



Fire detection and alarm systems

Part 18: Input/output 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 30 November 2015.

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- Association of Hydraulic Services Consultants Australia
 - 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[®]

Fire detection and alarm systems

Part 18: Input/output 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 specify requirements, test methods and performance criteria for input/output devices connected to a transmission path forming part of a fire detection and alarm system and used to receive and/or transmit signals necessary for the operation of the fire detection and fire alarm system and/or fire protection system.

This Standard is identical with, and has been reproduced from ISO 7240-18:2009, *Fire detection and alarm systems*, Part 18: *Input/output devices*.

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 Standards, as follows:

| <i>Reference to International Standard</i> | | <i>Australian Standard</i> | |
|--|---|----------------------------|---|
| ISO | | AS | |
| 7240 | Fire detection and alarm systems | 7240 | Fire detection and alarm systems |
| 7240-1 | Part 1: General and definitions | 7240.1 | Part 1: General and definitions |
| 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 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 h + 12 h 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 |

Only normative references that have been adopted as Australian Standards have been listed.

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INTRODUCTION

This part of ISO 7240 is based on a European standard, EN 54-18, prepared by the European Committee for standardization CEN/TC 72 "*Fire detection and fire alarm systems*".

The term input/output devices, used in this part of ISO 7240, covers a wide range of different types of devices that are intended for different applications and can, therefore, have different functions. This part of ISO 7240 does not, therefore, include detailed functional requirements for the input/output devices but requires that their function is sufficiently specified by the manufacturer and that they function correctly in accordance with the manufacturer's specification.

AUSTRALIAN STANDARD

Fire detection and alarm systems**Part 18:
Input/output devices****1 Scope**

This part of ISO 7240 specifies requirements, test methods and performance criteria for input/output devices connected to a transmission path of a fire detection and alarm system used to receive and/or transmit signals to or from the transmission path, necessary for the operation of the fire detection and fire alarm system and/or fire protection system.

An input/output device can be a physically separate device or its function can be integrated into another device, in which case this part of ISO 7240 can be used to assess this function.

An input/output device can include signal amplifiers and signal transfer in separate enclosures, in which case the requirements of this part of ISO 7240 shall apply.

Control and indicating equipment and ancillary control and indicating equipment (e.g. repeater panels and fire brigade panels) are not covered by 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 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 60068-2-75:1997, *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*