

SLOVENSKI STANDARD SIST EN 61076-3-001:2009

01-januar-2009

BUXca Yý U. SIST EN 61076-3-001:2002

Konektorji za elektronsko opremo - Zahteve za izdelek - 3-001. del: Pravokotni konektorji - Okvirna podrobna specifikacija (IEC 61076-3-001:2008)

Connectors for electronic equipment - Product requirements - Part 3-001: Rectangular connectors - Blank detail specification (IEC 61076-3-001:2008)

Steckverbinder für elektronische Einrichtungen - Produktanforderungen - Teil 3-001: Rechteckige Steckverbinder - Vordruck für Bauartspezifikation (IEC 61076-3-001:2008)

Connecteurs pour équipements électroniques : Exigences de produit - Partie 3-001: Connecteurs rectangulaires Spécification particulière Cadre (CEI-61076-3-001:2008)

Ta slovenski standard je istoveten z: EN 61076-3-001:2008

ICS:

31.220.10 XããÁşÁçã} Âçã} ãX^ÊÁ[} ^\ d[| bã Plug-and-socket devices.

Connectors

SIST EN 61076-3-001:2009 en,fr

SIST EN 61076-3-001:2009

iTeh STANDARD PREVIEW (standards.iteh.ai)

<u>SIST EN 61076-3-001:2009</u> https://standards.iteh.ai/catalog/standards/sist/1176b7e1-fa78-43f1-b6b3-7dca2a28bfc0/sist-en-61076-3-001-2009

EUROPEAN STANDARD

EN 61076-3-001

NORME FUROPÉENNE **EUROPÄISCHE NORM**

November 2008

ICS 31.220.10

Supersedes EN 61076-3-001:2000

English version

Connectors for electronic equipment -**Product requirements -**Part 3-001: Rectangular connectors -Blank detail specification

(IEC 61076-3-001:2008)

Connecteurs

pour équipements électroniques -

Exigences de produit -

Partie 3-001: Connecteurs rectangulaires -

Spécification particulière-cadre

Steckverbinder

für elektronische Einrichtungen -

Produktanforderungen -

Teil 3-001: Rechteckige Steckverbinder -

Vordruck für Bauartspezifikation

(CEI 61076-3-001:2008) STANDARD P(JEC 61076-3-001:2008)

(standards.iteh.ai)

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/1880/FDIS, future edition 2 of IEC 61076-3-001, 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 61076-3-001 on 2008-10-01.

This European Standard supersedes EN 61076-3-001:2000.

EN 61076-3-001:2008 includes the following significant technical changes with respect to EN 61076-3-001:2000:

- 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 61076-3-001 has been revised to match with this updated structure;
- 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: (standards.iteh.ai)

- latest date by which the EN has to be implemented -001:2009
 at national level by publication of an identical and ards/sist/1176b7e1-fa78-43f1-b6b3 national standard or by endorsement 8bfc0/sist-en-61076-3-001-2009 (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 61076-3-001:2008 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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	EN/HD	<u>Year</u>
IEC 61076-1	2006	Connectors for electronic equipment - Product requirements - Part 1: Generic specification	EN 61076-1	2006
IEC 61076-3	2008	Connectors for electronic equipment - Product requirements - Part 3: Rectangular connectors - Sectional specification	EN 61076-3	2008
IEC 62197-1	2006	Connectors for electronic equipment - Quality assessment requirements - Part 1: Generic specification	EN 62197-1	2006
IEC Guide 109	_ 1) IT	Environmental aspects - Inclusion in electrotechnical product standards	<u>V</u> V	-
IEC Guide 114	- 1)	Environmentally conscious design - Integrating environmental aspects into	-	-
	https://sta	design and development of electrotechnical name alcatalog standards/sist/11/6b/e1-ta/8-43f products / dca2a28bfc0/sist-en-61076-3-001-2009	1-b6b3-	

_

¹⁾ Undated reference.

SIST EN 61076-3-001:2009

iTeh STANDARD PREVIEW (standards.iteh.ai)

<u>SIST EN 61076-3-001:2009</u> https://standards.iteh.ai/catalog/standards/sist/1176b7e1-fa78-43f1-b6b3-7dca2a28bfc0/sist-en-61076-3-001-2009



IEC 61076-3-001

Edition 2.0 2008-07

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Connectors for electronic equipment A Product requirements – Part 3-001: Rectangular connectors – Blank detail specification

Connecteurs pour équipements électroniques Exigences de produit – Partie 3-001: Connecteurs rectangulaires — Spécification particulière-cadre

7dca2a28bfc0/sist-en-61076-3-001-2009

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

PRICE CODE CODE PRIX

ICS 31.220.10 ISBN 2-8318-9819-6

CONTENTS

FO	REWO	DRD		5
INT	RODU	JCTION		7
1	Gene	eral info	rmation	9
	1.1	Scope		9
	1.2	Norma	tive references	11
2	Tech	nical inf	formation	13
	2.1	Terms	and definitions	13
	2.2		ns of levels	
		2.2.1	Performance levels	
		2.2.2	Compatibility levels, according to IEC 61076-1:2006	
	2.3	Classif	ication into climatic categories	
	2.4		nce and creepage distances	
	2.5		it-carrying capacity	
	2.6		g	
3			information	
	3.1		al	
	3.2		ric view and common features	
	5.2	3.2.1		
			Common features A.N.D.A.R.D. D.R.E.V.II.V.	10
	3.3	Fngag	Reference systemement (mating)(information rds.iteh.ai)	21
	0.0	3.3.1	Engaging (mating) direction	21
			Perpendicular to the engaging (mating) direction	21
		3.3.3	Perpendicular to the engaging (mating) direction. Inclination. 7dca2a28bfc0/sist-en-61076-3-001-2009	21
	3.4	Fixed	7dca2a28bfc0/sist-en-61076-3-001-2009	21
		3.4.1	Dimensions	
		3.4.2	Terminations	
	3.5	Free c	onnectors	
		3.5.1	Dimensions	
		3.5.2	Terminations	23
	3.6	Access	sories	
	3.7		ng information for connectors	
		3.7.1	Mounting on panels	
	3.8	Gauge	S	
		3.8.1	Sizing gauges and retention force gauges	
		3.8.2	Mechanical function, engaging/separating/insertion/withdrawal force	
			gauges	
		3.8.3	Probes	27
		3.8.4	Contact resistance gauge	27
		3.8.5	Test panel (for voltage proof test)	27
		3.8.6	Test panel (for EMC/crosstalk, etc.)	27
4	Char	acteristi	ics	29
	4.1	Genera	al	29
	4.2	Pin assignment and other definitions		
	4.3	Classification into climatic categories		
	4.4	Electri	cal characteristics	29
		4.4.1	Creepage and clearance distances	29

		4.4.2	Voltage proof	31
		4.4.3	Current-carrying capacity	31
		4.4.4	Contact and shield resistance	31
		4.4.5	Insulation resistance	31
		4.4.6	Impedance	33
		4.4.7	Transmission characteristics	33
	4.5	Mecha	inical characteristics	37
		4.5.1	Mechanical operation	37
		4.5.2	Effectiveness of connector coupling devices	37
		4.5.3	Engaging and separating forces (or insertion and withdrawal forces)	37
		4.5.4	Contact retention in insert	37
		4.5.5	Polarizing and coding method	37
	4.6	Other	characteristics	39
		4.6.1	Shock and vibration (method either random or sine)	39
		4.6.2	Degree of protection provided by enclosures (IP-code)	39
		4.6.3	Screen and shielding properties	39
	4.7	Enviro	nmental aspects	41
		4.7.1	Marking of insulation material (plastics)	41
		4.7.2	Design/use of material	41
5	Test		le	
	5.1	Gener	al iTeh STANDARD PREVIEW	43
		5.1.1		
		5.1.2	Climatic category	45
		5.1.3	Arrangement for contact resistance measurement	45
		5.1.4	Arrangement for dynamic stress tests 76b7e1-fa78-43f1-b6b3	
		5.1.5	Arrangement foratesting)static-load,-axial-2009.	
		5.1.6	Wiring of specimens	
	5.2	Test s	chedules	
		5.2.1	Basic (minimum) test schedule	
		5.2.2	Full test schedule	
	5.3	Test p	rocedures and measuring methods	77
	5.4	Pre-co	onditioning	77
	5.5	Wiring	and mounting of specimens	77
		5.5.1	Wiring	
		5.5.2	Mounting	77
Ar	inex A	(norma	tive) New tests and additional test phases	78
Та	ıble 1 -	- Perfor	mance levels	13
Та	ıble 2 -	- Isome	tric view and common features	17
			mance levels, example	
			mance levels	
			age and clearance distances	
			mance levels	
			age and clearance distances	
			example	
			tests	
			er of test specimens and contacts	
18	IDIC 9 -	- ivuiiibe	er of test specifiens and colliacis	೨೨

-4-

61076-3-001 ©	EC:2008
---------------	---------

Table 10 – Test group P	53
Table 10 – Test group P (continued)	55
Table 11 – Test group AP	55
Table 11 – Test group AP (continued)	59
Table 12 – Test group BP	61
Table 12 – Test group BP (continued)	63
Table 13 – Test group CP	65
Table 14 – Test group DP	67
Table 15 – Test group EP	69
Table 16 – Test group FP	71
Table 17 – Test group GP	73
Table 18 – Test group HP	75
Table 19 – Test group JP	77
Table 20 – Test group KP	77

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN 61076-3-001:2009

https://standards.iteh.ai/catalog/standards/sist/1176b7e1-fa78-43f1-b6b3-7dca2a28bfc0/sist-en-61076-3-001-2009

INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONNECTORS FOR ELECTRONIC EQUIPMENT – PRODUCT REQUIREMENTS –

Part 3-001: Rectangular connectors – Blank detail specification

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 non-governmental 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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.

 7deca238hf0/rist on 61076 3, 001, 2000
- 7dca2a28bfc0/sist-en-61076-3-001-2009

 5) IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with an IEC Publication.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61076-3-001 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 published in 1999. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- 1) This International Standard no longer includes the quality assessment procedures. As described in IEC 61076-1 and IEC 62197-1, a new document structure has been established. IEC 61076-3-001 has been revised to match with this updated structure.
- 2) Subclause 2.2 Systems of levels has been introduced.

-6-

- 3) Subclause 2.5 IEC type designation has been removed following the decision according to 14.2 of the Berlin SC 48B Plenary meeting minutes (48B/1732/RM).
- 4) Clauses 3 Dimensional Information and 4 Characteristics have been added.
- 5) Old Subclauses 4.2 to 4.4 have been moved to new Subclauses 5.3 to 5.5.
- 6) Table 2 Number of test specimens and contacts has been inserted.
- 7) Test groups have been rearranged. Test group HP has been added.

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

FDIS	Report on voting	
48B/1880/FDIS	48B/1913/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.

A list of all parts of the IEC 61076 series, under the general title Connectors for electronic equipment - Product requirements, can be found on the IEC website.

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,

(standards.iteh.ai)

- withdrawn,
- replaced by a revised edition, or <u>SIST EN 61076-3-001:2009</u> https://standards.iteh.ai/catalog/standards/sist/1176b7e1-fa78-43f1-b6b3amended. 7dca2a28bfc0/sist-en-61076-3-001-2009

-7-

INTRODUCTION

This blank detail product specification is a supplementary document to the sectional product specification IEC 61076-3 and contains requirements for style, layout and content of detail product specifications for rectangular connectors. It is to be used in conjunction with the following publications: IEC 61076-1 and IEC 61076-3 for product requirements as well as IEC 62197-1 for quality requirements.

The main content of this blank detail product specification is divided into two parts: on one page, the example for a blank detail product specification, on the other page, the guidance notes referring to the example. The guidance notes have the same numbering as the relevant paragraphs of the example pages.

The sample pages can be used like a template when preparing a detail product specification within the scope of this document. This document is not intended to replace the templates and guidance notes of IEC, but to assist in their application. All users are reminded to adhere to relevant directives and guidelines of the IEC when preparing a standard.

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

NOTE 2 The quality assessment requirements for connectors according to the IEC 61076 series are detailed in IEC 62197-1.

iTeh STANDARD PREVIEW (standards.iteh.ai)

<u>SIST EN 61076-3-001:2009</u> https://standards.iteh.ai/catalog/standards/sist/1176b7e1-fa78-43f1-b6b3-7dca2a28bfe0/sist-en-61076-3-001-2009

Guidance notes

The following pages give a recommended layout of a detail product specification. The contents of this page give guidance on the information which should, wherever possible, be given on the front page of a detail product specification (see IEC Guide 102).

For the scope and definition of a detail product specification, see 1.2.3 of IEC 61076-1:2006.

The numbers between brackets on the front page of the detail product specification correspond to the following information.

Identification of the detail product specification

- [1] The International Electrotechnical Commission or the national standards organization under whose authority the detail product specification is drafted. It shall also be stated where the detail product specification may be obtained.
- [2] The IECQ/IEC number of the detail product specification and date of issue.
- [3] The IECQ/IEC number and issue number of the generic and the sectional specifications.
- [4] The national number of the detail product specification, if it differs from the IECQ/IEC number.

Identification of the connector

- [5] A short description of the type of connector. PREVIEW
- [6] Information on the typical construction of the connector, for example, it should be stated whether the connector is suitable for mounting on printed boards.
- [7] Outline drawing, preferably of sign etric or similar projection, from which the connector may be clearly identified in itehai/catalog/standards/sist/1176b7e1-fa78-43f1-b6b3-
- [8] Information on performance level(s) and assessment level(s) specified in the document, if applicable.
- [9] Reference data on the most important properties, to allow comparison between the various connector types.

NOTE It may be convenient to give some of this information in tabular form.

[1]	IEC Detail product specification number [2]
Generic specification number Electronic components of assessed quality in accordance with: [3]	National number of detail product specification (it is not necessary to use this if the IEC number is identical) [4]
Outline drawing	Product description [5]
[7]	
	[6]
	[8]
	Performance level(s):
	Assessment level(s):
	Combination of performance levels and assessment
iTeh STANDARD PRI	
(standards.iteh.a	Reference data [9]

SIST EN 61076-3-001:2009

https://standards.iteh.ai/catalog/standards/sist/1176b7e1-fa78-43f1-b6b3-7dca2a28bfc0/sist-en-61076-3-001-2009

1 General information

1.1 Scope