AS/NZS 3198:1996

Australian/New Zealand Standard®

Approval and test specification— Electric cables—XLPE insulated— For working voltages up to and including 0.6/1 kV

AS/NZS 3198:1996

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL/3, Electric Wires and Cables. It was approved on behalf of the Council of Standards Australia on 26 February 1996 and on behalf of the Council of Standards New Zealand on 29 April 1996. It was published on 5 May 1996.

The following interests are represented on Committee EL/3:

Australian Electrical and Electronic Manufacturers Association
Department of Defence, Australia
Electrical regulatory authorities
Electricity Supply Association of Australia
Ministry of Commerce, New Zealand
New Zealand Electrical Contractors Association
New Zealand Electrical and Electronic Manufacturers Federation
Office of Energy, N.S.W.
Railways of Australia Committee
Testing interests

Review of Standards. To keep abreast of progress in industry, Joint Australian/New Zealand 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 Joint Standards and related publications will be found in the Standards Australia and Standards New Zealand Catalogue of Publications; this information is supplemented each month by the magazines 'The Australian Standard' and 'Standards New Zealand', which subscribing members receive, and which give details of new publications, new editions and amendments, and of withdrawn Standards.

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

AS/NZS 3198:1996

Australian/New Zealand Standard®

Approval and test specification— Electric cables—XLPE insulated— For working voltages up to and including 0.6/1 kV

PUBLISHED JOINTLY BY:

STANDARDS AUSTRALIA 1 The Crescent, Homebush NSW 2140 Australia

STANDARDS NEW ZEALAND Level 10, Standards House, 155 The Terrace, Wellington 6001 New Zealand 2

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL/3 on Electric Wires and Cables to supersede AS 3198—1990 and NZS/AS 3198—1990, Approval and test specification—Electric cables—XLPE insulated—For working voltages up to and including 0.6/1kV.

This Standard is one of series of Approval and Test Specifications issued by Standards Australia and Standards New Zealand. In Australia, these Standards are to be read in conjunction with AS 3100, Approval and test specification—General requirements for electrical equipment. In New Zealand, they are to be read in conjunction with NZS 6200, Specification for general requirements for electrical apparatus and materials. The purpose of these Standards is to outline the conditions which must be met to secure approval for the sale and use of electrical equipment. Only safety matters and related conditions are covered.

The objective of this Standard is to specify the construction, dimensions and tests for XLPE insulated cables for working voltages not exceeding 1 kV.

The objective of this revision is to update the 1990 edition and to add cables suitable for a maximum permissible conductor temperature of 110°C.

The nominal cross-sectional areas of the conductors specified herein are taken from AS 1125, *Conductors in insulated electric cables and flexible cords*, and are identical with the values recommended in IEC 228: 1978 *Conductors of insulated cables*.

This Standard differs from the 1990 edition as follows:

- (a) Cables suitable for a maximum permissible conductor temperature of 110°C have been added.
- (b) The Standard has been issued as a Joint Australian/New Zealand Standard.

In the preparation of this Standard, consideration was given to IEC 502 Extruded solid dielectric insulated power cables for rated voltages from 1 kV to 30 kV and acknowledgment is made of the assistance received from that source.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendix to which they apply. A 'normative' appendix is an integral part of a Standard, whereas an 'informative' appendix is only for information and guidance.

© Copyright - STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

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

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

Inclusion of copyright material in computer software programs is also permitted without 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 or Standards New Zealand at any time.

CONTENTS

	Pe	age
1	SCOPE	
2	REFERENCED DOCUMENTS	5
3	DEFINITIONS	
4	VOLTAGE DESIGNATION	
5	MAXIMUM CONTINUOUS CONDUCTOR TEMPERATURE	6
6	CONDUCTORS	
7	INSULATION	
8	LAY UP OF CORES (MULTICORE CABLES)	
9	FILLERS, BARRIER TAPES AND BINDERS	10
10	BEDDING	10
11	METALLIC LAYERS	11
12	SEPARATION SHEATH	11
13	ARMOUR	
14	METAL SHEATH	
15	NON-METALLIC SHEATH	
16	SERVING	
17	MARKING	
18	CONSTRUCTION AND DIMENSIONS	
19	TESTS	17
A T	DDENDIGEG	
Ai	PPENDICES A PURCHASING GUIDELINES	20
	B THE FICTITIOUS CALCULATION METHOD FOR THE DETERMINATION	30
	OF THE DIMENSIONS OF PROTECTIVE COVERINGS	27
	C NOTES ON CALCULATION OF DIMENSIONS OF CABLE	
	D ROUNDING OF NUMBERS	
	D ROUNDING OF NUMBERS	43
TA	ABLES	
1	TESTS AND CRITERIA FOR INSULATION	9
2	APPROXIMATE THICKNESS OF BEDDING	10
3	DIAMETER OF ARMOUR WIRE	
4	THICKNESS OF ARMOUR TAPE	12
5	TESTS AND CRITERIA FOR NON-METALLIC AND SEPARATION	
	SHEATHS	15
6	TESTS ON CABLE – CRITERIA, CATEGORY AND REFERENCE	17
7	CONSTRUCTION AND DIMENSIONS OF 0.6/1 kV INSULATED AND	
	NON-METALLIC SHEATHED SINGLE-, 2-, 3- AND 4-CORE	
	CIRCULAR CABLES	19
8	CONSTRUCTION AND DIMENSIONS OF 0.6/1 kV INSULATED,	
	BEDDED, GALVANIZED STEEL SINGLE WIRE ARMOURED 2-,	
	3- AND 4-CORE CIRCULAR CABLES WITH OR WITHOUT	
	OPTIONAL FURTHER PROTECTION	22
9		
	LEAD-ALLOY SHEATHED SINGLE-, 2-, 3- AND 4-CORE	
	CIRCULAR CABLES WITH OR WITHOUT OPTIONAL FURTHER	
	PROTECTION	26



	This is a free preview.	Purchase the e	entire publication	at the link below:
--	-------------------------	----------------	--------------------	--------------------

Product Page

- Dooking for additional Standards? Visit Intertek Inform Infostore
- Dearn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation