SMOKE-WE & HEAT-WE
INSTALLATION GUIDE

Intrusion innovators

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Complete solutions

R&D capabilities

Growth platform
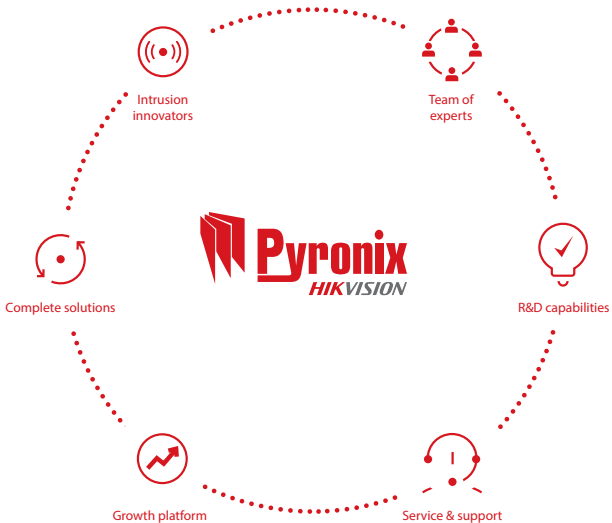
Service & support

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CONVENTIONS
STANDARDS
BS 5839-6 Fire detection and fire alarm systems for buildings Part 6: Code of practice for the design, installation, commissioning and maintenance of fire detection and fire alarm systems in domestic premises for the UK, will hereinafter be referred to as **BS 5839-6**.

DIAGRAMS
All diagrams in this manual are **not to scale** and are intended for illustrative and indicative purposes only.

This colour denotes important components in diagrams and does not reflect the physical product.

TECHNICAL SUPPORT
If you experience issues with the installation, please call our UK technical support team.

Alternatively if you do not require assistance straight away, you can always email the team who will reply to you as soon as possible.

Our office hours are: Monday to Friday 08:00 - 18:30.

0333 444 1280

customer.support@pyronix.com

Please note: In order to assist getting your issue resolved quickly, please have the software revision of the equipment you are currently working with.

CONTENTS

INTRODUCTION
SMOKE DETECTOR
The SMOKE-WE is designed to sense smoke that comes into the sensing chamber and to give early warning of developing fires by alarming from its built-in piezo.

It does not sense gas, or flame.

HEAT DETECTOR
The HEAT-WE senses ambient temperature via a thermistor and provides an early warning of developing fires by alarming from its built-in piezo when the temperature rises above a predefined value.

It does not sense gas, or smoke.

Please note: These detectors can only provide pre-warning if they are located, installed, and maintained properly as described in this guide.

SPECIFICATIONS
DIMENSIONS & WEIGHT

	SMOKE-WE	**HEAT-WE**
Dimensions (Ø x D)	120 x 52.45mm	120 x 52.45mm
Weight (including battery)	183g	172g

PERFORMANCE

	SMOKE-WE	**HEAT-WE**
Detection	Smoke only	Heat only
Sensor low voltage alert	2.6 - 2.7VDC	2.6 - 2.7VDC
RF low voltage alert	2.5V +/- 5% @ 25C	2.5V +/- 5% @ 25C

	SMOKE-WE	HEAT-WE
Sensor standby | alarm current	25uA | 120mA	25uA | 120mA
Sound level	85dB/3M	85dB/3M
Visual indications	Power, fault and alarm	Power, fault and alarm
Transmission frequency	868MHz FM transceiver narrow band	
Transmission method and range	Fully encrypted rolling code, 300m	
Operating temperature	-10 - 50°C	-10 - 50°C
Humidity	5 - 90%	5 - 90%
Heat alarm temperature	N/A	57°C
Sensitivity range	EN14604 0.105 ~ 0.165dB/m	EN54-5 Temp class: A2 Response time limits: Lower | Upper - 29 | 46 mins Increases by 1°C per min
Standards	EN 14604	-

BATTERIES

SMOKE-WE & HEAT-WE

Sensing element	This part is powered by 2 x 1.5V, AA and **are not replaceable**. When they reach the end of their life cycle, the whole unit will need replacing. Life expectancy ~10 years.
Radio TX and RX	The radio component is powered by 1 x 3V, CR123A and can be replaced when discharged. When this battery is low on charge, the unit will indicate to the control panel it needs to be replaced with a new one. Life expectancy ~2 years

INSTALLATION & LOCATION ADVICE
WHERE TO INSTALL
LOCATIONS IN THE HOME
Smoke detectors should be installed in accordance with the BS5839-6. These are Grade F1 and used for LD3 categories.

Minimum coverage is one detector installed on each floor in the property and one in each section of the property with adjacent bedrooms.

For **added protection**, install a separate smoke detector in each separate room and exit way, except the kitchen and rooms which emit steam, for example bathrooms and wet rooms, as shown below in fig I and II.

I   NOT TO SCALE

- Minimum smoke protection
- Added smoke protection
- Heat sensor protection

Locations for placing detectors for single-floor homes with adjacent bedrooms.

II   NOT TO SCALE

- Minimum smoke protection
- Added smoke protection
- Heat sensor protection

Locations for placing detectors for single-floor homes with spread out bedrooms.

III   NOT TO SCALE

- Minimum smoke protection
- Added smoke protection
- Heat sensor protection

Locations for placing detectors for multi-floor homes.

For **complete coverage** in residential properties, smoke detectors should be installed in all rooms, halls, storage areas, basements, and attics. Install a minimum of two in any household.

USEFUL TIPS

- In hallways or corridors exceeding 7.5m in length, no point within the hallway or corridor should exceed 7.5m from the nearest detector.
- Install a first-floor smoke detector at the top of the ground-to-first floor stairwell. Be sure that no door or other obstruction blocks the path of smoke to the alarm.

CEILING, WALL AND PITCHED ROOF INSTALLATION

IV NOT TO SCALE
300mm   300mm

V NOT TO SCALE
300mm
150mm
300mm

VI NOT TO SCALE
150mm
600mm
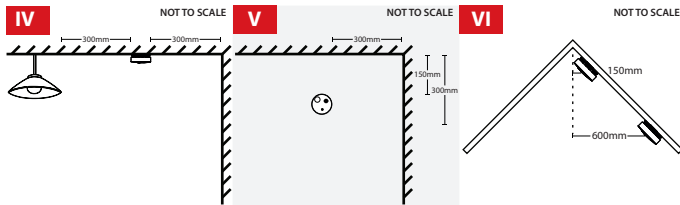
Ideally, the detector should be located as central as possible. The detector must be installed at least 300mm from walls or any light fittings as shown in fig IV.

If ceiling mounting is not possible, when wall mounting the top of the detector should be 150 - 300mm from the ceiling and at least 300mm from any walls or objects as shown in fig V.

When siting a **smoke detector** on a pitched ceiling, the centre must be no more than 600mm and a **heat detector** no more than 150mm vertically below the apex as shown in fig VI.

Please note: If it is not possible to locate the smoke or heat detector at the required distance from the apex on a pitched ceiling, it is considered a flat ceiling and should be installed as fig IV.

WHERE NOT TO INSTALL
GENERAL

Do not install...

• In environments where the ambient temperature can exceed 40℃ or be below 0℃
• Where heat/steam could cause false alarms such as directly above ovens or kettles etc.
• On surfaces that are normally warmer or colder than the rest of the room (e.g. attic hatches) as temperature differences may stop smoke or heat from reaching the unit.
• In close proximity to anything that can create airflows such as air conditioning units, windows, vents or heaters.
• Anywhere that not easily accessible to silence false alarms or test/replace the battery.
• Near any objects that could cause electrical interference such as dimmer switches or proximity readers.
• Within 1.5m of fluorescent light fittings as the electrical noise or flickering may affect the unit.

SMOKE DETECTORS

Do not install...

• In bathrooms, kitchens, shower rooms, garages or other rooms where the smoke alarm may be triggered by steam, condensation, normal smoke or fumes.
• Within 6 metres from sources of normal smoke/fumes.
• Near very dusty or dirty areas. Build-up of dust or dirt in the chamber will impair performance. It can also block the insect screen mesh and prevent smoke from entering the chamber.
• In insect infested areas. Small insects getting into the smoke detector chamber can cause intermittent alarms.
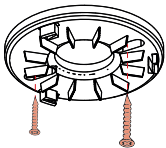
HEAT DETECTORS

Do not install...

• In, or close to bathrooms, shower rooms or other rooms where the unit may be triggered by steam or condensation.
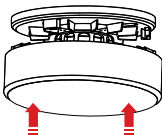
FITTING THE DETECTOR

1. Put the mounting base against the surface it is to be fixed to.
2. Mark two screw holes, one in each of the keyhole slots.
3. Using a 5mm drill bit, drill two holes where the keyhole marks are.
4. Insert the two red wall plugs provided into the holes.
5. Use the two screws also provided to attach the bracket. (Fig VII)
6. Line up the sensing unit making sure its clips are to the side of the clips on the base. (Fig VIII)
7. Rotate the sensing unit to secure in place. (Fig IX)

Please note: Mounting base and sensing unit may differ in appearance to the diagram shown above however, installation remains exactly the same.
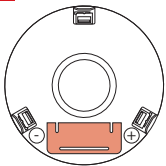
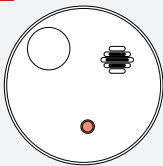# WIRELESS INTEGRATION
LEARNING THE DEVICE TO THE SYSTEM

X   NOT TO SCALE

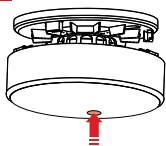1. Insert battery on the back of the sensing unit.

XI   NOT TO SCALE

2. Locate the test/silence button on the front. Press and hold it down.
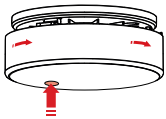
XII   NOT TO SCALE

3. Keeping the button pressed, put the sensing unit on the mounting base...
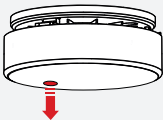
XIII   NOT TO SCALE

4. ...and rotate clockwise to secure in place.
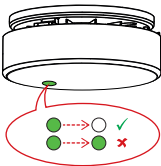
XIV   NOT TO SCALE

5. Once the LED turns red, release the test button. The LED will turn green and the unit will signal to the system.

XV   NOT TO SCALE

6. If the pairing is successful, the LED will extinguish. If the green LED stays on, press the test button so the LED turns red and release again.

SIGNAL STRENGTH TEST

1. Refer to the technical documentation that accompanies the control panel and prepare the system for a Remote Signal Strength Indicator (RSSI) test.

2. The system will count down and then display the signal strength of the wireless peripherals.

```
Please Wait
299
```

0 - No signal
1 - Weak signal
2 - Good
3 - Excellent

```
3210----XXXXXXXX
XXXXXXXXXXXXXXXX
```

Please note: Press YES / ✓ to view each zone individually. This will also display a signal strength value between 0-100.

```
Input      [01]
Excellent  [100]
```

BATTERY TEST

1. Refer to the technical documentation that accompanies the control panel and prepare the system for a battery status test.

2. The system will count down and then display the battery status of the first wireless zone.

```
Please wait
299
```

Good - The battery has at least one month life
Replace - The battery needs replacing as soon as possible.

```
Input      [01]
Good
```

Please note: Press B / D to view each zone individually.

If the **CR123A** battery needs to be replaced, the detector will indicate to the system and the system will display the fault.

```
[Zone Name]
Wireless Low Bat
```

Please refer to the technical documentation that accompanies the control panel for help locating and accessing the log to determine which zone has low battery.

MAINTENANCE
BATTERY REPLACEMENT

1. Remove from mounting base by carefully turning the sensing unit anticlockwise.
2. Open battery compartment. (Fig XVI)
3. Making sure that the positive and negative are at the correct terminals ends, put the new battery in. (Fig XVII)

XVI   NOT TO SCALE   **XVII**   NOT TO SCALE
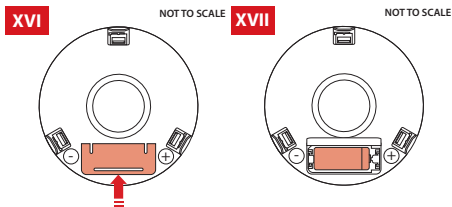
TESTING THE DEVICES

Test the detectors weekly by pressing firmly on the test button for approximately 1 second and the device will do the following to confirm it is functioning correctly.

SMOKE-WE

Beep three times whilst flashing the red LED.

HEAT-WE

Beeps three times then the red LED will flash once.

Please note: Once tested, the system will display that there has been an alarm on this zone. This can be cleared using a valid engineer or user code (subject to system programming).

TAKING CARE OF THE DEVICES

As well as testing the detectors weekly, it is important to keep the detectors clean.

CLEANING A SMOKE DETECTOR

To ensure optimum performance, a smoke detector should be opened and the sensing chamber cleaned at least once per month.

1. Remove battery before cleaning.
2. Use the soft brush attachment on the vacuum to carefully remove any dust on components, especially on the openings of the sensing chamber.
3. Once finished, replace the battery and test the detector to make sure the battery is working correctly.

• Never use water, or liquid cleaning products as they may damage the unit.

XVIII

NOT TO SCALE
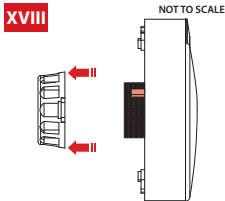
Please note: If the unit false alarms, refer to 'Installation & Location Advice' section to check whether the detector's location is suitable. Move the detector if it is not located as recommended.
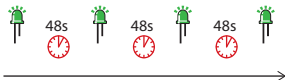
SENSOR INDICATIONS & FEATURES
STANDBY MODE - SMOKE & HEAT
VISUAL AND AUDIBLE PATTERN
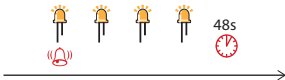Flashing green LED once every 48 seconds with
no audible sound.

MEANING
In standby mode with no faults.

END OF LIFE - SMOKE & HEAT
VISUAL AND AUDIBLE PATTERN
Yellow LED flashing 4 times with a beep on the
first flash followed by a 48 second interval.

MEANING
The batteries that power the sensor are now at the end of their life cycle and the whole
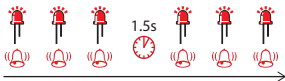sensor unit needs replacing.

Please note: These batteries are not replaceable will last approximately 10 years.

ALARM - SMOKE
VISUAL AND AUDIBLE PATTERN
Red LED flashing 3 times with a simultaneous
beeps followed by a 1.5 second pause.

MEANING
The device has detected harmful smoke levels.

TO SILENCE THE ALARM
When the device is in an alarm condition, pressing the test button will silence the device
for approximately 8 minutes. At the end of this timer, if the smoke concentration is still at
(or above) alarm level, the device will re-alarm immediately.

ALARM - HEAT
VISUAL AND AUDIBLE PATTERN
Red LED flashing once after three beeps, followed by a 1.5 second pause.

MEANING
The device has detected the temperature of the environment is above 57°C.
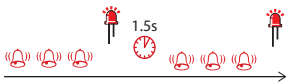
TO SILENCE THE ALARM
When the device is in an alarm condition, pressing the test button will silence the device for approximately 8 minutes. At the end of this timer, if the temperature of the environment is above 57°C, the device will re-alarm immediately.

CLEAN ME - SMOKE
VISUAL AND AUDIBLE PATTERN
Yellow LED flashing twice with beeps on each flash. The will be followed by a 48 second interval.
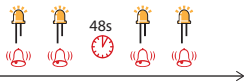
MEANING
The device has detected that the smoke chamber entrance is not clear and needs to be cleaned out. Please refer to 'Taking Care of the Devices' for help cleaning out the device.

LOW SENSITIVITY - SMOKE
VISUAL AND AUDIBLE PATTERN
Yellow LED flashing once on the second beep followed by a 48 second interval.
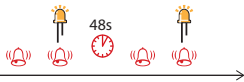
MEANING
There is an issue with the sensor and it is indicating it will need a higher level of smoke to trigger the device. Refer to the 'Installation & Location Advice' and 'Taking Care of the Devices' sections for advice.

SENSOR LOW BATTERY - SMOKE & HEAT
VISUAL AND AUDIBLE PATTERN

Yellow flashing LED once every 48 seconds with a single beep at the same time.

MEANING

The device is indicating the 2 x 1.5V, AA batteries in the sensor are low but should last for up to 7 days before the sensor runs out of power completely.

These batteries are expected to last approximately 10 years however, this can vary depending on factors such as frequency of testing, number of activations etc.

Please note: These batteries are not replaceable.

DETECTOR TROUBLE - SMOKE
VISUAL AND AUDIBLE PATTERN

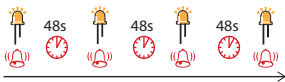Yellow LED flashing once on the third beep followed by a 48 second interval.
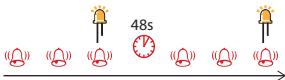
MEANING

The device has detected an issue that does not fall into any of the other fault categories. This would generally be a fault in the device electronics.

DETECTOR TROUBLE - HEAT
VISUAL AND AUDIBLE PATTERN

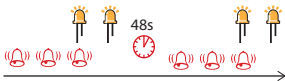Yellow LED flashing on the third beep and once again after followed by a 48 second interval.

MEANING

The device has detected an issue that does not fall into any of the other fault categories. This would generally be a fault in the device electronics.

REAR SWITCH FEATURE - SMOKE & HEAT

If the sensor unit is detached or not seated on the mounting base correctly for 5 minutes or more, immediately after being tested or powered up, the system will display a detector fault.

```
Smoke Detector
Detector Fault

11-Landing
Detector Fault
```

Please note: Once the system has indicated a 'Detector Fault', it must be cleared using a valid engineer or user code (subject to system programming).

During this time, the unit's LEDs will be completely extinguished and there will be no reaction to pressing the test button.

When reseated correctly, the device will beep and the green LED with flash. After this, test the device to make sure it is all working correctly. For help refer to 'Testing the Devices'.

Once the device has indicated to the system that it is now on it's mounting base correctly, it will only send an update to the panel **once every 24 hours**.

Please note: During any time period when the device is not seated on the mounting base correctly, the sensor component of the device is fully powered down.

This means the sensor component of the device which detects smoke or heat will be completely powered down and the device will provide no protection.

TEMPORARY FAULT MUTE FEATURE - SMOKE & HEAT

This feature temporarily mutes fault warnings for an hour.

To enable, when the detector indicating a fault such as 'Sensor Low Battery - Smoke & Heat', press the test button.

To disable the feature within the hour, press the test button and the detector will return back to an audible warning.

FIRE SAFETY ADVICE
SMOKE ALARM LIMITATIONS

- Although smoke detectors play a key role in reducing damage resulting from home fires, they can only work if they are properly installed, located and maintained.
- Smoke detector may not be heard if residents are hearing impaired.
- Special designed units such as those with additional visual and audible alarms should be installed for hearing impaired residents.
- Smoke detectors may not waken all individuals if they are sound sleepers.
- If children or other family members do not waken readily to the sound of the smoke detector, or if there are infants or members with mobility limitations, make sure someone is assigned to assist them in fire drill and in the event of emergency.

ENHANCE YOUR PROTECTION FROM FIRES

Putting up smoke and heat detectors is only one step in protecting your family and property from fires. You must also reduce the chances that fires will start in your home and increase your chances of escaping safely if one does start.

To have a good fire safety program you must apply the following tips to enhance your family's protection from fires:

1. Install smoke detectors properly and carefully follow all the instructions in this manual. Keep your smoke detectors clean, and test them every week.
2. Remember that smoke detector that do not work will not alert you. Replace your smoke detectors immediately if they are not working properly.
3. Follow fire safety rules, and prevents hazardous situations:
   - Use personal smoking products properly. Never smoke in bed.
   - Keep matches and cigarette lighters away from children.
   - Store flammable materials in suitable containers. Never use them near open flame or sparks.
   - Keep electrical appliances in good condition. Do not overload electrical circuits.

- Keep stoves, fireplaces, chimneys, and barbecue grills grease free. Make sure they are properly installed and away from any combustible materials.
- Keep portable heaters and open flames such as candles away from combustible materials.
- Do not allow rubbish to accumulate.

4. Develop a family escape plan and practice it with your entire family. Be sure to include small children in your practice.

- Draw a floor plan of your home, and find two ways to exit from each room. There should be one way to get out of each bedroom without opening the door.
- Explain to children what the smoke detector signal means. Teach them that they must be prepared to leave the home by themselves if necessary. Show them how to check to see if doors are hot before opening them. Show them how to stay close to the floor and crawl if necessary. Show them how to use the alternate exit if the door is hot and should not be opened.
- Decide on a meeting place which has a safe distance from your house. Make sure that all your children understand that they should go and wait for you there if there is a fire.
- Hold fire drills at least every 6 months to make sure that everyone, even small children, know what to do to escape safely.
- Know where to go to call the Fire Service from outside your home.
- Provide emergency equipment, such as fire extinguishers, and teach your family to use this equipment properly.

MORE TIPS TO FACE A FIRE IN YOUR HOME

If you have made a family escape plan and practiced it with your family, you have increased their chances of escaping safely. Go over the following rules with your children each time you have fire drills. This will help everyone remember them in case of a real fire emergency.

- Stay calm and don't panic. Your safe escape may depend on thinking clearly and remembering what you have practiced.
- Get out of the house as quickly as possible. Follow the planned escape route. Do not stop to collect anything or to get dressed.
- Feel the doors to see if they are hot. If they are not, open them carefully. Do not open a door if it is hot. Use an alternate escape route.
- Stay close to the floor. Smoke and hot gases rise.
- Cover your nose and mouth with a wet or damp cloth. Take short, shallow breaths.
- Keep doors and windows closed. Open them only if you have to in order to escape.
- Meet at your planned meeting place after leaving the house.
- Call the Fire Service as soon as possible from outside your house. Give the address and your name.
- Never go back inside a burning building.
- Contact your local Fire Department. They will give you more ideas about how to make your home safer from fires and how to plan your family's escape.

WARRANTY & COMPLIANCE

BATTERY INFORMATION

When disposing of the product, the battery must be removed and disposed of separately in accordance with the local regulations.

PRODUCT INFORMATION

For electrical products sold within the European Community. At the end of the electrical products life, it should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice in your country. This product is approved for use in the Residential, Commercial and Light Industrial Environments.

WARRANTY & COMPLIANCE

This product is sold subject to our standard warranty conditions and is warranted against defects in workmanship for a period of **two years** (batteries excluded). In the interest of continuing care and design, Pyronix Ltd reserves the right to amend specifications without giving prior notice.

For further warranty information visit: https://www.pyronix.com/terms-conditions-sales/

The declaration of conformity and further compliance documentation may be consulted at: www.pyronix.com/product-compliance.php