



Fire Industry Association

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BS5839-1 L5 SYSTEMS

1. INTRODUCTION

The 2002 edition of BS5839-1 introduced a new category of system that was designated L5.

Category L5 is described within the commentary Clause 5.1.3 e) of BS5839-1 as follows.

“Category L5: systems in which the protected area(s) and / or the location of detectors is designed to satisfy a specific fire safety objective (other than that of a category L1, L2, L3 or L4 system).”

Often the system is based upon a fire risk assessment or forms part of a fire engineering solution. Protection may be provided to compensate for some departure from normal guidance elsewhere or as a part of the operating system for a fire protection system. Such a system could be as simple as one that incorporates a single automatic fire detector in a room (or elsewhere in the building) but the system could comprise detection throughout large areas of a building in which, for example, structural fire resistance is less than that normally specified for buildings of that type.”

As the specification of an L5 system is wholly based upon the requirements of a particular building, there is a need for clear instructions being included within the specification for the fire detection and fire alarm system. This is referred to within the penultimate paragraph of commentary Clause 5.1.5 that states:

“The Category of system to be installed always needs to be included in the specification. Similarly, the specification of any Category of system, other than Category L1 and P1, always needs to include details of those areas of the building that are to be protected.”

Clause 8 also makes reference to Category L5.

Commentary Clause 8.1.2 states:

“In some buildings, a fire risk assessment might determine that unacceptable risk to occupants can be reduced by the installation of fire detectors in only selected rooms or areas in the building. A Category L5 system might then be suitable, but it will be necessary for the purchaser or user to inform the designer of rooms or areas that are to be protected [see 5.2d)]. A Category L5 system may form part of a fire engineering solution, in which automatic fire detection is just one component of the solution”.

Clause 8.2 states:

“The following recommendations are applicable.

- a) System documentation, including any purchase specification, tender document, design proposal, submission to enforcing authorities or insurers for approval and the certificate issued by the Designers (see Clause 41), should clearly identify the system Category as well as, where appropriate, the areas to be protected and any specific proposals for the type(s) of detector to be used.
- b) Any specification or proposal for a Category L5 system should clearly identify the rooms or areas that are to be protected by automatic fire detectors.

NOTE 1:

There might also be benefit in giving a simple description of the objective of the protection proposed, particularly in submissions to enforcing authorities.

NOTE 2:

The standard of protection (extent of coverage) of a Category L5 system might be lower or higher than that afforded by Category L2, L3 or L4 systems.”

Examples of Category L5 could include the following:

1. An open plan office, requiring automatic fire detection to trigger a warning of fire for occupants of an inner room
2. A mezzanine floor of limited size and designated as a storage area, and requiring automatic fire detection as a means of reducing other fire precaution requirements.

When the relevant text of BS5839-1:2002 is taken into account, it is evident that if the specification made available to the designer does not provide sufficient information relevant to Category L5 then the advice of the purchaser or user should be obtained before the design is undertaken. This may, for example, require the client to make available the risk assessment or a statement of the areas of the building requiring the L5 system.

Without this information being available, the designer is unable to undertake his or her part of the project.

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