

Commercial Fire Alarm Systems

- **How can a Fire Alarm system help protect your business from the threat of fire?**
- **How do Fire and Smoke Alarms actually work, from the different types of controls to positioning heat and smoke detectors?**
- **What fire regulations will need to be considered when installing a fire alarm system in your business?**
- **How and why you should choose a registered BAFE Installer**

You can find all you need to know about commercial fire alarm systems in this section.

Do I Need a Fire Detection System for My Business?

Obviously this is a question you need to answer for yourself based on your business type, risk, location, number of occupants etc. but Fire Protection Systems, in most instances, are an essential investment for your business. Also, your local fire officer or your insurance company may stipulate a need for a maintained fire alarm.

Smoke fire alarms will detect smoke and heat using various types of technology. An alarm then sounds to alert a building's occupants and/or the emergency services of any potential fire.

In most cases, early detection has saved countless lives, not to mention many thousands of pounds worth of property, records and loss of business continuity.

Conventional or Addressable Fire Alarm systems?

There are several differences between conventional and addressable fire alarm systems.

Addressable fire alarm systems give specific information about individual field devices such as detectors, whereas conventional systems only group field devices into zone areas. For this reason, addressable systems allow a courtesy text label to allow easy identification of any event. For instance detector 1 may be given the label "Bedroom 1".

Most addressable systems allow an early "pre-alarm" warning, which allows the responsible person to investigate potential false alarms before the system activates its sirens. Many addressable systems can also alter the alarm threshold of the detectors, in order to meet the needs of different environments in different zones of the system at various times.

Addressable systems are wired in a loop whereas conventional systems are wired as radial circuits.

Finally, addressable systems have a real time clock and event log to record system events.

This offers them the ability to use sophisticated programming options to operate certain outputs only with specific events.

Components

Commercial Fire Alarm systems contain certain main components. These include the control panel including PSU, the zones, the input devices and the output devices.

Control Panel

The control panel receives the input signals, monitors them and notifies you in case of any danger. This is also where the power supply is located.

Zones and Addresses

The zone (or 'area') feature located on the control panel can be set to react in a certain way to disturbances.

Zones are used to quickly identify the area within the building, where a fire has occurred, thus allowing the fire warden and/or the emergency services to quickly evacuate that area and commence the extinguishing of the fire effectively and safely.

An address gives you a description of exactly where each detector is situated
e.g (Main Corridor Smoke)

Smoke and Heat Detectors (input devices)

The three main types of smoke detectors are: optical, beam and ionization.

- Optical detectors work by a red beam reflecting off of the smoke particles.
- Beam detectors work by using a transmitter and receiver, as well as a red beam to detect an interruption within the normal air flow.
- Ionization detectors detect charred smoke particles that are affecting airflow as they pass through two electrodes.

The two main types of heat detectors that you may consider using in your business premises are those that are based on rise of temperature and those that are based on fixed temperature.

The **'rate of rise'** heat detectors detect sudden changes in temperature. **'Fixed temperature'** detectors operate according to the set fixed temperature; once this is reached, an alarm sounds.

Placing Detectors

In order for fire and safety systems to give optimum performance, you need to know the radius and range of cover for each type of detector.

Smoke detectors have a coverage radius of 7.5 meters while heat detectors only have a 5.3 meter radius.

You should install enough detectors to reach every part of a room for optimal protection.

Detectors also need to be 500 mm away from walls and 1 meter away from air conditioners to work correctly.

If there is an obstacle that comes up to more than 10 percent of the height of the ceiling, then treat that obstacle as a wall and place your detectors to accommodate for this.

Call Points & Sounders (output devices)

Call Points are used to manually sound the fire alarm when vacating the building to warn others, who may still be in the building, of the impending danger.

These devices are usually fitted adjacent to all your final exit doors to open air, on all storey exits and on escape routes with a maximum travel distance of 45 metres to locate a call point.

Installation

When choosing an installer you should always look for the BAFE Logo (British Approvals for Fire Equipment). Barlows UK is a BAFE approved contractor.

If you have any queries or you would like a quotation for having your fire alarm serviced or a new system installed, please don't hesitate to contact us on 01948 820 200.

Closed Circuit Television (CCTV)

CCTV technology has come a long way over the years and CCTV installations in the UK have proven their value in thousands of cases in both crime prevention and detection. Homes, offices, schools, retail units, service station forecourts and industrial sites can all benefit from digital analogue or IP CCTV systems. From a simple standalone DVR to an integrated shop IP network camera system, Barlows can show you the advantages of a CCTV camera system.

Here is a brief overview of what we can offer:

- Wireless Cameras
- Remote Camera Viewing
- Covert Cameras
- IP Cameras
- Digital Recordings
- IP Cameras
- iPhone Camera Control
- Boardroom Video & Audio Recording
- Live Web Viewing

Analogue and IP cameras are very different technologies and can provide different results, but what many people don't know is that they can run side by side on most digital video recorders.

Modern cameras are compact and easy to install, and can easily be adapted to any existing security installation. Where none exists, they can easily be connected to PCs or TVs. The tables below show a wiring diagram and the advantages and disadvantages of both types of systems.

ANALOG CCTV

(Hard wired, difficult to scale, "Octopus" architecture)



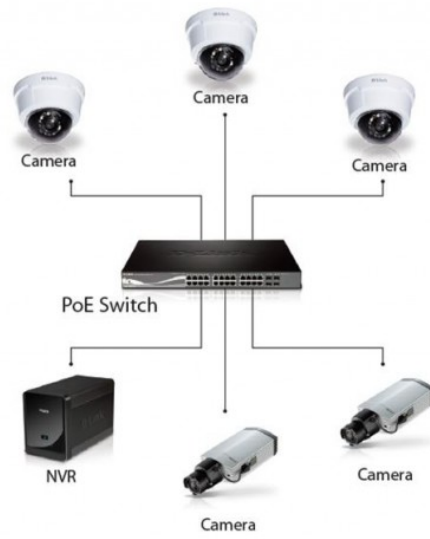
Fixed number of cameras and storage.



vs.

IP SURVEILLANCE

(Flexible, scalable, open architecture)



Easily scale any installation as your needs and budget grow.



	Analog CCTV	IP Surveillance
Price	Cheap cameras, expensive cabling	Broad range of cameras and price ranges, lower TCO
Resolution	Tops out at 720 x 480, many systems run at ¼ of this resolution	HD/megapixel IP cameras are 3 to 9 times the resolution of analog CCTV
Scalability	Costly and difficult to expand, "rip and replace" is typical	PoE, wireless make adding cameras or moving them extremely flexible; ceilings, rooftops, light poles, concrete walls, etc, IP make campus wide and/or multi-site installation much simpler to deploy (and grow)
Intelligence	None in camera, fixed camera count DVR has motion detection	Motion detection and video analytics in the camera, ability to easily configure and control camera remotely
Cabling	Combo power/coax cable is generally twice as much as network cable; audio and PTZ require additional cables	Single low cost network cable carries power, video, audio, PTZ, video motion detection data, alarm triggers

This chart serves as summary and highlights the stark contrast between analog CCTV and IP surveillance.

If you are unsure whether IP CCTV or digital analogue CCTV is best for you, why don't you give one of our experts a call for some impartial advice on 01948 820 200.

Extinguishers

Barlows Fire and Security Systems supply, fit and maintain fire extinguishers to the relevant British Standard.

The extinguisher should be properly serviced once a year.

Choosing Fire Extinguishers

Identify the type of materials in the area:

Class A: SOLIDS such as paper, wood, plastic etc

Class B: FLAMMABLE LIQUIDS such as paraffin, petrol, oil etc

Class C: FLAMMABLE GASES such as propane, butane, methane etc

Class D: METALS such as aluminium, magnesium, titanium etc

Class E: Fires involving ELECTRICAL APPARATUS

Class F: Cooking OIL & FAT etc

Types of fire extinguishers

Water Fire Extinguishers:

The cheapest and most widely used type of fire extinguisher. Used for Class A fires. Not suitable for Class B (Liquid) fires, or where electricity is involved.

Foam Fire Extinguishers:

More expensive than water, but more versatile. Used for Classes A & B fires. Foam spray extinguishers are not recommended for fires involving electricity.

CO₂ Fire Extinguishers:

Carbon Dioxide is ideal for fires involving electrical apparatus, and will also extinguish class B liquid fires, but has NO POST FIRE EXTINGUISHER VALUES and the fire could re-ignite.

Dry Powder Fire Extinguishers:

Often termed the 'multi-purpose' extinguisher, as it can be used on classes A, B & C fires. It is best for running liquid fires (Class B) and will efficiently extinguish Class C gas fires, BUT BEWARE, IT CAN BE DANGEROUS TO EXTINGUISH A GAS FIRE WITHOUT FIRST ISOLATING THE GAS SUPPLY. Special powders are available for class D metal fires.

Warning: when used indoors, powder can obscure vision or damage goods and machinery. It is also very messy!

Wet chemical:

Specialist extinguisher for class F fires.

For Metal Fires:

A specialist fire extinguisher for use on Class D fires – metal fires such as sodium, lithium, manganese and aluminium when in the form of swarf or turnings.

Fire Extinguishers - Colour Coding:

Prior to 1st Jan 1997, the code of practice for fire extinguishers in the UK was BS 5423, which advised the colour coding of fire extinguishers as follows:

Water – Red

Foam – Cream

Dry Powder – Blue

Carbon Dioxide (CO₂) – Black

Halon – Green (now 'illegal' except for a few exceptions such as the Police, Armed Services and Aircraft).

New extinguishers should conform to BS EN 3, which requires that the entire body of the extinguisher be coloured red. A zone of colour of up to 5% of the external area can be used to identify the contents using the old colour coding shown above.

If you have any enquires or you require costs for having your fire extinguishers serviced, please don't hesitate to contact us on 01948 820 200.

Intruder Alarms

Intruder alarms are electronic alarms designed to alert the user to a specific danger. Sensors are connected to a control unit via low-voltage wiring or a wireless link.

The most common security sensors are used to indicate the opening of a door or window or they detect motion via passive infrared (PIR). New construction systems are predominately hardwired.

Retrofit installations often use wireless systems for a faster and neater installation.

Who takes notice of an alarm sounding?

Quite frankly, it doesn't really matter who takes notice of your alarm sounding as long as the intruder does, right?

The fact is; thieves do not hang around when an alarm is sounding. Why should they? They don't know who is responding to the alarm and they don't want to be caught. The likelihood is this won't be their first offence and the consequence of capture is likely to be a term in prison. Almost all business systems are monitored 24hrs and the police will have been notified and be on their way.

Our advice

Always make sure your alarm is maintained by a NSI approved company.

If you want the police to respond to your alarm, it must conform to European Standard EN 50131. Wireless alarms must meet BS 6799 Class VI. Other systems have caused too many false alarms.

Fitting a 'Dummy Box' is false economy, as experienced burglars can tell the difference between a real and fake alarm.

Always ensure your alarm system is installed and maintained by a reputable security company who is accredited by the National Security Inspectorate (NSI) Gold standard. Accredited companies such as Barlows Uk Ltd are audited every six months by external NSI Technical and Quality Inspectors.

Types of alarm

Audible Only

This is an alarm that sounds when someone tries to either break in or if someone tries to tamper with the wiring.

Monitored alarms

These alert our monitoring partner Southern Monitoring Services (the UK's largest independent monitoring station). The Monitoring Station then rings your nominated key holder and then alerts the police, if needed, who will attend.

Autodial systems

This will send a voice message or text message to your mobile phone that alerts you to the fact that your alarm system has been activated.

All systems can be configured to fully meet the individual customers' needs.

The most popular types of detector devices for your business:

Passive infra-red or Dual-tech Technology

This type of protection is very efficient in covering large areas of your business such as offices, reception areas, warehouses, etc. and will detect the movement of intruders or a rapid change in temperature that you may get when a window is opened or smashed and is usually positioned in particularly vulnerable areas.

They also allow you to isolate areas, such as those that you may use at night, for example, the production areas, whilst having the main offices and any sensitive or vulnerable areas alarmed.

Perimeter Protection

These can be either small unobtrusive contacts that are placed on an opening window or door frame. Or they can be vibration detectors fitted on windows to sense if someone is trying to force the window or glass.

Will buying an alarm system reduce my business or home insurance premium?

Yes. Major insurance companies are now giving good discounts to businesses who have invested in an approved intruder alarm system to protect their business contents. The main criterion is that they must be installed by an approved security company from industry bodies such as National Security Inspectorate (NSI) and the National Alarm Council Of Security Systems (NACOSS).

If you have any queries or you would like a quotation for having your alarm serviced or for a new installation, please don't hesitate to contact one of our technical experts.