

AS 1154.1—2009
(Incorporating Amendment No. 1)

AS 1154.1—2009



Insulator and conductor fittings for overhead power lines

Part 1: Performance, material, general requirements and dimensions



This Australian Standard® was prepared by Committee EL-010, Overhead Lines. It was approved on behalf of the Council of Standards Australia on 4 November 2008. This Standard was published on 12 February 2009.

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
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This Standard was issued in draft form for comment as DR 07133.

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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Australian Standard[®]

**Insulator and conductor fittings for
overhead power lines**

**Part 1: Performance, material, general
requirements and dimensions**

Originated as AS C345.1—1962 and AS C345.2—1967.
Previous edition 2004.
Fifth edition 2009.
Reissued incorporating Amendment No. 1 (May 2020).

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ISBN 0 7337 9004 6

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-010, Overhead Lines, to supersede AS 1154.1—2004, *Insulator and conductor fittings for overhead power, Part 1: Performance, material, general requirements and dimensions*. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian rather than an Australian/New Zealand Standard.

This Standard incorporates Amendment No. 1 (May 2020). 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 users and manufacturers of fittings with definitions of terms, performance requirements, dimensions, test methods and acceptance criteria.

This Standard is one of a two-part series covering insulator and conductor fittings for overhead power lines, as follows:

Part 1: Performance, material, general requirements and dimensions (this Standard, which combines the former Part 1 and Part 2).

Part 3: Performance and general requirements for helical fittings.

In this revision reference is made to 120 kN rated fittings. These fittings employ M16 fasteners with 16 mm ball/socket couplings and, whilst maintaining the same dimensions, are essentially higher strength versions of the 70 kN fittings. These are NOT intended to be replacements for the previous rating of 125 kN that employed M18 fasteners with 20 mm couplings—these are mechanically similar but dimensionally quite different. If, for the purpose of maintenance, purchasers have need for 20 mm/125 kN fittings in their existing network, this is to be made clear to suppliers to avoid any confusion or incompatibility. Provision has been made by many to supply 106 kN fittings with high strength M18 bolts for these situations.

In the preparation of this Standard, consideration was given to IEC 61284:1997, *Overhead lines—Requirements and tests for fittings*, and IEC 61897:1998, *Overhead lines—Requirements and tests for Stockbridge type aeolian vibration dampers*, relevant parts of which have been incorporated in this Standard.

The following part of this Standard is technically identical to IEC 61284:1997:

Section 5, *Suspension and support fittings* is technically identical to Clauses 11.2—11.4 of IEC 61284:1997.

The following parts of this Standard are technically identical to IEC 61897:1998:

- (a) Clause 7.2.2.3, *Field test*, is technically identical to Clause 7.11.3.3 of IEC 61897:1998.
- (b) Clause 7.2.2.4, *Analytical method*, is technically identical to Clause 7.11.3.4 of IEC 61897:1998.

Statements expressed in mandatory terms in notes to tables and figures are deemed to be requirements of this Standard.

The term ‘normative’ has been used in this Standard to define the application of the appendix to which it applies. A ‘normative’ appendix is an integral part of a Standard.

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