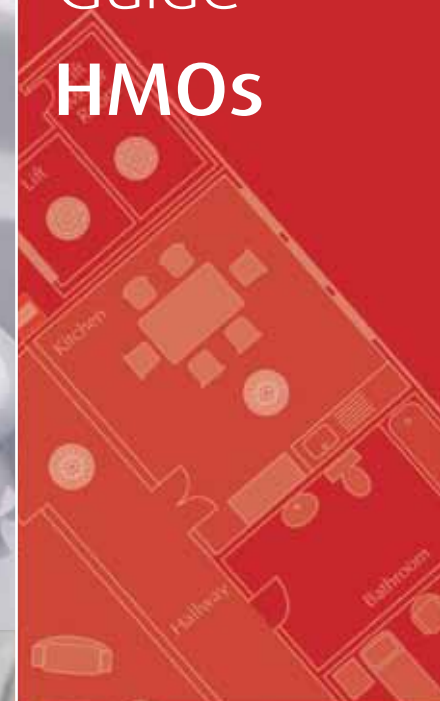





Application Guide HMOs



AlarmSense[®]

apollo
WORLD CLASS FIRE SOLUTIONS



2	Aims of this guide
3	What is AlarmSense?
3	What is an HMO
3	Fire Protection for an HMO
3	Approved Document B
4	Mandatory Licensing
4	BS 5839
4	Categories of System
6	Application of Categories of System
6	Mixed Systems
7	Siting Detectors and Alarms for a large HMO
7	Using AlarmSense in a large HMO
8	Grades of System
9	Approved Document B detector siting recommendations in dwellings
10	Designing Systems for Occupants with Special Requirements
10	Disability Discrimination Act
10	False Alarms
10	Reducing False Alarms
11	AlarmSense
11	Compliance with Standards
11	AlarmSense Features
12	The AlarmSense Range
14	Glossary
15	Suggested Further Reading
15	Apollo Literature
15	Useful Websites

All the information is given in good faith but Apollo Fire Detectors cannot be held responsible for any errors or omissions.



Aims of this guide

This guide has been written to highlight the fire protection requirements of HMOs (Houses in Multiple Occupation) and show how Apollo's AlarmSense range of detectors and detection devices can be used to fulfil the requirements of BS 5839, the code for fire alarm system design, installation, commissioning and maintenance.

This document is intended only as a guide and not a substitute for understanding BS 5839 Parts 1 and 6.

What is AlarmSense®?

AlarmSense is a range of conventional fire detection and alarm products designed to be connected to the same pair of supply wires, making installation quicker and less expensive.

AlarmSense has been developed to make the design and installation of a fire detection and alarm system easier and more economic for small to medium-sized buildings. The range also allows an existing system to be extended or modified if necessary. This flexibility makes AlarmSense an excellent choice for use in HMOs.

As you would expect from Apollo, AlarmSense incorporates features that help reduce false alarms and patented technology to ensure the integrity of a system.

The range also includes products, such as beacons, to help meet the requirements of the Disability Discrimination Act (DDA).

What is an HMO?

An HMO or House in Multiple Occupation is defined by HM Government as:

- A building or part of a building occupied by more than one household which shares certain amenities such as a bathroom or kitchen
- A converted building occupied by more than one household which is partly converted into self-contained flats
- A building which is made up entirely of self-contained flats which do not meet the 1991 Buildings Regulation and more than one third of the flats are occupied under short term tenancies

This means an HMO could be, amongst other things:

- Shared flats or houses
- Bedsits
- Student halls of residence
- Nurses' accommodation

Some hostels and bed and breakfast establishments might be classed as HMOs. To check, please refer to the definition in the Sleeping Accommodation Guide from HM Government.

Fire Protection for an HMO

The first step in designing any fire detection system is to undertake a fire risk assessment. To establish the fire risk, ask yourself:

- What is the probability of a fire?
- What is the probability of death or injury in the event of a fire?

So for example, a high probability of fire coupled with a significant possibility of loss of life or injury equals a high fire risk. This means that any fire detection system installed should warn occupants of a fire at an early stage, regardless of where in the building the fire occurs.

It is also useful to consider at this stage the type of tenants likely to be living in the HMO if known. For example, are they disabled, elderly or do they have special needs? If so, the system may have additional requirements to allow it to conform to the demands of the DDA. For more information refer to page 10.

By establishing the fire risk, you can also help determine the appropriate balance between protection and cost.

Approved Document B

The Approved Document B (ADB) Fire Safety guide to the Building Regulations gives advice on typical building situations. The information it contains is guidance only and, if appropriate, compliance with particular requirements can be achieved in alternative ways. The ADB is now in two volumes:

Volume 1 provides guidance for dwellinghouses; and

Volume 2 deals with non-dwellinghouses, but includes guidance for flats.

The ADB states that all new dwellinghouses and flats should be provided with a fire detection and alarm system.

The ADB is primarily concerned with protection of life in case of fire. However property protection is dealt with and the ADB recommends that stakeholders, in particular the insurers, be consulted because they may seek their own higher standards of protection before accepting the risk.

Regulation B1 of the Building Regulations, titled 'Means of warning and escape' states:

*The building shall be designed and constructed so that there are **appropriate provisions for the early warning of fire**, and appropriate means of escape in case of fire from the building to a place of safety outside the building capable of being safely and effectively used at all material times.*

The ADB goes on to recommend that:

In most houses the installation of smoke alarms or automatic fire detection and alarm systems, can significantly increase the level of safety by automatically giving an early warning of fire.

The ADB recommends that a building used as a dwelling should have a fire detection and alarm (FD&A) system. For large* dwellinghouses of 3 or more storeys (excluding basement storeys) the FD&A system should comply to BS 5839 part 6, grade A, category LD2, with detectors sited in accordance with the recommendations of BS 5839 part 1 for a category L2 system. For large* dwellinghouses of 2 storeys (excluding basement storeys) the FD&A system should comply to BS 5839 part 6, grade B, category LD3. For small dwellinghouses and flats the FD&A system should comply with BS 5839 part 6, grade D, category LD3.

The grades and categories** shown are a minimum and may be bettered if necessary. For example, installing an AlarmSense FD&A system could cover all grades and categories in BS 5839 parts 1 and 6. The communal parts (e.g. stairway) of flats or converted dwellinghouses used as HMOs are not dealt with specifically in the ADB. However, when the protected area is a converted dwellinghouse, with a communal stairway to HMO dwellings, then an AlarmSense FD&A system would be an ideal choice.

*A dwellinghouse is regarded as large if it has more than one storey and any of those storeys exceed 200m².

**For an explanation of grades and categories used in BS 5839 please see page 8.

Mandatory Licensing

In April 2006 mandatory licensing of HMOs of three storeys or more came into force.

National licensing is necessary to raise the standard of HMOs to the same level, making it consistent across the country. Licensing of HMOs is mandatory for all local authorities and some may even choose to widen the scope of licensing to include smaller or other types of HMOs. This is known as 'additional licensing'. It may be advisable to consult the relevant local authority, because they may have different regulations, depending on their housing stock and the perceived risk.

Some local authorities have a system of HMO categories from A to F, which vary, for example, from shared houses, bedsits, houses converted into flats, to hostels etc. It is advisable to contact the relevant local authority to establish the HMO category and the fire protection required.

BS 5839

BS 5839 is the British Standard for Fire Detection and Fire Alarm Systems for Buildings. The applicable part of the code depends on the size of the building and the different areas within it. For the installation of fire detection systems within an HMO, BS 5839 Part 6 is the main code of practice, but Part 1 may also be used, particularly in the communal areas and in large dwellings. The table below illustrates where different applicable codes would be used.

Size of HMO	Dwelling Unit(s)	Communal Area(s)
Up to and including 2 storeys	Part 6	Part 1*
3 or more storeys	Part 1*	Part 1*

Table 1: Building size and applicable codes

BS 5839 Part 6

Part 6 is the code of practice for dwellings and therefore the main code for the fire detection provision within the individual accommodation units of an HMO of two storeys or less.

BS 5839 Part 1

This part of the code deals with the design, installation, commissioning and maintenance of a fire detection system in buildings other than dwellings. However, depending on the size of the HMO, the recommendations of Part 1 can be applied to certain areas within the dwelling (see table above for details). *Where BS 5839 part 1 is shown in Table 1, it means that the system would be to Part 1 with the increased (battery) standby time of 72 hours and alarm sound pressure (dBA) recommendations in the dwellings to BS 5839 part 6.

Categories of System

BS 5839 divides fire alarm systems into a number of different categories for life protection for occupants. Part 6 and Part 1 of BS 5839 allocate slightly different names to these categories:

Category LD	used in Part 6
Category L	used in Part 1

The letters 'L' and 'D' used in these categories stand for 'Life protection' (L) and 'Dwelling' (D). Therefore Category LD used in Part 6 covers Life protection in Dwellings while Part 1's Category L covers Life protection in premises generally.

The definition of these categories also differs slightly between Parts 6 and 1. The table below shows the roughly equivalent categories:

BS 5839 Part 1	BS 5839 Part 6
L1	LD1
L2	LD2
L3	LD3
L4	
L5	N/A

Table 2: Equivalent categories between BS 5839 Part 1 and Part 6

The requirements of the categories of system are described below.

System L1 (Part 1)

An automatic detection system is installed throughout the building. This category of system is the most comprehensive, giving the earliest possible warning of a fire and the most time for escape.

System LD1 (Part 6)

This is a full coverage system where an automatic detection system is installed throughout the dwelling unit (see Fig 1). This includes detectors in all circulation spaces that are escape routes within the dwelling and in rooms where a fire is most likely to start (a kitchen or living room).

Note: In all LD Categories, bathrooms and toilets would not generally be protected.

System L2 (Part 1)

An automatic fire detection system is installed in escape routes*, in the rooms opening onto the escape routes and in defined parts of the building where there is an increased risk of fire e.g. in lift motor room(s) or in the kitchen(s).

System LD2 (Part 6)

Detectors are installed in all circulation spaces that form escape routes from within the dwelling and in all rooms where a fire is likely to start, such as a kitchen or living room (see Fig 2). The potential causes of these fires could be, for example, electrical equipment left on and unattended in a living room or people falling asleep while smoking or accidentally leaving a cigarette burning.

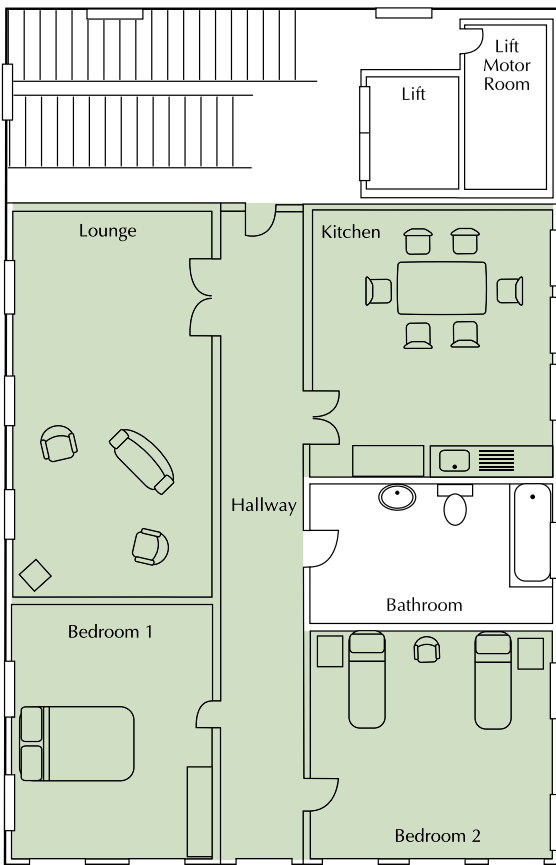


Fig 1. LD1 This is the most comprehensive of the three categories of Part 6, covering all rooms where a fire might start such as a kitchen or living room. Note that bathrooms and toilets are not generally protected.

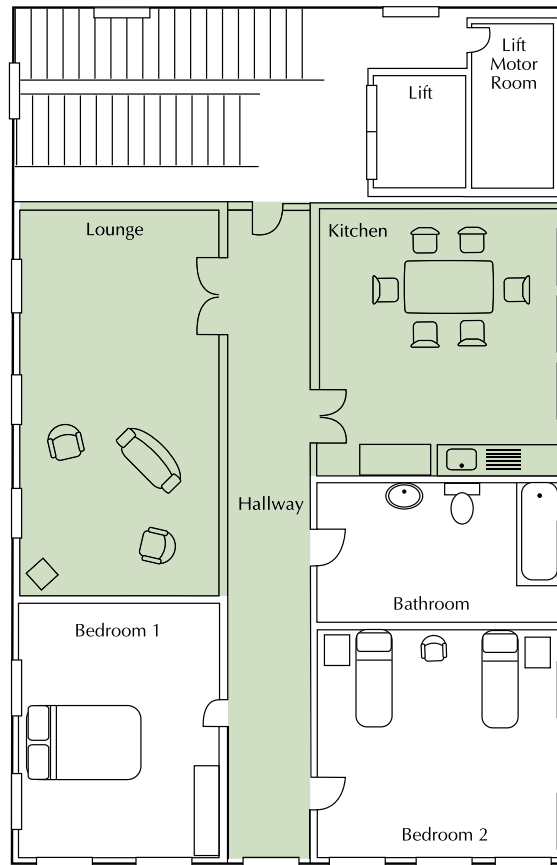
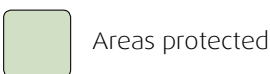


Fig 2. LD2 The escape routes within the dwelling and the higher risk rooms, such as a kitchen are protected.



System L3 (Part 1)

A system to Category L3 is intended to give an early warning of a fire. Escape routes* and rooms that open onto escape routes are protected.

System L4 (Part 1)

A system to Category L4 would protect only the escape routes* and circulation areas of a building.

*Escape routes for BS5839 Part 1 systems comprise escape corridors and stairways.

System LD3 (Part 6)

Detectors are installed in all circulation spaces that form part of the escape routes from within the dwelling, such as the hall (see Fig 3).

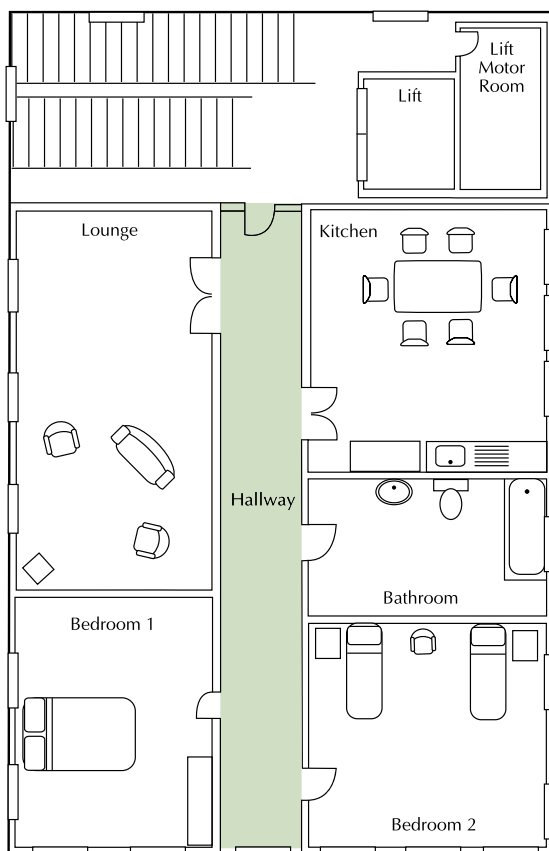


Fig 3. LD3 Only the circulation areas are protected.

 Areas protected

System L5 (Part 1)

An L5 system is intended to meet a specific fire safety objective. It is most unlikely to be applicable to an HMO.

Application of Categories of System

BS 5839 Part 6 recommends that all dwellings be protected to at least LD3 and new dwellings to LD2. If the risk is high, for example the occupants are elderly or have a disability, LD2 or LD1 should be considered for dwellings, whether new or not.

The table below shows the minimum standard of protection for dwellings as recommended by Part 6:

	LD1	LD2	LD3
New dwellings		●	
Existing dwellings			●
Dwellings for occupants with Disabilities (This applies whether the dwelling is new or existing)	●	●	

Table 3: Minimum standard of protection recommended in BS 5839 Part 6

Mixed Systems

A single fire detection system would be suitable for large HMOs, typically buildings with three or more storeys. However, other HMO properties could be fitted with a 'mixed system'. This essentially mixes BS 5839 Part 1 and Part 6. For an HMO, this could mean using BS 5839 Part 1 Category L3 or better in communal areas to warn occupants of a fire and BS 5839 Part 6 Category LD1 in the individual dwelling units. The hall could be both Part 6 and Part 1 as there may be a detector and alarm just inside the door of the dwelling (Part 1) and a smoke alarm, perhaps near the bedroom door (Part 6). The diagrams overleaf show how mixed systems can be used in different sized buildings.

Siting Detectors and Alarms for a large HMO

Large HMOs may be fitted with fire detection and alarms to BS 5839 part 1 category L3 (or L2) in the communal escape routes and in each of the accommodation areas opening onto the communal escape route. For example, smoke detectors would be sited at each main landing in a stairway with a fire detector just inside each accommodation area leading onto the communal escape route. Alarm devices would be sited in the communal escape route to BS 5839 part 1 with one or more sounders in each accommodation area. If any of these (part 1) detectors activate, then the alarm devices in the communal escape route and in the dwellings operate, so starting the evacuation throughout.

In the HMO dwelling units a fire detection and alarm system to BS 5839 part 6 would be used to detect a fire in the dwelling and operate the alarm devices in that dwelling only, so that the occupant(s) can take appropriate action. In the event of a false alarm, only the occupant(s) would be involved and a general evacuation avoided. However, if a fire threatened the communal escape route the detector in the accommodation area connected to the part 1 system would activate to operate the associated alarm devices in the communal escape route and in each dwelling.

Using AlarmSense in a large HMO

AlarmSense detectors and sounders could control the whole of the system described above, using a central fire alarm control panel. Detectors in the dwelling units would be set with a "non-priority" signalling delay, so that initially only local area sounders operate, making the occupant(s) aware so they can take appropriate action. If the smoke disperses within the delay time (usually about 2 minutes) the alarm devices would be silenced. If the fire is genuine and cannot be dealt with, after the delay, all sounders throughout the HMO building would operate, so evacuating all occupants. Using a central panel and AlarmSense devices provides overall alarm coverage in all areas of the communal escape routes and throughout the dwelling units. Detectors sited in the communal escape route and just inside the dwelling units (i.e. to part 1) would be set to "priority" and, when activated, would operate all alarm devices for a general evacuation.

Please see the section Priority/Non-priority signalling on page 11.

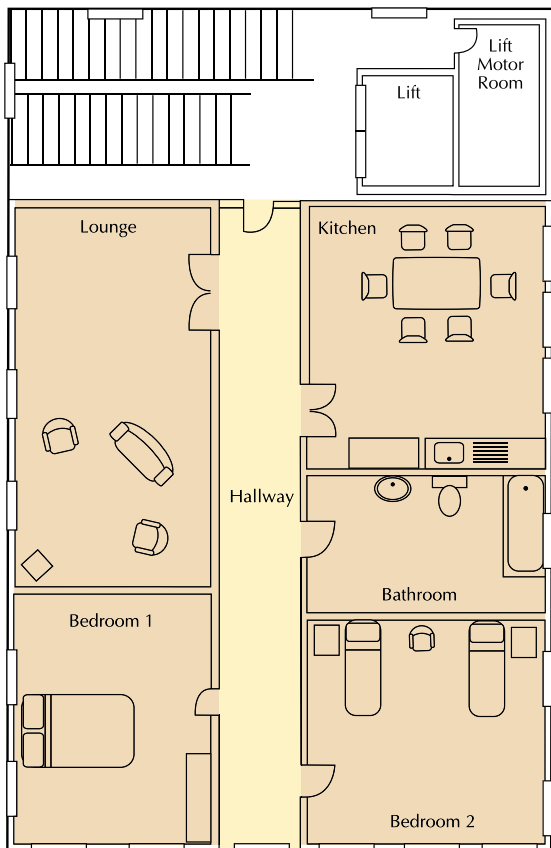


Fig 4. Dwellings up to 2 storeys

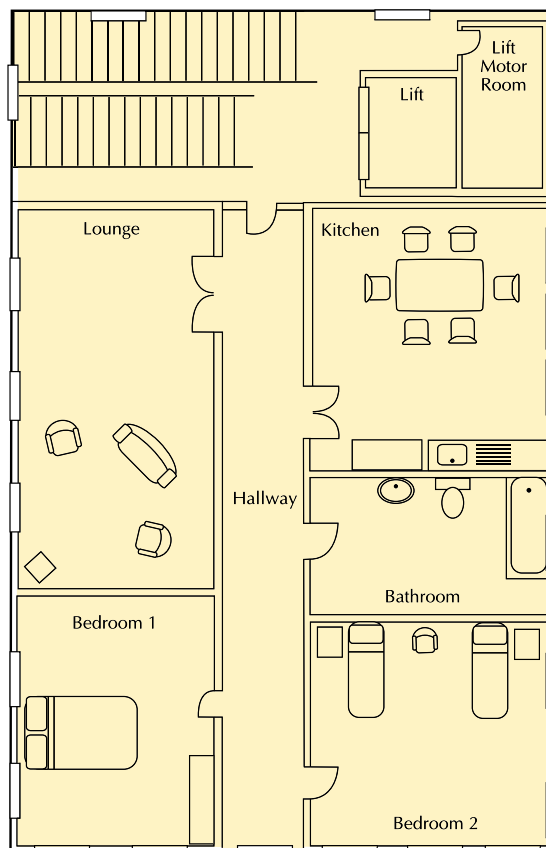
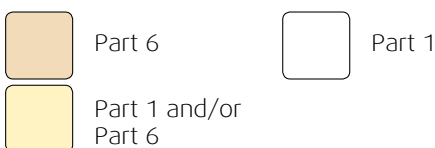


Fig 5. Dwellings of 3 or more storeys



Grades of System

In addition to system categories, BS 5839 Part 6 defines a number of system grades essentially referring to the technology of detection and protection.

There are six Grades, A to F with Grade A being the most comprehensive. The table below shows the advantages and disadvantages of each Grade.

More control		Less control
More monitoring		Less monitoring
Greater reliability		Less reliability
More expensive		Low cost
More complex installation		Easy installation
High fire risk applications		Lower fire risk applications
Large dwelling		Smaller dwelling
Grade A	through to	Grade F
Apollo's AlarmSense range meets the requirements of these Grades		

Table 4. BS 5839 Part 6 Grades : advantages and disadvantages

Grade A

A Grade A fire detection and alarm system conforms to the general recommendations of BS 5839 Part 1. This means that the equipment used in the system should conform to the following standards:

- Detectors to EN54-5 (heat) or EN54-7 (smoke)
- Control panel to EN54-2
- Power supply to EN54-4

While a Grade A system conforms to Part 1, certain elements of the system are covered by Part 6 instead. The table below shows which elements are covered by Part 6 and their equivalent clause in Part 1.

Within an HMO, a Grade A system should be able to identify the location of an alarm. This can be achieved

	Part 6 Clause	Part 1 Clause
Audible alarm signals	13	16
Fire alarm warning for people with impaired hearing	14	18
Manual call points	18	20
Capacity of standby batteries	15.2c	25.4e
Radio-linked systems	21	27

Table 5. Clauses covered by Part 6 and Part 1 in a Grade A system

by making each individual dwelling a zone. Therefore, if a fire occurs in a dwelling, only one zone would indicate fire, thereby showing firefighters the source of the fire. To see how AlarmSense can be used in a Grade A system please refer to the drawings on page 9.

AlarmSense can be used to meet all the requirements of Grade A because all AlarmSense detectors are approved to EN54-5 for heat detectors and EN54-7 for smoke detectors. For AlarmSense control panel approvals, please contact the panel manufacturer.

Grade B

A Grade B system follows the functionality of a Grade A system using smoke and heat detectors. A Grade B system is subject to many recommendations (to be found in Annex C of BS 5839 Part 6).

A Grade B system should also divide the building into detection zones. The table below shows the recommended guidelines for zone sizes:

Floor Area	Recommended Zone Division
Less than 200m ²	1 zone can be spread over more than 1 storey
200 – 2,000m ²	1 zone per storey
More than 2,000m ²	More than 1 zone per storey

Table 6. Suggested zone division

As AlarmSense meets the requirements of a Grade A system, it can be used to fulfil the requirements of Grade B too, meaning that the highest grade of system is installed.

Grade C

A Grade C system incorporates fire detectors and sounders connected to a common power supply. This power supply is both mains and a standby supply and contains an element of central control equipment.

In a Grade C system, zonal control is not recommended, so the whole dwelling could be one zone. The system could be incorporated into an intruder panel.

As AlarmSense fulfils the requirements of Grade A, it automatically meets the requirements of Grade C.

Grade D

A system containing mains-powered smoke or heat alarms with battery standby.

Grade E

A system containing mains-powered smoke or heat alarms with no battery standby.

Grade F

A system containing battery powered smoke or heat alarms only.

By using AlarmSense throughout a fire detection system you are already using a Grade A system. AlarmSense means a better system and better protection for individual dwellings and other occupants in the building.

Grades D and F have individual batteries in the smoke or heat alarms. These grades are therefore dependent on the occupant in the dwelling replacing the battery as required. Using Apollo's AlarmSense range, the back-up battery is located at the fire alarm panel and servicing, including battery checking, can be done on a regular basis by a Competent Person, calling according to a schedule. This provides better, more reliable cover without relying on the occupant having to replace batteries.

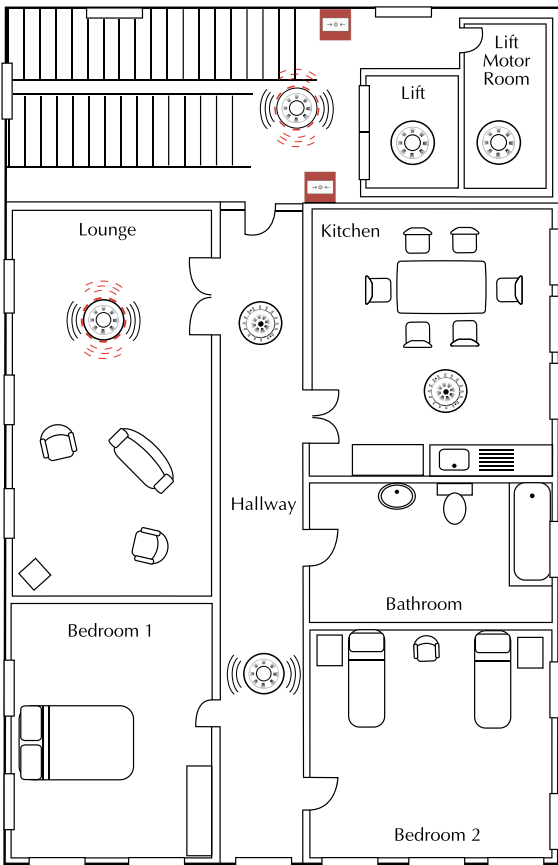


Fig 6: Typical AlarmSense system within an individual dwelling

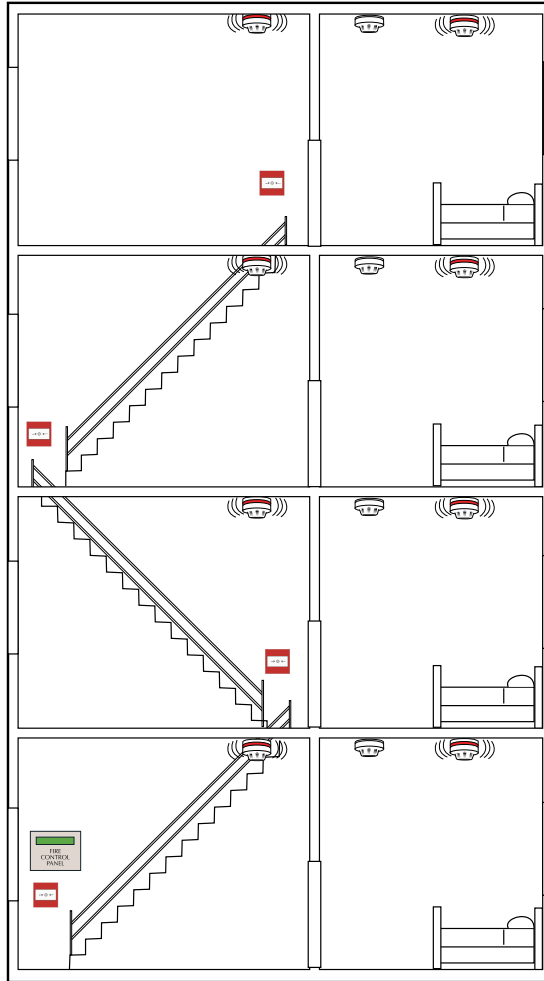


Fig 7: Typical AlarmSense system within an HMO

Approved Document B (ADB) detector siting recommendations in dwellings

Certain detector siting recommendation in the ADB reiterate BS 5839 part 6 and others are additional recommendations. Detectors should be sited in the circulation spaces within the dwelling units as follows:

- between sleeping spaces and where fire would be most likely to start (e.g. kitchens and living rooms);
- at least one smoke detector on every storey;
- where the kitchen is not separated by a door from the circulation spaces, a heat detector should be used in the kitchen, linked to the alarms;
- Where more than one alarm is installed, they should be interlinked;
- Smoke detectors and alarms should be fitted in the circulation spaces within 7.5m of every habitable room;
- power supplies should have a 72 hour standby.

Designing Systems for Occupants with Special Requirements

When designing a fire system for an HMO, the fire risk assessment should take into consideration the likely occupants. For example, are they elderly? Do they have a disability? If so, it is important to use a category that gives the maximum amount of time to allow them to escape. The assessment should include all rooms within the dwelling even though they may not be directly protected in the final fire system design.

BS 5839 Part 6 recommends that LD1 or LD2 categories be used in HMOs designed for use by elderly or disabled residents irrespective of whether the building is a new or existing dwelling.

Disability Discrimination Act

The final phase of the Disability Discrimination Act (DDA) came into force on the 1st October 2004. The Act seeks to end discrimination faced by disabled people and this has implications when designing a fire detection system.

The main requirement relevant to fire alarm systems is to include visual signalling devices (beacons, strobes) in a system in addition to audible devices (sounders). Beacons can be used in living rooms and bedrooms for example. The AlarmSense range includes a sounder beacon base to enable compliance with the requirements of the DDA.

The AlarmSense Alarm Relay allows other products designed to alert the disabled to be connected to the system such as pillow or bed alarms, radio vibrating devices and paging systems (see page 13 for more details).

False Alarms

The risk of false alarms is something all fire detection systems are susceptible to but the nature of HMOs and their potentially vulnerable tenants makes the risks and possible consequences even greater.

BS 5839 Part 1 defines false alarms as a 'fire signal resulting from a cause(s) other than fire'. A false alarm could be:

- A malicious act or vandalism
- Human error
- Transient phenomena such as cigarette smoke being interpreted as a fire rather than an unwanted alarm
- Damage to or faults within detection devices
- Poorly maintained devices

In reality, a false alarm in an HMO is likely to be an 'unwanted alarm' which BS 5839 Part 6 defines as "an alarm which a system has responded [to], either as designed or as the technology may reasonably be expected to respond".

- A fire-like phenomenon or environmental influence
- Accidental damage

This means the most common causes of 'unwanted alarms' are usually a result of a tenant's activities, for example,

- Toasting smoke and cooking fumes
- Steam from bathrooms and kitchens
- Aerosol spray, for example hairspray
- Candles
- Tobacco smoke
- Build-up of dust

Or sources beyond a tenant's control, e.g.

- Insects
- High humidity
- Water ingress
- Other sources of smoke external to the property

Reducing False Alarms

The likelihood of false alarms can be greatly reduced with the correct system design, device selection, installation and maintenance. By using AlarmSense, you can help reduce the risk of false alarms even further because the detectors have been designed to resist some causes of false alarms such as insects, high humidity and water ingress. The AlarmSense system is also monitored and has a priority/non-priority signalling feature to help reduce false alarms even further.

If a false (unwanted) alarm is raised, it is important to allow the occupants of individual dwellings in an HMO a means of silencing this signal before the rest of the building is alerted and evacuated. AlarmSense's priority and non-priority signalling gives a tenant two minutes to clear the source of the unwanted alarm before a full evacuation is initiated.

BS 5839 Part 6 recommends that, to help reduce the likelihood of false alarms in particularly sophisticated systems, for example in very large properties (usually incorporating more than fifty smoke detectors), only an analogue addressable system be used. An AlarmSense system can be used in systems of this size and complexity. However, if you decide that an analogue system is more appropriate, consider using one of Apollo's analogue addressable ranges, XP95 or Discovery.



AlarmSense is a range of conventional detection and alarm products designed to be connected to the same pair of supply wires. By allowing products to be connected in this way, a saving on cable and the costs associated with this can be made.

The products in the range are powered and controlled by purpose-designed control and indicating equipment.

Compliance with Standards

AlarmSense is certificated to European Directive 89106 EEC Construction Products Directive (CPD).

The entire AlarmSense range has been designed to enable compliance with BS 5839 Parts 1 and 6 in addition to the following EN54 standards:

Standard	AlarmSense product/s
EN54-3	Sounder Base Sounder Beacon Base
EN54-5	Heat Detectors
EN54-7	Smoke Detectors
EN54-11	Manual Call Points
EN54-18	Alarm Relay Module

Table 7: AlarmSense compliance with EN54 Standards

AlarmSense Features

Priority/Non-Priority Signalling

The AlarmSense sounder base and sounder beacon base feature priority and non-priority signalling. In an HMO, AlarmSense detectors in individual dwellings can be set to 'non-priority' while those in the communal areas are set to 'priority'.

In the event of a detector activating in a dwelling, only the occupants of the affected dwelling will be warned by the alarm. If it is a false (unwanted) alarm, such as cooking fumes, the occupants have two minutes to clear the detector. If the detector is clear after this time, the system will reset, the alarms in the dwelling will silence and no other alarms in the building will operate. This feature helps to reduce the likelihood of full-scale evacuations.

However, if the detector remains in alarm after two minutes the system will operate all alarms and all other occupants of the building will be alerted so they can evacuate. Figure 8 shows the process.

Priority/non-priority signalling is set simply by a DIL switch on the relevant device.

Note: please check with your chosen AlarmSense control panel manufacturer that their panel supports this feature.

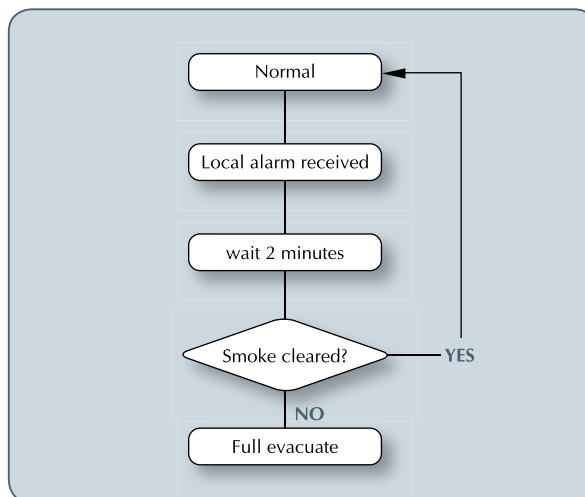


Fig 8: Flow chart of priority/non-priority signalling

RemovAlert™

All AlarmSense bases are fitted with electronic circuitry that monitors the presence of a detector head. If a detector is removed without authorisation, the base will signal a fault at the control panel.

This patented feature is known as RemovAlert™ and means that the fire detection system still operates as intended, even when a detector head has been removed. Put simply, devices such as detectors or manual call points continue to operate as normal.

AlarmSense for HMOs

The AlarmSense range is suitable for BS 5839 part 1 and BS 5839 part 6 installations, making it an excellent choice for all parts of HMOs. In particular where interlinked alarms are recommended, AlarmSense would be ideally suited.

The AlarmSense Range

The range includes the products you need to build a fire system for an HMO of any size.

The range comprises:

- Optical smoke detector
- Integrating optical smoke detector
- A1R heat detector
- CS heat detector
- Resettable Manual Call Point
- Base
- Sounder base
- Sounder Beacon base
- Alarm Relay

Combinations

Apollo makes ordering the AlarmSense products you need for a project easy with combination packages. These comprise an AlarmSense sounder base or sounder beacon base with a detector. This means you can order the exact number of products you need. Alternatively, you can order the products separately. See product descriptions for part numbers.

Sounder Base Combinations	Part Numbers
With Optical Smoke Detector	55000-392
With Integrating Optical Smoke Detector	55000-393
With A1R Heat Detector	55000-196
With CS Heat Detector	55000-197
Sounder Beacon Base Combinations	Part Numbers
With Optical Smoke Detector	55000-394
With Integrating Optical Smoke Detector	55000-395
With A1R Heat Detector	55000-198
With CS Heat Detector	55000-199

Table 8: AlarmSense combinations

Optical Smoke Detectors

The AlarmSense range features two optical smoke detectors, a standard optical smoke detector, part number 55000-390, and an integrating optical smoke detector, part number 55000-391, for use in areas where smoke is present under normal circumstances. Integrating optical smoke detectors can be used in HMOs where the occupants may be smokers. Using integrating optical smoke detectors in this environment will help reduce the likelihood of false alarms.

Heat Detectors

The AlarmSense range has two heat detectors, classified according to the requirements of EN54-5.

The rate-of-rise heat detector (A1R), part number 55000-190, responds to rapid increases in temperature and avoids false alarms in dirty, dusty areas, rooms with kitchenettes attached or where the occupants smoke.

A static heat detector (CS), part number 55000-193, is designed for high temperature applications such as a kitchen. They can be used in the same environments as the rate-of-rise detectors described above and without causing false alarms in areas where there are rapid temperature fluctuations such as laundries and boiler rooms.

Manual Call Point

The AlarmSense Manual Call Point gives an immediate response when operated. The standard call point is housed in a red moulding with an integral red alarm LED to show that it has been operated.

Bases

AlarmSense detectors can only be used with AlarmSense bases. The table below shows the features of the AlarmSense bases:

	RemovAlert™	Priority/ Non Priority Switching	Cap for stand alone use
Standard Base	●		N/A
Sounder Base	●	●	●
Sounder Beacon Base	●	●	●

Table 9: AlarmSense base features

Standard Base

The standard AlarmSense base part number 45681-244, is used for installing detectors that do not require an integral sounder or sounder beacon.

Sounder Base

The AlarmSense sounder base, part number 45681-510, combines a sounder and a detector base in one unit, giving two functions at one point. This gives you flexibility in designing the system and means that two devices can be installed at one point, providing an additional element of fire protection.

Sounder Beacon Base

The sounder beacon base, part number 45681-509, incorporates a sounder, a beacon and a detector base in one unit, giving three functions at one point.

The sounder beacon base includes high intensity red LEDs which flash once per second in the event of an alarm. This visual confirmation of an alarm enables an AlarmSense system to be compliant with the DDA.

BS 5839 Part 1 recommends a sound level of 75dB(A) be used to rouse sleeping occupants or where occupants are likely to be noisy. This means that 75dB(A) level should be heard at the bedhead even through closed doors. The sound output for the AlarmSense sounder beacon base can be selected at either 70 or 87dB(A).

Alarm Relay

The Alarm Relay, part number 55000-835, enables devices such as beacons, pillow/bed alarms and radio vibrating or paging devices to be connected to the fire detection system. This allows the system to comply with the requirements of the DDA.

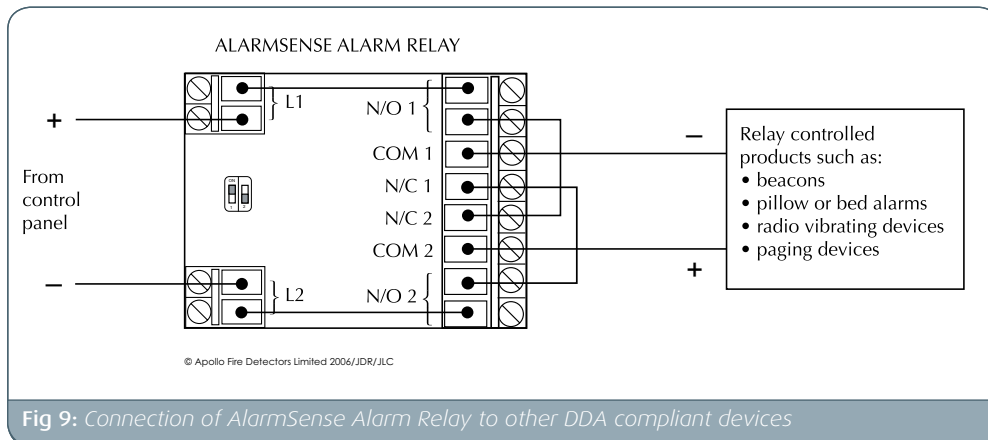


Fig 9: Connection of AlarmSense Alarm Relay to other DDA compliant devices

Glossary

Below are definitions of terms used throughout this brochure. They are intended to be read in relation to this document only.

Access Room

A room that provides an escape route from an inner room.

Circulation Area

A space that is mainly used as a means of access between a room and an exit. Examples of circulation areas include corridors, hallways, landings and staircases.

Communal Area

Any area within an HMO that is accessed by all occupants. In buildings where there are individual dwellings, communal areas are usually the corridors, escape routes, hallways and stairways.

In HMOs where certain amenities are shared, communal areas also include any shared kitchens, bathrooms and living areas.

Dwelling

A dwelling is defined as a self-contained unit of accommodation.

False Alarm

BS 5839 Part 1 defines a false alarm as a “fire signal resulting from a cause(s) other than a fire”. It goes on to define four categories of false alarm: a device responding to a fire-like phenomena such as cigarette smoke; a device or system malfunction; an alarm raised maliciously and an alarm raised with good intent. See page 10 for more information.

Heat Alarm

A heat alarm contains within its housing all the elements necessary to detect heat and sound an alarm. It may also contain an integral power supply.

Heat alarms do **not** form part of the AlarmSense range.

Heat Detector

A heat detector contains one or more sensors for monitoring and detecting heat. When heat has been detected, they initiate an alarm via their control equipment. Used as part of a system.

The AlarmSense range includes A1R and CS heat detectors. See page 12 for more details.

HMO

HMO stands for House in Multiple Occupation. It is essentially a building that houses more than one family. This could be self-contained flats or flats that share amenities; it could be a converted house or purpose-built accommodation. For a full definition, please see page 3.

Inner Room

An inner room has no escape route other than that provided by its access room.

Large House

A house is defined as large in Approved Document B if ‘any of its storeys exceed 200m².’

Patent

A grant of exclusive right to make, use and sell an invention in a defined territory such as the United Kingdom.

Priority/Non-Priority Signalling

A feature of AlarmSense that enables the investigation of an alarm in a single dwelling without evacuating the whole building. If, after two minutes, the detector remains in alarm, all occupants are alerted and the building can be evacuated. See page 11 for more information.

RemovAlert™

This is a patented AlarmSense feature that alerts the control panel if a detector has been removed from its base without authorisation. See page 11 for more information.

Smoke Alarm

A smoke alarm contains within its housing all the elements necessary to detect smoke and sound an alarm. It may also contain an integral power supply.

Smoke alarms do **not** form part of the AlarmSense range.

Smoke Detector

A smoke detector contains one or more sensors for monitoring and detecting smoke. When smoke has been detected, it initiates an alarm via its control equipment. Used as part of a system.

AlarmSense smoke detectors are optical type smoke detectors.

The AlarmSense range includes optical and integrating optical smoke detectors. See page 12 for more details.

Storey

Rooms on one level of a building. This can include basements and attics.

Two Wire

A system that allows detection and alarm devices to be connected to the same pair of wires. AlarmSense is a two wire system.

Suggested Further Reading

BS 5839: Part 6: 2004 Fire Detection and Fire Alarm Systems for Buildings Code of Practice for the Design, Installation and Maintenance of Fire Detection and Fire Alarm Systems in Dwellings.

BS 5839: Part 1: 2004 Fire Detection and Fire Alarm Systems for Buildings Code of Practice for System Design, Installation, Commissioning and Maintenance.

BS 5588: Part 8: 1999 Fire Precautions in the Design, Construction and use of Buildings – Code of Practice for means of escape for disabled people.

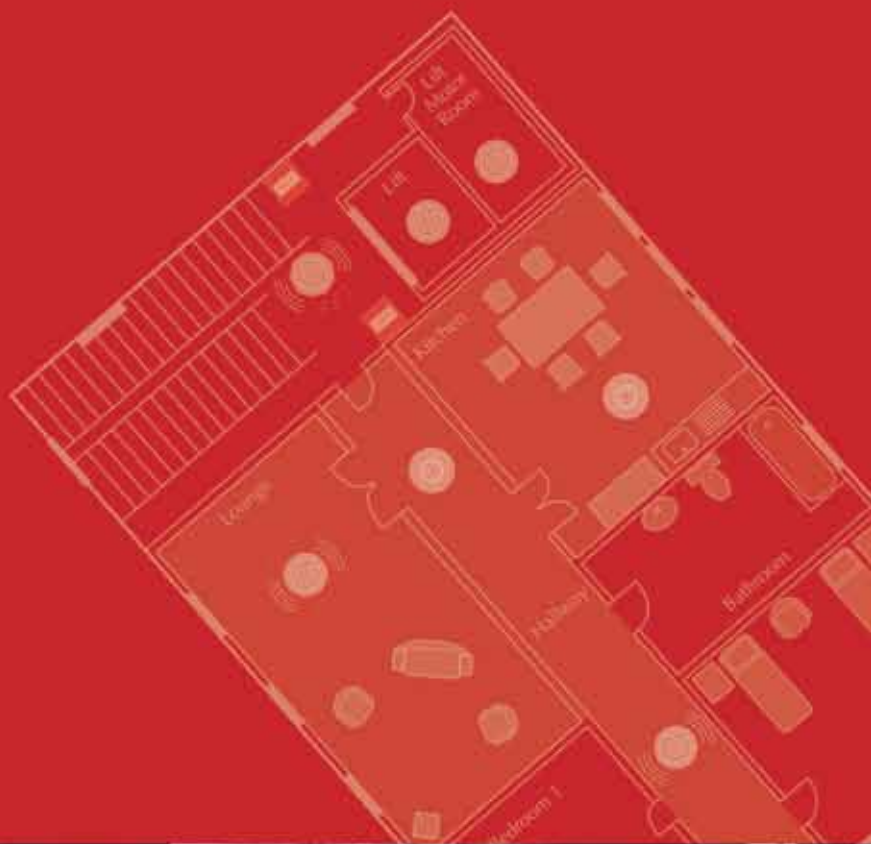
The Building Regulations 2000 Fire Safety Approved Document B (2006 edition).

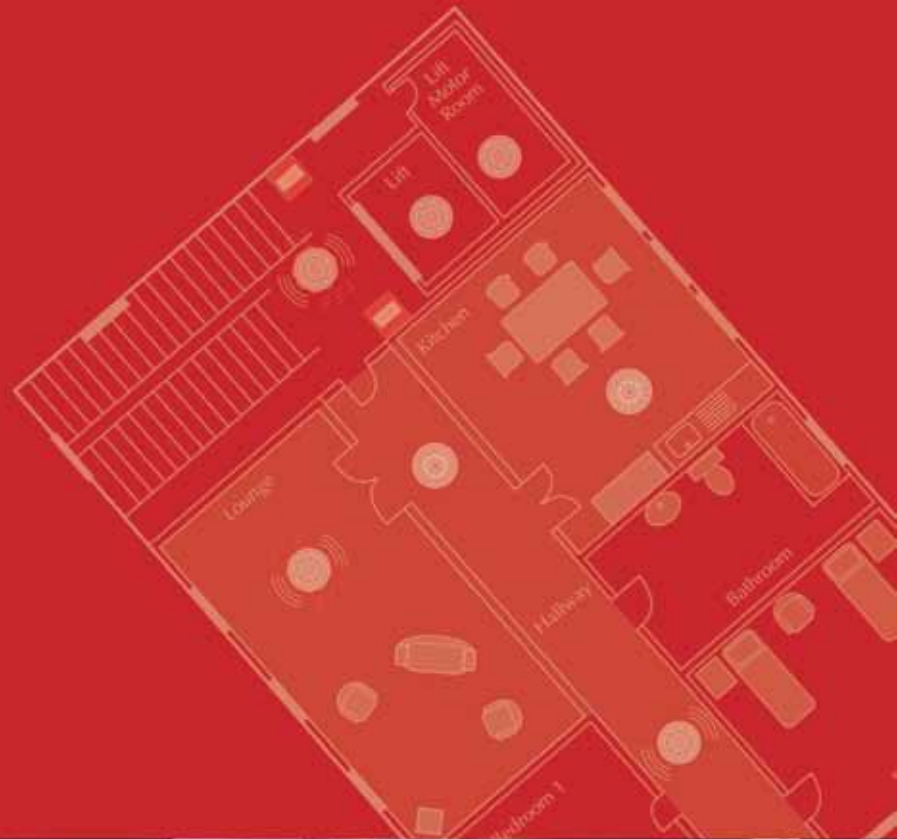
Apollo Literature

PP2068 AlarmSense Product Guide

Useful Websites

www.apollo-fire.co.uk
www.communities.gov.uk
www.propertylicencence.co.uk





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