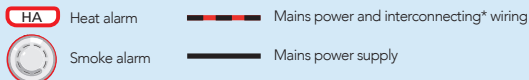
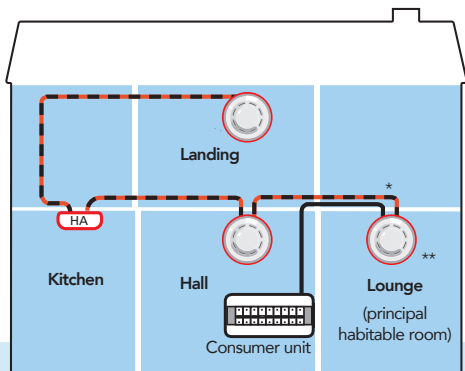


GRADES AND CATEGORIES FOR FIRE ALARM SYSTEMS in domestic premises and HMOs

This Guide addresses some of the recommendations for Grades and Categories of fire alarm system given in *BS 5839-6: 2019 – 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*. The standard is applicable to new or materially altered premises and houses in multiple occupation (HMOs).



* Interconnection provided, so that all devices give a warning if a fire is detected (see Clause 13.2(c) of BS 5839-6)

** Alternatively a carbon monoxide fire detector may be used (Clause 10.2 of BS 5839-6 refers)

There are eight Grades of system, (B and E are not currently defined), which identify the equipment incorporated. Grades A and C incorporate fire detectors, sounders and central control equipment. Grades D1 and D2 incorporate smoke alarms and possibly heat alarms too, these all being mains-powered with an integral battery standby supply. D1 incorporates a tamper-proof battery and D2 a user-replaceable battery. Grades F1 and F2 describe a system of detectors powered by tamper-proof or user-replaceable batteries respectively.

There are two Categories of system: LD, for protection of life, and PD, for protection of property. The Categories are further subdivided numerically to identify the level or protection afforded. For example, Category LD1 is a life protection system installed throughout the premises, whereas LD2 is installed in all circulation spaces and specified rooms.

It should be noted that for domestic premises, fire detection and fire alarm systems are usually installed to protect life and rarely installed solely for property protection. The minimum standard for life protection against fire given in Table 1 of BS 5839-6 for single-family dwellings and is a Grade D1/2, Category LD2 system. This system is for, example:

- dwellings of three-storeys or less with no floor greater than 200 m² in area, or
- single-storey where floor area may exceed 200 m², such as a bungalow.

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An example of a Grade D1/2, Category LD2 system for a two-storey dwelling with no floor greater than 200 m² is depicted overleaf. A system of Grade and Category higher than Grade D, Category LD2 may be recommended where the dwelling or HMO has an increased fire risk due to, for example, the nature and use of the building and/or the characteristics of the building occupants.

Where this is the case, Clause 9 (choice of system) and Table 1 of BS 5839-6 should be consulted and an appropriate Grade and Category selected. Although not comprehensive the following list provides examples of where a system of higher than Grade D, Category LD2 is recommended by Clause 9 and Table 1.

System Grade and Category	Recommended for:
Grade A LD2	A four (or more) storey house with no floor exceeding 200 m ² in area.
Grade A LD2	Communal areas of HMOs.
Grade A LD2	A two-storey house where one or both floors exceed 200 m ² in area.
Grade A LD1	Housing providing NHS supported living in the community.

Further information regarding Grade D Category LD2 systems in single-family dwellings is given in NICEIC and ELECSA Pocket Guide 24.

