AS/NZS 60898.1:2004

Australian/New Zealand Standard™

Electrical accessories—Circuit-breakers for overcurrent protection for household and similar installations

Part 1: Circuit-breakers for a.c. operation
(IEC 60898-1, Ed. 1.2 (2003) MOD)

STANDARDS AUSTRALIA

STANDARDS NEW ZEALAND
Paerewa Aotearoa

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-004, Electrical Accessories. It was approved on behalf of the Council of Standards Australia on 25 June 2004 and on behalf of the Council of Standards New Zealand on 9 July 2004.
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The following are represented on Committee EL-004:

Australasian Railway Association
Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Canterbury Manufacturers Association, New Zealand
Consumer Electronic Suppliers Association
Ministry of Economic Development (New Zealand)
National Electrical and Communications Association
Plastics Industry Pipe Association of Australia
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We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia International or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR 04122.

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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 4898:1997, *Approval and test specification—Circuit-breakers for overcurrent protection for household and similar installations,* from the date of publication.

This Standard forms the first edition of AS/NZS 60898-1, *Electrical accessories—Circuit-breakers for overcurrent protection for household and similar installations* Part 1: *Circuit-breakers for a.c. operation.*

This Standard is to be used in conjunction with the appropriate Part 2, which contains clauses that supplement or modify the corresponding clauses in Part 1, to provide the relevant requirements for the appropriate type of product.

The objective of this Standard is to provide Australian and New Zealand electrical industries, manufacturers and regulatory bodies with safety general requirements for circuit-breakers for a.c. operation, and which may be used as the bases for approval for sale or for connection to supply in Australia and New Zealand.

This Standard is an adoption with national modifications and has been reproduced from, IEC 60898-1, Ed. 1.2 (2003), *Electrical accessories—Circuit-breakers for overcurrent protection for household and similar installations – Part 1: Circuit-breakers for a.c. operation* which includes Amendment 1:2002 and Amendment 2:2003.

Variations to IEC 60898-1 to take account of Australian/New Zealand conditions are indicated at the appropriate places throughout this standard. Strikethrough (~~example~~) identifies IEC text, tables and figures which, for the purposes of this Australian/New Zealand Standard, are deleted. Where text, tables or figures are added, each is set in its proper place and identified by shading (example). Added figures are not themselves shaded, but are identified by a shaded border.

Variations made to IEC 60898-1 form the Australian/New Zealand variations for the purposes of the CB scheme for recognition of testing to standards for safety of electrical equipment. These variations have been incorporated in the body of the standard. They are listed in Annex ZZ for easy reference.

This Standard will exist in parallel with AS/NZS 3111, *Approval and test specification—Miniature overcurrent circuit-breakers* (and any revisions thereof). Both this Standard and AS/NZS 3111 are acceptable for miniature overcurrent circuit-breakers.

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

The terms ‘normative’ and ‘informative’ are used 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.

In this Standard, the following print types are used:

– requirements proper: in arial type;

– *test specifications: in italic type;*

– explanatory matter: in smaller arial type.

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 ‘IEC 60898’ should read ‘AS/NZS 60898’.

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

The numbering of clauses, subclauses, notes, tables, figures and annexes follows that of IEC 60898-1. To allow for additional material to be introduced by Australia and New Zealand, the numbers 201 to 300 are used to number further clauses, subclauses, notes, tables and figures in this Standard.

This scheme has been introduced to reduce the likelihood of the IEC and Australia or New Zealand using the same clause or figure number for differing requirements. The use of the word VOID indicates that the IEC requirement is not used in Australia or New Zealand. The word is also used where the deletion of a particular requirement such as a Table would lead to the consequential renumbering of references within the body of the Standard and succeeding tables. Where Australia and New Zealand have added a requirement or made a change to a particular clause of IEC 60898-1 that clause number remains unchanged.

This Standard does not purport to include all the necessary conditions of a contract.

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Any table, figure or text of the international standard that is struck through is not part of this standard. Any Australian/New Zealand table, figure or text that is added is part of this standard and is identified by shading.

1 Scope and object

This part of IEC 60898 applies to a.c. air-break circuit-breakers for operation at 50 Hz or 60 Hz, having a rated voltage not exceeding 440 V (between phases), a rated current not exceeding 125 A and a rated short-circuit capacity not exceeding 25 000 A.

As far as possible, it is in line with the requirements contained in IEC 60947-2.

These circuit-breakers are intended for the protection against overcurrents of wiring installations of buildings and similar applications; they are designed for use by uninstructed people and for not being maintained.

They are intended for use in an environment with pollution degree 2.

They are suitable for isolation.

Circuit-breakers of this standard, with exception of those rated 120 V or 120/240 V (see table 1), are suitable for use in IT systems provided that the requirements of IEC 60364-4-473:1977 + A1:1998 are complied with.

This standard also applies to circuit-breakers having more than one rated current, provided that the means for changing from one discrete rating to another is not accessible in normal service and that the rating cannot be changed without the use of a tool.

This standard does not apply to

– circuit-breakers intended to protect motors;
– circuit-breakers, the current setting of which is adjustable by means accessible to the user.

For circuit-breakers having a degree of protection higher than IP20 according to IEC 60529, for use in locations where arduous environmental conditions prevail (e.g. excessive humidity, heat or cold or deposition of dust) and in hazardous locations (e.g. where explosions are liable to occur), special constructions may be required.

Requirements for circuit-breakers for a.c. and d.c. operation are given in IEC 60898-2.

Requirements for circuit-breakers which incorporate residual current tripping devices are to be found in IEC 61009-1, IEC 61009-2-1, and IEC 61009-2-2.

A guide for co-ordination under short-circuit conditions between a circuit-breaker and another short-circuit protective device (SCPDs) is given in annex D.

NOTE 1 For more severe overvoltage conditions, circuit-breakers complying with other standards (e.g. IEC 60947-2) should be used.

NOTE 2 For an environment with a higher pollution degree, enclosures giving the appropriate degree of protection should be used.

NOTE 3 Circuit-breakers within the scope of this standard may also be used for protection against electric shock in case of fault, depending on their tripping characteristics and on the characteristics of the installation. The criterion of application for such purposes is dealt with by installation rules.