**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: 2013 – 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, for new or materially altered premises and houses in multiple occupation (HMOs).

There are six Grades of system, which identify the equipment incorporated. Grades A, B and C incorporate fire detectors, sounders and central control equipment. Grades D, E and F incorporate smoke alarms and possibly heat alarms too, these all being mains-powered with integral standby supply for Grade D, or mains-powered only for Grade E, or battery-powered only for Grade F.

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 HMOs is a Grade D, Category LD2 system. This system is for:

- dwellings of three-storey 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, and
- HMOs of two-storey or less with no floor greater than 200 m² in area.

Example of a Grade D, Category LD2 for a two-storey dwelling with no floor greater than 200 m²

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**Kitchen**

**Landing**

**Hall**

**Lounge**

**Consumer unit**

**Heat alarm**

**Smoke alarm**

**Mains power and interconnecting**

* 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)

**Based on information as at January 2015**
GRADES AND CATEGORIES FOR FIRE ALARM SYSTEMS in domestic premises and HMOs

An example of a Grade D, Category LD2 system for a two-storey dwelling with no floor greater than 200 m² is depicted overleaf. A Grade and Category of system higher than Grade D, Category LD2 may be required 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 Grade and Category higher than a Grade D Category LD2 is recommended by Clause 9 and Table 1.

<table>
<thead>
<tr>
<th>Grade and Category</th>
<th>Recommended for:</th>
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</thead>
<tbody>
<tr>
<td>Grade A LD2 system</td>
<td>A four (or more) storey house with no floor exceeding 200 m² in area.</td>
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<tr>
<td>Grade A LD2 system</td>
<td>Communal areas of HMOs.</td>
</tr>
<tr>
<td>Grade A LD2 system</td>
<td>A two-storey house with one or both floors exceed 200 m² in area.</td>
</tr>
<tr>
<td>Grade A LD1 system</td>
<td>Housing providing NHS supported living in the community.</td>
</tr>
</tbody>
</table>

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

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