

Code of practice for the operation of fire protection measures —

Part 1: Electrical actuation of gaseous total flooding extinguishing systems

ICS 13.220.20

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Foreword

This British Standard code of practice has been prepared by Technical Committee FSH/12. It supersedes BS 7273-1:1990, which is withdrawn. It covers the interface between fire detection systems (see BS 5839-1) and fire extinguishing systems (see BS 5306) and is also applicable to fire protection systems for electronic data processing installations (see BS 6266).

This code of practice is published in a series of parts.

Part 2 deals with the mechanical actuation of gaseous total flooding extinguishing systems and part 3 deals with pre-action systems.

Further parts of this standard either planned or in preparation will deal with the automatic closing (or opening) of fire doors, fire shutters, etc.

Attention is drawn to annex A which gives a simple diagrammatic representation of a typical sequence of actions leading to the release of fire extinguishing medium and to annexes B and C which give examples of a sounder sequence for coincidence release in automatic mode and manual release in manual mode, respectively.

Annexes A, B and C are informative.

As a code of practice, this British Standard takes the form of guidance and recommendations. It should not be quoted as if it were a specification and particular care should be taken to ensure that claims of compliance are not misleading.

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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.

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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 covers the interface between fire detection systems (see BS 5839-1) and fire extinguishing systems (see BS 5306) and is also applicable to fire protection systems for electronic data processing installations (see BS 6266). 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 Whilst the recommendations are applicable mainly to total flooding systems they may also be used for local application systems.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of this British Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. For undated references, the latest edition of the publication referred to applies.

BS 1635, *Recommendations for graphic symbols and abbreviations for fire protection drawings*.

BS 5306 (all parts), *Fire extinguishing installations and equipment on premises*.

BS 5306-4:1986, *Fire extinguishing installations and equipment on premises — Part 4: Specification for carbon dioxide systems*.

BS 5839-1:1988, *Fire detection and alarm systems for buildings — Part 1: Code of practice for system design, installation and servicing*.

BS 6266, *Code of practice for fire protection for electronic data processing installations*.

BS 7671, *Requirements for electrical installations — IEE Wiring Regulations — Sixteenth edition*.

BS 7629 (all parts), *Specification for 300/500 V fire resistant electric cables having low emission of smoke and corrosive gases when affected by fire*.

BS EN 54-2, *Fire detection and fire alarm systems — Part 2: Control and indicating equipment*.

BS EN 54-4, *Fire detection and fire alarm systems — Part 4: Power supply equipment*.

DD 233, *Code of practice for gaseous fire fighting systems*.

3 Terms and definitions

For the purposes of this part of BS 7273 the following terms and definitions apply.

3.1

automatic and manual/manual only switch

means of converting the system from automatic and manual to manual only actuation

NOTE This may be in the form of a manual switch on the control panel or other units, or a personnel door interlock; in all cases, this changes the actuation mode of the system from automatic and manual to manual only or vice versa.

3.2

automatic (of a fire extinguishing system)

mode of operation in which the system can actuate without manual intervention

3.3

coincidence connection

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.

3.4

manual (of a fire extinguishing system)

mode of operation in which the system can actuate only with manual intervention

3.5

protected space

space protected by a fire extinguishing system

3.6

zone

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 1 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 firefighting.

NOTE 2 The term “zone” should not be confused with a “flooding zone” (see BS 5306-4).

4 System design

4.1 General

The recommendations 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 regulatory body.