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Australian STANDARD®

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Fire detection and alarm systems

Part 3: Audible alarm devices

AS ISO 7240.3:2021

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Australasian Fire and Emergency Service Authorities Council
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Australian Industry Group
Australian Institute of Building Surveyors
CSIRO
Deafness Forum of Australia
Engineers Australia
Fire Protection Association Australia
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Fire detection and alarm systems

Part 3: Audible alarm devices

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Preface

This Standard was prepared by the Australian members of Joint Standards Australia/Standards New Zealand Committee FP-002, Fire Detection, Warning, Control and Intercom Systems, to supersede AS ISO 7240.3:2014, *Fire detection and alarm systems, Part 3: Audible alarm devices*.

The objective of this document is to specify the requirements, test methods and performance criteria for audible alarm devices intended to signal an audible warning, with or without voice messages between a fire detection and fire alarm system and the occupants of a building.

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

This document is not applicable to—

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

(b) supervisory audible alarm devices, e.g. within the control and indicating equipment.

This document is identical with, and has been reproduced from, ISO 7240-3:2020, *Fire detection and alarm systems — Part 3: Audible alarm devices*.

As this document has been reproduced from an International Standard, a full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms “normative” and “informative” are used in Standards to define the application of the appendices or annexes to which they apply. A “normative” appendix or annex is an integral part of a Standard, whereas an “informative” appendix or annex is only for information and guidance.

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 21, *Equipment for fire protection and fire fighting*, Subcommittee SC 3, *Fire detection and alarm systems*.

This second edition cancels and replaces the first edition (ISO 7240-3:2010), which has been technically revised. The main changes compared to the previous edition are as follows:

— EN 50130-4 has been replaced with IEC 62599-2 in 5.16.2.1 (electromagnetic compatibility immunity test);

— marking has been moved to a new Clause 7;

— data and software have been moved to a new Clause 8.

A list of all parts in the ISO 7240 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

In a fire detection and alarm system, the purpose of the audible alarm devices is to warn person(s) within, or near, a building of the occurrence of a fire emergency 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 document.

ISO 8201 specifies the temporal pattern and the required sound pressure level of an audible emergency evacuation signal.

This document 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 danger signals used by other non-evacuation 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 document 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.

NOTES

Australian Standard®

Fire detection and alarm systems

Part 3: Audible alarm devices

1 Scope

This document specifies the requirements, test methods and performance criteria for audible alarm devices intended to signal an audible warning, with or without voice messages between a fire detection and fire alarm system and the occupants of a building.

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

This document is not applicable to:

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 documents are referred to in the text in such a way that some or all of their content constitutes requirements 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*

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

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

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

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

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

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

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

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

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

IEC 60529, *Degrees of protection provided by enclosures (IP code)*

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

IEC 60695-11-20, *Fire hazard testing — Part 11-20: Test flames — 500 W flame test methods*

IEC 61672-1:2002, *Electroacoustics — Sound level meters — Part 1: Specifications*

IEC 62599-2, *Alarm systems — Part 2: Electromagnetic compatibility – Immunity requirements for components of fire and security alarm systems*