Australian Standard®

Emergency warning and intercommunication systems in buildings

Part 1: Equipment design and manufacture

This Australian Standard was prepared by Committee BD/56, Emergency Warning and Intercommunication Systems in Buildings. It was approved on behalf of the Council of Standards Australia on 4 May 1989 and published on 11 September 1989.

The following interests are represented on Committee BD/56:

Association of Consulting Engineers, Australia

Australian Assembly of Fire Authorities

Australian Fire Protection Association

Australian Uniform Building Regulations Coordinating Council

Building Owners and Managers Association of Australia

Commonwealth Fire Board

Department of Administrative Services—Construction Group

Department of Defence

Electrical Contractors Associations of Australia

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This Standard was issued in draft form for comment as DR 85304.

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First published as part of AS 2220—1978.
AS 2220—1978 (in part) revised and redesignated AS 2220.1—1989.

Incorporating:
Amdt 1—1989.
Amdt 2—1993.

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
1 THE CRESCENT, HOMEBUSH, NSW 2140
ISBN 0 7262 5785 0

PREFACE

This Standard was prepared by the Standards Australia Committee BD/56, Emergency Warning and Intercommunication Systems in Buildings. It is Part 1 of a two-part Standard, the parts of which are as follows:

AS
2220 *Emergency warning and intercommunication systems in buildings*
Part 1: Equipment design and manufacture (this Standard)
Part 2: System design, installation and commissioning

This Standard together with AS 2220.2 superseded AS 2220—1978, *Emergency warning and intercommunication systems for buildings.*

This Standard provides more detailed requirements than AS 2220—1978 but it does not differ in the overall intent of that Standard.

AS 1851, *Maintenance of fire protection equipment, Part 10: Emergency warning and intercommunication systems*, specifies the periodic inspection and maintenance requirements to ensure continued effective functioning of the emergency warning and intercommunication systems designed and installed in accordance with AS 2220.

This Standard does not seek to define the buildings in which these systems are to be used as it is considered that this is the responsibility of the Building Authority in the area concerned.

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FOREWORD

An emergency warning and intercommunication system is installed in a building for the purpose of enabling the orderly evacuation of the building in the event of an emergency. To achieve this aim, it is essential that the emergency warning and intercommunication system has the following capabilities as appropriate:

(a) Provision for manual and automatic activation.

(b) On activation, the ability to alert wardens with an audible alarm. (A visual alarm may also be required.)

(c) Where both an emergency warning system and an emergency intercommunication system are required to comply with AS 2220, these systems are integrated to provide a positive means of intercommunication between the House Warden and the various floors or Zone Wardens to enable the orderly evacuation of the building.

(d) Emission of audible or visible signals, or both, that will either -

  (i) alert the occupants; or

  (ii) order the occupants to vacate the building.

(e) Ease of operation.

(f) Continuously operable under the conditions of the hazard.

STANDARDS AUSTRALIA

Australian Standard

Emergency warning and intercommunication systems in buildings

Part 1: Equipment design and manufacture

SECTION 1. SCOPE AND GENERAL

1.1 SCOPE. This Standard sets out minimum requirements for the design and manufacture of the equipment used in emergency warning and intercommunication systems, which are installed in buildings to ensure warning in the event of an emergency, and assist in the subsequent orderly evacuation of the building.

1.2 APPLICATION. Equipment for emergency warning and intercommunication systems in buildings shall comply with Sections 2, 3 and 4 of this Standard.

NOTE: Information which should be supplied when specifying an EWIS is shown in Appendix B.

1.3 REFERENCE DOCUMENTS. The following documents are referred to in this Standard:

AS STANDARDS

1044 Limits of electromagnetic interference for electrical appliances and equipment

1076 Code of practice for selection, installation and maintenance of electrical apparatus and associated equipment for use in explosive atmospheres (other than mining applications)

1076.1 Part 1: Basic requirements

1099 Basic environmental testing procedures for electrotechnology

1102 Graphical symbols for electrotechnical documentation

1102.101 Part 101: General information and general index

1102.105 Part 105: Semiconductor and electron tubes

1560 Recommendations for the design and use of components intended for mounting on printed circuit boards

1603 Automatic fire detection and alarm systems

1603.4 Part 4: Control and indicating equipment

1931 High voltage testing techniques

1931.1 Part 1: General definitions, test requirements and test procedures and measuring devices

1939 Classification of degrees of protection provided by enclosures of electrical equipment

2030 Manually operating fire-alarm call points

2220 Emergency warning and intercommunication systems in buildings

2220.2 Part 2: System design, installation and commissioning

2481 All-or-nothing electrical relays (instantaneous and timing relays)

2546 Printed boards

2546.1 Part 1: General requirements and test methods

2546.3 Part 3: Design and use

2547 Semiconductor devices

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2547.2.2 Part 2.2: Integrated circuits—Digital

3000 SAA Wiring Rules

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REG 2 Interworking and non-interference requirements for customer premises equipment attached to the public switched telephone network

REG 3 General requirements for customer switching systems attached to the public switched telephone network

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249 Base materials for printed circuits

249-2 Part 2: Specifications

801 Electromagnetic compatibility for industrial process measurement and control equipment

801-3 Part 3: Radiated electromagnetic field requirements

UL

94 Tests for flammability of plastic materials for parts in devices and appliances

APPROVAL AND TEST SPECIFICATIONS

AS

3100 Approval and test specification for definitions and general requirements for electrical materials and equipment

3108 Isolating transformers and safety isolating transformers

3108.1 Part 1: General requirements

3108.2 Part 2: Supplementary requirements—Isolating transformers

3108.3 Part 3: Supplementary requirements—Safety isolating transformers

3126 Extra-low voltage transformers

3159 Electronic sound and vision equipment

3250 Mains operated electronic and related equipment for household and similar general use

1.4 DEFINITIONS. For the purpose of this Standard, the definitions below apply.

1.4.1 Alarm system—facility provided in a building to give an alarm in the event of fire, civil commotion, bomb threat, leakage of toxic or noxious fumes, structural damage, or other emergency.

1.4.2 Alarm signal—a signal given by fire alarm, or other alarm system, at the fire indicator panel (FIP) or other point at the building, and to places outside the building, e.g. to a fire brigade.