

Australian Standard<sup>®</sup>

---

**APPROVAL AND TEST  
SPECIFICATION FOR  
CORD EXTENSION SETS**

---

[Title Allocated by Defence Cataloguing Authority:  
CABLE ASSEMBLY, POWER, ELECTRICAL (Sheathed,  
3-core, Ordinary or Heavy Duty, Approval and Test)]

This Australian standard was prepared by Committee EL/4, Electrical Accessories. It was approved on behalf of the Council of the Standards Association of Australia on 29 July 1982, and published on 11 October 1982.

---

The following interests were represented on the committee responsible for the preparation of this standard:

- Association of Consulting Engineers Australia
- Australian Electrical and Electronic Manufacturers Association
- Confederation of Australian Industries
- Department of Defence Support
- Department of Transport and Construction
- Department of Public Works, N.S.W.
- Electrical Contractors Associations of Australia
- Electrical regulatory authorities
- Electricity Supply Association of Australia
- Plastics Institute of Australia Incorporated
- Railways of Australia Committee
- Telecom Australia

---

**Review of Australian Standards.** To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

---

First published . . . . . 1982.
Incorporating: Amdt 1—1985

*This standard was issued in draft form for comment as DR 81330.*

ISBN 0 7262 2701 3

## PREFACE

This specification was prepared by the Association's Committee on Electrical Accessories.

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.

It specifies requirements for low voltage cord extension sets consisting of a flexible cord, a three-pin plug and a cord extension socket, and intended for detachable connection to fixed wiring. Other types of extension outlet devices, e.g. coiling or reeling devices and multi-outlet devices, will be covered by a standard still under consideration.

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

AS 3100	Definitions and General Requirements for Electrical Materials and Equipment
AS 3112	Plugs and Plug Sockets
AS 3120	Cord Extension Sockets
AS 3191	Electric Flexible Cords
AS 3105	Portable Outlet Devices

### © Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

STANDARDS ASSOCIATION OF AUSTRALIA

---

**Australian Standard**

**APPROVAL AND TEST SPECIFICATION**

**FOR**

**CORD EXTENSION SETS**

---

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

---

**1 SCOPE.** This specification applies to cord extension sets intended for use at low voltage.

Cord extension sets incorporating a reeling or coiling device are excluded from this specification and are covered by AS 3XXX.

**2 DEFINITION.** For the purpose of this specification, the following definition applies:

**2.1 Cord extension set**—an assembly of—

- (a) a plug conforming to Fig. 2.1(a) of AS 3112;
- (b) a sheathed flexible cord; and
- (c) a cord extension socket, complying with the relevant requirements of AS 3120 and intended for use with a plug conforming to Fig. 2.1(a) of AS 3112.

**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 cord extension set and the insulation and/or safeguarding of parts which normally carry current.

**3.2 Specific Requirements of This Specification.** A cord extension set shall be deemed to comply with this specification only if it complies with all the requirements of this specification and passes the tests specified herein.

**3.3 Compliance With Other Specifications.** Components incorporated in a cord extension set which are depended upon for safety, shall comply with the appropriate requirements of any relevant approval and test specification.

**4 DESIGN AND CONSTRUCTION.**

**4.1 General.** The plug and cord extension socket shall be each of the same current rating, and in no case greater than the current-carrying capacity of the flexible cord.

**4.2 Plug.** The plug shall comply with the relevant requirements of AS 3112, and have a current rating of not less than 10 A.

**4.3 Flexible Cord.** The flexible cord shall comply with the relevant requirements of AS 3191 and shall be 3-core type, either ordinary duty or heavy duty sheathed, having conductors with a cross-sectional area of not less than 1 mm<sup>2</sup>.

**4.4 Cord Extension Socket.** The cord extension socket shall comply with the relevant requirements of AS 3120.

**4.5 Polarization.** The cord extension set shall be constructed so that the polarity of the aperture configuration of the cord extension socket

corresponds to that of the plug pins, and when viewing the mating face of the cord extension socket shall be earth, active, neutral, in a clockwise direction.

The terminals of the plug and cord extension socket shall be connected to the appropriate conductor identified by the following colours of insulation:

- (a) Active—brown.
- (b) Neutral—light blue.
- (c) Earth—green/yellow.

NOTE: For heavy duty flexible cord, the colours red and black are acceptable for active and neutral respectively.

The connections of the conductors to the plug and cord extension socket shall be such that the rotation order of the cores due to the lay of the cable is identical with the order of rotation of the connections of the conductors.

**4.6 Limitation of Outlets.** The cord extension set shall be provided with one outlet only.

**4.7 Length of Flexible Cord.** The maximum length of flexible cord shall be as shown in Table 1, except that longer lengths may be used with larger conductor areas for the purpose of limiting voltage drop, provided that the voltage drop is not greater than 5 percent of the supply voltage when operated at rated current.

**TABLE 1**  
**MAXIMUM LENGTHS OF FLEXIBLE CORD**

Cord extension set rating A	Conductor area mm <sup>2</sup>	Maximum length of flexible cord m
10	1.0	25
	1.5	32
15	1.5	25
	2.5	40
20	2.5	32
	4.0	40

**5 MARKING.**

**5.1 General.** The cord extension set shall be marked in accordance with the relevant requirements of Section 7 of AS 3100, and shall include the items under Clause 7.1 (i), (ii), (iii) and (iv), except that the rating in item (ii) shall be marked in amperes.

In addition, a warning tag of durable material using lettering, not less than 3 mm in height with the following wording, shall be permanently attached:

**DO NOT OPERATE UNLESS CORD IS FULLY UNCOILED.**