



Fire detection and alarm systems

Part 23: Visual alarm devices

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This Standard was published on 19 December 2014.

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 - Department of Human Services, Vic.
 - Engineers Australia
 - Fire Protection Association Australia
 - National Electrical and Communications Association
 - National Fire Industry Association
 - Property Council of Australia
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This Standard was issued in draft form for comment as DR AS ISO 7240.23:2014.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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Australian Standard[®]

Fire detection and alarm systems

Part 23: Visual alarm devices

First published as AS ISO 7240.23:2014.

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Published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001, Australia

ISBN 978 1 74342 948 8

PREFACE

This Standard was prepared by the Standards Australia Committee FP-002, Fire Detection, Warning, Control and Intercom Systems.

The objective of this Standard is to provide requirements and methods of test for visual alarm devices in fire detection and fire alarm systems and emergency warning control and indicating equipment in and around buildings.

This Standard is identical with, and has been reproduced from ISO 7240-23:2013, *Fire detection and alarm systems, Part 23: Visual alarm devices*.

For the purposes of this Australian Standard:

- (a) a.a.d should read as AAD.
- (b) d.c. should read as DC.
- (c) r.m.s. should read as RMS.
- (d) v.a.d. should read as VAD.

As this Standard is reproduced from an International Standard, the following applies:

- (i) In the source text 'this part of ISO 7240' should read 'this Australian Standard'.
- (ii) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

<i>Reference to International Standard</i>		<i>Australian Standard/Australian New Zealand Standard</i>	
IEC		AS	
60068	Environmental testing	60068	Environmental testing
60068-1	Part 1: General and guidance	60068.1	Part 1: General and guidance
60068-2-1	Part 2-1: Tests—Test A: Cold	60068.2.1	Part 2.1: Tests—Test A: Cold
60068-2-2	Part 2-2: Tests—Test B: Dry heat	60068.2.2	Part 2.2: Tests—Test B: Dry heat
60068-2-6	Part 2-6: Tests—Test Fc: Vibration (sinusoidal)	60068.2.6	Part 2.6: Tests—Test Fc: Vibration (sinusoidal)
60068-2-27	Part 2-27: Tests—Test Ea and guidance: Shock	60068.2.27	Part 27: Tests—Test Ea and guidance: Shock
60068-2-30	Part 2-30: Tests—Test Db: Damp heat, cyclic (12 + 12-hour cycle)	60068.2.30	Part 2.30: Tests—Test Db and guidance: Damp heat, cyclic (12 + 12-hour cycle)
60068-2-40	Part 2-40: Tests—Test Z/AM: Combined cold/low air pressure tests	60068.2.40	Part 2.40: Tests—Test Z/AM: Combined cold/low air pressure tests
60068-2-75	Part 2-75: Test Eh: Hammer tests	60068.2.75	Part 2.75: Test Eh: Hammer tests
60068-2-78	Part 2-78: Tests—Test Cab: Damp heat, steady state	60068.2.78	Part 2.78: Tests—Test Cab: Damp heat, steady state
IEC		AS	
60529	Degrees of protection provided by enclosures (IP Code)	60529	Degrees of protection provided by enclosures (IP Code)
IEC		AS/NZS	
60695	Fire hazard testing	60695	Fire hazard testing
60695-11-10	Part 11-10: Test flames—50 W horizontal and vertical flame test	60695.11.10	Part 11.10: Test flames—50 W horizontal and vertical flame test

	methods		methods
60695-11-20	Part 11-20: Test flames—500 W flame test methods	60695.11.20	Part 11.20: Test flames—500 W flame test methods
ISO 7240 7240-1	Fire detection and alarm systems Part 1: General and definitions	AS 7240 7240.1	Fire detection and alarm systems Part 1: General and definitions
ISO 2813	Paints and varnishes— Determination of specular gloss of non-metallic paint films at 20 degrees, 60 degrees and 85 degrees	AS/NZS 1580.602.2	Paints and related materials— Methods of test—Measurement of specular gloss of non-metallic paint films at 20 degrees, 60 degrees and 85 degrees

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the annex to which they apply. A ‘normative’ annex is an integral part of a Standard, whereas an ‘informative’ annex is only for information and guidance.

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INTRODUCTION

The purpose of a visual fire alarm device 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 part of ISO 7240 allows manufacturers to specify visual alarm devices in terms of the range at which the required illumination is met. Three classes of device are defined, one for ceiling mounted devices, one for wall mounted devices and an open class. The maximum range of the visual alarm device is tested by measuring the light output in a part of the hemisphere surrounding it to determine its light distribution. As the light output of some visual alarm devices can change over time due, for example, to the effect of self-heating, a specific test checks that the variation of light output over time is within acceptable limits.

This part of ISO 7240 gives common requirements for the construction and robustness of visual alarm devices as well as for their performance under climatic, mechanical and electrical interference conditions which are likely to occur in the service environment. Visual alarm devices can be classified in one of three application environment types.

AUSTRALIAN STANDARD

Fire detection and alarm systems**Part 23:
Visual alarm devices****1 Scope**

This part of ISO 7240 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 a fire detection and alarm system and occupants in and around buildings.

This part of ISO 7240 specifies visual alarm devices for three types of application environment.

It is only applicable to pulsing or flashing visual alarm devices, for example xenon beacons or rotating beacons. It is not applicable to devices giving continuous light output.

This part of ISO 7240 is not intended to cover visual indicators, for example, 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.

ISO 2813:1994, *Paints and varnishes — Determination of specular gloss of non-metallic paint films at 20 degrees, 60 degrees and 85 degrees*

ISO 7240-1, *Fire detection and alarm systems — Part 1: General and definitions*

ISO/CIE 23539:2005, *Photometry — The CIE system of physical photometry*

IEC 60068-1:1988, *Environmental testing — Part 1: General and guidance*

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

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

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

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

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

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

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

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

IEC 60529:2001, *Degrees of protection provided by enclosures (IP Code)*

IEC 60695-11-10:2003, *Fire hazard testing — Part 11-10: Test flames — 50 W horizontal and vertical flame test methods*