AS IEC 60720—2007
Reconfirmed 2018

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Australian Standard®

Characteristics of line post insulators (IEC 60720, Ed. 1.0 (1981) MOD)

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 07045.

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 60720–2007
Characteristics of line post insulators
(IEC 60720, Ed. 1.0 (1981) MOD)

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®

Characteristics of line post insulators (IEC 60720, Ed. 1.0 (1981) MOD)

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AUSTRALIAN 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 stakeholders 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 line post insulators for use on overhead lines.

This Standard is an adoption with national modifications and has been reproduced from IEC 60720, Ed.1.0(1981), *Characteristics of line post insulators*, and has been varied as indicated to take account of Australian conditions.

Variations to IEC 60720, Ed.1.0(1981) are indicated at the appropriate places throughout this standard. Strikethrough (~~example~~) identifies IEC text, tables and figures which, for the purposes of this Australian Standard, are deleted. Where text, tables or figures are added, each is set in its proper place and identified by shading (example). Added figures are not themselves shaded, but are identified by a shaded border.

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 60720’ should read ‘AS IEC 60720’.

(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 standard applies to line post insulators with insulating parts of ceramic material intended for a.c. overhead lines with a nominal voltage higher than 1000 V and a frequency not higher than 100 Hz.

This standard applies to tie-top type line post insulators intended for vertical or horizontal mounting (Figure 1) and clamp-top type line post insulators intended for vertical mounting (Figure 4) and for horizontal mounting (Figure 5).

This standard applies to line post insulators with normal creepage distance for use on overhead lines situated in clean or moderately polluted areas and to line post insulators with longer creepage distance for use on overhead lines situated in polluted areas.

NOTE – The extension of this standard to glass insulators may be considered later.

2 Object

The object of this standard is to prescribe specified values for electrical and mechanical characteristics and for the principal dimensions of line insulators of ceramic material (see Tables I and II).

NOTE – General definitions and methods of tests are given in ~~IEC 60383, *Tests on insulators of ceramic material or glass for overhead lines with a nominal voltage greater than 1000 V*~~. AS/NZS 2917.1, *Insulators Porcelain and glass for overhead power lines—Voltage greater than 1000 a.c.*, Part 1: *Test methods—Insulator units*

3 Electrical characteristics

Each line post insulator is characterized by the specified rated lightning impulse withstand voltage and rated wet power-frequency withstand voltage in accordance with ~~IEC 60071, *Insulation co-ordination*~~ AS 1824.1*, Insulation co-ordination*, Part 1: *Definitions, principles and rules*

NOTE – The operating voltage is not specified because, depending on service conditions, it may be necessary to choose insulators of different impulse withstand voltage levels for a given operating voltage.

4 Mechanical characteristics

Each line post insulator is characterized by the specified minimum bending failing load.

Generally, this bending failing load is 12.5 kN; in addition, for tie-top line insulators of impulse withstand voltage levels up to and including 170 kV, it is 8 kN.

The bending load is applied at the centre of the side groove in the case of a tie-top type insulator and at the point determined by dimension H in the case of a clamp-top type insulator.