Australian Standard™

# Fire detection and alarm systems—Smoke alarms (ISO 12239:2003, MOD)



STANDARDS AUSTRALIA

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 January 2004 and published on 30 April 2004.

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*This Standard was issued in draft form for comment as DR 03326.*

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First published as AS 12239—2004.



Published by Standards Australia International Ltd
GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 5885 1

# PREFACE

This Standard was prepared by the Standards Australia Committee FP-002, Fire Detection, Warning, Control and Intercom Systems to supersede AS 3786—1993, *Smoke alarms*. The Committee intends to withdraw AS 3786—1993 five years after the publication of this Standard.

This Standard has been adopted with national modifications and has been reproduced from ISO 12239:2003, *Smoke alarms*. The modification is that Clause 5.18 is not optional for installation in Australia (see Annex ZA).

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

(a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.

(b) In the source text 'this International Standard' should read 'this Australian Standard'.

(c) A full point should be substituted for a comma when referring to a decimal marker.

The term 'normative' and 'informative' are 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.

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

| *References to International Standard* | | *Australian/New Zealand Standard* | |
|---|---|---|---|
| IEC | | AS | |
| 60068-1 | Environmental testing | 60068 | Environmental testing |
| 60068-1 | Part 1: General and guidance | 60068.1 | Part 1: General and guidance |
| 60068-2-1 | Part 2: Tests. Tests A: cold | 60068.2.1 | Part 2: Tests—Tests A: Cold |
| 60068-2-2 | Part 2: Tests. Test B: Dry heat | 60068.2.2 | Part 2: Tests—Test B: Dry heat |
| 60068-2-6 | Part 2: Tests. Test Fc: vibration (sinusoidal) | 60068.2.6 | Part 2: Tests—Test Fc: vibration (sinusoidal) |
| 60068-2-78 | Part 2: Tests. Test Cab: Damp heat, steady state | 60068.2.78 | Part 2: Tests- Test Cab: Damp heat, steady state |
| IEC | | AS/NZS | |
| 60065 | Safety requirements for mains operated electronic and related apparatus for household and similar use | 60065 | Audio, video and similar electronic apparatus - Safety requirements (IEC 60065:2001, MOD) |
| 60950 | Information technology equipment– Safety | 60950 | Information technology equipment – Safety |
| 60950-1 | Part 1: General requirements | 60950.1 | Part 1: General requirements |

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# INTRODUCTION

This International Standard for smoke alarms is drafted on the basis of functions that are to be provided on all smoke alarms covered by this standard, and optional functions with requirements which may be provided. It is intended that the options shall be used for specific applications, as recommended in application guidelines.

Each optional function is included as a separate entity, with its own set of associated requirements, in order to permit smoke alarms covered by this standard with different combinations of functions to conform to this International Standard.

Two optional sound output levels are specified in this International Standard. The options allow national regulators to specify minimum sound output levels [70 dB(A) or 85 dB(A)] as required under national regulations.

An optional extended temperature-range test is included for smoke alarms installed in areas subject to a greater temperature range, such as leisure accommodation vehicles.

Other functions may also be provided, even if not specified in this International Standard, if they do not jeopardize any function required by this document.

NOTES

AUSTRALIAN STANDARD

# Fire detection and alarm systems—Smoke alarms
(ISO 12239:2003, MOD)

## 1 Scope

This International Standard specifies requirements, test methods, performance criteria, and manufacturer's instructions for smoke alarms that operate using scattered light, transmitted light, or ionization, and that are intended for household or similar residential applications.

For the testing of other types of smoke alarms, or smoke alarms working on different principles, this International Standard should be used only for guidance. Smoke alarms with special characteristics and developed for specific risks are not covered by this International Standard.

This International Standard allows, although it does not require, the inclusion within the smoke alarm of facilities for the following:

— visual fault condition indication;

— extended temperature-range operation;

— interconnection with other similar smoke alarms and/or accessories;

— alarm-silencing facility.

Where such facilities are included, this International Standard specifies applicable requirements.

This International Standard does not cover devices intended for incorporation in systems using separate control and indicating equipment.

Certain types of smoke alarms contain radioactive materials. The national requirements for radiation protection differ from country to country and they are not specified in this International Standard. Such smoke alarms should, however, comply with the applicable national standards, which should be in line with the recommendations of the Nuclear Energy Agency (NEA) of the Organisation for Economic Co-operation and Development (OECD).

## 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 209-1, *Wrought aluminium and aluminium alloys — Chemical composition and forms of products — Part 1: Chemical composition*

ISO 7731, *Ergonomics — Danger signals for public and work places — Auditory danger signals*

ISO 8201, *Acoustics — Audible emergency evacuation signal*

EN 54-3, *Fire detection and fire alarm systems — Part 3: Fire alarm devices — Sounders*

EN 50130-4, *Alarm systems — Part 4: Electromagnetic compatibility — Product family standard: Immunity requirements for components of fire, intruder and social alarm systems*