

Issues Concerning Hybrid BS5839 Pt1 & Pt6 Systems in HMOs.

Overview.

This document is written to address concerns surrounding the installation of ‘hybrid’ systems in HMOs. In recent years, there has been a tendency for system designers to specify a BS5839 Pt1 L1 system in communal areas and domestic, mains driven BS5839 Pt6 devices in the accommodation areas.

This trend has been driven by the misconception that these systems will help to prevent false alarm call outs, as the accommodation devices will only activate within one apartment/flat, and not in the rest of the building. Landlords and building owners are reluctant to have the whole building evacuated in the event of a tenant burning food etc. There are also short term cost saving implications. However, with a correctly installed system using the appropriate equipment and programming, these concerns can be addressed leaving a much more comprehensive and effective fire alarm system which in the long term will also be more cost effective.

Effective use of BS5839 Pt1 systems throughout the building.

Using verification and cause and effect programming, a system can be designed that will only activate local sounders in flats in the event of one detector, or one element of a multi-sensor activating. This can then have a verification period added so that when the verification time expires, or a second detector or element activates, the whole building is evacuated without any human intervention required. If, however, the detector is cleared of smoke during the verification time, the local sounder will stop and the system will reset without any human intervention. Cause and effect programming also provides the ability to operate staged evacuation procedures. These features are available on fire alarm control panels such as the Nittan Evo+ 5000 series.

With regard to faults and wiring, it is a requirement of BS5839 that all detection and signalling devices are wired in fire proof cable which remain connected during the most intense fires. All devices are also continuously monitored for faults meaning that any fault can be detected and rectified immediately. Analogue addressable detection can be programmed to react in various ways, depending on the location and sensitivity required which makes these devices much more resilient to false alarms.

The long term cost savings are apparent if and when the system needs to be changed to allow for upgrades due to regulation or building changes. The system can easily be extended and any programming changes can be done in a short space of time from the control panel, without the need to gain access to the accommodation areas. Currently, the use of Part 1 systems in communal areas and Part 6 in the accommodation areas is accepted. This might not be the case in future due to concerns outlined in this document.

Use of hybrid BS5839 Pt1 & Pt 6 systems.

In the event of a fire in a flat. Only the sounders within the flat would activate at first as they are wired to each other. The rest of the building would only be notified when the smoke reaches the communal area. Depending on the type of fire door fitted, this could take a considerable amount of time, putting residents at serious risk. If the flat is occupied at the time, the resident would leave the flat and would have the responsibility of activating a call point, this obviously requires human intervention.

With regard to faults and wiring, there is no requirement to wire Part 6 domestic smoke alarms in fire proof cable. In the event of a fire, mains cables will perish leaving the device without power and, depending on the state of the back-up battery, potentially inoperable. Any faults on these devices will not be apparent until a service visit is carried out. These visits could potentially be several months apart leaving the system vulnerable in the event of a faulty device. Also, these devices are not programmable or adjustable, meaning they may not have the correct sensitivity level for their location.

Conclusions.

Current legislation allows for the installation of the hybrid systems discussed above. However, these systems present serious risks for fire safety due to limitations in both fire and fault conditions. The long term cost savings of a BS5839 Pt1 system are obvious when one considers the costs involved in subsequent additions due to building works, regulation changes etc.

If you need any further guidance please contact Nittan Technical Support:

Email: tech@nittan.co.uk
Phone: 01483 541169
Mobile: 07511 047039



David Wright
Technical Support Engineer

