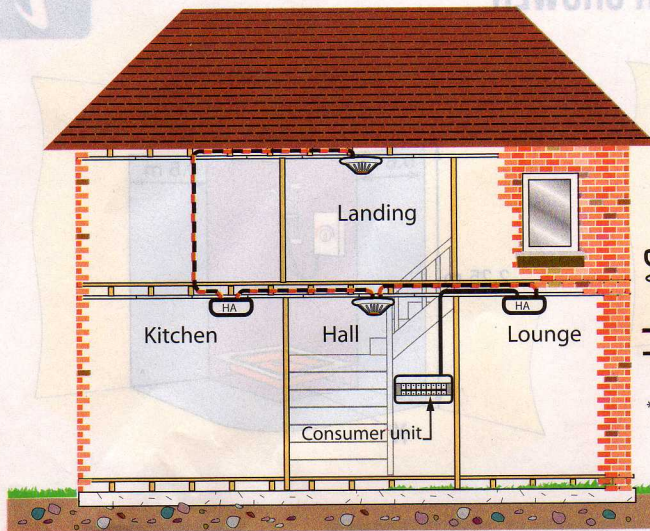


FIRE ALARMS IN DWELLINGS



**IMPORTANT NOTE**  
 This information should not be used as an alternative to the actual wiring regulations. BS5839-6:2004 IEE Wiring Regulations should always be used for all electrical installations.

- Heat alarm
- Smoke alarm
- Mains power and interconnecting\* wiring
- Mains power supply

\* Interconnection provided, so that all devices give a warning if a fire is detected

Table 1 - BS 5839-6: 2004 Grade D and E systems

Grade of system	Summary of equipment incorporated
<b>Grade D</b>	A system of one or more mains-powered smoke alarms, each with an integral standby supply. (The system may, in addition, incorporate one or more mains-powered heat alarms, each with an integral standby supply.)
<b>Grade E</b>	A system of one or more mains-powered smoke alarms with no standby supply. (The system may, in addition, incorporate one or more heat alarms, with or without standby supplies.)

Table 2 - BS 5839-6: 2004 Categories of system

Category of system	Principles of operation
<b>Category LD</b>	A fire detection and fire alarm system intended for the protection of life.
<b>Category PD</b>	A fire detection and fire alarm system intended for the protection of property.
<b>Note: the above Categories are further subdivided</b>	An LD2 system incorporates detectors in all circulation spaces that form part of the escape routes from the dwelling, and in all rooms or areas that present a high fire risk for example LD2 to the occupants.

NOTES

- (1) This guide addresses some of the recommendations in BS 5839-6: 2004 – Fire detection and alarm systems for buildings, Code of practice for the design, installation and maintenance of fire detection and fire alarm systems in dwellings.
- (2) The minimum standard of protection recommended in the 2004 edition of BS 5839-6 is, for new dwellings, that smoke alarms should be provided within the circulation areas of most single-family dwellings and small houses in multiple occupation (HMOs), and that heat alarms should be provided in the kitchen and the principal habitable room (eg, the lounge).
- (3) The Standard recommends that smoke alarms and heat alarms installed within new single-family dwellings and small HMOs are mains-powered with, in addition, a standby power supply in the form of a battery or capacitor.
- (4) There are six Grades of system in the Standard. The Grades identify the equipment incorporated. Grades A, B and C are systems that include fire detectors, alarm devices and central control equipment. Grades D and E are mains-powered smoke alarm systems (as summarised in Table 1). A Grade F system includes a battery-powered smoke alarm.
- (5) Categories of system (used to describe the principles of operation) in the Standard are summarised in Table 2.
- (6) In the context of fire detection and alarm systems in dwellings, attention is drawn to the relevant requirements of national building regulations and, in the case of small HMOs, to the relevant housing legislation.
- (7) Guidance on fire alarm requirements in building regulations is given in Approved Document B in England and Wales, the Technical Standards that support the relevant building regulations in Scotland, and in Technical Booklet E in Northern Ireland.