

Australian/New Zealand Standard™

Connecting devices—Flat quick-connect terminations for electrical copper conductors—Safety requirements (IEC 61210:1993 MOD)



Standards Australia



AS/NZS 61210:2002

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 11 February 2002 and on behalf of the Council of Standards New Zealand on 28 March 2002. It was published on 11 April 2002.

The following interests 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 Electronics Suppliers Association
Electricity Supply Association of Australia
Energy Safety Service, New Zealand
International Accreditation New Zealand
National Electrical and Communications Association
Plastics and Chemicals Industries Association
Regulatory Authorities (Electrical), Australia
Testing Interests (Australia)

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Australia web site at www.standards.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

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.

Australian/New Zealand Standard™

Connecting devices—Flat quick-connect terminations for electrical copper conductors—Safety requirements (IEC 61210:1993 MOD)

Originated as AS C169—1964.
Previous edition AS 3169—1989.
Jointly revised and redesignated AS/NZS 61210:2002.

COPYRIGHT

© Standards Australia/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Jointly published by Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 4384 6

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-004 on Electrical Accessories to supersede AS 3169—1989 (NZS/AS 3169—1989) *Approval and test specification—Flat, quick-connect terminations*, from date of publication.

The objective of this Standard is to provide Australian and New Zealand electrical industries with electrical safety requirements for flat quick-connect terminations for electrical copper conductors.

This Standard is an adoption with national modifications and has been reproduced from IEC 61210, *Connecting devices—Flat quick-connect terminations for electrical copper conductors—Safety requirements*, and has been varied as indicated to take account of Australian/New Zealand conditions.

Variations to IEC 61210:1993 are indicated at the appropriate places throughout this Standard. Strikethrough (~~example~~) identifies IEC tables, figures and passages of text which, for the purposes of this Australian/New Zealand Standard, are deleted. Where Australian/New Zealand tables, figures or passages of text 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.

These variations also form the Australian national variations for purposes of the IEC scheme for recognition of results of testing to Standards for safety of electrical equipment (the CB scheme).

A reference to an International Standard identified in the Normative References Clause by strikethrough (~~example~~) is replaced by a reference to the Australian or Australian/New Zealand Standard(s) listed immediately thereafter and identified by shading (**example**). Where the struck-through referenced document and the referenced Australian or Australian/New Zealand Standard are identical, this is indicated in parenthesis after the title of the latter.

The term ‘informative’ has been used in this Standard to define the application of the annex to which it applies. 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 ‘this standard’ should read ‘this Australian/New Zealand Standard’.
- (c) A full point should be substituted for a comma when referring to a decimal marker.
- (d) References to imperial measurements are ‘struckthrough’.

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

CONTENTS

	<i>Page</i>
Clause	
1 Scope	1
2 Normative references.....	1
3 Definitions	2
4 General	3
5 General requirements for tests.....	3
6 Main characteristics	4
7 Marking and information	5
8 Constructional requirements	6
9 Tests	7
9.1 Insertion and withdrawal force	7
9.2 Mechanical overload force (for integral tabs or female connectors).....	8
9.3 Temperature rise	9
9.4 Current loading, cyclic	10
9.5 Elevated temperature test.....	10
9.6 Tensile strength test for crimped connections	11
Figures	14
Annex A – Maximum permissible temperature.....	19
Annex ZZ – Variations to IEC 61210:1993 for application in Australia and New Zealand	20

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard**Connecting devices—Flat quick-connect terminations for electrical copper conductors—Safety requirements
(IEC 61210:1993 MOD)**

Any IEC table, figure or passage of text that is struck-through is not part of this Standard. Any Australian/New Zealand table, figure or passage of text that is added (and identified by shading) is part of this Standard.

1 Scope

This Standard applies to flat quick-connect terminations consisting of a male tab of size 2,8, 4,8, 6,3 or 9,5 mm (~~0,110, 0,187, 0,250, or 0,375 in~~) and a mating female connector for use as either an incorporated or an integrated part of an equipment or of a component, or as a separate entity, for connecting electrical copper conductors according to the manufacturer's instructions.

Said electrical copper conductors may be flexible or rigid stranded, having a cross-sectional area up to and including 6 mm² (AWG equal to or greater than 10) or rigid solid having a cross-sectional area up to and including 2,5 mm² (AWG equal to or greater than 14).

The rated voltage by which electrical energy is utilized, shall not exceed 1 000 V a.c. with a frequency up to and including 1 000 Hz, and 1 500 V d.c. and having the temperature limits applicable to materials used within this standard.

Requirements for insulated male tabs and female connectors are under consideration.

NOTES

- 1 This standard, where applicable, may be used for conductors made of material other than copper, but not including aluminium.
- 2 For reasons of safety, it is recommended that flat quick-connect terminations beyond the scope of this standard should not be interchangeable with those of this standard.
- 3 This standard does not apply to female connectors with positive locking means.
- 4 The flat quick-connect terminations covered by this standard are not intended to be disconnected by pulling the cable.

This standard does not apply to flat quick-connect terminations for data and signal circuits.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.