SLOVENSKI STANDARD

SIST EN 61076-4-100:2002

prva izdaja

september 2002

Connectors with assessed quality, for use in d.c., low frequency analogue and digital high-speed data applications - Part 4: Printed board connectors - Section 100: Detail specification for two-part connector modules having a grid of 2,5 mm for printed boards and backplanes (IEC 61076-4-100:2001)

ICS 31.220.10

Referenčna številka
SIST EN 61076-4-100:2002(en)

EUROPEAN STANDARD **EN 61076-4-100**

NORME EUROPÉENNE

EUROPÄISCHE NORM December 2001

ICS 31.220.10 Supersedes EN 61076-4-100:1998

English version

Connectors for electronic equipment
Part 4-100: Printed board connectors with assessed quality - Detail specification for two-part connector modules having a grid of 2,5 mm for printed boards and backplanes
(IEC 61076-4-100:2001)

Connecteurs pour équipements électroniques
Partie 4-100: Connecteurs pour cartes imprimées -
Spécification particulière pour les modules de connecteurs en deux parties pour cartes imprimées et fonds de panier, au pas de 2,5 mm
(CEI 61076-4-100:2001)

Steckverbinder für elektronische Einrichtungen
Teil 4-100: Steckverbinder für gedruckte Schaltungen mit bewerteter Qualität -
Bauartspezifikation für indirekte Steckverbinder für gedruckte Schaltungen und Rückplatten, modulare Bauweise, Raster 2,5 mm
(IEC 61076-4-100:2001)

This European Standard was approved by CENELEC on 2001-12-01. 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, 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

Ref. No. EN 61076-4-100:2001 E

Foreword

The text of document 48B/1086/FDIS, future edition 2 of IEC 61076-4-100, 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 61076-4-100 on 2001-12-01.

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)	2002-09-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2004-12-01

Annexes designated "normative" are part of the body of the standard.
In this standard, annexes A and ZA are normative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61076-4-100:3001 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60068-1 + corr. October + A1	1988 1988 1992	Environmental testing Part 1: General and guidance	EN 60068-1	1994
IEC 60297-3	1984	Dimensions of mechanical structures of the 482,6 mm (19 in) series Part 3: Subracks and associated plug-in units	HD 493.3 S2 [1)]	1993
IEC 60326-3	1991	Printed boards Part 3: Design and use of printed boards	-	-
IEC 60352-1	1997	Solderless connections Part 1: Wrapped connections - General requirements, test methods and practical guidance	EN 60352-1	1997
IEC 60352-5	1995	Part 5: Solderless press-in connections - General requirements, test methods and practical guidance	EN 60352-5	1995
IEC 60410	1973	Sampling plans and procedures for inspection by attributes	-	-
IEC 60512	Series	Connectors for electronic equipment - Tests and measurements	EN 60512	Series
IEC 60664-1 (mod)	1992	Insulation coordination for equipment within low-voltage systems Part 1: Principles, requirements and tests	HD 625.1 S1 + corr. November	1996 1996

1) HD 493.3 includes A1:1992 to IEC 60297-3.

Publication	Year	Title	EN/HD	Year
IEC 60917-2-2	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	EN 60917-2-2	1996
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 - Capability approval	EN 61076-1	1995
A1	1996		A1	1996
IEC 61076-4	1995	Part 4: Sectional specification - Printed board connectors	EN 61076-4	1996
IEC 61076-4-102	1997	Part 4: Printed board connectors -- Section 102: Detail specification for two-part single-pole connectors, for multiple uses on plug-in units, with pre-centring, coding and early mating features, having a metric grid in accordance with IEC 60917	EN 61076-4-102	1997

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Connecteurs pour équipements électroniques –

Partie 4-100:
Connecteurs pour cartes imprimées sous assurance de la qualité – Spécification particulière pour les modules de connecteurs en deux parties pour cartes imprimées et fonds de panier, au pas de 2,5 mm

Connectors for electronic equipment –

Part 4-100:
Printed board connectors with assessed quality – Detail specification for two-part connector modules having a grid of 2,5 mm for printed boards and backplanes

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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For price, see current catalogue

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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CONNECTORS FOR ELECTRONIC EQUIPMENT –

Part 4-100: Printed board connectors with assessed quality – Detail specification for two-part connector modules having a grid of 2,5 mm for printed boards and backplanes

FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The 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 the 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 National Committees.
3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61076-4-100 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, issued in 1994, and constitutes a technical revision.

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

FDIS	Report on voting
48B/1086/FDIS	48B/1117/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.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated when a new edition is prepared.

The QC number that appears on the front cover of this publication is the specification number of the IEC Quality Assessment System for Electronic Components (IECQ).

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

Annex A forms an integral part of this specification.

The committee has decided that the contents of this publication will remain unchanged until 2004. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

CONNECTORS FOR ELECTRONIC EQUIPMENT –

Part 4-100: Printed board connectors with assessed quality – Detail specification for two-part connector modules having a grid of 2,5 mm for printed boards and backplanes

<table>
<tr><td>IEC SC 48B: LF connectors

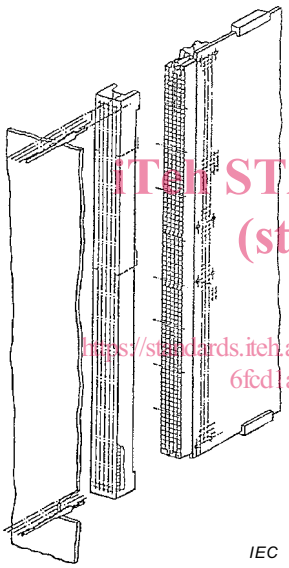
Specification available from:

IEC Central Office or from the addresses shown on the inside cover.

ELECTRONIC COMPONENTS OF ASSESSED QUALITY IN ACCORDANCE WITH:

– GENERIC SPECIFICATION IEC 61076-1
First edition:1995</td><td>IEC 61076-4-100
QC 480301XX0001

Page 15 of 138 pages</td></tr>
<tr><td>See clause 3 for dimensions

 
IEC 1839/01</td><td>Modular two-part connector for printed boards and backplanes, grid of 2,5 mm in accordance with IEC 60917

Connector with height multiple modules n × 25 mm, (with n = 1, 2, 4, 9,10) five rows

Performance levels (PL): 1, 2, 3

Assessment levels: B and G *)

Combinations of performance and assessment levels: 1G, 2B, 2G, 3B</td></tr>
<tr><td colspan="2">*) See 6.2 and 6.3.</td></tr>
</table>

1 General data

1.1 Recommended method of mounting

The free board connectors are provided either with solder or with press-in contacts. The mounting of the free board connector is achieved by press-in pivots. The terminations of the free board connectors shall fit into holes in the printed board according to IEC 60326-3, located on a grid of 2,5 mm.

The fixed board connectors are provided either with:

– press-in contacts;

– press-in and wrap contacts;

– press-in and wrap and mating area contacts.

The connector is fixed on the press-in contacts. Fixing holes on the backplane are not necessary. The distance of termination centre lines is 2,5 mm or a multiple of it. The terminations of the fixed board connectors are suited for backplanes having a grid dimension of 2,5 mm.

NOTE Information about manufacturers who have components qualified to this detail specification is given in the Qualified Products List.

1.2 Ratings and characteristics

Rated voltage: Contact/contact for fully loaded connector (arrangement 1)

Table 1 – Rated voltage

Material group	Pollution degree	Rated voltage V
I, II, IIIa/b	1	250
II, IIIa/b	2	32
NOTE Reference is made to table 14 of this specification, and table 4 of IEC 60664-1 listing the relation between creepage distances, pollution degree and material groups versus voltages r.m.s.		

Current rating: 1 A at 70 °C for fully loaded connector (arrangement 1)

Insulation resistance: 10^6 MΩ min. for PL1 and PL2
10^5 MΩ min. for PL3

Climatic category: PL1: 55/125/56
PL2: 55/125/21
PL3: 25/100/00

Printed board thickness: 1,6 mm to 3,2 mm for free board connector
1,6 mm min. for fixed board connector

Contact spacing: 2,5 mm