Guidance Note

Fire Industry Association

Leading Excellence in Fire Since 1916

Guide to the changes in BS 5839-1:2025

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1. BS 5839-1 history

BS 5839 Part 1 was first published in 1980 and over the last 45 years it has been revised 11 times. Therefore, BS 5839-1 is considered a very mature standard and due to its long history, it is firmly embedded within the industry. The 2025 revision involved a full review of the standard.

2. New introduction and new numbering

There is a new introduction to BS 5839-1:2025. This introduction consists mainly of the information given in the clause 4 of the previous 2017 edition. A new BSI numbering format has been introduced and applied to the complete standard. Previous editions used letters for the subclauses for example:

BS 5839-1:2017 22.3

e) Other than within rooms in a Category L3 system [see **22.3f)**] or in voids [see **22.3g)**] or where a horizontal ceiling comprises a series of small cells [see **22.3l)**], fire detectors should be sited on ceilings, such that their sensitive elements are between the following distances below ceilings:

1) 25 mm – 600 mm for smoke detectors;

2) 25 mm – 150 mm for heat detectors.

This is now:

BS 5839-1:2025 21.2.4 Other than within rooms in a Category L3 system (see **21.2.5**), in voids (see **21.2.7**) or where a horizontal ceiling comprises a series of small cells (see **21.2.13** and **21.2.14**), fire detectors should be sited on ceilings, such that their sensitive elements are between the following distances below ceilings:

a) 25 mm to 600 mm for smoke detectors; and

b) 25 mm to 150 mm for heat detectors.

The information and recommendations have remained the same, but the numbering has changed.

The introduction discusses the importance of fire detection and fire alarm systems in supporting fire evacuation strategies for buildings. It emphasizes that the system design should support the required fire evacuation procedures rather than the procedures being designed around a predetermined system design.

The need for fire detection and fire alarm systems is typically determined by the authority responsible for enforcing fire safety legislation or by a fire risk assessment conducted by the owner, landlord, occupier(s), or employer(s). As the standard is a standard for fire detection and fire alarm systems, the need for one should not be part of the standard itself, which is why this information has been moved to the introduction.

Guidance on the need for these fire detection and fire alarm systems can be found in various sources, including BS 9991, BS 9999, guidance documents supporting fire safety legislation, insurance documentation, and relevant fire risk assessments.

The introduction also mentions that fire detection and fire alarm systems are generally appropriate for virtually all buildings, except very small premises that are relatively open-plan. It highlights that fire detection and fire alarm systems are not normally required in communal areas or ancillary accommodation within purpose-built blocks of flats.

National building regulations require fire detection and fire alarm systems to be installed in many buildings at the time of construction. Legislation also mandates that existing premises must be equipped with appropriate fire detection and fire alarm systems where necessary, to safeguard relevant persons in case of fire.

3. Normative references

New normative references have been added. These mainly relate to product standards and are:

- BS 5446-3:2015, Detection and alarm devices for dwellings – Part 3: Specification for fire alarm and carbon monoxide alarm systems for deaf and hard of hearing people;
- BS 8893, Emergency voice communication (EVC) systems – Components – Specification;
- BS EN 54-22, Fire detection and fire alarm systems – Part 22: Resettable line type heat detectors;
- BS EN 54-28, Fire detection and fire alarm system – Part 28: Non resettable line type heat detectors;
- BS EN 50085-1, Cable trunking systems and cable ducting systems for electrical installations – Part 1: General requirements;
- BS EN 50131-6:2017+A1:2021, Alarm systems – Intrusion and hold up systems – Part 6: Power supplies;
- BS EN 50518, Monitoring and alarm receiving centre;
- ETSI EN 300 224 V2.1.1, Land mobile service – Radio equipment for use in a paging service operating within the frequency range 25 MHz - 470 MHz – Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU.

4. Terms and definitions

The terms and definitions have been aligned with the newly published BS 4422:2024 Fire Vocabulary. The aim of BS 4422 is to provide a unifying document so that terms and their definitions can be used throughout the fields of fire and fire safety, so that, as far as possible, a given term will always have the same meaning and that a given concept is always expressed by the same term. This means that BS 5839-1:2025 is aligned with the rest of the published fire standards.

New and modified definitions are:

- **access room** - room that forms the only escape route from an inner room
- **area of low fire risk** - area containing little or no combustible material and no ignition sources, in which any foreseeable fire is unlikely to spread such as to present any significant threat to escape by occupants or damage to property

  NOTE Examples of combustible materials are furniture, fittings, storage or linings.
- **competent person** - person, suitably trained and qualified by knowledge and practical experience, and provided with the necessary instructions, to enable the required task(s) to be carried out correctly

  NOTE Maintenance of competence is likely to require continuing professional development (CPD).
- **fire detection zone** - subdivision of the protected premises such that the occurrence of a fire within it is indicated by a fire detection and fire alarm system separately from an indication of fire in any other subdivision

  NOTE A fire detection zone usually consists of an area protected by several manual call points and/or detectors, and is separately indicated to assist in location of the fire, evacuation of the building and firefighting.
- **fire engineering solution** - application of science and engineering to the achievement of one or more fire safety objectives in such a way that the objectives are achieved without following, in full, prescriptive recommendations of a recognized code of practice
- **fire resistance** ability of a component or construction of a building to meet for a stated period of time some or all of the appropriate criteria specified in a standard fire resistance test

  NOTE 1 These criteria include one or more of the following: load-bearing capacity (R); integrity (E); and insulation (I).

  NOTE 2 The fire resistance classification periods are not a measure of the actual time for which an element functions in a real fire

- **inner room** - room from which escape is possible only by passing through another room
- **place of relative safety** - place in which there is no immediate danger, but in which there could be future danger, from fire and smoke or the effects of fire and smoke
- **place of ultimate safety** - place in which there is no immediate or future danger from fire and smoke or the effects of fire and smoke
- **point detector** - detector which responds to a phenomenon sensed in the vicinity of a fixed point
- **protection** - presence of one or more automatic fire detector(s) able to initiate actions needed for the safety of life or property in the event of a fire
- **storey** part of a building comprising all the accessible areas that are on the same level, including:

  a) any gallery having an area of more than half that of the space into which it projects; and

  b) a roof, unless it is accessible only for maintenance or repair

- **storey exit** final exit, or a doorway that gives direct access into a protected stairway, evacuation lift lobby, firefighting lobby or external escape route
- **visual display unit** - display screen not forming an integral part of the Control and Indicating Equipment (CIE)

5. Categories of system

There have been changes made to the categories of system. With category L2 altered to include rooms in which people sleep as they are now being defined as a high-risk room and therefore requiring protection. Therefore, heat detectors are no longer permitted by the standard to be used in such rooms.

Stairway lobbies are now designated as areas requiring automatic detection, whereas previously, these areas could be excluded from automatic detection requirements as they were classed as areas of low risk.

With heat detectors no longer acceptable in rooms in which people sleep, more emphasis has been placed on the Selection and application of fire detectors – Annex D (previously Annex E). The output of this process especially where detection can be set to a number of different operating modes (e.g. when a system incorporates multi sensor detector(s) with a number of different response characteristics), the designer should record the selection of the detector type and configuration. This information should be made available to the commissioning technician and recorded in the operating and maintenance manual for the system

A subtle but important change has been made to the terminology around category L3 systems and ceiling voids. In the 2017 version, the separation of the void of the room off the escape route had to be “fire-resisting construction” and this always raised the question of “what is fire-resisting construction?”, and “how do you identify it?”. The aim of the clause is to prevent smoke from the void adjacent to the escape route compromising the escape route. Whether the wall between them is of fire-resisting construction is largely immaterial. It should just be of solid construction with no holes in it.

A significant change has been made to category L4 with flue-like structures. It is now recommended that the flue-like structure should have a fire detector at the top. However, unlike categories L1, L2, L3 and P1 systems, it does not recommend a detector to be placed within approximately 1.5 m of the penetration on every floor.

6. Variations

Whilst BS 5839-1:2025 is a code of practice, and variations against the recommendations of the standard are allowed, it has now been recognised that the following departures from the recommendations of BS 5839-1:2025 are likely to be so detrimental to the safety of life that they should **not** be regarded as acceptable variations. These are:

- The absence of a zone plan (or other suitable diagrammatic representation as recommended in **22.2.5**) in premises in which there is more than one zone on any storey, particularly premises in which people sleep; or
- The absence of a facility for transmission of fire alarm signals to an ARC in either:
  - supported housing in which the facility is considered necessary to meet the recommendations of BS 5839-1 (where a Grade A system according to BS 5839-6:2019 is necessary); or
  - a residential care home.

This is a new departure from the previous edition whereby anything could have been an agreed variation. With this change not only are some variations no longer permitted but also **all** variations need justification especially if proposed at installation or commissioning stage.

All agreed variations should now be recorded within the system logbook. This is a change as the previous 2017 version only recommended that the “major variations” needed to be recorded, but there was no definition of what “major” meant.

7. Placement of interfaces

For all systems, and categories, the fire detection and fire alarm system interfaces should be located such that they are accessible for maintenance purposes. This is to keep in line with the requirements of The Construction (Design and Management) Regulations 2015, with its requirements to reduce risks to maintenance personnel. Therefore, as a common example, this might preclude the siting of the interface within an enclosure provided for other equipment, as access might not be possible without the need for attendance by other parties or might involve removing power to the other equipment.

8. System components

Recognition has been given to the BS EN 54 product standards for linear heat cable which are BS EN 54-28 for non-resettable type linear heat cable and BS EN 54-22 for resettable type linear heat cable.

9. Obstacles to detectors

With obstacles on or near ceilings becoming increasingly common, more consideration has been given in the standard to help installers navigate these issues.

21.2.12 Where obstructions such as ducting are installed close to the ceiling, these obstructions should be treated as a wall if:

a) the gap between the top of the obstruction and the ceiling above is less than 300 mm; **and**

b) the obstruction is deeper than 10% of the overall ceiling height

Where structural beams, ductwork, light fittings or other isolated ceiling attachments not greater than 250 mm in depth create obstacles to the flow of smoke, detectors should not be mounted closer to the obstruction than twice the depth of the obstruction. A new note has clarified that where there is a gap above any of these features greater than 300 mm, the features are not regarded as an obstacle to the flow of smoke.

Closely spaced structural beams has always been a bit of an issue with no real definition of what closely spaced actually is. This has now been clarified so that closely space beams are now defined as being approximately 1 m or less when measured centre to centre of the beams.

10. Call points

The distances to find the nearest call points has been simplified to the 30 m straight line and 45 m actual travel distance. As these are the maximum distances, they can be shorter if the designer deems it necessary.

The call point mounting height has been clarified too, with the tolerance on the mounting height being 200 mm higher than 1.4 m, and 300 mm lower than 1.4 m.

The protective covers that were introduced as a recommendation in the 2017 edition are now recommended to be transparent.

The reference to "enclosed stairway" in 2017 **13.2.1 a)**, has been removed, ending some confusion over the location of manual call points in stairways. It now simply says:

12.1 The following recommendations should be met in all fire detection zones.

a) If manual call points are located on the landings of a stairway (see **19.4**), the manual call point on each level, other than a final exit level from the stairway, should be incorporated within the zone that serves the adjacent accommodation on that level.

11. Fire alarm tones

The use of fire alarm sounders for signals other than warning of fire has changed whereby, the 2017 edition did not allow for the same physical alarm device to be used for conflicting warnings. It is now permitted to use the same device, but with different tones/messages. The use within schools for class change has been clarified, and the time allowed for this signal extended from 5 to 10 seconds to address the potential issue of data lag in addressable systems. It is also now acknowledged that it is becoming common for schools to use the fire detection and fire alarm system infrastructure for a lockdown/invacuation alarm system. With further guidance on such system provided by the FIA guidance document Use of fire alarm systems for lockdown (specifically in schools)[1].

15.1.12 Fire alarm evacuation tones should not be used for purposes other than warning of fire, except where:

a) the response required is identical to that required in the event of fire (i.e. immediate evacuation by use of all escape routes); or

b) in schools, the fire alarm signal is used to indicate the start or finish of predetermined periods. In these cases, the duration of class change signals should not exceed 10 s.

NOTE Guidance on the use of a fire alarm system as a lockdown alarm is available in FIA guidance document Use of fire alarm systems for lockdown (specifically in schools).

12. Remote indicator

It has been clarified that for all remote indicators, the visual indication provide by the indicator should be red in colour. Also, that they should be checked for correct operation at the annual service visit to ensure they have not been obstructed or painted over.

[1] https://www.fia.uk.com/resourceLibrary/guidance-note-use-of-fire-alarm-systems-for-lockdown--specifically-in-schools-.html

13. Alarm transmission

With the public switched telephone network (PSTN) being switched off in 2027 and the UK moving to an all IP network, it has been acknowledged that alarm transmission equipment will have to meet certain criteria to ensure a reliable and timely summoning of the Fire and Rescue Service (FRS). To that end, BS 5839-1:2025 now provides details of the alarm transmission timings that the alarm transmission equipment should meet. Whilst it was in the 2017 revision that BS 5839-1 recognised the use of Intruder and Hold Alarm Systems (I&HAS) transmission equipment, it did not provide any information on the Grade of signalling required.

14.17 For Category L systems, in the event of a fire alarm signal, an indication should be received at the ARC within a maximum of 90 s; a catastrophic failure of the transmission system (whereby no alarm signals can be transmitted) should be indicated at the ARC and the CIE within 3 min.

14.18 For Category P systems, in the event of a fire alarm signal, an indication should be received at the ARC within a maximum of 120 s; a catastrophic failure of the transmission system (whereby no alarm signals can be transmitted) should be indicated at the ARC and the CIE within 31 min.

BS 5839-1:2025 now provides maximum timings for the transmission of the alarm signals and timings for a catastrophic failure of the transmission system e.g. the loss of all paths. It also recommends that the if a separate power supply unit is used to power the alarm transmission equipment it should either conform to BS EN 54-4 or BS EN 50131-6 Grade 4.

To aid the reduction in false alarms caused by not informing the Alarm Receiving Centre (ARC) that the system is about to undergo a test. A new label (see figure 1) has been recommended to be fixed on, or adjacent to the CIE to remind the premises management that the system has an active connection to the Fire and Rescue Service via an ARC.

Figure 1 Example false alarm notice

With the FRS now operating call challenging polices to reduce the number of false alarm attendances, informing the FRS of the type of premises is important. A new recommendation states that the ARC should be provided with all relevant information about the premises, for example, if it contains sleeping accommodation. This enables the ARC to pass the information on to the FRS. With the rise of the all IP networks and the use of connected technology, the ability exists to transmit more data to the ARC. Therefore, where practicable, the alarm signal transmitted to the ARC should indicate the nature of the triggering device and if there is coincidence filtering in place.

14. The use of heat detectors

With the changes to category L2 systems now including early warning of fire to rooms in which occupants sleep. The use of heat detectors is no longer permitted in these areas. Similarly, heat detectors should now not be used in rooms where people sleep in a category L3 system, albeit the objective of L3 is not to protect persons in that room. Despite the previous editions of BS 5839-1 allowing the use of heat detectors in sleeping rooms, the new recommendation is not retrospective, so existing systems do not need to be changed unless they are undergoing new works e.g. a system upgrade.

The use of sprinkler heads as heat detectors has long been acknowledged within BS 5839-1. Now for the 2025 revision, whilst the use of sprinklers heads as heat detectors remains, there is an added recommendation that if sprinkler heads are to be used to initiate a fire condition on the CIE the indication of sprinkler operation should be such that there can be no confusion between the area in which the sprinkler has operated and any of the fire detection zones. Additionally, the sprinkler zone should not overlap with more than one fire detection zone.

15. Selection and application of fire detectors

With the growth in the use of multi-sensor detectors, often as a result of trying to reduce false alarm issues, the importance of the detector selection Annex D (previously Annex E) has been given more emphasis, as it is the commissioning technician who will program the detector to the designers chosen settings.

20.11 Where detection can be set to a number of different operating modes (e.g. when a system incorporates multi sensor detector(s) with a number of different response characteristics), the designer should record the selection of the detector type and configuration. This information should be made available to the commissioning technician and recorded in the operating and maintenance manual for the system **[see 38.1b)].**
NOTE A suitable means of recording the information is given in Annex D, Figure D.1.

16. Cabling, labelling and identification

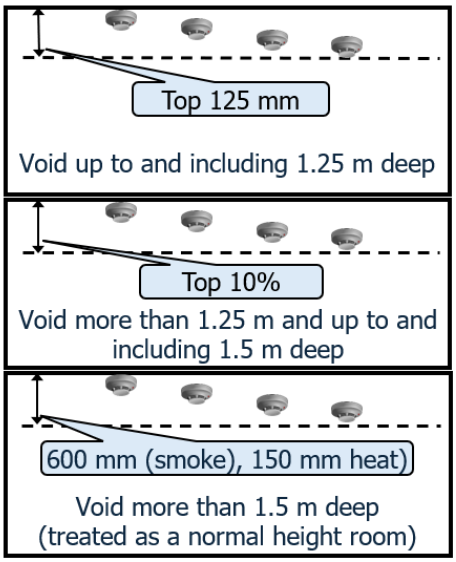
One of the common questions asked on the FIA's technical helpline was, what colour should the mains cable be? Whilst the mains cable should be installed in fire resistant cable to the same grade as the fire detection and fire alarm system, it was never clear in the 2017 revision of BS 5839-1 what colour it should be. This has been clarified in the 2025 revision to emphasize that all fire alarm cables, **and the low voltage mains supply** should be of a single, common colour with the colour red being preferred.

With the publication of Amendment 2 to BS 7671: Requirements for Electrical Installations (also known as the IET Wiring Regulations) in 2022, "IEC 60445:2021 Basic and safety principles for man-machine interface, marking and identification – Identification of equipment terminals, conductor terminations and conductors" has now been incorporated. Under these updated requirements, the functional earth conductor should be identified by the colour pink or marked with the alphanumeric designation "FE". This change is now also reflected in BS 5839-1:2025. In previous editions of BS 7671 and IEC 60445, the functional earth conductor was identified by the colour cream. Batteries should have a label fixed to them showing the date of installation. BS 5839-1:2025 has acknowledged the long-standing custom and practice of labelling batteries with a permanent marker.

17. Ceiling heights

With the use of multi-sensors becoming more common the limits of ceiling height for multi-sensors has been clarified. If the multi-sensor is configured to operate **only** on detection of heat **and** smoke, then its maximum mounting height as per table 3 should be to the lowest form of detection i.e. heat.

18. Detectors in voids



The placement of detectors in voids has been made clearer with the use of a new figure to highlight at what position and what depth of the void the detector should be mounted.

19. Power supplies

The recommendations for the isolation of the mains power to the fire detection and fire alarm system have been clarified and the recommendations are now in a single clause rather than being in clauses 25 and 29 of the 2017 revision.

20. Limitation of false alarms and unwanted fire alarm signals

Section 3 Limitation of false alarms and unwanted fire alarm signals has been reviewed and reorganised to one section with the following clauses:

- Clause 29 Responsibility for limitation of false alarms and unwanted fire alarm signals
- Clause 30 Categories and causes of false alarms
- Clause 31 Investigation of false alarms
- Clause 32 Design process for limitation of false alarms and unwanted fire alarm signals
- Clause 33 Measures to limit false alarms and prevent unwanted fire alarm signals

The new 2025 revision of BS 5839-1 now recommends that all false alarms be investigated by the user and that the commissioning/handover organization should provide information on how this is to be carried out.

29.6 The commissioning/handover organization should advise the user to arrange for suitable investigation and, if appropriate, action to be taken on every occasion that a false alarm occurs.

NOTE This could, for example, comprise managerial changes within the building, modifications to the fire detection and fire alarm system or further separate investigation by the organization that maintains the system.

The categories of false alarms have been moved from the terms and definitions to the commentary of clause 30. Whilst these have not changed from the previous revision it is now recommended that the commissioning/handover organisation explain to the user what they are and the differences between them to ensure that the user assigns the correct category of false alarm to every false alarm incident.

The investigation of false alarms has been simplified to bring the trigger points for a preliminary investigation and in-depth investigation in line with the false alarm calculation recommended to be carried out every service visit. These trigger points have not changed in the new 2025 revision. They are now expressed as preliminary investigation when the rate of false alarms over the previous 12 months exceeds four false alarms per 100 detectors per annum. With an in-depth investigation recommended for systems with more than 40 automatic fire detectors when the average rate of false alarms exceeds five false alarms per 100 detectors per annum.

Greater emphasis has been placed on the use of multi-sensor detectors. In situations where point smoke detectors may present a higher risk of false alarms, the 2025 revision recommends selecting multi-sensor detectors instead. With the Selection and application of fire detectors Annex (Annex D) providing guidance on the appropriate choice of detector.

21. Documentation/handover

A new item that appears within the documentation clause of BS 5839-1:2025 is the recommendation that a cause-and-effect matrix or text description of how the cause and effect operates is included with the documentation to be provided to the purchaser or user of the system. This could be as simple as “this system operates as a simultaneous evacuation” or a cause-and-effect matrix document might be required for more complex strategies. The standard does not dictate the manner of the cause-and-effect matrix only that it needs to be produced.

The commissioning technician should inform the user that it is important to keep the documentation provided up to date and available to interested parties.

22. Maintenance

The time between successive service visits has been brought into alignment with custom and practice.

43.2.1 The recommendations in this subclause should be carried out by a competent person **(see 3.13)**. Successive inspection and servicing visits should be undertaken at intervals of approximately 6 months (see Note 1).

NOTE 1 It would be acceptable for one inspection, test and service of the system to be carried out any time between 5 months and 7 months after the previous inspection, test and service.

NOTE 2 The date of acceptance is to be regarded as the datum for these periods.

The pervious revision stated that if the service visit was not within six months of the previous service, then the system was not compliant.

BS 5839-1:2017 45.3 The recommendations in this clause should be carried out by a competent person **(see 3.12).** The period between successive inspection and servicing visits should not exceed six months. If this recommendation is not implemented, it should be considered that the system is no longer compliant with this part of BS 5839.

This has been clarified to reflect the customary practice of servicing the system either within the month before or the month after it falls due. Note 2 further defines the date of acceptance as the datum point for the six-monthly servicing schedule, with a permitted tolerance of one month either side of each six-month interval. At every service visit, any time clock of the CIE should be checked and adjusted as necessary this is particularly important where systems include day/night settings.

At every service visit, systems that incorporate automatic signalling to an ARC should have the alarm signals that are sent to the ARC checked. Where more than one form of alarm signal can be transmitted (e.g. fire and fault signals), the correct transmission of each signal should be confirmed.

When servicing a system involves the disablement of protection in significant parts of the system, this should be kept to a practicable minimum, and the premises management or their appointed representative should be informed of the areas affected. This also applies to disablement of sounders or visual alarms.

The functional testing of smoke detectors in ventilation ducts has now been added to the list of actions undertaken at the 12 monthly service visit.

During the 12 monthly service visit, the zone identification reported on the CIE should be verified that it is the same zone that has been tested and that it corresponds with the zone plan. The verification of correct text descriptors on an addressable system is not specifically recommended as an action for the servicing organisation to carry out during a routine service visit. It is deemed the responsibility of the premises management of the system to inform the servicing organization of any changes that are necessary. It might be prudent to confirm periodically (e.g. every 5 years) that the text descriptors are correct.

With the rise of the all IP networks and the connected CIE, remote services and cyber security are now given more prominence, and the 2025 revision acknowledges the use of such technology, introducing a new clause on remote services and cyber security clause 43.4. This has recommendations for preventing the unauthorized access to the system, access points, and network pathways by physical means such as locking the comms cabinet or fitting anti-tamper plugs to patch leads. Also, a method of authentication of a request to accept a remote connection should be included in the CIE or gateway software before remote access is allowed.

Prior to performing any remote service, particularly when executing read, control, or write functions, a thorough risk assessment should be conducted to evaluate the potential impact on the operation of the CIE. If there is any risk that the remote service might compromise the correct functioning of the CIE, the responsible individual must ensure that the system is fully operational upon completion of the remote service.

23. Arrangements for repair of faults or damage

Where the user has reported a fault on the system to the service organization and the service organization cannot complete an effective repair, fault indications should not be concealed (e.g. by suppressing the fault indication).

24. Section 7 Extensions and modifications

A new Section 7 Extensions and modifications has been added. This new section incorporates the previous BS 5839-1:2017 clause 46 and adds a new clause on extensions. This clarifies that when undertaking an extension to a system, whilst the new works undertaken should comply with the current version of the standard it acknowledges that the overall system might not conform to the current standard.

The certificate that should be issued after any extension or modification has been complete has been updated from a modification certificate to an extension or modification certificate.

It has now been clarified that updating the firmware of a CIE is a modification and as such will require a certificate to be produced.

Where a system has been modified and existing equipment is no longer in use, to avoid confusion, the redundant devices should either be removed (where practicable) or clearly identified as no longer in use.

25. Logbook

The logbook clause has been updated to include the recommendation for recording **all** variations. The Annex for the logbook Annex H (previously Annex F in 2017) has been updated to reflect the information that is within clause 48.

26. Annexes

The Annexes have been updated and reordered to reflect the order in which they are cited within the standard.

The 2017 revision Annexes were ordered as:

- Annex A (informative) Choice of appropriate category of fire detection and fire alarm system.
- Annex B (informative) Typical noise levels in building.
- Annex C (normative) Control and transmission equipment for tactile alarm devices provided for people who are Deaf and hard of hearing.
- Annex D (normative) Method for calculating standby battery capacity.
- Annex E (informative) The selection and application of fire detectors.
- Annex F (informative) Model format for system logbook.
- Annex G (informative) Model certificates.

The 2025 revision has reordered them to:

- Annex A (informative) Choice of appropriate category of fire detection and fire alarm system.
- Annex B (normative) Control and transmission equipment for portable tactile alarm devices provided for people who are Deaf or have a hearing impairment.
- Annex C (informative) Typical noise levels in buildings.
- Annex D (informative) Selection and application of fire detectors.
- Annex E (normative) Method for calculating standby battery capacity.
- Annex F (informative) Calculation of false alarm rates.
- Annex G (informative) Model certificates.
- Annex H (informative) Model format for logbook.

Annex E has been amended to bring BS 5839-1:2025 in line with the rest of the BS 5839 series by the addition of T_2 which is the total battery alarm period in hours (h), replacing the previous method of dividing by 2. The result of the calculation is not affected by this change.

There is a new Annex F which now provides the calculation for false alarm rate:

$$A_{fr} = 100 \left(\frac{A_{fn}}{D_{AF}}\right)$$

where:

A_{fr} is the false alarm rate;

A_{fn} is the number of false alarms; and

D_{AF} is the number of automatic fire detectors

This Annex also includes a number of worked examples of false alarm calculations showing the method of calculation and the type of investigation required, preliminary or in-depth.

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