

Connectors for electronic equipment – Product requirements

Part 3: Rectangular connectors
– Sectional specification

National foreword

This British Standard is the UK implementation of EN 61076-3:2008. It is identical to IEC 61076-3:2008. It supersedes BS EN 61076-3:2000 which is withdrawn.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.

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

© The British Standards Institution 2014. Published by BSI Standards Limited 2014

ISBN 978 0 580 86304 2

ICS 31.220.10

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 28 February 2009.

Amendments/corrigenda issued since publication

Date	Text affected
30 April 2014	CENELEC adoption sheet, Foreword, Endorsement and Annex ZA inserted

**Connectors for electronic equipment -
Product requirements -
Part 3: Rectangular connectors -
Sectional specification
(IEC 61076-3:2008)**

Connecteurs
pour équipements électroniques -
Exigences de produit -
Partie 3: Connecteurs rectangulaires -
Spécification intermédiaire
(CEI 61076-3:2008)

Steckverbinder
für elektronische Einrichtungen -
Produktanforderungen -
Teil 3: Rechteckige Steckverbinder -
Rahmenspezifikation
(IEC 61076-3:2008)

This European Standard was approved by CENELEC on 2008-10-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 48B/1881/FDIS, future edition 2 of IEC 61076-3, 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 61076-3 on 2008-10-01.

This European Standard supersedes EN 61076-3:2000.

EN 61076-3:2008 includes the following significant technical changes with respect to EN 61076-3:2000:

- this European Standard no longer includes the quality assessment procedures. As described in EN 61076-1 and EN 62197-1, a new document structure has been established. EN 61076-3 has been revised to match with this updated structure. The title of this European Standard was also revised;
- Subclause 2.2 *Systems of levels* has been introduced;
- Subclause 2.5 *IEC type designation* has been removed following the decision according to 14.2 of the Berlin IEC/SC 48B Plenary meeting minutes (48B/1732/RM);
- Clauses 3 *Dimensional Information* and 4 *Characteristics* have been added;
- old Subclauses 4.2 to 4.4 have been moved to new Subclauses 5.3 to 5.5;
- Table 2 – *Number of test specimens and contacts* has been inserted;
- test groups have been rearranged. Test group HP has been added.

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) 2009-07-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2011-10-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61076-3:2008 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60664-1	NOTE	Harmonized as EN 60664-1:2007 (not modified).
IEC 60999	NOTE	Harmonized in EN 60999 series (not modified).
IEC 61076-7-100	NOTE	Harmonized as EN 61076-7-100:2006 (not modified).
IEC 61984	NOTE	Harmonized as EN 61984:2001 (not modified).
IEC 62197-1	NOTE	Harmonized as EN 62197-1:2006 (not modified).

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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-1 + corr. October + A1	1988 1988 1992	Environmental testing - Part 1: General and guidance	EN 60068-1	1994
IEC 60352	Series	Solderless connections	EN 60352	Series
IEC 60512	Series	Connectors for electronic equipment - Tests and measurements	EN 60512	Series
IEC 60512-1-100	- ¹⁾	Connectors for electronic equipment - Tests and measurements - Part 1-100: General - Applicable publications	EN 60512-1-100	2006 ²⁾
IEC 61076-1	2006	Connectors for electronic equipment - Product requirements - Part 1: Generic specification	EN 61076-1	2006

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

CONTENTS

1	Scope	5
1.1	General considerations	5
1.2	Normative references	5
2	Technical information	5
2.1	Terms and definitions	5
2.2	Systems of levels	6
2.2.1	Performance levels	6
2.2.2	Compatibility levels, according to IEC 61076-1:2006	6
2.3	Classification into climatic categories	6
2.4	Clearance and creepage distances	6
2.5	Current-carrying capacity	6
2.6	Marking	6
3	Dimensional information	6
4	Characteristics	7
5	Tests and test schedules	7
5.1	General aspects	7
5.2	Test schedules	7
5.2.1	Basic (minimum) test schedule	8
5.2.2	Full test schedule	9
5.3	Test procedures and measuring methods	19
5.4	Pre-conditioning	19
5.5	Wiring and mounting of specimens	19
5.5.1	Wiring	19
5.5.2	Mounting	19
6	Blank detail product specification – General	19
	Bibliography	21
	Table 1 – Basic tests	9
	Table 2 – Number of test specimens and contacts	10
	Table 3 – Test group P	10
	Table 4 – Test group AP	11
	Table 5 – Test group BP	13
	Table 6 – Test group CP	15
	Table 7 – Test group DP	16
	Table 8 – Test group EP	16
	Table 9 – Test group FP	17
	Table 10 – Test group GP	18
	Table 11 – Test group HP	19

CONNECTORS FOR ELECTRONIC EQUIPMENT – PRODUCT REQUIREMENTS –

Part 3: Rectangular connectors – Sectional specification

1 Scope

1.1 General considerations

This part of IEC 61076 establishes uniform specifications and technical information for rectangular connectors. It should be used in conjunction with the generic specification IEC 61076-1:2006 for product requirements as the basis for preparation of consistent detail product specifications for rectangular connectors.

NOTE 1 The quality assessment requirements for connectors according to the IEC 61076 series are detailed in IEC 62197-1.

NOTE 2 A detail quality specification, future IEC 62197-3-1XX should be prepared, based on the blank detail quality specification for rectangular connectors, future IEC 62197-3-001, and should be used in conjunction with the detail product specification IEC 61076-3-1XX.

1.2 Normative references

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.

IEC 60068-1:1988, *Environmental testing – Part 1: General and guidance*
Amendment 1(1992)

IEC 60352 (all parts), *Solderless connections*

IEC 60512 (all parts), *Connectors for electronic equipment – Tests and measurements*

IEC 60512-1-100, *Connectors for electronic equipment – Tests and measurements – Part 1-100: General – Applicable publications*

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

2 Technical information

The detail product specification shall contain all necessary information which contributes to a proper application of the connectors. It will also provide specificities to enable a better understanding of the connectors and/or the connector family.

2.1 Terms and definitions

For the purposes of this document, the terms and definitions given in 2.1 of IEC 61076-1:2006 and IEC 60512-1 apply.

2.2 Systems of levels

2.2.1 Performance levels

If appropriate, the detail product specification shall contain information about the different performance levels.

The term 'performance level' reflects the grouping of the environmental and mechanical stresses at which a component is tested, and also such features as long-term stability of electrical characteristics. If different levels are defined in the detail product specification, they have to be numbered, where the lowest number (1) usually indicates the highest performance.

2.2.2 Compatibility levels, according to IEC 61076-1:2006

As a function of the standardization degree, four levels characterize the compatibility of connectors from different sources. These levels are defined in 2.2.3.1 to 2.2.3.5 of IEC 61076-1:2006 and shall, when appropriate, be indicated in the detail product specification of rectangular connectors.

NOTE If connectors of different compatibility level are mated, the lower level shall prevail.

2.3 Classification into climatic categories

Unless impractical, the lower and upper temperatures and the duration for the damp heat, steady-state test shall be described in a table similar to the example given in 2.3 of IEC 61076-1:2006.

2.4 Clearance and creepage distances

Permissible working or rated voltages depend on the application and on the applicable or specified safety requirements.

Therefore, clearance and creepage distances as well as proof voltages under specified air pressure shall be specified in the detail product specification.

2.5 Current-carrying capacity

For each connector, the current-carrying capacity shall be specified in the detail product specification, preferably by the derating curve determined in accordance with test 5b of IEC 60512.

2.6 Marking

Each connector and its associated package shall be marked in accordance with the requirements specified in 2.7.1 a) and b) of IEC 61076-1:2006.

3 Dimensional information

Dimensions provided in the detail product specification for rectangular connectors shall provide

- mating information;
- mounting information;
- overall dimension;
- locking and sealing information, if appropriate;
- information on termination and cable fixing.

For more details see 3.1 to 3.5 of IEC 61076-1:2006.