Australian Standard™

# Fire detection and alarm systems

## Part 7: Point-type smoke detectors using scattered light, transmitted light or ionization (ISO 7240-7:2003, 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 1 December 2003 and published on 16 April 2004.

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# PREFACE

This Standard was prepared by the Standards Australia Committee FP-002, Fire Detection, Warning, Control and Intercom Systems to supersede AS 1603.1—1997, *Automatic fire detection and alarm systems*, Part 1: *Heat detectors*. The Committee intends to withdrawn AS 1603.1—1997 five years after the publication of this Standard.

This Standard has been adopted with national modifications and reproduced from ISO 7240-7:2003, *Fire detection and fire alarm systems,* Part 7*: Point-type smoke detectors using scattered light, transmitted light or ionization*. A modification for Australian conditions is the addition of the indicator visibility requirement of AS 2362.25. The variations are set out in 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'.

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References to International standards should be replaced by references to Australian Standards as follows:

| *References to International Standard or other Publication* | | *Australian/New Zealand Standard* | |
|---|---|---|---|
| IEC | | AS | |
| 60068 | Environmental testing | 60068 | Environmental testing |
| 60068-1 | Part 1: General and guidance | 60068.1 | General and guidance |
| 60068-2-1 | Part 2: Tests. Test A: Cold | 60068.2.1 | Tests-Test A: Cold |
| 60068-2-2 | Part 2: Tests. Test B: Dry heat | 60068.2.2 | Tests-Test B: Dry heat |
| 60068-2-6 | Part 2: Tests. Test Fc: Vibration (sinusoidal) | 60068.2.6 | Tests-Test Fc: Vibration (sinusoidal) |
| 60068-2-27 | Part 2: Tests. Test Ea and guidance: Shock | 60068.2.27 | Tests-Tests Ea and guidance: Shock |
| 60068-2-78 | Part 2: Tests. Test Cab: Damp heat, steady state | 60068.2.78 | Tests- Test Cab: Damp heat, steady state |

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.

# CONTENTS

# INTRODUCTION

This part of ISO 7240, drawn up by ISO/TC 21/SC 3, is based on a draft prepared by the European Committee for Standardization's CEN/TC 72, *Automatic fire detection systems*.

A fire detection and alarm system is required to function satisfactorily not only in the event of fire, but also during and after exposure to conditions likely to be met in practice, including corrosion, vibration, direct impact, indirect shock and electromagnetic interference. Specific tests are intended to assess the performance of fire smoke detectors under such conditions.

This part of ISO 7240 is not intended to place any other restrictions on the design and construction of such detectors.

NOTES

AUSTRALIAN STANDARD

# Fire detection and alarm systems

## Part 7:
## Point-type smoke detectors using scattered light, transmitted light or ionization (ISO 7240-7:2003, MOD)

## 1 Scope

This part of ISO 7240 specifies requirements, test methods and performance criteria for point-type smoke detectors that operate using scattered light, transmitted light or ionization, for use in fire detection and alarm systems installed in buildings.

For the testing of other types of smoke detectors, or smoke detectors working on different principles, this part of ISO 7240 can be used only for guidance. Smoke detectors with special characteristics, developed for specific risks, are not covered.

NOTE Certain types of detector contain radioactive materials. The national requirements for radiation protection differ from country to country and are not specified in this part of ISO 7240.

## 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 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: Tests. Tests A: Cold*

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

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

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

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

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

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