

SPECIFICATION FOR FIRE ALARM SYSTEMS TO BRITISH STANDARD 5839 2004 PART 6 GRADE A

BS 5839 2004 Part 6 relates to fire resistance in dwellings. It differentiates the appropriate grades of fire detection systems for dwellings depending on size, number of storeys and use.

Grade A systems are broadly similar to Part 1 systems under BS 5839 2002.

Such a system will be suitable for installation in high risk premises, typically a 3 storey HMO or hostel with bedsits or sharers. The increased level of protection from this system affords zoning of detection areas, use of fire resisting wiring and the panel monitors the system for faults. This system also requires regular testing and maintenance. (separate doc)

The system comprises a control panel with indicating equipment. Access to the controls is usually by a key or a number code. The panel controls the functioning of the system. Power comes from a dedicated mains circuit via batteries (72 hour back up) which are on constant trickle charge from the mains so that the system continues to operate in the event of mains failure. Installers should ensure that the fused switch for the system is not accessible for tenants to avoid tampering with the power supply.

Wiring for the whole system is to be fire resisting.

The system incorporates automatic smoke and heat detectors, sounders and manual call points at appropriate locations, at least next to the final exit points from the building and usually on each landing level of the staircase.

Detector should be optical smoke which work best for slow smouldering fires, such as domestic fires involving furniture or bedding. Heat detectors should be used in locations like kitchens or where kitchenettes are provided in bedsitting rooms. Heat detectors activate at a fixed temperature and are not so sensitive to false alarms from cooking etc. Generally the schedule of works from the Council or Fire Service will specify which detectors are to be used in which locations.

Location of detectors will be specified in the work schedule. There are different coverage levels, but for HMOs and hostels that are considered high risk, the coverage will be LD2 which means in the escape staircase plus risk rooms that open onto the stairs plus any other rooms considered to be high risk, such as a cellar or boiler room, for example.

The system must achieve a sound pressure level of 75dBA at the bedhead. This is to ensure that sleeping tenants are awakened by the alarm. To achieve that level it is necessary to use "detector/sounders" which fit together to form a unit or either fit a sounder in each room as well. The former option saves on wiring.

There will be some properties which require protection for the system from malicious damage. Panels can sometimes be a target for misuse. In such cases the main control panel should be sited in a secure locked location and a simple dumb repeater panel be located in the common areas. This panel will still have functions such as silence alarms, test and reset, but will not give any access to the controls or allow access that could damage or disconnect the system. Anti vandal devices are also available to cover call points and detector heads to avoid tampering.

It is advisable to consult with a specialist for this type of system as installation requires specialist skills. In addition all systems must be commissioned on completion and issued with a certificate stating that the system has been designed, installed and commissioned by a properly accredited contractor.

Manufacturers are usually happy to help with advice on the technical specification and /or design.

All Electrical work required to meet the requirements of Part P (Electrical Safety) must be designed, installed, inspected and tested by a person competent to do so. Prior to completion the Council must be satisfied that an appropriate electrical installation certificate has been issued for the work, and it has been signed by a person competent to do so.