



BSI Standards Publication

Connectors for electronic equipment – Product requirements

Part 1: Generic specification (IEC 61076-1:2006)

National foreword

This British Standard is the UK implementation of EN 61076-1:2006+A1:2019. It is identical to IEC 61076-1:2006, incorporating amendment 1:2019. It supersedes BS EN 61076-1:2006, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to IEC text carry the number of the IEC amendment. For example, text altered by IEC amendment A1 is indicated by A1 A1.

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.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Date	Text affected
31 July 2019	Implementation of IEC amendment 1:2019 with CENELEC endorsement A1:2019

English Version

**Connectors for electronic equipment – Product
requirements – Part 1: Generic specification
(IEC 61076-1:2006)**

Connecteurs pour équipements électroniques –
Exigences de produit – Partie 1: Spécification
générique (CEI 61076-1:2006)

Steckverbinder für elektronische
Einrichtungen – Produktanforderungen – Teil 1:
Fachgrundspezifikation (IEC 61076-1:2006)

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

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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/1621/FDIS, future edition 2 of IEC 61076-1, prepared by SC 48B, Connectors, of IEC TC 48, Electromechanical components and mechanical structures for electronic equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61076-1 on 2006-05-01.

This European Standard supersedes EN 61076-1:1995 + A1:1996 + A2:2001.

This Standard is to be used in conjunction with EN 62197-1:2006.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2007-02-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2009-05-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61076-1:2006 was approved by CENELEC as a European Standard without any modification.

European foreword to amendment A1

The text of document 48B/2678/FDIS, future IEC 61076-1/A1, 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 61076-1:2006/A1:2019.

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) 2019-11-15
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-02-15

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 61076-1:2006/A1:2019 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60050-581	1978	International Electrotechnical Vocabulary (IEV) — Chapter 581: Electromechanical components for electronic equipment	–	–
IEC 60068-1 + corr. October	1988 1988	Environmental testing — Part 1: General and guidance	EN 60068-1 ¹⁾	1994
IEC 60512	Series	Connectors for electronic equipment — Tests and measurements	EN 60512	Series
IEC 60664-1 (mod) + A1 + A2	1992 2000 2002	Insulation coordination for equipment within low-voltage systems — Part 1: Principles, requirements and tests	EN 60664-1	2003
IEC 62197-1	2006	Connectors for electronic equipment — Quality assessment requirements — Part 1: Generic specification	EN 62197-1	2006
IEC/TR 62225	2001	Guidance on terms for connectors and mechanical structures in electronic equipment	–	–
IEC Guide 109	2003	Environmental aspects — Inclusion in electrotechnical product standards	–	–
ISO 129-1	2004	Technical drawings — Indication of dimensions and tolerances — Part 1: General principles	–	–
ISO 286-1	1988	ISO system of limits and fits — Part 1: Bases of tolerances, deviations and fits	EN 20286-1	1993
ISO 286-2	1988	ISO system of limits and fits — Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts	EN 20286-2	1993
ISO 1000	1992	SI units and recommendations for the use of their multiples and of certain other units	–	–
ISO 1101	2004	Geometrical Product Specifications (GPS) — Geometrical tolerancing — Tolerances of form, orientation, location and run-out	EN ISO 1101	2005

ISO 1302	2002	Geometrical Product Specifications (GPS) — Indication of surface texture in technical product documentation	EN ISO 1302	2002
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1) EN 60068-1 includes A1 to [IEC 60068-1](#)

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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 nongovernmental 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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International Standard IEC 61076-1 has been prepared by subcommittee 48B: Connectors, of IEC technical committee 48: Electromechanical components and mechanical structures for electronic equipment.

This second edition cancels and replaces the first edition issued in 1995, its amendment 1 (1996) and its amendment 2 (2001) and constitutes a technical revision. Modifications with respect to the previous edition are described in the introduction.

This standard is to be used in conjunction with [IEC 62197-1:2006](#).

The text of this standard is based on the following documents:

FDIS	Report on voting
48B/1621/FDIS	48B/1671/RVD

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

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

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

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

INTRODUCTION

The objective of this work is to update the quality assessment procedures of the connector specifications to the current state of the art industrial procedures.

At the time of publication, all the connector detail specifications dealt with by subcommittee 48B of the International Electrotechnical Commission were built as described in Figure 1 with 5 major chapters.

The most significant out of date procedures relate to the lot-by-lot tests with different inspection levels and acceptance quality level and to the periodic tests with permitted number of defectives.

It was felt necessary to introduce the capability and the technology approval together with the basic design parameters of statistical process control as a feed back system to have a continuous control of the quality during the various steps of manufacture.

It was also felt appropriate to split the current documentation structure into two separate structures of documents which, in the day to day use of specifications, satisfy most users, see Figure 2.

The documentation system will be split into two parts:

- Product requirements
- Quality assessment requirements

The structure for the Product Specification contains characteristics, dimensions, performance requirements and test schedules.

The structure for the quality assessment specification contains the requirements to obtain Qualification Approval (QA) for a given performance level (per environment category), Capability Approval (CA) per family of connectors or Technology Approval (TA) comprising all relevant technologies for connector production.

Capability Approval or Technology Approval combined with statistical process control parameters are intended to replace lot-by-lot and periodic tests.

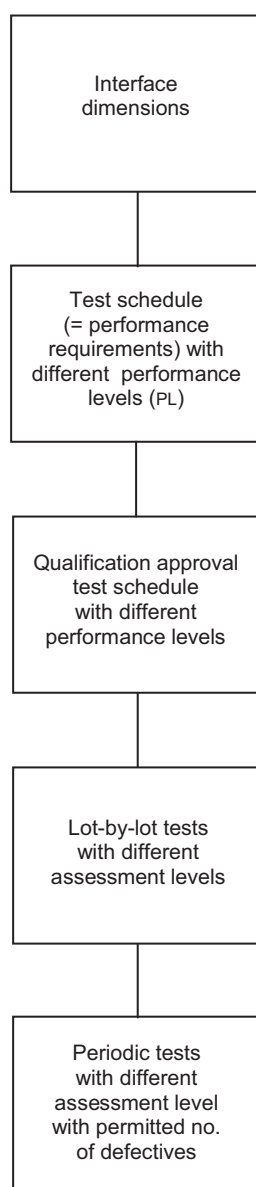
To fully certify a product, a combination of the two structures will have to be selected by the user, keeping in mind that in the statistical process control, key characteristics shall be agreed between manufacturer and user.

A generic product specification with a 4 level structure consists of a generic, a sectional, a blank detail and a detail specification.

From this, it can be concluded that two generic specifications are being circulated, one document for the product aspects and a second one for the quality aspects.

The sectional specifications will be presented at the product level per family of connectors, for example printed board connectors, circular connectors, rectangular connectors, etc.

At the quality assessment level, Annex B of [IEC 62197-1](#) deals with qualification approval in B.2, capability approval in B.3 and technology approval in B.4.



IEC 481/06

Figure 1 — Actual detail specification structure