

AS 60120:2022



# **Ball and socket couplings of string insulator units — Dimensions (IEC 60120:2020 (ED. 4.0) MOD)**



AS 60120:2022

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- Australian Industry Group
- Civil Aviation Safety Authority
- Communications, Electrical and Plumbing Union — Electrical Division
- Department of Regional NSW
- Electrical Regulatory Authorities Council
- Energy Networks Australia
- Engineers Australia

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# Ball and socket couplings of string insulator units — Dimensions (IEC 60120:2020 (ED. 4.0) MOD)

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## Preface

This Standard was prepared by the Standards Australia Committee EL-010, Overhead Lines, to supersede AS 60120 — 2010, *Dimensions of ball and socket couplings of string insulator joints*.

The objective of this document is to define the dimensions of a series of standard ball and socket couplings using the standard locking devices (refer to AS 60372:2022) in order to permit the assembly of insulators or metal fittings supplied by different manufacturers. This document applies to string insulator units of the cap and pin and long rod types and their associated metal fittings.

For the pin ball and the socket, dimensions apply to the finished product after any surface treatment. Extreme positions of the pin ball in the socket are given in Annex A. Typical examples of gauges for checking the dimensions of pin balls and sockets are given in Annex B.

This document is an adoption with national modifications, and has been reproduced from, IEC 60120:2020 (ED. 4.0), *Ball and socket couplings of string insulator units — Dimensions*. The modifications are additional requirements and are set out in Appendix ZZ, which has been added at the end of the source text.

Appendix ZZ lists the modifications to IEC 60120 for the application of this document in Australia.

As this document has been reproduced from an International document, the following applies:

- (a) In the source text “this international Standard” should read “this document”.
- (b) A full point substitutes for a comma when referring to a decimal marker.

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The terms “normative” and “informative” are used in Standards to define the application of the appendices or annexes to which they apply. A “normative” appendix or annex is an integral part of a Standard, whereas an “informative” appendix or annex is only for information and guidance.

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**BALL AND SOCKET COUPLINGS OF STRING  
INSULATOR UNITS – DIMENSIONS****FOREWORD**

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International Standard IEC 60120 has been prepared by IEC technical committee 36: Insulators.

This fourth edition cancels and replaces the third edition published in 1984. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) Two new designated size of couplings, 36 and 40 were introduced;
- b) According to the results of the questionnaire(36/424/Q), the relevant content of the 28B W-clip was deleted;
- c) The  $Q_{min}$  column in Table C.1 was deleted;
- d) Annex A is informative, Annex B is normative, Annex C is informative.

The text of this International Standard is based on the following documents:

| FDIS        | Report on voting |
|-------------|------------------|
| 36/486/FDIS | 36/492/RVD       |

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

## BALL AND SOCKET COUPLINGS OF STRING INSULATOR UNITS – DIMENSIONS

### 1 Scope

The object of this international standard is to define the dimensions of a series of standard ball and socket couplings using the standard locking devices (see IEC 60372) in order to permit the assembly of insulators or metal fittings supplied by different manufacturers.

This document applies to string insulator units of the cap and pin and long rod types and their associated metal fittings.

For the pin ball and the socket, dimensions apply to the finished product after any surface treatment.

Extreme positions of the pin ball in the socket are given in Annex A.

Typical examples of gauges for checking the dimensions of pin balls and sockets are given in Annex B.

NOTE Only the dimensions necessary for assembly are dealt with in this standard. Properties of material and working loads are not specified. The co-ordination of dimensions with strength classes is specified in IEC 60305 and IEC 60433.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050-471:2007, *International Electrotechnical Vocabulary (IEV) – Part 471: Insulators*

IEC 60372, *Locking devices for ball and socket couplings of string insulator units – Dimensions and tests*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions of IEC 60050-471, some of which are reproduced below for ease of reference, apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

#### 3.1

##### **ball and socket coupling**

coupling consisting of a ball, a socket and a locking device, and providing flexibility

[SOURCE: IEC 60050-471:2007, 471-03-11]