AS ISO 7240.3:2014
ISO 7240-3:2010

AS ISO 7240.3:2014

Fire detection and alarm systems

Part 3: Audible alarm devices

This Australian Standard® was prepared by Committee FP-002, Fire Detection, Warning, Control and Intercom Systems. It was approved on behalf of the Council of Standards Australia on 18 November 2014.
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The following are represented on Committee FP-002:

- Australasian Fire and Emergency Service Authorities Council
- Australian Building Codes Board
- Australian Chamber of Commerce and Industry
- Australian Industry Group
- Australian Institute of Building Surveyors
- CSIRO
- Deafness Forum of Australia
- Department of Human Services, Vic.
- Engineers Australia
- Fire Protection Association Australia
- National Electrical and Communications Association
- National Fire Industry Association
- Property Council of Australia
- Society of Fire Safety

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Australian Standard®

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Part 3: Audible alarm devices

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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 audible alarm devices in fire detection and fire alarm systems in and around buildings.

This Standard is identical with, and has been reproduced from ISO 7240-3:2010, *Fire detection and alarm systems,* Part *3: Audible alarm devices.*

For the purposes of this Australian Standard, 'a.a.d' should read 'AAD'.

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

(a) In the source text 'this part of ISO 7240' should read 'this Australian Standard'.

(b) 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:

Reference to International Standard		*Australian Standard or Australian/New Zealand Standard*	
IEC		AS	
60068	Environmental testing	60068	Environmental testing
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 2.27: Tests—Test Ea and guidance: Shock
60068-2-30	Part 2-30: Tests—Test Db: Damp heat, cyclic (12 h + 12 h cycle)	60068.2.30	Part 2.30: Tests—Test Db: Damp heat, cyclic (12 + 12-hour cycle)
60068-2-42	Part 2-42: Tests—Test Kc: Sulphur dioxide test for contacts and connections	60068.2.42	Part 2.42: Tests—Test Kc: Sulphur dioxide test for contacts and connections
60068-2-75	Part 2-75: Tests—Test Eh: Hammer tests	60068.2.75	Part 2.75: Tests—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)
		AS IEC	
61672	Electroacoustics—Sound level meters	61672	Electroacoustics—Sound level meters
61672-1	Part 1: Specifications	61672.1	Part 1: Specifications
		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 methods	60695.10.11	Part 11.10: Test flames—50 W horizontal and vertical flame test methods
60695-11-20	Part 11-20: Test flames—500 W flame test methods	60695.10.20	Part 11.20: test flames—500 Wflame test methods

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.

CONTENTS

INTRODUCTION

In a fire detection and alarm system, the purpose of the audible alarm devices is to warn person(s) within, or in the vicinity of, a building of the occurrence of a fire emergency situation in order to enable such a person(s) to take appropriate measures.

Audible alarm devices using voice messages are also for warning the occupants of a building of the occurrence of a fire risk. These use a combination of an attention-drawing signal and dedicated voice message(s). Additional requirements, test methods and performance criteria specific to audible alarm devices with voice are also incorporated in this International Standard.

Attention is drawn to ISO 8201, which specifies the temporal pattern and the required sound pressure level of an audible emergency evacuation signal.

This part of ISO 7240 recognizes that the exact nature of the sound requirements, i.e. its frequency range, temporal pattern and output level, will vary according to the nature of the installation, the type of risk present and appropriate measures to be taken, the type of signals used by other non-emergency alarms (see for example ISO 7731) and national differences in custom and practice. The resulting standard specifies, therefore, a common method for testing of the operational performance of audible alarm devices against the specification declared by the manufacturer, rather than imposing common requirements.

This part of ISO 7240 gives common requirements for the construction and robustness of audible alarm devices, as well as for their performance under climatic, mechanical and electrical interference conditions which are likely to occur in the service environment. Audible alarm devices have been classified in either an indoor or an outdoor application environment category.

AUSTRALIAN STANDARD

Fire detection and alarm systems

Part 3:
Audible alarm devices

1 Scope

This part of ISO 7240 specifies the requirements, test methods and performance criteria for audible alarm devices intended to signal an audible warning of fire between a detection and alarm system and the occupants of a building. 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 part of ISO 7240 is also intended to cover audible alarm devices capable of giving voice messages by the application of specific requirements, tests and performance criteria.

This part of ISO 7240 specifies fire alarm audible alarm devices for two types of application environment, type A for indoor use and type B for outdoor use.

This part of ISO 7240 is not intended to cover:

a) loudspeaker-type devices primarily intended for emitting emergency voice messages that are generated from an external audio source;

b) supervisory audible alarm devices, e.g. within 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 7240-1, *Fire detection and alarm systems — Part 1: General and definitions*

ISO 8201, *Acoustics — Audible emergency evacuation signal*

IEC 60068-1:1988/Corr. 1:1988/A1:1992, *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)*