



BSI Standards Publication

Connectors for electrical and electronic equipment – Tests and measurements

Part 1: Generic specification (IEC 60512-1:2018)

National foreword

This British Standard is the UK implementation of EN IEC 60512-1:2018. It is identical to IEC 60512-1:2018. It supersedes BS EN 60512-1:2001, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EPL/48, Electromechanical components and mechanical structures for electronic equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

**Connectors for electrical and electronic equipment - Tests and measurements - Part 1: Generic specification
(IEC 60512-1:2018)**

Connecteurs pour équipements électroniques et électroniques - Essais et mesures - Partie 1: Spécification générique(IEC 60512-1:2018)

Steckverbinder für elektrische und elektronische Einrichtungen - Mess- und Prüfverfahren - Teil 1: Allgemeines(IEC 60512-1:2018)

This European Standard was approved by CENELEC on 2018-11-26. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 48B/2667/FDIS, future edition 5 of IEC 60512-1, prepared by SC 48B "Electrical connectors" of IEC/TC 48 "Electrical connectors and mechanical structures for electrical and electronic equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60512-1:2018.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2019-08-26
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2021-11-26

This document supersedes EN 60512-1:2001.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 60512-1:2018 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 61984:2008	NOTE	Harmonized as EN 61984:2009 (not modified)
ISO/IEC 17025	NOTE	Harmonized as EN ISO/IEC 17025

Annex ZA
(normative)

**Normative references to international publications
with their corresponding European publications**

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-1	2013	Environmental testing - Part 1: General and guidance	EN 60068-1	2014
IEC 60352-1	1997	Solderless connections - Part 1: Wrapped connections - General requirements, test methods and practical guidance	EN 60352-1	1997
IEC 60352-2	2006	Solderless connections - Part 2: Crimped connections - General requirements, test methods and practical guidance	EN 60352-2	2006
IEC 60352-3	1993	Solderless connections - Part 3: Solderless accessible insulation displacement connections - General requirements, test methods and practical guidance	EN 60352-3	1994
IEC 60352-4	1994	Solderless connections - Part 4: Solderless non-accessible insulation displacement connections - General requirements, test methods and practical guidance	EN 60352-4	1994
IEC 60352-5	2012	Solderless connections - Part 5: Press-in connections - General requirements, test methods and practical guidance	EN 60352-5	2012
IEC 60352-6	1997	Solderless connections - Part 6: Insulation piercing connections - General requirements, test methods and practical guidance	EN 60352-6	1997
IEC 60352-7	2002	Solderless connections - Part 7: Spring clamp connections - General requirements, test methods and practical guidance	EN 60352-7	2002
IEC 60352-8	2011	Solderless connections - Part 8: Compression mount connections - General requirements, test methods and practical guidance	EN 60352-8	2011
IEC 60512-1-100 -		Connectors for electronic equipment - Tests and measurements - Part 1-100: General - Applicable publications	-	-
IEC 60512-1-101 -		Connectors for electronic equipment - Tests and measurements - Part 1-101: Blank detail specification	-	-
IEC 61076-1	-	Connectors for electronic equipment - Product requirements - Part 1: Generic specification	EN 61076-1	-

CONTENTS

FOREWORD.....	3
1 Scope.....	5
2 Normative references.....	5
3 Terms and definitions	6
4 Numbering of tests and measurements specification.....	9
5 Preparation for test (description and instructions).....	10
5.1 Test apparatus.....	10
5.1.1 Test equipment, fixture and gauge.....	10
5.1.2 Calibration	10
5.2 Preparation of specimens.....	11
5.3 Wiring.....	11
5.4 Mounting of specimen	11
6 Test (description and instructions).....	11
6.1 Tests and measurements	11
6.2 Test sequences.....	12
6.3 Combined tests	12
6.4 Dimensional measurements.....	12
6.5 Alternative test methods.....	12
7 Requirements	12
8 Documentation	12
Bibliography	14

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT –
TESTS AND MEASUREMENTS –****Part 1: Generic specification**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60512-1 has been prepared by subcommittee 48B: Electrical connectors, of IEC technical committee 48: Electrical connectors and mechanical structures for electrical and electronic equipment.

This fifth edition cancels and replaces the fourth edition, published in 2001. It constitutes a technical revision.

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

- in Clause 3, only terms relating to the testing are defined, and IEC 61076-1 is referred to for terms of connectors.
- Clause 4 (Numbering of tests and measurement specification) is added.
- Subclause 5.1.2 (Calibration) is added.
- in Clause 6 (Test), test procedure follows IEC 60068-1.

This standard shall be used in conjunction with IEC 60512-1-101 and relevant part(s) of series IEC 60512. Part 60512-1-100 provides the list of the existing test and measuring methods published within series IEC 60512.

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

FDIS	Report on voting
48B/2667/FDIS	48B/2684/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.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

A list of all parts in the IEC 60512 series, published under the general title *Connectors for electrical and electronic equipment – Tests and measurements*, can be found on the IEC website.

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.

CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT – TESTS AND MEASUREMENTS –

Part 1: Generic specification

1 Scope

This part of IEC 60512 is intended to be used as a basis for tests and measurements specifications for electrical connectors. It provides guidance and reference for tests and measurements within the IEC 60512 series.

It includes the description and the practice of the various phases of tests and measurements (preparation, tests and measurements, requirements, documentation), in addition to basic terms and definitions applicable to any part of the IEC 60512 series.

This document is used in conjunction with IEC 60512-1-101 to establish uniform detail tests and measurements specifications.

Detail tests and measurements specifications are applicable to electrical connectors and their components (e.g. connector inserts, connector housings, locking mechanisms, contacts and terminations) within the scope of technical committee 48. They may also be used for similar devices when specified in a detail product specification.

Detail tests and measurements specifications are used in conjunction with detail product specifications which prescribe the tests to be used, the required degree of severity for each of them and the permissible performance limits. The detail product specification also specifies the deviations in procedures, which may be required when applying a test to the type of connector or its component under consideration, and it further specifies any special procedures which may be required.

NOTE RF and fibre optical connectors are not dealt with by subcommittee 48B, however, hybrid connectors which additionally employ RF and/or fibre optic contacts, are handled by SC 48B in cooperation with TC 46 and/or TC 86.

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 60068-1:2013, *Environmental testing – Part 1: General and guidance*

IEC 60352-1:1997, *Solderless connections – Part 1: Wrapped connections – General requirements, test methods and practical guidance*

IEC 60352-2:2006, *Solderless connections – Part 2: Crimped connections – General requirements, test methods and practical guidance*

IEC 60352-2:2006/AMD1:2013

IEC 60352-3:1993, *Solderless connections – Part 3: Solderless accessible insulation displacement connections – General requirements, test methods and practical guidance*