

Connectors for electronic equipment —

Part 6: Loose part contacts — Sectional specification

The European Standard EN 61076-6:2004 has the status of a
British Standard

ICS 31.220.10

National foreword

This British Standard is the official English language version of EN 61076-6:2004. It is identical with IEC 61076-6:2004.

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

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

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

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 18, an inside back cover and a back cover.

The BSI copyright notice displayed in this document indicates when the document was last issued.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 13 April 2004

© BSI 13 April 2004

ISBN 0 580 43629 2

Amendments issued since publication

Amd. No.	Date	Comments

EUROPEAN STANDARD

EN 61076-6

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2004

ICS 31.220.10

English version

Connectors for electronic equipment
Part 6: Loose part contacts -
Sectional specification
(IEC 61076-6:2004)

Connecteurs pour équipements
électroniques
Partie 6: Pièces de contact
des connecteurs électriques -
Spécification intermédiaire
(CEI 61076-6:2004)

Steckverbinder für elektronische
Einrichtungen
Teil 6: Kontakte als Einzelteile -
Rahmenspezifikation
(IEC 61076-6:2004)

This European Standard was approved by CENELEC on 2004-03-01. 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and 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

© 2004 CENELEC - All rights of exploitation in any form and by any means reserved worldwide for CENELEC members.

Foreword

The text of document 48B/1393/FDIS, future edition 1 of IEC 61076-6, 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 61076-6 on 2004-03-01.

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) 2004-12-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2007-03-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61076-6:2004 was approved by CENELEC as a European Standard without any modification.

CONTENTS

1	General	4
1.1	Scope.....	4
1.2	Normative references	4
2	Technical information	5
2.1	Terms and definitions	5
2.2	Classification into climatic categories	6
2.3	Material	7
2.4	Metallic protective plating	7
2.5	Current carrying capacity	9
2.6	Dimensional information	9
2.7	Marking	9
2.8	Storage	9
2.9	Type designation	9
2.10	Tools for the processing of contacts	11
3	General requirements and test schedules	11
3.1	General	11
3.2	Wiring and mounting of specimens	12
3.3	Test schedule	12
3.4	Test specimens	17
4	Preparation of detail specification	17
	Figure 1 – Contact arrangement for concentric, triaxial and twinax contacts	6
	Figure 2 – Female contact with integral contact pressure element	8
	Figure 3 – Female contact with separate pressure element	8
	Figure 4 – Male contact	8
	Figure 5 – Tuning fork contact	8
	Figure 6 – Blade contact	8
	Figure 7 – Male contact, coaxial	8
	Figure 8 – Female contact, coaxial	8
	Table 1 – Identification of climatic categories	7
	Table 2 – Contact size codes	10
	Table 3 – Wire accommodation	11
	Table 4 – Basic tests	13
	Table 5 – Test group P	14
	Table 6 – Test group AP	15
	Table 7 – Test group BP	16
	Table 8 – Shielding and signal integrity tests	17
	Table 9 – Quantity of test specimens for qualification approval	17
	Annex ZA (normative) Normative references to international publications with their corresponding European publications	18

CONNECTORS FOR ELECTRONIC EQUIPMENT –

Part 6: Loose part contacts – Sectional specification

1 General

1.1 Scope

This part of IEC 61076 is applicable to loose part contacts which may be used in conjunction with connectors within the IEC 61076 series or for independent contact systems. It should be used with the relevant detail specification.

It is applicable to removable crimp, wire wrap, solder and press-in contacts, used in connectors or other elements of electrical connections.

This sectional specification establishes uniform specifications, type test requirements for loose part contacts and gives guidance on the rules for the preparation of detail specifications for loose part contacts, where the electrical, mechanical, environmental and dimensional characteristics of electrical contacts used in elements of electrical connections, including concentric and triaxial contacts, will be defined.

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

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 60050-581:1978, *International Electrotechnical Vocabulary (IEV) – Chapter 581: Electro-mechanical components for electronic equipment*

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 60512-1-100:2001, *Connectors for electronic equipment – Tests and measurements – Part 1-100: General – Applicable publications*

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

ISO 8843:1991, *Aircraft – Crimp-removable contacts for electrical connectors – Identification system*

2 Technical information

2.1 Terms and definitions

For the purpose of this specification, the terms and definitions given in IEC 60050-581, IEC 60512, and IEC 61076-1, as well as the following, apply.

Point of electrical contact

the position of the point of application of the force, which provides contact pressure

Contact active area

part of the contact, which allows current to pass between the contact and any other element. A contact comprises a dynamic active zone (zones X and Y in Figures 2 to 8) and a static active zone (termination)

Concentric contact

assembly of two contacts arranged coaxially enabling the view of the engaging face connection of coaxial, shielded or twisted pair cables (see Figure 1)

Triaxial contact

assembly of three contacts (centre, intermediate and outer contact) arranged coaxially, enabling the termination of shielded triaxial or twisted pair cables (see Figure 1)

Twinax contact

assembly of three contacts, two of which are parallel (twin contacts), the third being peripheral to these, enabling the termination of shielded twisted pair cables (see Figure 1)

Male concentric or triaxial contact

contact where the outer contact is male; the central contact(s) may be male or female

Female concentric or triaxial contact

contact where the outer contact is female; the central contact(s) may be male or female

Circular contacts

basically cylindrical contacts with a cylindrical mating face

Blade contacts

solid contact with a rectangular cross-section, usually with a chamfered mating edge

Tuning fork contacts

resilient contact having a shape similar to that of a tuning fork, the two arms of which apply contact force in opposite direction [IEV 581-02-14]