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NSAI Standards

Irish Standard
I.S. EN 54-23:2010

Fire detection and fire alarm systems - Part 23: Fire alarm devices - Visual alarm devices

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 54-23

March 2010

ICS 13.220.20

English Version

Fire detection and fire alarm systems - Part 23: Fire alarm devices - Visual alarm devices

Systèmes d'alarme feu et de détection d'incendie - Partie 23: Dispositifs d'alarme feu - Alarmes visuelles

Brandmeldeanlagen - Teil 23: Feueralarmeinrichtungen - Optische Signalgeber

This European Standard was approved by CEN on 23 January 2010.

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Foreword

This document (EN 54-23:2010) has been prepared by Technical Committee CEN/TC 72 “Fire detection and fire alarm systems”, the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2010, and conflicting national standards shall be withdrawn at the latest by March 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

EN 54, *Fire detection and fire alarm systems*, consists of the following parts:

- *Part 1: Introduction*
- *Part 2: Control and indicating equipment*
- *Part 3: Fire alarm devices — Sounders*
- *Part 4: Power supply equipment*
- *Part 5: Heat detectors — Point detectors*
- *Part 7: Smoke detectors — Point detectors using scattered light, transmitted light or ionization*
- *Part 10: Flame detectors — Point detectors*
- *Part 11: Manual call points*
- *Part 12: Smoke detectors — Line detectors using an optical light beam*
- *Part 13: Compatibility assessment of system components*
- *Part 14: Guidelines for planning, design, installation, commissioning, use and maintenance* (in preparation)
- *Part 16: Voice alarm control and indicating equipment*
- *Part 17: Short-circuit isolators*
- *Part 18: Input/output devices*
- *Part 20: Aspirating smoke detectors*
- *Part 21: Alarm transmission and fault warning routing equipment*
- *Part 22: Resettable line-type heat detectors* (in preparation)

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- *Part 23: Fire alarm devices — VADs*
- *Part 24: Components of voice alarm systems — Loudspeakers*
- *Part 25: Components using radio links*
- *Part 26: Point fire detectors — Carbon monoxide fire detectors* (in preparation)
- *Part 27: Duct smoke detectors* (in preparation)
- *Part 28: Non-resettable (digital) line-type heat detectors* (in preparation)
- *Part 29: Multi-sensor fire detectors — Point detectors using a combination of smoke and heat sensors* (in preparation)
- *Part 30: Multi-sensor fire detectors — Point detectors using a combination of carbon monoxide and heat sensors* (in preparation)

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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Introduction

The purpose of a visual fire alarm device (VAD) is to warn person(s) within, or in the vicinity of, a building of the occurrence of a fire emergency in order to enable such person(s) to take appropriate measures.

This European Standard allows manufacturers to specify VADs in terms of the range at which the required illumination is met. Three categories of device are defined, one for ceiling mounted devices, one for wall mounted devices and an open category. The maximum range of the VAD is tested by measuring the light output in a hemisphere surrounding it to determine its light distribution. As the light output of some VADs can change over time due, for example, to the effect of self-heating, a test has been introduced to check that the variation of light output over time is within an acceptable limit.

This European Standard gives common requirements for the construction and robustness of VADs as well as for their performance under climatic, mechanical and electrical interference conditions which are likely to occur in the service environment. VADs are classified in one of two application environment types, i.e. Type A and Type B. More severe climatic conditions are applied to devices that are primarily intended for outdoor applications (Type B) than those primarily intended for indoor applications (Type A).

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1 Scope

This European Standard specifies the requirements, test methods and performance criteria for visual alarm devices in a fixed installation intended to signal a visual warning of a fire between the fire detection and fire alarm system and the occupants of a building (see item C of Figure 1 of EN 54-1:1996). It is intended to cover only those devices which derive their operating power by means of a physical electrical connection to an external source such as a fire alarm system.

This European Standard specifies the evaluation of conformity and the marking of the visual alarm devices.

This European Standard applies to visual alarm devices that rely on software for their operation and to those that do not.

This European Standard applies only to pulsing or flashing visual alarm devices, for example xenon beacons or rotating beacons. Devices giving continuous light output are excluded from this European Standard.

This European Standard is not intended to cover visual indicators, for example those on detectors or on the control and indicating equipment.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 54-1:1996, *Fire detection and fire alarm systems — Part 1: Introduction*

EN 50130-4:1995, *Alarm systems — Part 4: Electromagnetic compatibility — Product family standard: Immunity requirements for components of fire, intruder and social alarm systems* (including EN 50130-4:1995/A1:1998 and EN 50130-4:1995/A2:2003)

EN 60068-1:1994, *Environmental testing — Part 1: General and guidance (IEC 60068-1:1988 + Corrigendum 1988 +A1:1992)*

EN 60068-2-1:2007, *Environmental testing — Part 2-1: Tests — Tests A: Cold (IEC 60068-2-1:2007)*

EN 60068-2-2:2007, *Environmental testing — Part 2-2: Tests — Test B: Dry heat (IEC 60068-2-2:2007)*

EN 60068-2-6:2008*, Environmental testing — Part 2-6: Tests — Tests Fc: Vibration, (sinusoidal) (IEC 60068-2-6:2007)*

EN 60068-2-27:2009, *Environmental testing — Part 2-27: Tests — Test Ea and guidance: Shock (IEC 60068-2-27:2008)*

EN 60068-2-30:2005, *Environmental testing — Part 2-30: Tests — Test Db: Damp heat, cyclic (12 h + 12 h cycle) (IEC 60068-2-30:2005)*

EN 60068-2-42:2003, *Environmental testing — Part 2-42: Tests; Test Kc: Sulphur dioxide test for contacts and connections (IEC 60068-2-42:2003)*

EN 60068-2-75:1997, *Environmental testing — Part 2-75: Tests — Test Eh: Hammer tests (IEC 60068-2-75:1997)*

EN 60068-2-78:2001, *Environmental testing — Part 2-78: Tests; Test Cab: Damp heat, steady state (IEC 60068-2-78:2001)*

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