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AS/NZS 5000.1:1999
(Incorporating Amendment No. 1)

AS/NZS 5000.1

Australian/New Zealand Standard™

Electric cables—Polymeric insulated

Part 1: For working voltages up to and including 0.6/1 kV

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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 18 November 1999 and on behalf of the Council of Standards New Zealand on 22 November 1999. It was published on 5 December 1999.

The following interests are represented on Committee EL/3:

Australasian Railway Association
Australian Electrical and Electronic Manufacturers Association
Australian Industry Group
Department of Defence, Australia
Department of Mineral Resources, N.S.W.
Electrical Contractors Association of New Zealand
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PREFACE

This Standard was prepared by the Standards Australia/Standards New Zealand Committee EL/3, on Electric Wires and Cables, to supersede AS 3147–1992, *Approval and test specification—Electric cables—Thermoplastic insulated—For working voltages up to and including 0.6/1 kV*, AS/NZS 3116:1996, *Approval and test specification—Electric cables—Elastomer insulated—For working voltages up to and including 0.6/1 kV*, and AS/NZS 3198:1996, *Approval and test specification—Electric cables—XLPE insulated—For working voltages up to and including 0.6/1 kV*. The superseded Standards will be withdrawn eighteen months after the publication of this Standard. During the period before withdrawal of the superseded Standards, while the Standards are concurrent for the same cable, it is expected that cables manufactured to any of the appropriate Standards may be approved for use.

This Standard incorporates Amendment No. 1 (February 2001). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure, or part thereof affected.

The objective of this Standard is to provide manufacturers and suppliers with construction, dimensions and tests for cables and flexible cables insulated with thermoplastic, elastomer or XLPE materials intended for use in electrical installations at working voltages up to and including 0.6/1(1.2) kV.

This Standard differs from the previous edition of each of the superseded Standards as follows:

(a) The tables of construction and dimensions have been deleted and, where appropriate, instructions regarding construction have been incorporated in text throughout the Standard.

(b) The tests and criteria for insulation and sheath material have been deleted and reference made to AS/NZS 3808. This Standard details the materials and associated tests for materials used in most cable Standards.

(c) The requirements for non-metallic layers and further protection have been modified to allow for the use of multiple layers.

(d) A definition of aerial cables has been added.

(e) The lists of suitable materials for both insulation and sheath have been expanded to include those for thermoplastic insulated, elastomer insulated and XLPE insulated cables.

(f) The requirement in AS 3147, for cables comprising active conductors of 16 mm^2 to be marked with the active conductor cross-sectional area, in mm^2, and with the conductor material, has been removed.

In the preparation of this Standard, consideration was given to IEC 60502:1997, *Extruded solid dielectric insulated power cables for rated voltages from 1 kV up to 30 kV* and acknowledgment is made of the assistance received from that source.

The nominal cross-sectional areas of the conductors specified in this Standard are based on the values recommended in IEC 228:1978, *Conductors of insulated cables*.

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.

Statements expressed in mandatory terms in notes to table are deemed to be requirements of this Standard.

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CONTENTS

Page

1 SCOPE 4
2 REFERENCED DOCUMENTS 4
3 DEFINITIONS 4
4 VOLTAGE DESIGNATION 6
5 CONDUCTORS 6
6 INSULATION 6
7 CONSTRUCTION OF CABLES 9
8 BEDDING 10
9 METALLIC LAYERS 11
10 SEPARATION LAYER 11
11 ARMOUR 12
12 METALLIC SHEATH 13
13 NON-METALLIC SHEATH 14
14 FURTHER PROTECTION 15
15 UNPROTECTED MULTI-CORE CABLES 16
16 MARKING 16
17 TESTS 17

APPENDICES
A PURCHASING GUIDELINES 21
B THE FICTITIOUS CALCULATION METHOD FOR THE DETERMINATION OF THE DIMENSIONS OF PROTECTIVE COVERINGS 22

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