AS/NZS 5000.1:2005
(Incorporating Amendment No. 1)
Reconfirmed 2017

Australian/New Zealand Standard™

Electric cables—Polymeric insulated

Part 1: For working voltages up to and including 0.6/1 (1.2) kV

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-003, Electric Wires and Cables. It was approved on behalf of the Council of Standards Australia on 28 October 2005 and on behalf of the Council of Standards New Zealand on 4 November 2005.
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The following are represented on Committee EL-003:

Australasian Railway Association
Australian Electrical and Electronic Manufacturers Association
Australian Industry Group
Canterbury Manufacturers Association New Zealand
Department of Primary Industries, Mine Safety (NSW)
Electrical Contractors Association of New Zealand
Electrical Regulatory Authorities Council
Energy Networks Association
Engineers Australia
Ministry of Economic Development (New Zealand)

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We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR 05061.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

RECONFIRMATION

OF
AS/NZS 5000.1:2005
Electric cables—Polymeric insulated
Part 1: For working voltages up to and including 0.6/1 (1.2) kV

RECONFIRMATION NOTICE

Technical Committee EL-003 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 10 October 2016.

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The following are represented on Technical Committee EL-003:

Australian Cable Makers' Association
Australian Industry Group
Electrical Compliance Testing Association
Electrical Regulatory Authorities Council
National Electrical and Communications Association
Queensland University of Technology

NOTES

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-003, Electric Wires and Cables to supersede AS/NZS 5000.1:2003.

This Standard incorporates Amendment No. 1 (December 2006). 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 details, 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 2003 edition as follows:

(a) The method of specifying the thickness of insulation, separation layer, metallic sheath and oversheath has been aligned with IEC 60502-1.

(b) A 1.0 mm^2 earth core conductor size has been included.

(c) Optional aluminium wire armour has been included.

(d) The conductor resistance test has been specified as being carried out on completed cable to align with AS/NZS 1660.3.

(e) A legibility of marking test has been included.

(f) Requirements for qualification testing have been included.

In the preparation of this Standard, consideration was given to IEC 60502-1, *Power cables with extruded insulation and their accessories for rated voltages from 1 kV (U_m = 1,2 kV) up to 30 kV (U_m = 36 kV),* Part 1: *Cables for rated voltages of 1 kV (U_m = 1,2 kV) and 3 kV (U_m = 3,6 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 60228, *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 tables are deemed to be requirements of this Standard.

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1 SCOPE

This Standard specifies construction, dimensions and tests for single- and multicore cables insulated with polymeric materials intended for use in electrical installations at working voltages up to and including 0.6/1 (1.2) kV.

It does not apply to polymeric insulated cables for special installations and service conditions or for which there are separate Australian/New Zealand Standards, e.g. neutral screened cables, welding cables, flexible cords and aerial bundled cables.

NOTES:

1 Purchasing guidelines are contained in Appendix A.

2 AS/NZS 3008.1 should be referenced to assist correct cable size selection for the intended application and installation.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

2706 Numerical values—Rounding and interpretation of limiting values

AS/NZS

1125 Conductors in insulated electric cables and flexible cords

1660 Test methods for electric cables, cords and conductors

1660.1 Method 1: Conductors and metallic components

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