

Connectors with assessed quality, for use in d.c., low frequency analogue and in digital high-speed data applications —

Part 4: Sectional specification — Printed board connectors

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British Standard

ICS 31.220.10

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by Technical Committee EPL/48, Electromechanical components for electronic equipment, to Subcommittee EPL/48/2, Connectors for electronic equipment, upon which the following bodies were represented:

- Association of Manufacturers Allied to the Electrical and Electronics Industry (BEAMA Ltd.)
- British Telecommunications plc
- Federation of the Electronics Industry
- Ministry of Defence
- National Supervising Inspectorate
- Society of British Aerospace Companies Limited

This British Standard, having been prepared under the direction of the Electrotechnical Sector Board, was published under the authority of the Standards Board and comes into effect on 15 March 1997

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The following BSI references relate to the work on this standard:
Committee reference EPL/48/2
Draft for comment 93/213248 DC

ISBN 0 580 26914 0

Amendments issued since publication

Amd. No.	Date	Comments

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National foreword

This British Standard has been prepared by Subcommittee EPL/48/2, and is the English language version of EN 61076-4:1996 *Connectors with assessed quality, for use in d.c., low frequency analogue and in digital high-speed data applications — Part 4: Sectional specification — Printed board connectors*, published by the European Committee for Electrotechnical Standardization (CENELEC). It is identical with IEC 1076-4:1995 published by the International Electrotechnical Commission (IEC).

This Part of BS EN 61076-4 forms the sectional specification in the IEC quality assessment system for electronic components (IECQ) for printed board connectors. In the IECQ System, this specification is numbered QC 480300.

The other Parts form the generic specification and the sectional specifications, some being under consideration or in preparation:

- IEC 1076-1: *Generic specification*
- IEC 1076-2: *Sectional specification for circular connectors*
- IEC 1076-3: *Sectional specification for rectangular connectors*
- IEC 1076-5: *Sectional specification for removable contacts*
- IEC 1076-6: *Under consideration*

Cross-references

Publication referred to	Corresponding British Standard
EN 60352-3:1994 (IEC 352-3:1993)	BS EN 60352 <i>Solderless connections</i> BS EN 60352-3:1995 <i>Solderless accessible insulation displacement connections — General requirements, test methods and practical guidance</i>
EN 60352-4:1994 (IEC 352-4:1994)	BS EN 60352-4:1995 <i>Solderless non-accessible insulation displacement connections. General requirements, test methods and practical guidance</i>
EN 60352-5:1995 (IEC 352-5:1995)	BS EN 60352-5:1995 <i>Solderless press-in connections. General requirements, test methods and practical guidance</i>
EN 60917:1990 (IEC 917:1988)	BS EN 60917:1992 <i>Modular order for the development of mechanical structures for electronic equipment practices</i>
EN 61076-1:1995 (IEC 1076-1:1995)	BS EN 61076 <i>Connectors with assessed quality for use in d.c., low frequency analogue and in digital high-speed data applications</i> BS EN 61076-1:1996 <i>Generic specification</i>

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 20, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

English version

Connectors with assessed quality, for use in d.c.,
low frequency analogue and in digital high-speed data
applications
Part 4: Sectional specification
Printed board connectors

(IEC 1076-4:1995)

Connecteurs sous assurance de la qualité, pour
utilisation dans le cadre d'applications
analogiques en courant continu et à basse
fréquence et dans le cadre d'applications
numériques utilisant des débits élevés pour le
transfert des données
Partie 4: Spécification intermédiaire
Connecteurs pour cartes imprimées
(CEI 1076-4:1995)

Gütebestätigte Steckverbinder für analoge
Gleichspannungs- und
Niederfrequenzanwendungen sowie digitale
Anwendungen mit hoher Übertragungsrate
Teil 4: Rahmenspezifikation für Steckverbinder
für gedruckte Schaltungen
(IEC 1076-4:1995)

This European Standard was approved by CENELEC on 1995-11-28. 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.

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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/364/DIS, future edition 1 of IEC 1076-4, 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 61076-4 on 1995-11-28.

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) 1996-09-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1996-09-01

Annexes designated “normative” are part of the body of the standard.

In this standard, Annex ZA is normative.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 1076-4:1995 was approved by CENELEC as a European Standard without any modification.

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1 General

1.1 Scope

This part of IEC 1076 establishes uniform specifications, type testing requirements and quality assessment procedures for a sub-family of connectors for printed board applications.

It contains a choice of all test methods and sequences, severities and preferred values for dimensions and characteristics.

It gives guidance on the rules for the preparation of detail specifications for printed board connectors of assessed quality, used in electronic and electrical equipment.

It should be used in conjunction with the generic specification IEC 1076-1 and with relevant detail specifications.

In the event of conflict between the sectional specification and the detail specification, the requirements of the detail specification should prevail.

NOTE 1 Connectors designed for use at radio frequencies are not covered in this standard.

NOTE 2 As this family of connectors, is suitable to be used in mechanical structures in accordance with IEC 917, a guide will be provided in the blank detail specification, future IEC 1076-4-001.

1.2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 1076. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 1076 are encouraged to investigate the possibility of applying the most recent editions of the normative documents listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 352-1:1983, *Solderless connections — Part 1: Solderless wrapped connections — General requirements, test methods and practical guidance.*

IEC 352-2:1990, *Solderless connections — Part 2: Solderless crimped connections — General requirements, test methods and practical guidance.*

IEC 352-3:1993, *Solderless connections — Part 3: Solderless accessible insulation displacement connections — General requirements, test methods and practical guidance.*

IEC 352-4:1994, *Solderless connections — Part 4: Solderless non-accessible insulation displacement connections — General requirements, test methods and practical guidance.*

IEC/DIS 352-5:1995, *Solderless connections — Part 5: Solderless press-in connections — General requirements, test methods and practical guidance.*

IEC 917:1988, *Modular order for the development of mechanical structures for electronic equipment practices.*

Amendment No. 1 (1993)

IEC 917-2-2:1994, *Modular order for the development of mechanical structures for electronic equipment practices — Part 2: Sectional specification — Interface co-ordination dimensions for the 25 mm equipment practice — Section 2: Detail specification — Dimensions for subracks, chassis, backplanes, front panels and plug-in units.*

IEC 1076-1:1995, *Connectors with assessed quality, for use in d.c. low frequency analogue and in digital high speed data applications — Part 1: Generic specification.*

2 Technical information

2.1 Terminology

The terminology used in and applicable to this specification is stated in 2.1 of IEC 1076-1.

2.2 Classification into climatic categories

Unless otherwise impractical, the lower and upper temperatures and the duration of the damp heat, steady state test should be selected from the preferred values stated in 2.2 of IEC 1076-1.

2.3 Creepage and clearance distances

The detail specification shall specify creepage and clearance distances in accordance with the requirements of 2.3 of IEC 1076-1.

2.4 Current-carrying capacity

The detail specification shall specify the current-carrying capacity of connectors in accordance with the requirements of 2.4 of IEC 1076-1.

2.5 IEC type designation

Connectors to which this standard applies shall be designated by the following indications and in the order given:

- a) The letters “IEC”.
- b) The number of the detail specification (without dashes), being eight characters (e.g. 10764100).
- c) A letter denoting the style of the connector (the system shall be specified in the detail specification).
- d) The number of contacts of connectors or of contact cavities of connector bodies, the number of digits used shall be in accordance with the maximum possible number of contacts or cavities.
- e) A letter denoting the type of contact of two-part connectors or the number of electrically independent rows of edge-socket connectors. The following letters shall be used:

— Two-part connector	F	female contact
	H	hermaphroditic contact
	M	male contact
— Edge-socket connector	D	double row (separated)
	S	single row

- f) A number, being a combination of three digits describing the contact arrangement, which may include:
 - pre-mating contact levels;
 - loaded contact rows;
 - loaded contact patterns.

- g) A letter denoting the basic type of the terminations, followed by a character defining the variation. The following letters shall be used:

A	screw	S	solder
C	crimp	T	tab
I	insulation displacement/piercing		
M	surface mount	U	plug-up plus wrap
P	press-in	W	wrap
R	press-in plus rear plug-up	Z	no terminations

- h) If prescribed in the detail specification, the type designation may optionally be extended to cover further information, such as climatic category, printed board dimensions, contact finish, etc.
- i) Where the detail specification provides for a variation of performance and assessment levels, a single digit and a letter shall be used to denote performance level (PL) and assessment level (AL) respectively. The digit and letter shall be prescribed in the detail specification and shall be included as the final characters of the type designation.