

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

Part 3: Rectangular connectors with assessed quality — Sectional specification

The European Standard EN 61076-3:2000 has the status of a
British Standard

ICS 31.220.10

National foreword

This British Standard is the official English language version of EN 61076-3:2000. It is identical with IEC 60176-3:1999.

The UK participation in its preparation was entrusted by Technical Committee EPL/48, Electromechanical components for electronic equipment, to Subcommittee EPL/48/2, Connectors for electronic equipment, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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

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Summary of pages

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English version

**Connectors for use in d.c., low-frequency analogue
and digital high-speed data applications
Part 3: Rectangular connectors with assessed quality
Sectional specification
(IEC 61076-3:1999)**

Connecteurs pour applications
analogiques en courant continu et
basse fréquence et pour applications
numériques utilisant des débits élevés
pour le transfert des données
Partie 3: Connecteurs rectangulaires
sous assurance de la qualité
Spécification intermédiaire
(CEI 61076-3:1999)

Steckverbinder für Gleichspannungs-
und Niederfrequenzanwendungen
sowie digitale Anwendungen mit
hoher Übertragungsrate
Teil 3: Rechteckige Steckverbinder
mit bewerteter Qualität
Rahmenspezifikation
(IEC 61076-3:1999)

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

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Foreword

The text of document 48B/790/FDIS, future edition 1 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 2000-01-01.

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) 2000-10-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2003-01-01

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 61076-3:1999 was approved by CENELEC as a European Standard without any modification.

CONTENTS

Clause	Page
1 General	4
1.1 Scope	4
1.2 Normative references	4
2 Technical information	5
2.1 Terminology	5
2.2 Classification into climatic categories	5
2.3 Creepage and clearance distances	5
2.4 Current-carrying capacity	5
2.5 IEC type designation	5
2.6 Marking	6
3 Quality assessment procedures	6
4 Tests and test schedules	6
4.1 General	6
4.2 Test procedures and measuring methods	7
4.3 Pre-conditioning	7
4.4 Wiring and mounting of specimens	7
4.4.1 Wiring	7
4.4.2 Mounting	7
4.5 Test schedules	7
4.5.1 Basic (minimum) test schedule	8
4.5.2 Full test schedule	9
4.5.2.1 Test group P – Preliminary	9
4.5.2.2 Test group AP – Dynamic/climatic	10
4.5.2.3 Test group BP – Mechanical endurance	12
4.5.2.4 Test group CP – Moisture	14
4.5.2.5 Test group DP – Electrical load	14
4.5.2.6 Test group EP – Mechanical resistivity	15
4.5.2.7 Test group FP – Chemical resistivity	16
4.5.2.8 Test group GP – Terminations	16
4.5.2.9 Test group HP – Additional	17
4.5.3 Qualification approval test schedule	17
4.5.4 Quality conformance inspection, lot-by-lot tests	19
4.5.5 Quality conformance inspection, periodic tests	19
4.5.6 Delayed delivery, re-inspection	21
5 Blank detail specification – General	21
Annex ZA (normative) Normative references to international publications with their corresponding European publications	22

CONNECTORS FOR USE IN DC, LOW-FREQUENCY ANALOGUE AND DIGITAL HIGH-SPEED DATA APPLICATIONS –

Part 3: Rectangular connectors with assessed quality – Sectional specification

1 General

1.1 Scope

This part of IEC 61076 establishes uniform specifications, type testing requirements and quality assessment procedures for a subfamily of rectangular connectors. It should be used in conjunction with the generic specification IEC 61076-1 and with relevant detail specifications.

1.2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61076. For dated references, subsequent amendments to or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 61076 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60068-1:1988, *Environmental testing – Part 1: General and guidance*

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

IEC 60352-2:1990, *Solderless connections – Part 2: Solderless crimped connections – General requirements, test methods and practical guidance*

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

IEC 60352-4:1994, *Solderless connections – Part 4: Solderless non-accessible insulation displacement connections – General requirements, test methods and practical guidance*

IEC 60352-5:1995, *Solderless connections – Part 5: Solderless press-in connections – General requirements, test methods and practical guidance*

IEC 60410:1973, *Sampling plans and procedures for inspection by attributes*

IEC 60512 (all parts), *Electromechanical components for electronic equipment – Basic testing procedures and measuring methods*

IEC 61076-1:1995, *Connectors with assessed quality, for use in d.c. low-frequency analogue and digital high-speed data applications – Part 1: Generic specification*

2 Technical information

The detail specification shall contain 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 Terminology

In addition to the terminology used in, and applicable to, the detail specification, as stated in 2.1 of IEC 61076-1, it is recommended that those definitions which are unique to the connectors specified in the detail specification be listed.

2.2 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 2.2 of IEC 61076-1.

2.3 Creepage and clearance distances

The detail specification shall specify creepage and clearance distances in accordance with requirements of 2.3 of IEC 61076-1.

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 61076-1.

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 nine characters (e.g. 610763100)
- 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	W	wrap
		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.
- j) Grouping information

The indications (a-i) above shall be grouped to clarify the type of entity:

- | | |
|------------------------|--------------------|
| – basic description: | a, b, c, d, and e; |
| – contact arrangement: | f; |
| – terminations: | g; |
| – performance: | h, i. |

2.6 Marking

Each connector and its associated package shall be marked in accordance with the requirements specified in 2.6 of IEC 61076-1.

3 Quality assessment procedures

See clause 3 of IEC 61076-1.

4 Tests and test schedules

4.1 General

See clause 4 of IEC 61076-1.

The detail specification shall state the test sequence (in accordance with this standard), and the number of specimens for each test sequence (not less than four).

Individual variants may be submitted to type tests for approval of those particular variants.

It is permissible to limit the number of variants tested to a selection representative of the whole range for which approval is required (which may be less than the range covered by the detail specification), but each feature and characteristic shall be proved.

The connectors shall have been processed in a careful and workmanlike manner, in accordance with good current practices.