

Code of practice for

The operation of fire protection measures —

**Part 1: Electrical actuation of gaseous
total flooding extinguishing systems**

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Fire Standards Policy Committee (FSM/-) to Technical Committee FSM/12, upon which the following bodies were represented:

- British Cable Makers' Confederation
- British Fire Protection Systems Association Ltd.
- British Fire Services' Association
- British Telecommunications plc
- Chartered Institution of Building Services Engineers
- Chief and Assistant Chief Fire Officers' Association
- Department of Health
- Department of the Environment, Property Services Agency
- Department of the Environment, Building Research Establishment
- Department of Transport, Marine Directorate
- Electrical Contractors' Association
- Electrical Installation Equipment Manufacturers' Association (BEAMA Ltd)
- Home Office
- Institution of Electrical Engineers
- Institution of Fire Engineers
- Loss Prevention Council
- Ministry of Defence
- National Inspection Council for Electrical Installation Contracting
- Royal Institute of British Architects
- Society of Fire Protection Engineers
- Trades Union Congress

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

- British Computer Society
- Eea (the Electronics and Business Equipment Association)
- London Fire and Civil Defence Authority

This British Standard, having been prepared under the direction of the Fire Standards Policy Committee, was published under the authority of the Board of BSI and comes into effect on 31 July 1990

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The following BSI references relate to the work on this standard:
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Foreword

This British Standard code of practice has been prepared under the direction of the Fire Standards Policy Committee. It covers the interface between standards relating to fire detection systems (see BS 5839) and those concerned with fire extinguishing systems (see BS 5306) and is also applicable to fire protection systems for electronic data processing installations (see BS 6266).

Other Parts of the standard either planned or in preparation will deal with the mechanical actuation of gaseous total flooding extinguishing systems and the automatic closing (or opening) of fire doors, fire shutters, etc.

Attention is drawn to Appendix A which gives a simple diagrammatic representation of a typical sequence of actions leading to the release of fire extinguishing medium.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 10, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This Part of BS 7273 gives recommendations for the planning, installation and servicing of electrical equipment for the actuation of gaseous total flooding fire extinguishing systems. It applies only to electrically actuated total flooding gaseous fire extinguishing systems for use in a temperate climate such as that of the United Kingdom.

NOTE The titles of the publications referred to in this standard are listed on the inside back cover.

2 Definitions

For the purposes of this Part of BS 7273, the following definitions apply.

2.1

automatic/manual or manual only change-over device

a device that can be operated before a person enters a space protected by a fire extinguishing system to prevent the fire detection system from activating the automatic release of fire extinguishing medium

2.2

automatic (Of a fire extinguishing system.)

one that, under specified conditions, functions without intervention by a human operator

2.3

coincidence connection

a facility designed so that an output is obtained only when at least two independent detection inputs are present at the same time

NOTE 1 For example an output suitable for triggering a fire extinguishing system is obtained only after a detector has detected a fire, and at least one other independent detector covering the same protected space has confirmed the existence of fire.

NOTE 2 The term “double knock” should not be used as a synonym for coincidence connection.

2.4

manual (Of a fire extinguishing system.)

one that, under specified conditions, functions by means of the intervention of a human operator

2.5

protected space

the space protected by a fire extinguishing system

2.6

system disable

a means of rendering the fire extinguishing system inoperative

2.7

zone

a subdivision of the protected premises such that the occurrence of a fire within it will be indicated by a fire alarm system separately from an indication of fire in any other subdivision

NOTE A zone will usually consist 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 fire-fighting.

3 System design

3.1 General

The requirements for the protected space(s) should be ascertained by consultation between the client and, as appropriate, the architect, the consultant, the fire detection and alarm system contractor, the fire extinguishing contractor(s), the fire authority, the fire insurer, the Health and Safety Executive, and any relevant public authority.

It is essential that, in the event of fire, a pre-planned and practised course of action should be taken to ensure the safety of occupants and the effective operation of the fire extinguishing system. Such necessary actions should be discussed at the design stage and incorporated within the proposed system.

The system design should comply with the appropriate recommendations of BS 5839-1, BS 5306-4 and BS 5306-5 and BS 6266.

On the basis of this consultation, documents should be prepared showing the following:

- a) details of the proposal, including for example a simple diagrammatic representation of a sequence of actions leading to the release of fire extinguishing medium;

NOTE An example of such a diagrammatic representation is given in Appendix A.

- b) the accommodation required for the equipment, if the accommodation needs to be specified at an early stage;

- c) chases, ducts, conduits, channels, trunking and other structural provisions for wiring.

3.2 Chases, ducts, conduits, channels, trunking, sleeves and segregation of wiring

Wiring diagrams should be agreed in collaboration with those responsible for other services, to enable necessary chases, conduits, ducts, etc. to be specified before building operations commence. The need for segregation of the fire alarm system wiring and equipment should be taken into account at this stage, together with the need for fire stopping (see 17.10 and 24.3 of BS 5839-1:1988).