



## An Introduction to False Alarms

According to Government figures, the UK's fire and rescue services attended nearly a quarter of a million false alarm incidents throughout the last two years, with the majority caused by faulty fire system apparatus.

It is therefore unsurprising that many UK Fire Services are changing, or have already changed, their automatic fire alarm (AFA) response. Many services now advise that unless sight of a real fire can be confirmed, they will not respond to an AFA generated call. If they do respond, Fire Brigade services have the power to charge businesses if they have been called out unnecessarily.



This document has therefore been produced to help end users understand how they can prevent unwanted alarms.

## Who is responsible for false alarms?

The RRFSO states that **Premises Management** are responsible for the maintenance of fire detection systems, unless clear alternative arrangements have been made. For example, Premises Management may decide to employ a '**Responsible Person**', who is adequately trained and fully competent.

In large buildings, it may be appropriate to have a separate role for a **Fire Risk Assessor**, who can carry out risk assessments and make recommendations for all aspects of fire safety.

It is also important to ensure that there is a maintenance schedule in place with an appropriate fire alarm company, to ensure that systems are always in full working order (as recommended by BS5839).

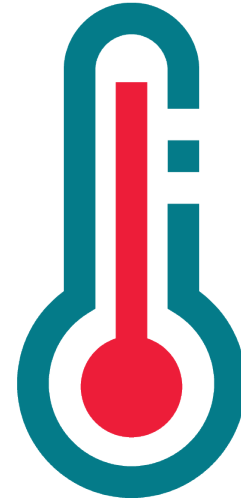
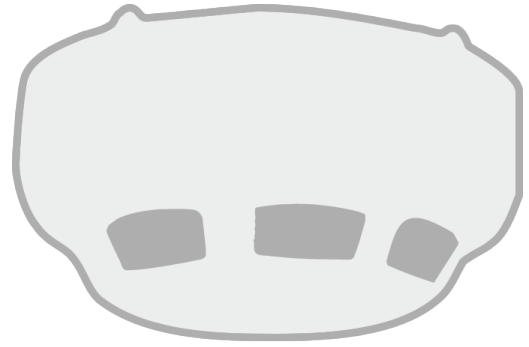


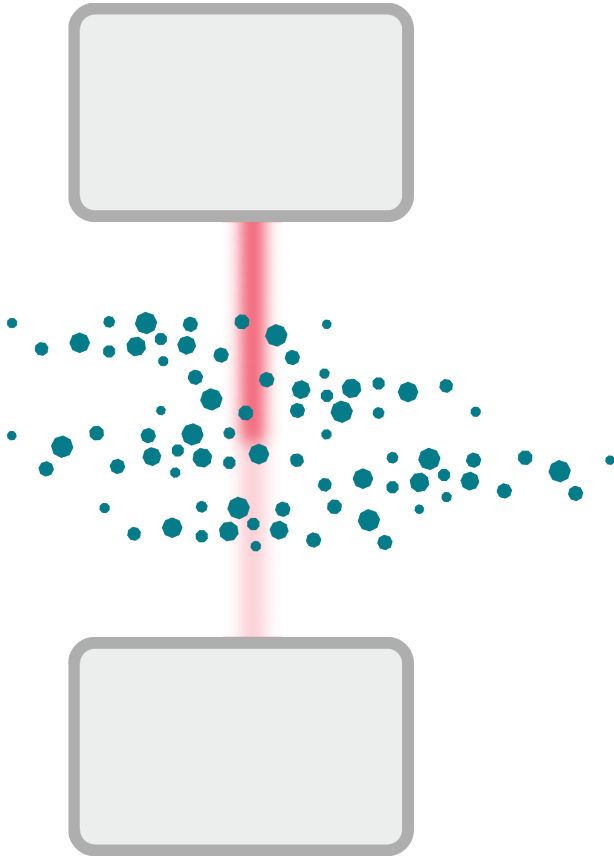
## Selecting the best detector for the application

There are a number of detector types available; heat detectors, smoke detectors, beam detectors, flame detectors and air sampling systems; all of which have been designed for different applications.

Heat Detectors are insensitive to smoke and instead monitor either the rate of rise of temperature or the general temperature compared to a fixed point, e.g. 60°C. These detectors are ideal for kitchens, because they will be able to differentiate between a fire and burnt cooking.

Smoke Detectors are well suited to most fire detection applications and they respond quickly to developing fires. Smoke detectors may work using photoelectric or ionisation technology; again, you should ensure that you chose the best technology for the application.

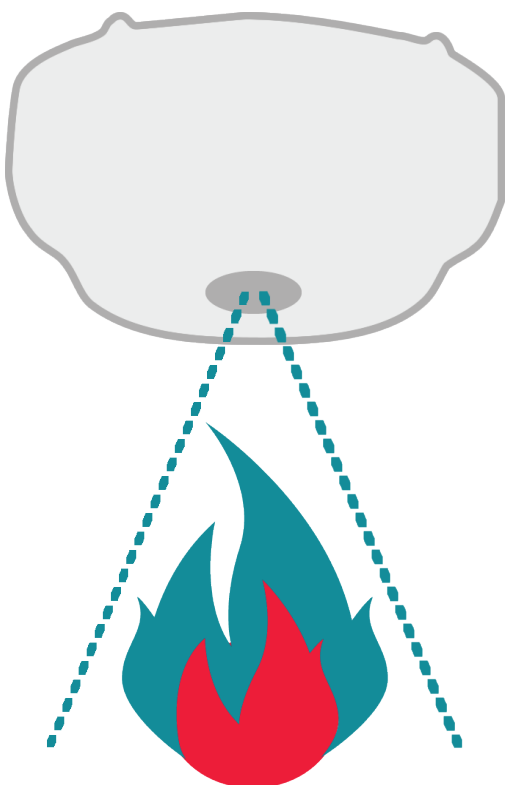




Beam detectors use an obscuration technique, whereby a constant beam of infra-red light is monitored for a decrease in strength due to smoke particles obscuring the beam. They can cover a huge volume of space and therefore are often used in leisure centres, shopping centres and auditoriums etc.

Flame detectors respond to the radiation from flames, therefore they are ideal for storage facilities that harbour items that are likely to flame, rather than smoulder. They are not ideal for places that use a furnace or welding equipment as this is likely to cause a false alarm.

Air Sampling systems are highly sensitive and are ideal for clean rooms where very early detection of smoke is essential. These detectors would not be appropriate for high traffic or dirty environments.



## Product Integrity

Steam, dust, fumes, tobacco smoke, insects, aerosols, candles, humidity etc, can all cause false alarms, therefore it is important to install high integrity products.

Some of the most reliable devices on the market will have alarm verification, error detection, drift compensation and the ability to adjust sensitivity to compensate for the causes of false alarms .

A high quality smoke detector will be able to tell the difference between steam and smoke. Imagine staying at a hotel with low quality, poor performance detectors; the steam from your shower or the gas from your deodorant could potentially cause a false alarm!



Poor quality or damaged equipment can also cause false alarms, therefore it is important to check the condition of wiring, devices, panels etc to ensure that faults will not occur.

It is also important to check the building for defects; such as roof leaks, inadequate ventilation, steam leaks etc, as these could damage fire alarm equipment.

## Reducing the risk of false alarms with periodic inspections and servicing

It is essential that the system is subject to periodic inspection and servicing, so that faults are identified, preventative measures can be taken to ensure continued reliability of the system, false alarm problems are identified and suitably addressed and that the user or building owner is made aware of any changes to the building that may affect protection afforded by the system.

It is important to note that periodic inspection and servicing does not constitute a fresh review of system design; it is a verification of the functionality and serviceability of the existing system.

Periodic inspection and servicing should be carried out by a competent person with specialist knowledge of the fire detection and fire alarms system; including knowledge of the causes of false alarms and sufficient information regarding the system.



## Planning Ahead

If you are having a new system installed, ensure that the installation company has enough time to complete the job. If their time is restricted they may have to rush completion and miss vital checks, leaving your system susceptible to false alarms.



Similarly, if you are having building work carried out onsite, make sure the workers are aware of the fire detection system. If the work is going to cause dust, smoke, paint spray etc, precautions should be taken to prevent unwanted false alarms.

For example, you could ensure that temporary screens are put in place between the work area and the detectors, or you could temporarily disable sections of the fire alarm system. However, you should ensure that screens do not increase the fire risk, and any disabled fire detectors are fully reinstated on completion of the work.



## Investigating and Recording False Alarms

Following a false alarm incident and once the building has been declared safe for re-entry, the false alarm should be investigated and recorded in a suitable manner; BS5839 recommends that this information is recorded in a Fire Systems Logbook.

As per clause 46 of BS5839-1:2013; following a fault (or real fire) the system should be inspected and tested. The Premises Management should therefore contact their maintenance provider to arrange an immediate maintenance check so that it can be confirmed that the system is in good health and fully operational (or not as the case may be).

Remember, Fire Safety Enforcement Officers from local Fire and Rescue Services now have the right to enter any work place at any reasonable hour, without giving notice to inspect a premises and its fire systems paperwork (logbook). If a breach is found, then the severity of the action will be decided by the officer. Sometimes informal advice may be given or an Enforcement Notice may be issued, but a severe breach could lead to prosecution and/or a fine.



### Fined £210,000

British consumer cooperative, The Co-operative Group were in Southampton Crown Court charged with serious fire safety breaches at its store in Shirley Road, Southampton. Hampshire Fire and Rescue Authority prosecuted for six breaches of fire safety under the Regulatory Reform (Fire Safety) Order 2005 and the company was subsequently fined £210,000.

#### Fire Safety Breaches

- Failing to maintain the rear emergency exit doors
- A fitted lock requiring a security code on the emergency door
- Fire alarm call point obstruction
- Failing to ensure that the store manager was provided with suitable and sufficient fire safety training
- Failing to ensure that the fire alarm system was being regularly tested
- Failing to ensure a means of early detection of fire

*“A number of common trends have emerged since the fire safety law came into force in 2006. These include blocked or locked exits, poorly maintained fire escape staircases, lack of staff fire training, storage of combustible materials in boiler rooms, lack of fire alarms, lack of emergency lighting, lack of fire doors, and in far too many cases lack of suitable fire risk assessment”*

Chief Officer John Bonney of Hampshire Fire and Rescue Service

## Further Information

Elements of this whitepaper have been formed using information provided by fire-docs.com. For more information please visit:  
[www.fire-docs.com](http://www.fire-docs.com)

The FIA also have a lot of information about false alarms; you can find more information here:  
<http://www.fia.uk.com/en/cut-false-alarm-costs/>

The Regulatory Reform (Fire Safety) Order 2005, details your responsibilities surrounding fire safety; read more at:  
<http://www.legislation.gov.uk/uksi/2005/1541/contents/made>

Hochiki Logbooks, not only allow you to record your fire alarm tests, maintenance work, and false alarms, but they also contain detailed information about user responsibilities, periodic inspections, how to prevent false alarms and much more. Watch our short video on the Hochiki Fire Log Book on YouTube:  
<https://youtu.be/Hi2-7aPbXto>

For more useful whitepapers and product information, please visit our web site:  
[www.hochikieurope.com](http://www.hochikieurope.com)

