for these areas.

Multi-sensor alarms ensure that when there is a fire, or in the case of FA4451BW and FA4453BW, dangerous levels of CO, sufficient early warning is given so everybody can escape safely. This means, alarms should ideally be located near all potential sources of fire, or CO and that the alarm should be heard throughout the house – particularly in the bedrooms. Aim to install an alarm in a bedroom or hallway located close to the sleeping area. If more than one sleeping area exists, locate additional alarms in each sleeping area. If the alarm is located in the same room as a fuel-burning appliance, it should ideally be located 3m from the potential CO source.

Common sources of CO include: oil and gas boilers, portable generators, oil or solid fuel cookers, gas or paraffin heaters, barbecues, clogged chimneys, wood or gas fireplaces, any gas or fossil fuel-burning appliance, or even adjoining properties.

Common sources of CO:

	Ovens		Escapes from adjoining properties		Open fires
	Car exhausts		Broken flues		Blocked chimneys
	Boilers		BBQs		Gas or paraffin heaters

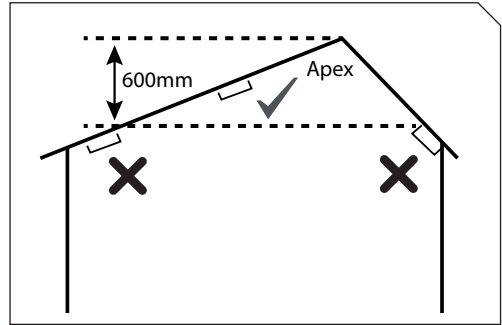


Please see below suitable positions for each alarm, within a property.

Product	Type	Kitchen	Bathroom	Living Room	Bedrooms	Hallways	Loft	Garage
FA4150BW	Smoke Alarm			✓	✓	✓		
FA4250BW	Heat Alarm	✓					✓	✓
FA4452BW	Smoke and Heat Alarm			✓	✓	✓		
FA4451BW	Heat and CO Alarm	✓		✓	✓	✓		✓
FA4453BW	Smoke, Heat and CO Alarm			✓	✓	✓		

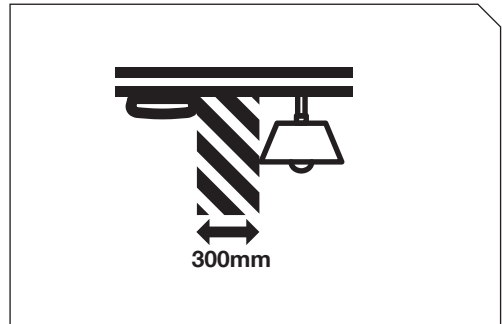
✓ DO:

- Install smoke / CO alarms in circulation areas at a distance no greater than 7.5m from the farthest wall, no greater than 7.5m from a door to any room in which a fire might start and no greater than 7.5m from the next smoke alarm.
- Install heat alarms on the ceiling, ideally in the centre of the room, less than 150mm from the highest point and multi-sensor alarms less than 600mm from the highest point.
- Install sufficient alarms to compensate for closed doors and obstacles.
- Install your heat alarm at a distance no greater than 5.3m from the farthest wall, no greater than 5.3m from a door to any room in which a fire might start and no greater than 5.3m from the next heat or smoke alarm.



✗ DO NOT:

- Install alarms within 300mm (12") of light fittings or room corners.
- Install alarms in wall positions that are less than 100mm (4") or more than 300mm (12") away from the ceiling.
- Locate the alarm close to bathrooms or showers as it can be susceptible to nuisance alarms from steam.
- Install heat alarms on a wall.



NOTE: For further guidance on siting CO alarms and mounting of the apparatus consult EN50292. Installation of the alarm should not be used as a substitute for proper installation, use and maintenance of fuel burning appliances including appropriate ventilation and exhaust systems.

NOTE: The device can be connected to the non-switching side of domestic lighting circuits containing Dimmer Switches or Fluorescent lights which are CE marked and conform with 2014/30/EU, BS EN60669-1 or 2, BS EN60081, BS EN60968 or equivalent. It is the Installer's responsibility to ensure compatibility prior to installation.

HARDWIRE INSTALLATION

The alarm base plate is designed to be permanently mounted, using its own built-in terminal block to connect it to the mains. The base plate can be screwed directly to the ceiling.

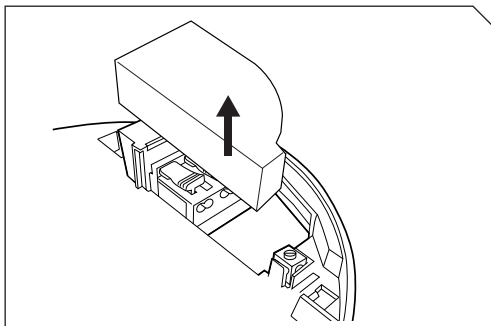
- **IMPORTANT:** The circuit used to power the alarm must be a 24 hour voltage circuit that cannot be turned off by a switch. BS 5839-6 states that: For mains powered alarms, each with an integral standby supply (Grade D1), the mains electricity supply should take the form of either a) an independent circuit at the dwelling's main circuit board, in which case no other electrical equipment should be connected to this circuit (other than a dedicated monitoring device installed to indicate failure of the mains electricity supply to the alarms); or b) a separately electrically protected, regularly used local lighting circuit.
- Disconnect the mains power supply.
- Ensure a permanent connection to the fixed wiring of the building is made in a suitable junction box.
- Remove the terminal block cover, as illustrated.
- If trunking is required, snap the break-out tab away from the base plate prior to connection.
- The wiring must be connected to the terminal block as follows:

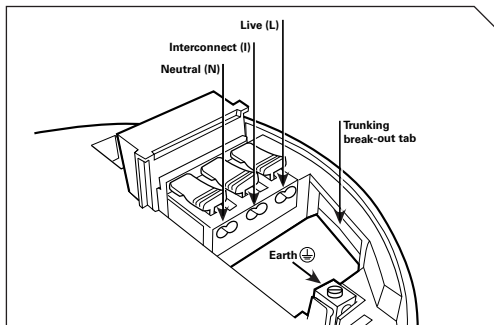
Live (L) - Connect to the Live in the house wiring.

Neutral (N) - Connect to the Neutral in the house wiring.

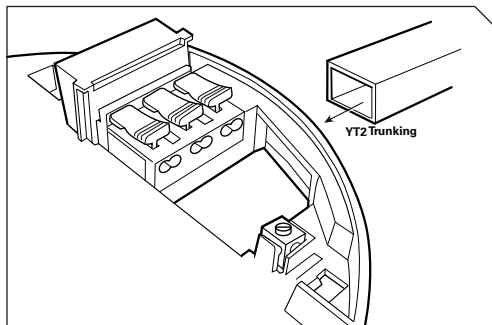
Interconnect (IC) - If desired, join the Interconnect wire between the alarms.

- If desired, use the  terminal to safely terminate any copper Earth or green/yellow cable; however as this is a Class II product, it is already double insulated.

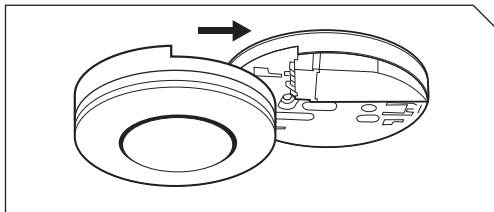




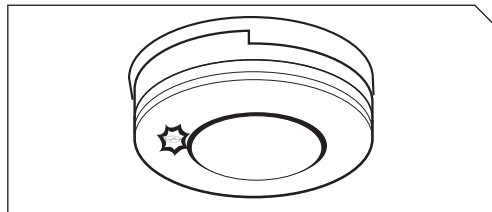
WARNING: Mixing the Live and Neutral connections when interconnecting alarms will damage all the alarms. DO NOT use the Earth wire for the interconnect connection.



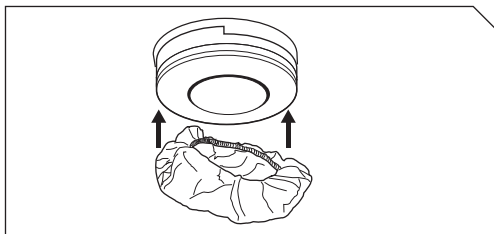
Either feed the wire through the hole in the base plate or through the Y22 trunking.



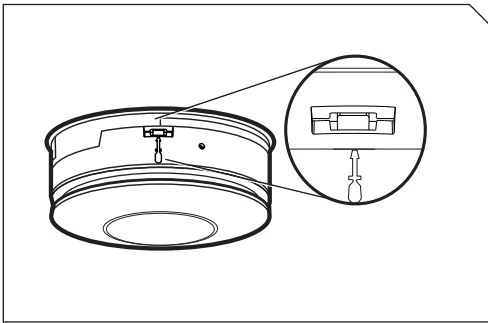
Line up the alarm with the base plate then slide and click into place. Switch on the mains electricity supply.



A successful activation will trigger all LEDs to flash once simultaneously. The LEDs are located on the front of the alarm.



Make sure the dust cap remains on the alarm until all building and decorating work is complete. This should then be removed before use.



ANTI-TAMPER FEATURE

If you need to remove your alarm from its base plate, turn off the mains electricity supply, use a small flat-head screwdriver horizontally and insert into the hole at the base of the alarm (illustrated here). While holding the screwdriver in position, push the lower half of the alarm away from the screwdriver to release it from the base plate.

HARDWIRE INTERCONNECT

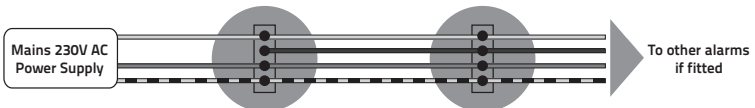
For multiple alarm installations use a 'three core and earth' style cable between all the alarms to be interconnected. Connect the interconnect cable between each alarms 'I' terminal. The interconnect wire (minimum 0.75 mm² cable) must be treated as Live, it should be insulated and sheathed.

× DO NOT:

- Exceed the maximum of 50 interconnected alarms on a network.
- Exceed 250 m of connecting wire per circuit.
- Connect FireAngel Bluetooth alarms to any other FireAngel ranges or models produced by another manufacturer.

WIRING KEY

-  = Neutral
-  = Interconnect
-  = Live
-  = Earth



BLUETOOTH WIRELESS INTERLINK

The FireAngel Bluetooth range is designed to be wirelessly interlinked with up to 50 products within the FireAngel Bluetooth range. They are not designed to communicate with wireless alarms from other ranges or manufacturers. These alarms need to be 'paired' or interlinked in order to communicate with each other. If one alarm sounds, all alarms will sound. Simply press the Test / ◀ button to locate the alarm initially triggered.

Bluetooth technology is a wireless network technology designed for low-power, reliable connectivity. It eliminates the need for interconnecting wires around a property making future system modifications easy and cost effective. AC smoke / CO alarms will still need a mains supply in accordance with BS 5839-6 and Building Regulations.

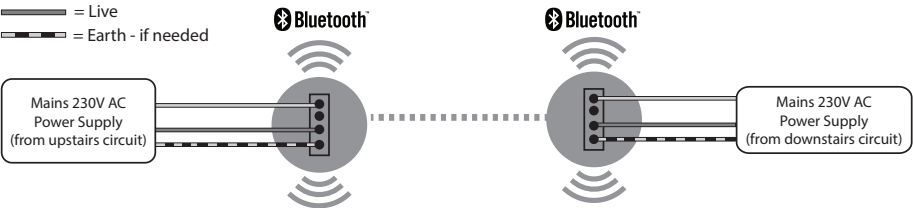
IMPORTANT: Obstructions such as steel reinforcement in concrete could block or impede the wireless signal. While the wireless range is over 120 m in clear air / clear line of sight, the effective range may be reduced by walls and other obstructions in the building. It is recommended not to exceed 35 m as the maximum distance between alarms in a network.

DO NOT:

- ✗ Exceed the maximum of 50 alarms interlinked in a network.
- ✗ Connect FireAngel Bluetooth alarms to any models produced by other ranges or manufacturers.

WIRING KEY

- = Neutral
- = Live
- = Earth - if needed



INTERLINKING WITH MOBILE APP

The Angel Pro App is designed specifically to meet the demands of professional installers. It makes the installation of FireAngel's leading alarms as intuitive and efficient as possible. The app enables you to quickly install your network of connected alarms, resolve issues, test and even certify your installation.

Scan the QR code to discover how easy it is yourself.



INTERLINKING MANUALLY

Install alarms as described earlier (see 'Hardwire Installation').

1. Power On All Devices

Once the alarm is connected to AC power, it will automatically enter pairing mode for 3 hours. (After 3 hours, press the blue LED button once to enter secondary mode.) The blue LED will flash slowly, indicating that the device is waiting for a 'Primary' connection.

2. Selecting the 'Primary' Device

Since all alarms are initially 'Secondary' devices, you must select one to become the 'Primary' device.

To do this press the blue LED button once to exit 'Secondary' mode (LED will turn off), then quickly press the same button three times to define it as a 'Primary' device. The blue LED will remain on, indicating the device is now the 'Primary' and it will automatically search for alarms to connect via Bluetooth.

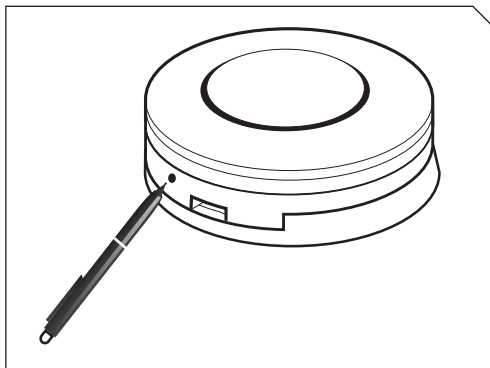
3. Confirm Successful Pairing

Once devices are successfully paired, the blue LED on the 'Primary' remains on until timeout or manual exit, whilst the 'Secondary' devices flash twice, then their LEDs turn off. Once all devices revert to standby (LED off), the Bluetooth network is established.

4. Testing the Network

Briefly press the test button in the centre of an alarm and release. All devices that have successfully completed will flash red 🔴 / 🔵 LEDs simultaneously twice per second for a total of 5 minutes.

This allows you to take the time to check each individual alarm to ensure a successful network has been established.



Exiting Pairing Mode

Pairing mode ends automatically but can be manually ended by pressing the blue LED once on an alarm. The blue LED will turn off and the 'Primary' device will automatically revert back to 'Standby' mode.

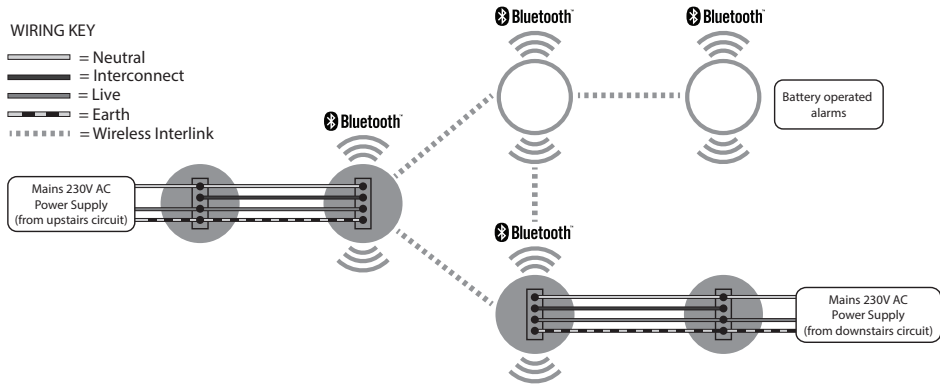
Resetting the Bluetooth Network:

If reconfiguration is needed, press and hold the blue LED button for 10 seconds or longer on any alarm in the network to reset it. During this period, the blue LED will flash rapidly. After 10 seconds, release to clear the network and restart the device. Upon restart, the device automatically returns to 'Standby' mode.

Please note: If released before 10 seconds, clearing will be unsuccessful.

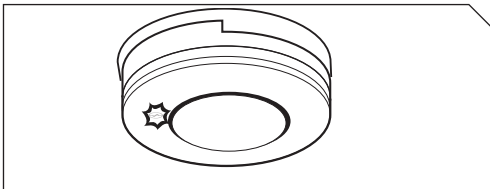
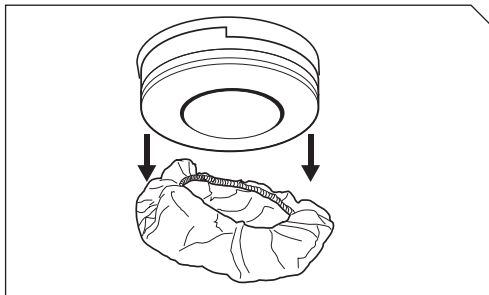
MIXED SYSTEMS

Interconnecting both hardwired and wireless products together in a network:

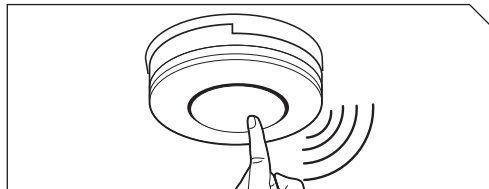


ALARM TEST

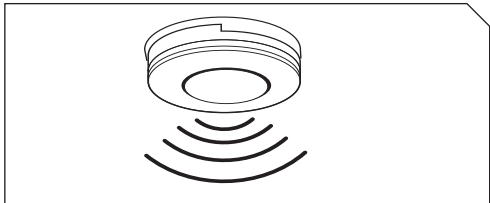
- If not already removed, remove the dust cover from each alarm before use.
- Test the alarms on a weekly basis.
- Keep this guide safe for future reference.
- Test all alarms after repositioning large items of furniture to ensure they still work.
- Every 7 days, the alarm will self-test, emitting a barely audible click.



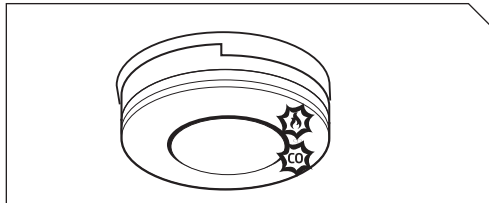
1. Check the green operating LED is on in standby mode.



2. Briefly press the test button in the centre and release.



3. A reduced volume audible alarm (<75 dB at 3m), consisting of three loud beeps (fire pattern) should occur, then stop. If the alarm has CO sensors, pressing the test button a second time will result in four loud beeps (CO pattern). This test alternates repeatedly between the smoke and CO indicators (on a multi-sensor smoke / CO alarm).



4. The relevant red LEDs (smoke or CO) on the alarm will flash during the audible signal. To hear a full volume test (>85 dB at 3m), double press or press and hold the test button.

To check the functioning of the mains battery back-up (directly after installation and then at least yearly):

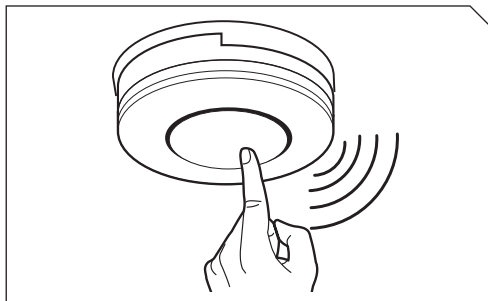
- Turn off the mains power at the distribution board and check that the green indicator light is flashing once every 40 seconds.
- A single press of the Test / 🔊 button will produce a reduced volume test of <75db at 3m.
- A double press of the Test / 🔊 button will produce a full volume test of >85db at 3m.
- Pressing and holding the Test / 🔊 button will produce 1 cycle of quiet test followed by a repeated full volume test.
- Once alarms have been tested remember to turn the mains supply back on.

NOTE: This method fully tests all elements of the alarm. Additional but not essential testing may be conducted on carbon monoxide alarms, using the Sense-CO Test mode and CO gas. For information and instructions on the correct method of gas testing your alarm visit www.fireangeltech.com/sense-co

WARNING: Mains powered alarms must be installed by a competent, qualified electrician, in accordance with this manual and local regulations. Failure to do so may result in electric shock or malfunction.

ALARM SMART SILENCE™

Your alarm features 'Smart Silence™' technology. In the event of a known false alarm, your alarm can be temporarily silenced by pressing the central test button. Your alarm will automatically return to full sensitivity within 10 minutes, if fire has been detected, and on CO alarms, 5 minutes if CO has been detected. In the case of CO, the alarm can only be silenced if the CO level detected is less than 150ppm. After this period of time the alarm will reset to normal functionality.



During the reduced sensitivity mode the red LED on your alarm will continue to flash (signalling either the fire or CO icon, if applicable). Only use the alarm silence function after making sure that there is no emergency situation. Do not block the vents on the alarm or disable the alarm in any way, as this will remove your protection.

NOTE: If the level of CO reaching the alarm is greater than 150ppm, the alarm silence will be overridden and the alarm will continue to sound.

LOW BATTERY WARNING

Should your alarm enter a low battery condition, the unit will emit an audible beep and the yellow LED will flash once, every 40 seconds. When this occurs, we recommend you reconnect the alarm to mains power immediately, allowing the battery back-up to recharge. Your alarm will continue to warn of this low battery condition until the mains power is reconnected. Failure to reconnect the alarm to an AC power supply within 24 hours means your alarm may have insufficient power to alert you in a real fire / CO situation.

SLEEP EASY™

Low battery warnings often start at night or when it may be inconvenient to replace your alarm. You can silence the audible 'low battery' chirp for a period of 8 hours by pressing the test button. The yellow LED will flash once every 40 seconds. After this period the audible chirp will start again. This process can be repeated for a maximum of 10 times. Your alarm will still detect fire and CO during this time, however you must reconnect to mains power as soon as possible.

WARNING: Your alarm cannot be silenced if the chirp is indicating a fault. In this instance, the unit should be replaced immediately to ensure protection in the event of a fire or CO leak.

FAULT INDICATION

Your alarm will automatically self-test, if a fault is detected the yellow LED will flash and the alarm will beep twice every 40 seconds. If a buzzer fault is detected, the yellow LED will flash twice every 40 seconds. In this instance, the unit should be replaced immediately to ensure protection in the event of a fire or CO leak.

END OF LIFE

When your alarm reaches the end of its life (EOL), the yellow LED will flash and the alarm will chirp 3 times every 40 seconds. Replace the unit within 30 days. During these 30 days, pressing the test button briefly can silence the EOL pre-warning for 8 hours, the yellow LED will flash 3 times every 40 seconds. This process can be repeated for a maximum of 10 times. During the silence period, if a low battery or fault occurs, the device cannot be silenced. After 30 days, this warning can no longer be silenced.

NIGHTTIME SENSING

Your alarm automatically detects night hours and will reduce the brightness of the green power LED during the nighttime. Where a low battery 'chirp' has already been silenced during the day, your device automatically detects nighttime and reactivates the silence period for another 8 hours.

If you have silenced an EOL warning, after 8 hours, if the ambient light sensor detects darkness (“night”), the silence period will be extended for a further 8 hours. If the environment is no longer dark, the EOL warning will resume. The test button must then be pressed again to silence the EOL warning.

ALARM MEMORY

Once an alarm has detected fire / CO and sounded, this event will be memorised for 7 days. This is particularly useful in the case of CO leaks which may have occurred whilst you are away from the property.

Event Indications

During the first 3 days after an alarm, the device will alert you with a dedicated red indicator light:

1. Smoke / Heat Memory - The red 🔴 indicator flashes twice every 24 seconds.
2. Carbon Monoxide (CO) Memory - The red 🟡 indicator flashes twice every 24 seconds.

After the first 3 days, the alarm memory indication will be hidden (from Day 4 to Day 7). However, within 7 days after the alarm event, you can still press the Test/⚡ button to check the alarm memory. The 🔴 / 🟡 indicator light will flash twice and give 2 beeps to indicate a previous 🔴 or 🟡 event.

Clearing Indications (hiding the LED indication)

Within the first 3 days, pressing the Test / ⚡ button once will hide the LED indication. You will still be able to view stored alarm event by pressing the Test / ⚡ button.

Reset Memory Indication

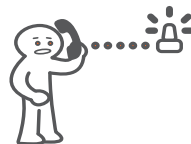
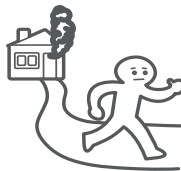
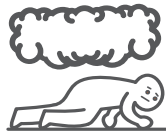
To fully reset the memory, press and hold the Test / ⚡ button for at least 10 seconds. You will first hear two short beeps, and the red LED will begin flashing while holding the button. Afterward, the device will emit one long beep accompanied by a long LED flash, indicating that the alarm memory has been erased. Once reset, you will no longer be able to view any previously stored alarm events.

FIRE SAFETY

A loud alarm is a warning that there is potentially a fire present. NEVER IGNORE THIS ALARM. When dangerous levels of smoke or heat are detected a loud audible signal (85 dB at 3m) will sound and a red 🔔 LED will flash.

Smoke and heat alarms properly installed and maintained are an essential part of a good home safety programme. Review fire hazards and eliminate dangerous conditions whenever possible. When fire strikes, a prepared and practised escape plan could prove vital. Consider and discuss the following:

- Ensure everyone is familiarised with the alarm signal.
- Always test doors with your hands before flinging them open. If they feel warm, fire may have walled up behind them – leave closed and find another escape route.
- Don't waste time collecting possessions. Arouse all occupants and leave the building. Your life is more valuable!
- **GET OUT, STAY OUT, GET THE FIRE BRIGADE OUT.**
- Keep everyone in a set meeting place after you escape.
- If trapped inside, stay close to the floor, cover your mouth with a cloth and conserve breath as you crawl to safety.
- Keep all windows and doors closed except for escape purposes.
- Prepare and practice an escape plan before a fire starts.
- Draw a floor plan. Have fire drills often. Practise your escape.



IF THERE IS ANY QUESTION AS TO THE CAUSE OF THE ALARM, ALWAYS ASSUME THAT THERE IS AN ACTUAL FIRE AND FOLLOW YOUR FIRE EMERGENCY PLANS.

CO AWARENESS

A loud alarm is a warning that potentially lethal levels of carbon monoxide are present. NEVER IGNORE THIS ALARM, FURTHER EXPOSURE CAN BE FATAL.

Immediately check residents for symptoms of CO poisoning. Contact the proper authorities to resolve all CO problems.

ALARM

When dangerous levels of CO are detected a loud audible signal (85 dB at 3m) will sound and a red (CO) LED will flash. The higher the concentration of CO detected, the quicker the alarm will respond.

The alarm will sound:

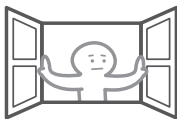
Between 60 & 90 mins when exposed to **50ppm** of CO

Between 10 & 40 mins when exposed to **100ppm** of CO.

Within 3 mins when exposed to **300ppm** or more of CO.

VENTILATE

Keep calm; open doors and windows to ventilate the property. Stop using all fuel-burning appliances and, if possible, turn them off.



EVACUATE

Evacuate the property immediately.



RING FOR HELP

Ring your fuel supplier on their emergency number. Do not use appliances again until they have been checked by an expert. Get medical help immediately for anyone suffering the effects of CO poisoning (headache, nausea), and advise that carbon monoxide poisoning is suspected. Write your fuel supplier's emergency number here:

DEPENDING ON THE LEVEL OF CO DETECTED, IT CAN TAKE UP TO 10 MINUTES TO CLEAR THE SENSOR AND THE ALARM TO STOP. DO NOT RE-ENTER THE PROPERTY UNTIL THE ALARM HAS STOPPED.

The following symptoms may be related to CO poisoning which all household members should be aware of:

- Mild Exposure: Slight headache, vomiting, fatigue (often described as 'flu-like' symptoms).
- Medium Exposure: Severe throbbing headache, drowsiness, confusion, fast heart rate.
- Extreme Exposure: Unconsciousness, convulsions, cardiorespiratory failure, death.

Your CO alarm monitors levels of CO as parts per million (ppm) in the air surrounding the detector.

35ppm The maximum allowable concentration for continuous exposure for healthy adults in any 8 hour period (as recommended by the Occupational Safety & Health Administration).

200ppm Slight headache, fatigue, dizziness, nausea after 2 - 3 hours.

400ppm Frontal headaches within 1 - 2 hours, life threatening after 3 hours.

800ppm Dizziness, nausea and convulsions within 45 minutes. Unconsciousness within 2 hours. Death within 2 - 3 hours.

Please note: This apparatus may not prevent the chronic effects of carbon monoxide exposure, and the apparatus will not fully safeguard individuals at special risk.

This apparatus is designed to protect individuals from the acute effects of carbon monoxide exposure. It may not protect people who are at additional risk from CO exposure due to age, pregnancy or medical condition. If in doubt, consult your doctor.

Please note: CO Alarms have a cross sensitivity to other substances that may in certain circumstances trigger an alarm. Do not expose this CO alarm to fumes from petrol, diesel, solvents, greases, alcohols and organic cleaning fluids. Please note: that the alarm may respond to brief exhaust gas emissions e.g. during initial start-up of an appliance or engine. Exposure to Hydrogen can cause unwanted alarms and may occur from some battery charging activities and also the curing of concrete.

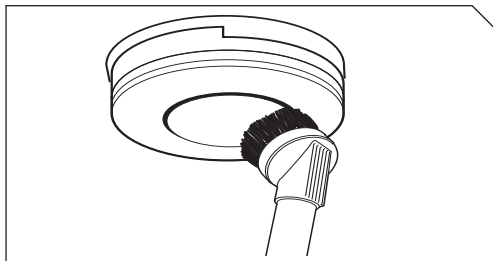
PRODUCT INDICATORS

Icon	Function	Audible pattern	LED pattern	Action required
	Power on / standby		The green 'Power' LED should be on constantly to indicate the device is active on AC power. When powered by backup battery, the green LED will flash once / 40 secs.	
Test / 	Test (button press when no alarm condition is present)	3 beeps / 4 secs (fire), 4 beeps / 4 secs (CO).	4 red LED flashes / 4 secs (alternating between  /  icons).	
	Smoke/heat alarm	3 beeps / 4 secs, repeated.	4 red  LED flashes / 4 secs.	If you are unsure of the cause, assume there is fire and evacuate immediately. See 'FIRE SAFETY'.
	Interlinked smoke/heat alarm	3 beeps / 4 secs, repeated		When a fire is detected, all interlinked alarms will sound together.
	Smoke/heat alarm silence		Red  LED flashes repeatedly.	Silence time: approx 10 mins.
	Smoke/heat alarm memory		2 red  LED flashes / 24 secs.	To Reset the Memory: Hold down the Test /  button for more than 10 seconds.
	CO Alarm (models: FA4451BW and FA4453BW)	4 beeps / 4 secs repeated.	4 red  LED flashes / 4 secs.	Keep calm; open doors & windows to ventilate the property. Stop using all fuel-burning appliances and, if possible, turn them off. Evacuate. See 'CO AWARENESS'.
	Interlinked CO alarm (models: FA4451BW and FA4453BW)	4 beeps / 4 secs repeated.		When CO is detected, all interlinked alarms will sound together.

Icon	Function	Audible pattern	LED pattern	Action required
	CO alarm silence (models: FA4451BW and FA4453BW)		4 red  LED flashes / 4 secs.	Silence time: approx 5 mins. During this period, if CO levels reach 150ppm, the alarm will be triggered again.
	CO alarm memory (models: FA4451BW and FA4453BW)		2 red  LED flashes / 24 secs.	To reset the memory: Hold down the Test /  button for more than 10 seconds.
	Nighttime sensing		AC power supply: green LED reduces brightness. DC power supply: green LED reduces brightness and flashes once / 40 secs.	Alarms automatically detect night hours and will reduce the brightness of the power LED during the nighttime.
	Low battery warning	1 beep / 40 secs.	1 yellow  flash / 40 secs.	Reconnect to the mains power supply to enable battery to recharge.
	Sleep Easy: Low battery warning silence		1 yellow  flash / 40 secs.	Silence time: approx 8 hours.
	Fault	2 beeps / 40 secs.	2 yellow  flashes / 40 secs.	Remove alarm and replace as soon as possible.
	Buzzer fault		2 yellow  flashes / 40 secs.	Remove alarm and replace as soon as possible.
	End-of-Life	3 beeps / 40 secs.	3 yellow  LED flashes / 40 secs.	This warning can be silenced for up to 30 days by pressing the Test /  button. Remove the alarm and replace as soon as possible.
	End-of-Life Pre-Warning Silence		3 yellow  LED flashes / 40 secs.	Replace the alarm.

If you have any questions about the operation of your alarm, please contact Technical Support between 9am-5pm Monday-Friday. Telephone: **0330 094 5830** or e-mail: **customersupport@fireangeltech.com**
You can also visit the support section of our website: **www.fireangel.co.uk**

MAINTENANCE



Your alarms should be cleaned every 3 months, by firstly turning off the mains electricity supply and then using a vacuum cleaner fitted with the soft brush attachment. Switch the power back on once you have finished.

DISPOSAL



Waste electrical products should not be disposed of with your other household waste. The alarm is ideally suited for disposal within the waste electronic and electrical equipment (WEEE) recycling scheme. All batteries should be removed from the product and disposed of separately in line with current local regulations. Please recycle where facilities exist. Check with your local authority, retailer or contact Technical Support for recycling/disposal advice as regional variations apply. Your alarm can be unlearned from a network, as described in 'Bluetooth Wireless Interlinking'. Once it is removed from its base plate it is automatically disabled and ready to be disposed of.

WARNING: Do not burn or dispose of in fire.

WARNING: If your alarm is dropped or damaged, as a precaution, it should be removed from the building.

TECHNICAL SPECIFICATIONS

Model: All Models

Operating Temperature Range: -10°C (14°F) to 40°C (104°F)

Operating Humidity Range: 10 - 95% relative humidity, non-condensing

Alarm Sound Level: >85dB at 3m

Sensor Life: 10 Years - Replace unit after 10 years of operation

Supply Voltage: AC 230V / 50Hz

Bluetooth Frequency: 2400Mhz-2483.5Mhz

Max RF Power: 8dBm

Back-up Battery: Rechargeable Panasonic Lithium battery. Fully charged, the battery will provide up to 3 months back-up without mains power, under normal working conditions.

FireAngel Safety Technology Limited, declares that the FA4150BW, FA4250BW, FA4451BW, FA4452BW & FA4453BW, are in compliance with the essential requirements and other relevant provisions of Directive 2014/53/ EU. The declaration of conformity may be consulted at **www.fireangel.co.uk/compliance**.

WARNING: Prolonged exposure to a sounding alarm near your ears may damage your hearing. Prolonged exposure to extreme high or low temperatures may reduce the life of the battery.

Model: FA4150BW Smoke Alarm - Certified to: EN14604:2005/AC:2008

Model: FA4250BW Heat Alarm - Certified to: BS 5446-2:2003

Model: FA4451BW Heat and CO Alarm - Certified to: BS 5446-2:2003, EN 50291-1: 201

Model: FA4452BW Smoke and Heat Alarm - Certified to: EN14604:2005/AC:2008, BS 5446-2:2003

Model: FA4453BW Smoke, Heat and CO Alarm - Certified to: EN14604:2005+AC:2008, BS 5446-2:2003, EN 50291-1:2018

WARRANTY

FireAngel SafetyTechnology Limited warrants to the original purchaser that its enclosed alarm be free from defects in materials and workmanship under normal residential use and service for a period of 10 (ten) years from the date of purchase. Provided it is returned with postage prepaid and proof of purchase date, FireAngel SafetyTechnology Limited hereby warrants that during the 10 (ten) year period commencing from the date of purchase FireAngel SafetyTechnology Limited, at its discretion, agrees to replace the unit free of charge.

The warranty on any replacement alarm, will last for the remainder of the period of the original warranty in respect of the alarm originally purchased – that is from the date of original purchase and not from the date of receipt of the replacement product. FireAngel SafetyTechnology Limited reserves the right to offer an alternative product similar to that being replaced if the original model is no longer available or in stock. This warranty applies to the original retail purchaser from the date of original retail purchase and is not transferable. Proof of purchase is required. This warranty does not cover damage resulting from accident, misuse, disassembly, abuse or lack of reasonable care of the product, or applications not in accordance with the user guide. It does not cover events and conditions outside of FireAngel SafetyTechnology Limited's control, such as Acts of God (fire, severe weather etc.). It does not apply to retail stores, service centres or any distributors or agents. FireAngel SafetyTechnology Limited will not recognise any changes to this warranty by third parties.

FireAngel SafetyTechnology Limited shall not be liable for any incidental or consequential damages caused by the breach of any expressed or implied warranty. Except to the extent prohibited by applicable law, any implied warranty of merchantability or fitness for a particular purpose is limited in duration for 10 (ten) years. This warranty does not affect your statutory rights. Except for death or personal injury, FireAngel SafetyTechnology Limited shall not be liable for any loss of use, damage, cost or expense relating to this product or for any indirect or consequential loss, damages or costs incurred by you or any other user of this product.

