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AS IEC 60433—2007

Australian Standard®

Insulators for overhead lines with a nominal voltage above 1000 V—Ceramic insulators for a.c. systems—Characteristics of insulator units of the long rod type

This Australian Standard® was prepared by Committee EL-010, Overhead Lines. It was approved on behalf of the Council of Standards Australia on 5 September 2007.
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The following are represented on Committee EL-010:

- Australasian Railway Association
- Australian Chamber of Commerce and Industry
- Australian Electrical and Electronic Manufacturers Association
- Australian Porcelain Insulators Association
- Electricity Engineers Association New Zealand
- Energy Networks Association

This Standard was issued in draft form for comment as DR 07046.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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STANDARDS AUSTRALIA

RECONFIRMATION

OF
AS IEC 60433–2007
Insulators for overhead lines with a nominal voltage above 1000 V–Ceramic insulators for a.c. systems–Characteristics of insulator units of the long rod type

RECONFIRMATION NOTICE

Technical Committee EL-010 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 13 March 2018.

The following are represented on Technical Committee EL-010:
Aerial Application Association of Australia
Australian Industry Group
Civil Aviation Safety Authority
Communications, Electrical and Plumbing Union - Electrical Division
Energy Networks Australia
Energy Safe Victoria
Engineers Australia
NSW Department of Industry, Skills and Regional Development

NOTES

Australian Standard®

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PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee EL-010, Overhead Lines to partly supersede AS/NZS 2947.2:2002, *Insulators—Porcelain and glass for overhead power lines—Voltages greater than 1000 V a.c.*, Part 2: *Characteristics*. After consultation with stakeholder in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this Standard is to specify characteristics for long rod insulators for use on overhead power lines.

This Standard is identical with, and has been reproduced from, IEC 60433 Ed.3.0 (1989), *Insulators for overhead lines with a nominal voltage above 1000 V—Ceramic insulators for a.c. systems—Characteristics of insulator units of the long rod type*.

As this Standard is reproduced from an International Standard, the following applies:

(a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.

(b) In the source text 'IEC 60433' should read 'AS IEC 60433'.

(c) A full point should be substituted for a comma when referring to a decimal marker.

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Any table, figure or text of the international standard that is struck through is not part of this standard. Any Australian table, figure or text that is added is part of this standard and is identified by shading.

1 Scope

This International Standard is applicable to string insulator units of the long rod type with insulating parts of ceramic material intended for use in a.c. overhead power lines with a nominal voltage greater than 1 000 V and a frequency not greater than 100 Hz. It is also applicable to insulators of similar design, used in substations.

This standard is applicable to ceramic string insulator units of the long rod type, either with a clevis end fitting at both ends for coupling with a tongue, or with a socket end fitting at both ends for coupling with a pin ball.

The object of this standard is to prescribe specified values for electrical and mechanical characteristics, and for the principal dimensions of ceramic string insulator units of the long rod type.

This standard is applicable to string insulator units for use on overhead lines situated in lightly polluted areas, and the creepage distances given in table 1 have been established accordingly, using the IEC 60815 recommendation of 16 mm/kV for pollution level I. However, shorter creepage distances may be used in some non-polluted areas. If specific operating conditions require or allow non-standard (longer or shorter) creepage distances, the mechanical characteristics as well as the lengths *L* (see clause 4) of this standard should be used unless the need for exceptionally long creepage distances requires values of *L* greater than those given in table 1. In the case of special requirements, e.g. very heavy polluted areas and for other particular or extreme environmental conditions, it may be necessary for certain dimensions to be changed.

NOTES

1 As far as reasonably applicable, this International Standard may also be applied to similar insulator units outside the scope of this standard, such as insulators for electric traction lines.

2 This International Standard does not include tests on insulators and dimensions of end fittings.

3 Ball and socket couplings are covered by IEC 60120, clevis and tongue couplings by IEC 60471.

4 For the definition of pollution levels, see IEC 60815.

5 The term "ceramic" is used in this International Standard to refer to porcelain materials and, contrary to North American practice, does not include glasses.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.