

Australian/New Zealand Standard™

**Approval and test specification—Plugs
and socket-outlets**



AS/NZS 3112:2004

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Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Canterbury Manufacturers Association, New Zealand
Consumer Electronic Suppliers Association
Consumers' Federation of Australia
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Approval and test specification—Plugs and socket-outlets

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-004, *Electrical Accessories* to supersede AS/NZS 3112:2000 on publication.

This Standard incorporates Amendment No. 1 (October 2006). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

The objective of this Standard is to provide the Australian and New Zealand electrical industry including manufacturers, test laboratories and regulators with requirements and test methods for plugs and socket-outlets.

This Standard is one of a series of approval and test specifications to be read in conjunction with AS/NZS 3100, *Approval and test specification—General requirements for electrical equipment*. The purpose of this series is to outline conditions which must be met to secure approval for the sale and use of electrical equipment. Only safety matters and related conditions are covered.

The essential safety requirements in AS/NZS 3820 that could be applicable to plugs and socket-outlets are covered by this Standard taken in conjunction with any other relevant requirements affecting safety.

This Standard was revised to introduce the following technical and editorial changes:

- (a) Amendments 1 and 2 to AS/NZS 3112:2000 have been incorporated into the text.
- (b) Requirements for the shape of the ends of plug pins.
- (c) Pin bending test.
- (d) Changes to fire test requirements.
- (e) Requirements with regards to any interference between metal contacts and thermoplastic or resilient mouldings.
- (f) Lateral strain test for two pin plugs.
- (g) Updating of cross-references to referred Standards and other minor editorial changes.

Notes to the text in the body of the Standard are not mandatory parts of the Standard.

The term ‘normative’ has been used in this Standard to define the application of the appendix to which it applies. A ‘normative’ appendix is an integral part of a Standard.

This Standard does not provide all the necessary conditions for a contract.

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Approval and test specification—Plugs and socket-outlets

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies essential safety requirements for plugs and socket-outlets, as defined in Clause 1.4, intended for use at extra-low or low voltages and a rated current not exceeding 32 A for household or similar purposes. (For extra-low voltage plugs and socket-outlets, see Appendix E.)

This Standard does not apply to the following:

- (a) Appliance couplers (see AS/NZS 60320.1).
- (b) Installation couplers (see AS/NZS 3131:1995 or AS/NZS 61535.1).
- (c) Plugs, socket-outlets and couplers for general industrial applications (see AS/NZS 3123).
- (d) Plugs and socket-outlets for moveable appliances (see AS/NZS 3131).

1.2 APPLICATION**1.2.1 General requirements of AS/NZS 3100**

This Standard shall be read in conjunction with AS/NZS 3100 and the appropriate provisions of AS/NZS 3100 shall apply to the construction of a plug or socket-outlet and the insulation and safeguarding of parts which normally carry current.

1.2.2 Specific requirements of this Standard

A plug or socket-outlet shall be considered to comply with this Standard only if it complies with all the appropriate requirements of this Standard and passes the relevant tests specified herein.

NOTES:

- 1 Plugs, socket-outlets and connectors incorporating retaining means of the type specified in AS/NZS 3123, or similar, need not comply with all general dimensional requirements of this Standard, so long as the safe functioning of accessories in a particular system is not impaired. Where appropriate, dimensions relevant to specified pin configurations are applied.
- 2 Requirements for equipment with integral pins for insertion into socket-outlets are provided in Appendix J.

1.3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard.

AS

- 1722 Pipe threads of Whitworth form
- 1722.2 Part 2: Fastening pipe threads
- 60068 Environmental testing
- 60068.2.30 Part 2.30: Tests—Test DB and guidance: Damp heat, cyclic (12 + 12-hour cycle)
- 60068.2.32 Part 2.32: Tests—Test Ed: Free fall