AS/NZS 1429.1:2006
Reconfirmed 2017

Australian/New Zealand Standard™

Electric cables—Polymeric insulated

Part 1: For working voltages 1.9/3.3 (3.6) kV up to and including 19/33 (36) kV

STANDARDS Australia

STANDARDS NEW ZEALAND PAEREWA AOTEAROA

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 3 April 2006 and on behalf of the Council of Standards New Zealand on 31 March 2006.
This Standard was published on 21 April 2006.

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 05363.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

RECONFIRMATION

OF
AS/NZS 1429.1:2006
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Part 1: For working voltages 1.9/3.3 (3.6) kV up to and including 19/33 (36) 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.

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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 1429.1:2000.

This Standard differs from the previous edition in the following significant ways:

(a) The range of conductor sizes has been expanded to 1 600 mm^2.

(b) The method of specifying the thickness of insulation, separation sheath, metal sheath and oversheath has been aligned with IEC 60502-2.

(c) MDPE has replaced PE as an optional oversheathing material.

(d) Cables with collectively screened constructions are no longer specified.

(e) The requirement for a qualification test report has been added.

(f) The range of approval has been modified.

(g) The recommended diameter of drum barrel and minimum installation bending radius has been extended to cover triplex cables.

(h) The sample test requirement has become mandatory.

In the preparation of this Standard, consideration was given to the following publications and acknowledgment is made of the assistance received:

IEC 60502-2, *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 2*: Cables for rated voltages from 6 kV (U_m = 7,2 kV) up to 30 kV (U_m = 36 kV)*

IEC 60811, *Common test methods for insulating and sheathing materials of electric cables and optical cables* (all Parts)

The nominal cross-sectional areas of the conductors specified herein are identical with the values specified in AS/NZS 1125, *Conductors in insulated electric cables and flexible cords*.

The dimensions for insulation and oversheath thicknesses are identical with the values recommended in IEC 60502. Certain tests and criteria in this Standard are more stringent than those in IEC 60502.

Two types of insulation compounds are specified in this Standard, namely insulation comprising cross-linked polyethylene (XLPE) and insulation comprising ethylene propylene rubber (EPR).

Although the Standard provides tables of insulation thicknesses and the necessary information to establish precisely the dimensions of the cable protective coverings, no cable dimension tables are provided owing to the variety of cable constructions that could possibly affect such dimensions.

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 and figures are deemed to be requirements of this Standard.

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements for cross-linked polyethylene (XLPE) and ethylene propylene rubber (EPR) insulated cables for fixed installations for electricity supply at working voltages 1.9/3.3 (3.6) up to and including 19/33 (36) kV.

NOTE: Optional requirements for metal sheath, armour, water-blocking, protection from insect attack and metre marking on cable are provided in Clauses 2.9, 2.12, 2.14, 2.15 and 2.17 respectively.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS
1931 High-voltage test techniques (all Parts)
3983 Metal drums for insulated electric cables and bare conductors

AS/NZS
1125 Conductors in insulated electric cables and flexible cords
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