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Approval and test specification—Flat, quick-connect terminations

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Confederation of Australian Industry

Department of Defence

Department of Public Works, N.S.W.

Electrical Contractors Association of Australia

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PREFACE

This Standard was prepared by the Standards Australia Committee on Electrical Accessories to supersede AS 3169—1982.

It is one of a series of Approval and Test Specifications issued by Standards Australia. These Specifications are accompanied by a general Specification AS 3100, containing definitions and general requirements for electrical materials and equipment. The purpose of these Specifications is to outline conditions which must be met to secure approval for the sale and use of electrical equipment in Australia. Only safety matters and related conditions are covered.

This Standard was revised to incorporate Amendment No.1, April 1985 (which affected Clauses 8 and 11.1 and Tables 1, 2, 4, 5 and 6) to AS 3169—1982 and introduces other technical and editorial changes such as:

- Allowance (via Figure 1) of the use of a tab with either a convex edge or a bevel edge.
- Editorial changes to Figure 2 to cover the use of a hole as a detent.
- Changes to the voltage drop requirements of Table 6.
- Updating of the cross-references to referred Standards.
- Other minor editorial changes.

This Standard supersedes AS 3169—1982 (including Amendment No. 1, April 1985) from date of publication.

Standards Australia points out that this Specification does not purport to include all the necessary provisions of a contract.

CONTENTS

STANDARDS AUSTRALIA

Australian Standard

Approval and test specification—Flat, quick-connect terminations

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

1 SCOPE AND REFERENCED DOCUMENTS.

1.1 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 multiple connectors of similar principle but of different form, e.g. circular.

1.2 Referenced documents. The documents below are referred to in this Standard.

AS	
1099	Basic environmental testing procedures for electrotechnology
1099.2Da	Part 2Da: Damp heat, 24-hour cycle
3100	Approval and test specification—Definitions and general requirements for electrical materials and equipment

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 when 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 durably with the following:

(a) The name or registered trade name or mark of the manufacturer or of the responsible vendor.

(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.

NOTE: Manufacturers making a statement of compliance with this Australian Standard on a product, or on packaging or promotional material related to that product, are advised to ensure that such compliance is capable of being verified.

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.