

Australian/New Zealand Standard™

**Electric cables—For underground
residential distribution systems**



AS/NZS 4026:2008

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 20 June 2008 and on behalf of the Council of Standards New Zealand on 6 August 2008.

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Australian Electrical and Electronic Manufacturers Association
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RECONFIRMATION
OF
AS/NZS 4026:2008
Electric cables—For underground
residential distribution systems

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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 4026:2001. The Standard applies to a range of cables recommended for use by electricity distributors in underground residential distribution (URD) systems at working voltages of 0.6/1 (1.2) kV, 6.35/11 (12) kV and 12.7/22 (24) kV.

For reasons of standardization and rationalization, this Standard provides for the construction, dimensions and test requirements of only a limited range of cables.

This version differs from previous issues of this Standard in that design options are included in the Section for High Voltage XLPE insulated cables, rather than there being essentially a single design construction. These variations were prompted by changes in the requirements of the electricity supply industry. The inclusion of options is to be re-considered at the next review of this Standard.

The requirements of this Standard are compatible with and complementary to those for the range of cables covered in AS/NZS 1429.1, AS/NZS 1026 and AS/NZS 5000.1.

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

- (a) Changes were made to the range of conductor sizes in Sections 3 and 4.
- (b) Single-core and triplex constructions were included in the range of polymeric insulated high voltage distribution network cables.
- (c) EPR insulated cables were included in the range of polymeric insulated high voltage distribution network cables.
- (d) The requirement for water blocking of the metallic screen was included in the range of single-core polymeric insulated high voltage distribution network cables.
- (e) Cables rated at 12.7/22 (24) kV were deleted from the range of paper insulated high voltage distribution network cables.
- (f) A two-core flat construction was added to the range of XLPE insulated 0.6/1 (1.2) kV service cables.

The term 'informative' has been used in this Standard to define the application of the appendix to which it applies. An 'informative' appendix is only for information and guidance.

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Electric cables—For underground residential distribution systems

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies the construction of a rationalized range of cables used by electricity supply authorities in underground residential distribution (URD) systems.

NOTES:

- 1 Cable data and recommendations to assist in the selection of the appropriate cables are provided in Appendix A.
- 2 Guidelines on information that should be supplied with enquiries or orders are provided in Appendix B.

1.2 APPLICATION

For the purposes of this Standard, the cables shall comply with the requirements of the following Sections, as appropriate:

- | | |
|-----------|--|
| Section 2 | Polymeric insulated 6.35/11 (12) kV and 12.7/22 (24) kV cables for use in high voltage distribution networks |
| Section 3 | Paper insulated 6.35/11 (12) kV cables for use in high voltage distribution networks |
| Section 4 | XLPE insulated 0.6/1 (1.2) kV cables for use in low voltage distribution networks |
| Section 5 | XLPE insulated 0.6/1 (1.2) kV cables for use as low voltage service cables |

1.3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS/NZS

- | | |
|----------|---|
| 1026 | Electric cables—Impregnated paper insulated—For working voltages up to and including 19/33 (36) kV |
| 1429 | Electric cables—Polymeric insulated |
| 1429.1 | Part 1: For working voltages 1.9/3.3 (3.6) kV up to and including 19/33 (36) kV |
| 1660 | Test methods for electric cables, cords and conductors |
| 1660.2.1 | Part 2.1: Insulation, extruded semi-conductive screens and non-metallic sheaths—Methods for general application |
| 2053 | Conduits and fittings for electrical installations |
| 2053.2 | Part 2: Rigid plain conduits and fittings of insulating material |
| 3008.1 | Electrical installations—Selection of cables—Cables for alternating voltages up to and including 0.6/1 kV |
| 3100 | Approval and test specification—General requirements for electrical equipment |