SLOVENSKI STANDARD
SIST EN 60603-13:2002

01-september-2002

Connectors for frequencies below 3 MHz for use with printed boards - Part 13: Detail specification for two-part connectors of assessed quality, for printed boards for basic grid of 2,54 mm (0,1 in), with free connectors

Connectors for frequencies below 3 MHz for use with printed boards -- Part 13: Detail specification for two-part connectors of assessed quality, for printed boards for basic grid of 2,54 mm (0,1 in), with free connectors for non-accessible insulation displacement terminations (ID)

Steckverbinder für gedruckte Schaltungen für Frequenzen unter 3 MHz -- Teil 13: Bauartspezifikation für gütebestätigte indirekte Steckverbinder für gedruckte Schaltungen mit Raster 2,54 mm (0,1 in), mit freiem Steckverbinder für Schneidklemmenanschluß (ID)

Connecteurs pour fréquences inférieures à 3 MHz pour utilisation avec cartes imprimées -- Partie 13: Spécification particulière pour connecteurs en deux parties, sous assurance de la qualité pour cartes imprimées pour grille de base de 2,54mm (0,1 in), avec fiches pour bornes de sortie non-accessibles à déplacement (CAD)

Ta slovenski standard je istoveten z: **EN 60603-13:1998**

ICS:

31.220.10	Vtiļ i in vtiļ nice, konektorji	Plug-and-socket devices. Connectors

SIST EN 60603-13:2002 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60603-13

February 1998

ICS 31.220.10

Descriptors: Electronic components, electric connectors, printed-circuit cards, designation, detail specifications, electric properties, dimensions, mechanical properties, conformity tests, quality assurance, quality control, routine verification

English version

Connectors for frequencies below 3 MHz for use with printed boards Part 13: Detail specification for two-part connectors of assessed quality, for printed boards for basic grid of 2,54 mm (0,1 in), with free connectors for non-accessible insulation displacement terminations (ID)

(IEC 60603-13:1995)

Connecteurs pour fréquences inférieures à 3 MHz pour utilisation avec cartes imprimées
Partie 13: Spécification particulière pour connecteurs en deux parties, sous assurance de la qualité pour cartes imprimées pour grille de base de 2,54mm (0,1 in), avec fiches pour bornes de sortie non-accessibles à déplacement (CAD)
(CEI 60603-13:1995)

Steckverbinder für gedruckte Schaltungen für Frequenzen unter 3 MHz
Teil 13: Bauartspezifikation für gütebestätigte indirekte Steckverbinder für gedruckte Schaltungen mit Raster 2,54 mm (0,1 in), mit freiem Steckverbinder für Schneidklemmenanschluß (ID)
(IEC 60603-13:1995)

This European Standard was approved by CENELEC on 1998-01-01. 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, 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 60603-13:1998 E

Foreword

The text of the International Standard IEC 60603-13:1995, prepared by SC 48B, Connectors, of IEC TC 48, Electromechanical components and mechanical structures for electronic equipment, was submitted to the formal vote and was approved by CENELEC as EN 60603-13 on 1998-01-01 without any modification.

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)	1998-12-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	1998-12-01

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

Endorsement notice

The text of the International Standard IEC 60603-13:1995 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	1988	Environmental testing Part 1: General and guidance		
+ corr. October	1988			
+ A1	1992		EN 60068-1	1994
IEC 60068-2-60	1990[1]	Part 2: Tests - Test Ke: Corrosion tests in artificial atmosphere at very low concentration of polluting gas(es)	-	-
IEC 60097	1991	Grid systems for printed circuits	EN 60097	1993
IEC 60352-1	1983	Solderless connections Part 1: Solderless wrapped connections General requirements, test methods and practical guidance	EN 60352-1[2]	1994
IEC 60352-4	1994	Part 4: Solderless non-accessible insulation displacement connections General requirements, test methods and practical guidance	EN 60352-4	1994
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 60512-1	1984[3]	Electromechanical components for electronic equipment - Basic testing procedures and measuring methods Part 1: General	-	-
A1	1988		-	-

---

[1] IEC 60068-2-60:1995 is harmonized as EN 60068-2-60:1996.

[2] EN 60352-1 is superseded by EN 60352-1:1997, which is based on IEC 60352-1:1997.

[3] IEC 60512-1:1994 is harmonized as EN 60512-1:1994.

Publication	Year	Title	EN/HD	Year
IEC 60512-2	1985	Part 2: General examination, electrical continuity and contact resistance tests, insulation tests and voltage stress tests	-	-
IEC 60512-3	1976	Part 3: Current-carrying capacity tests	-	-
IEC 60512-4	1976	Part 4: Dynamic stress tests	-	-
IEC 60512-5	1992	Part 5: Impact tests (free components), static load tests (fixed components), endurance tests and overload tests	-	-
IEC 60512-7	1993	Part 7: Mechanical operating tests and sealing tests	-	-
IEC 60512-8	1993	Part 8: Connector tests (mechanical) and mechanical tests on contacts and terminations	-	-
IEC 60512-9	1992	Part 9: Miscellaneous tests	-	-
IEC 60603-1	1991	Connectors for frequencies below 3 MHz for use with printed boards Part 1: Generic specification General requirements and guide for the preparation of detail specifications, with assessed quality		
+ A1	1992		EN 60603-1	1998
IEC QC 001002	1986	Rules of procedure of the IEC Quality Assessment System for Electronic Components (IECQ)	-	-
A1	1992		-	-
ISO 272	1982	Fasteners Hexagon Products Width across flats	-	-
ISO 468	1982	Surface roughness Parameters, their values and general rules for specifying requirements	-	-

NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
IEC
603-13

QC 010000XX0001

Première édition
First edition
1995-01

Connecteurs pour fréquences inférieures à 3 MHz pour utilisation avec cartes imprimées –

Partie 13:

Spécification particulière pour connecteurs en deux parties sous assurance de la qualité pour cartes imprimées pour grille de base de 2,54 mm (0,1 in), avec fiches pour bornes de sortie non accessibles à déplacement d'isolant (CAD)

Connectors for frequencies below 3 MHz for use with printed boards –

Part 13:

Detail specification for two-part connectors of assessed quality, for printed boards for basic grid of 2,54 mm (0,1 in), with free connectors for non-accessible insulation displacement terminations (ID)

Bureau Central de la Commission Electrotechnique Internationale 3, rue de Varembé Genève, Suisse

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE X

Pour prix, voir catalogue en vigueur
For price, see current catalogue

CONTENTS

Page

INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONNECTORS FOR FREQUENCIES BELOW 3 MHz FOR USE WITH PRINTED BOARDS –

Part 13: Detail specification for two-part connectors of assessed quality, for printed boards for basic grid of 2,54 mm (0,1 in), with free connectors for non-accessible insulation displacement terminations (ID)

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 cooperation 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, prepared by technical committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
3) They have the form of recommendations for international use published in the form of standards, 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.

International Standard IEC 603-13 has been prepared by sub-committee 48B: Connectors, of IEC technical committee 48: Electromechanical components and mechanical structures for electronic equipment.

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

DIS	Report on voting
48B(CO)252	48B/367/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.

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

Annex A forms an integral part of this standard.

CONNECTORS FOR FREQUENCIES BELOW 3 MHz FOR USE WITH PRINTED BOARDS –

Part 13: Detail specification for two-part connectors of assessed quality, for printed boards for basic grid of 2,54 mm (0,1 in), with free connectors for non-accessible insulation displacement terminations (ID)

1 Scope

This part of IEC 603 covers a range of two-part connectors with contact arrangements having spacings of 2,54 mm (0,1 in) in both directions. The two-part connector range comprises a fixed (board-mounted) connector containing male contacts and a free connector containing female contacts. They are primarily intended to provide interconnection between printed boards using a basic grid of 2,54 mm (0,1 in) as laid down in IEC 97 and round conductor ribbon cable on 1,27 mm (0,05 in) centreline spacing. The fixed connectors are provided with posts either for solder, press-in or wrapped connections. The free connectors are provided with non-accessible insulation displacement terminations.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 603. 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 603 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 68-1: 1988, *Environmental testing – Part 1: General and guidance*
Amendment No. 1 (1992)

IEC 68-2-60: 1990, *Environmental testing – Part 2: Tests – Test Ke: Corrosion tests in artificial atmosphere at very low concentration of polluting gas(es)*

IEC 97: 1991, *Grid systems for printed circuits*

IEC 352-1: 1983, *Solderless connections – Part 1: Solderless wrapped 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 352-5: 1995, *Solderless connections – Part 5: Solderless press-in connections – General requirements, test methods and practical guidance*

IEC 410: 1973, *Sampling plans and procedures for inspection by attributes*

IEC 512-1: 1984, *Electromechanical components for electronic equipment; basic testing procedures and measuring methods – Part 1: General*
Amendment No. 1 (1988)

IEC 512-2: 1985, *Electromechanical components for electronic equipment; basic testing procedures and measuring methods – Part 2: General examination, electrical continuity and contact resistance tests, insulation tests and voltage stress tests*

IEC 512-3: 1976, *Electromechanical components for electronic equipment; basic testing procedures and measuring methods – Part 3: Current-carrying capacity tests*

IEC 512-4: 1976, *Electromechanical components for electronic equipment; basic testing procedures and measuring methods – Part 4: Dynamic stress tests*

IEC 512-5: 1992, *Electromechanical components for electronic equipment; basic testing procedures and measuring methods – Part 5: Impact tests (free components), static load tests (fixed components), endurance tests and overload tests*

IEC 512-7: 1993, *Electromechanical components for electronic equipment; basic testing procedures and measuring methods – Part 7: Mechanical operating tests and sealing tests*

IEC 512-8: 1993, *Electromechanical components for electronic equipment; basic testing procedures and measuring methods – Part 8: Connector tests (mechanical) and mechanical tests on contacts and terminations*

IEC 512-9: 1992, *Electromechanical components for electronic equipment; basic testing procedures and measuring methods – Part 9: Miscellaneous tests*

IEC 603-1: 1991, *Connectors for frequencies below 3 MHz for use with printed boards – Part 1: Generic specification – General requirements and guide for the preparation of detail specifications, with assessed quality*
Amendment No. 1 (1992)

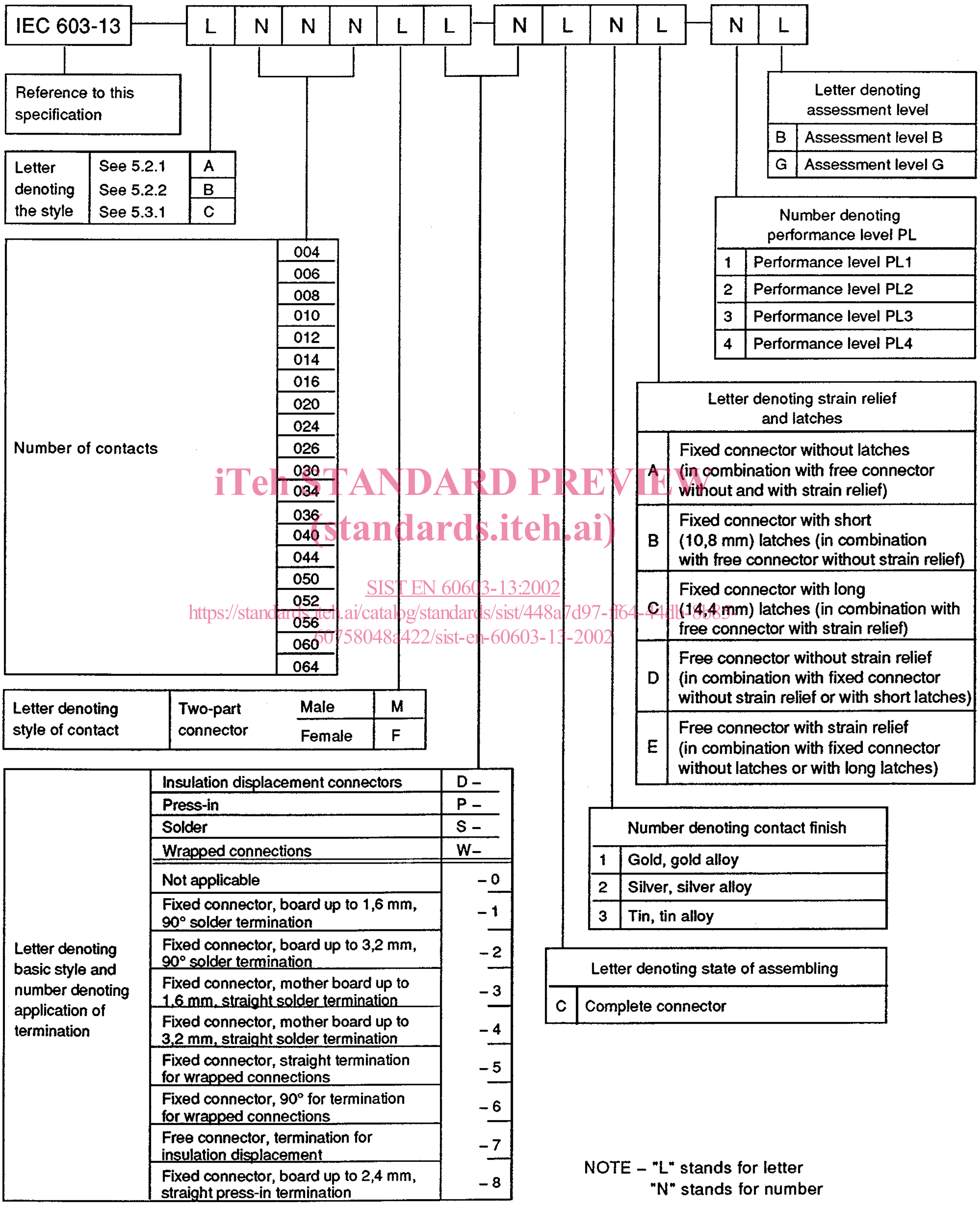
IEC QC 001002: 1986, *Rules of procedure of the IEC quality assessment system for electronic components (IECQ)*
Amendment No. 1 (1992)

ISO 272: 1982, *Fastener hexagon products – Width across flats*

ISO 468: 1982, *Surface roughness – Parameters, their values and general rules for specifying requirements*

3 IEC type designation

Connectors, fixed (board-mounted) and free, with and without strain reliefs and latches according to this standard shall be designated by the following system.



IEC 603-13 — L N N N L L — N L N L — N L

Reference to this specification

Letter denoting the style	See 5.2.1	A
	See 5.2.2	B
	See 5.3.1	C

Number of contacts	004
	006
	008
	010
	012
	014
	016
	020
	024
	026
	030
	034
	036
	040
	044
	050
	052
	056
	060
	064

Letter denoting style of contact	Two-part connector	Male	M
		Female	F

Letter denoting basic style and number denoting application of termination	Insulation displacement connectors	D –
	Press-in	P –
	Solder	S –
	Wrapped connections	W–
	Not applicable	– 0
	Fixed connector, board up to 1,6 mm, 90° solder termination	– 1
	Fixed connector, board up to 3,2 mm, 90° solder termination	– 2
	Fixed connector, mother board up to 1,6 mm, straight solder termination	– 3
	Fixed connector, mother board up to 3,2 mm, straight solder termination	– 4
	Fixed connector, straight termination for wrapped connections	– 5
	Fixed connector, 90° for termination for wrapped connections	– 6
	Free connector, termination for insulation displacement	– 7
	Fixed connector, board up to 2,4 mm, straight press-in termination	– 8

Letter denoting assessment level	
B	Assessment level B
G	Assessment level G

Number denoting performance level PL	
1	Performance level PL1
2	Performance level PL2
3	Performance level PL3
4	Performance level PL4

Letter denoting strain relief and latches	
A	Fixed connector without latches (in combination with free connector without and with strain relief)
B	Fixed connector with short (10,8 mm) latches (in combination with free connector without strain relief)
C	Fixed connector with long (14,4 mm) latches (in combination with free connector with strain relief)
D	Free connector without strain relief (in combination with fixed connector without strain relief or with short latches)
E	Free connector with strain relief (in combination with fixed connector without latches or with long latches)

Number denoting contact finish	
1	Gold, gold alloy
2	Silver, silver alloy
3	Tin, tin alloy

Letter denoting state of assembling	
C	Complete connector

NOTE – "L" stands for letter
"N" stands for number

Example – Connector style B, having 20 male contacts gold-finished with solder terminations. Complete fixed connector for boards up to 3,2 mm (0,126 in), straight termination without latches, with performance level 2 and assessment level G: IEC 603-13-B020MS-4C1A-2G.

4 Common features

Not applicable.

4.1 *Isometric view*

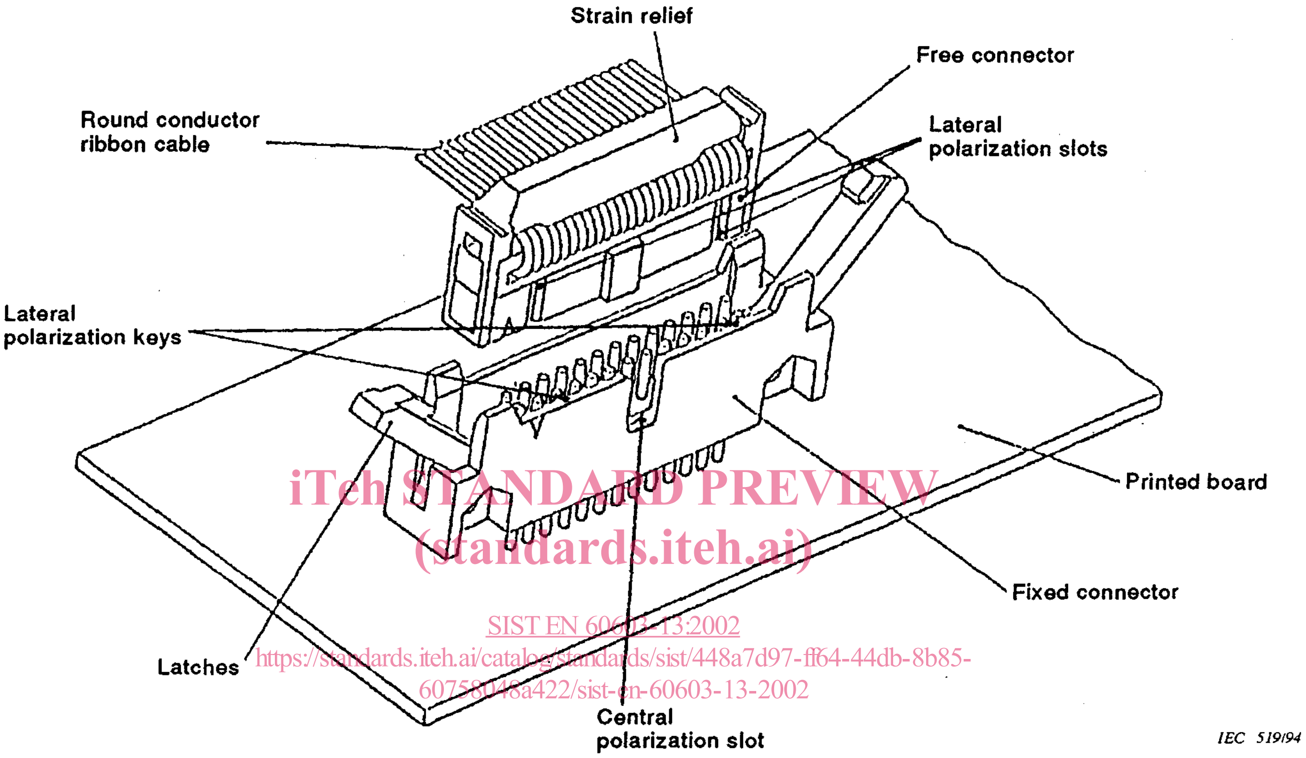


Figure 1 – Isometric view