Amendment 1 - April 1985

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Australian Standard 3169—1982

APPROVAL AND TEST SPECIFICATION FOR

FLAT, QUICK-CONNECT TERMINATIONS

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Association of Consulting Engineers Australia

Australian Electrical and Electronic Manufacturers Association

Confederation of Australian Industries

Department of Public Works, N.S.W.

Department of Transport and Construction

Department of Defence Support

Electrical Contractors Associations of Australia

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PREFACE

This specification was prepared by the Association's Committee on Electrical Accessories as a revision of AS C169—1964 which it accordingly supersedes.

Preparation of this edition was undertaken to align the Australian specification as far as possible with international practice, and to update to a metric edition.

It is one of a series of approval and test specifications issued by the Association. These specifications are accompanied by a general specification AS 3100, containing definitions and general requirements for electrical materials and equipment.

This specification contains requirements for the design, construction and testing of flat, quick-connect terminations and covers only safety matters and conditions closely allied thereto.

This specification requires reference to the following Australian standard approval and test specification:

AS 3100 Definitions and General Requirements for Electrical Materials and Equipment

and to the following Australian standard:

AS 1099 Basic Environmental Testing Procedures for Electrotechnology.

AS 3169/Amdt 1/1985-04-04

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AMENDMENT No 1
to
AS 3169—1982
Approval and Test Specification for
FLAT, QUICK-CONNECT TERMINATIONS

REVISED TEXT

The 1982 edition of AS 3169 is amended as follows; the amendments should be inserted in the appropriate place.

SUMMARY: The following sections of this standard are covered by this amendment: Clauses 8 and 11.1, and Tables 1, 2, 4, 5 and 6.

Published on 4 April 1985.

AMDT No 1 APRIL 1985

Page 4. Clause 8.

Delete the existing second paragraph and *inse* following:

The hardness of the tab shall lie in the range of 12 to 150 HV, except for stainless steel which car a maximum hardness of 180 HV.

This amendment forms part of the specification on publi

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Australian Standard
APPROVAL AND TEST SPECIFICATION
FOR
FLAT, QUICK-CONNECT TERMINATIONS

This specification shall be read in conjunction with AS 3100. (See also Clause 3, below.)

1 SCOPE. This specification applies to flat, quick-connect terminations comprising tabs with hole or dimple detents, and their mating receptacles.

The terminations may serve to connect flexible, stranded, or solid conductors of copper, nickel, or other corrosion resistant materials.

This specification does not apply to terminations for use with conductors made of aluminium, or aluminium alloys.

NOTE: This specification is not intended to preclude the use of multipole connectors of similar principle but of different form, e.g. circular.

2 DEFINITIONS. For the purpose of this specification the following definitions apply:

2.1 Flat, quick-connect termination—a tab or receptacle.

NOTE: The use of the term 'termination' in this specification means a flat, quick-connect termination.

2.2 Test tab—a tab manufactured to close tolerances for the specific purpose of conducting mechanical tests with production receptacles.

NOTE: The use of test tabs has been found to produce more consistent test results.

2.3 Tab—the portion of a connector which enters the receptacle.

2.4 Receptacle—the portion of a connector which receives the tab.

2.5 Detent—a dimple (depression) or hole in the tab which acts to engage a raised portion on the receptacle, thus providing a latch for the mating parts.

2.6 Reference point—a specially designated point used when making electrical test measurements.

2.7 Connector—an electrical connection consisting of a tab and a mating receptacle which can be readily inserted and withdrawn with a sliding action without the use of a tool or tools.

2.8 Connector adaptor—a tab or receptacle which provides for the connection of more than one mating termination.

2.9 Termination strip—an electrically continuous assembly of terminations intended for fixing in position and to which a number of mating terminations may be connected. The termination strip may comprise all tabs or all receptacles or a combination of tabs and receptacles.

3 COMPLIANCE WITH SPECIFICATIONS.

3.1 General Requirements of AS 3100. This specification shall be read in conjunction with AS 3100 and the appropriate provisions of AS 3100 shall apply to the construction of the terminations and the insulation and/or safeguarding of parts which normally carry current.

3.2 Specific Requirements of this Specification. A termination shall be deemed to comply with this specification only if it complies with all the requirements of this specification and passes the relevant tests specified herein.

4 CLASSIFICATION. Terminations are classified into groups according to the nominal width of the tabs. This specification covers the following groups:

(a) Classification 2.8—2.8 mm nominal width.
(b) Classification 4.8—4.8 mm nominal width.
(c) Classification 6.3—6.3 mm nominal width.
(d) Classification 9.5—9.5 mm nominal width.

NOTE: Appendix A details requirements for miniature (2.3 mm) connectors suitable for use in telecommunication, audio and video, electronics and similar equipment.

5 GENERAL ARRANGEMENT. Terminations may be provided with a means for securing in position or may be intended for use as a floating connection.

Connector adaptors (as distinct from termination strips) shall not provide for the accommodation of more than three terminations.

6 MARKING. Every termination shall be marked legibly and indelibly with the following:

(a) The name or registered trade name or trade mark of the manufacturer or of the applicant for approval or, alternatively the approvals marking allotted by an approvals authority.
(b) The classification.

Item (a) shall be marked on the tab or receptacle; item (b) may be marked on the container in or on which the receptacle or tab is supplied.

7 VALUES OF CURRENT. The values of current shown in Table 6 are for testing purposes only. Operating values of current depend upon the application and are based on the maximum allowable temperatures in Table 1.

8 MATERIALS. Terminations shall be manufactured from material having adequate electrical and mechanical properties, and suitably resistant to heat and corrosion. Table 1 gives the maximum permissible (or operating) temperature for various base materials and their platings under dry heat conditions. Under high humidity conditions these values may need to be reduced.

The hardness of the tab shall lie in the range of 120 HV to 190 HV.

SEE AMENDMENTS No 1

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