
Connectors for frequencies below 3 MHz for use with printed boards - Part 9: Two-part connectors for printed boards, backpanels and cable connectors, basic grid of 2,54 mm (0,1 in) (IEC 60603-9:1998)

Connectors for frequencies below 3 MHz for use with printed boards -- Part 9: Two-part connectors for printed boards, backpanels and cable connectors, basic grid of 2,54 mm (0,1 in)

Stekverbinder für gedruckte Schaltungen für Frequenzen unter 3 MHz -- Teil 9: Indirekte Steckverbinder für gedruckte Schaltungen, Rückplatten und Kabelanschluß - Rastermaß 2,54 mm (0,1 in)

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Connecteurs pour fréquences inférieures à 3MHz pour utilisation avec cartes imprimées -- Partie 9: Connecteurs pour cartes imprimées enfichables, connexions fond de panier et connecteurs de câble, pour grille de base de 2,54 mm (0,1 in)

Ta slovenski standard je istoveten z: EN 60603-9:1998

ICS:

31.220.10 Xcã ãñ Ácã } ã^É[] ^\ ç !ã Plug-and-socket devices.
Connectors

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60603-9

February 1998

ICS 31.220.10

Descriptors: Electronic components, electric connectors, printed-circuit cards, connector plugs, designation, dimensions, assembling, couplings, tests

English version

**Connectors for frequencies below 3 MHz for use with printed boards
Part 9: Two-part connectors for printed boards, backpanels and
cable connectors, basic grid of 2,54 mm (0,1 in)
(IEC 60603-9:1990)**

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

Partie 9: Connecteurs pour cartes
imprimées enfichables, connexions fond
de panier et connecteurs de câble, pour
grille de base de 2,54 mm (0,1 in)
(CEI 60603-9:1990)

Stekverbinder für gedruckte
Schaltungen für Frequenzen
unter 3 MHz

Teil 9: Indirekte Steckverbinder für
gedruckte Schaltungen, Rückplatten und
Kabelanschluß
Rastermaß 2,54 mm (0,1 in)
(IEC 60603-9:1990)

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.

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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 the International Standard IEC 60603-9:1990, 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 60603-9 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, annex ZA is normative.
Annexes ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60603-9:1990 was approved by CENELEC as a European Standard without any modification.

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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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050(581)	1978	International Electrotechnical Vocabulary (IEV) Chapter 581: Electromechanical components for electronic equipment	-	-
IEC 60097	1970 ¹⁾	Grid system for printed circuits	-	-
IEC 60194	1988	Terms and definitions for printed circuits	HD 142 S3	1991
IEC 60326	series	Printed boards	-	-
IEC 60352-1	1983	Solderless connections Part 1: Solderless wrapped connections General requirements, test methods and practical guidance	EN 60352-1 ²⁾	1994
IEC 60512	series	Electromechanical components for electronic equipment Basic testing procedures and measuring methods	EN 60512	series
IEC 60603-1	1981 ³⁾	Connectors for frequencies below 3 MHz for use with printed boards Part 1: General rules and guide for the preparation of detail specifications	-	-
ISO 468	1982	Surface roughness Parameters, their values and general rules for specifying requirements	-	-

1) IEC 60097:1991 is harmonized as EN 60097:1993.

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

3) IEC 60603-1:1991 + A2:1992 are harmonized as EN 60603-1:1998.

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First edition
1990-11

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

Neuvième partie:

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connexions fond de panier et connecteurs de
câble, pour grille de base de 2,54 mm (0,1 in)**

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

Part 9:

**Two-part connectors for printed boards,
backpanels and cable connectors,
basic grid of 2,54 mm (0,1 in)**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONNECTORS FOR FREQUENCIES BELOW 3 MHz FOR USE WITH PRINTED BOARDS

Part 9: Two-part connectors for printed boards, backpanels and cable connectors, basic grid of 2,54 mm (0,1 in)

FOREWORD

- 1) 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.
- 2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.
- 3) In order to promote international unification, the IEC expresses the wish that all National Committees should adopt the text of the IEC recommendation for their national rules in so far as national conditions will permit. Any divergence between the IEC recommendation and the corresponding national rules should, as far as possible, be clearly indicated in the latter.
- 4) The IEC has not laid down any procedure concerning marking as an indication of approval and has no responsibility when an item of equipment is declared to comply with one of its recommendations.

iTeh STANDARD PREVIEW
PREFACE

This standard has been prepared by Sub-Committee 48B: Connectors, of IEC Technical Committee No. 48: Electromechanical components for electronic equipment.

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

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Six Months' Rule	Report on Voting
48B(CO)166	48B(CO)176

Full information on the voting for the approval of this standard can be found in the Voting Report indicated in the above table.

The following IEC publications are quoted in this standard:

Publications Nos.	50 (581) (1978): International Electrotechnical Vocabulary (IEV), Chapter 581: Electromechanical components for electronic equipment.
	97 (1970): Grid system for printed circuits.
	194 (1988): Terms and definitions for printed circuits.
	326: Printed boards.
	352-1 (1983): Solderless connections, Part 1: Solderless wrapped connections — General requirements, test methods and practical guidance.
	512: Electromechanical components for electronic equipment; basic testing procedures and measuring methods.
	603-1 (1981): Connectors for frequencies below 3 MHz for use with printed boards, Part 1: General rules and guide for the preparation of detail specifications.

Other publication quoted:

ISO Standard 468 (1982): Surface roughness — Parameters, their values and general rules for specifying requirements.

CONNECTORS FOR FREQUENCIES BELOW 3 MHz FOR USE WITH PRINTED BOARDS

Part 9: Two-part connectors for printed boards, backpanels and cable connectors, basic grid of 2,54 mm (0,1 in)

1. Scope

This standard covers a group of related two-part connectors for printed boards and cable connectors associated with printed backpanels. The group covers high-density connectors having up to 96 miniature contacts for low-voltage applications, hereinafter called "signal contacts", connectors having up to 6 high current contacts, hereinafter called "power contacts", combined with up to 42 signal contacts and a range of 4, 10, 20 and 64 way female cable connectors and associated male parts for making connection to the backpanel or to the printed board (see Figures 1 and 2, pages 9 and 11).

The board-mounted connectors with female contacts are provided with terminations suitable for printed boards in accordance with IEC Publication 326 and using a grid of 2,54 mm (0,100 in) as laid down in IEC Publication 97.

A first range of fixed connectors with male signal contacts is assembled on the backpanel by signal contacts and moulded housings. These male signal contacts have compliant press-in sections (optional additional soldering) suitable for use in backpanels with a grid of 2,54 mm (0,100 in) according to IEC Publication 97. (The press-in technique is under consideration.)

The individual male contacts are suitable for additional wrapping (see Figure 1).

A second range of independent male connectors with solder terminals for printed back-panel mounting is included (see Figure 2).

First-to-make contact facilities can be provided on the connection between the printed board and the backpanel.

The two-row cable connectors are intended to connect round cables having up to 64 cores of 0,25 mm (0,010 in) or 0,5 mm (0,020 in) diameter conductors. Connections are made with the insulation displacement technique (under consideration for specification). Furthermore, male connectors for printed board mounting to mate with these cable connectors are included (see Figure 2).

This standard shall be used in conjunction with IEC Publications 50(581), 97, 194, 326, 352-1, 512, 603-1 and 603-2.

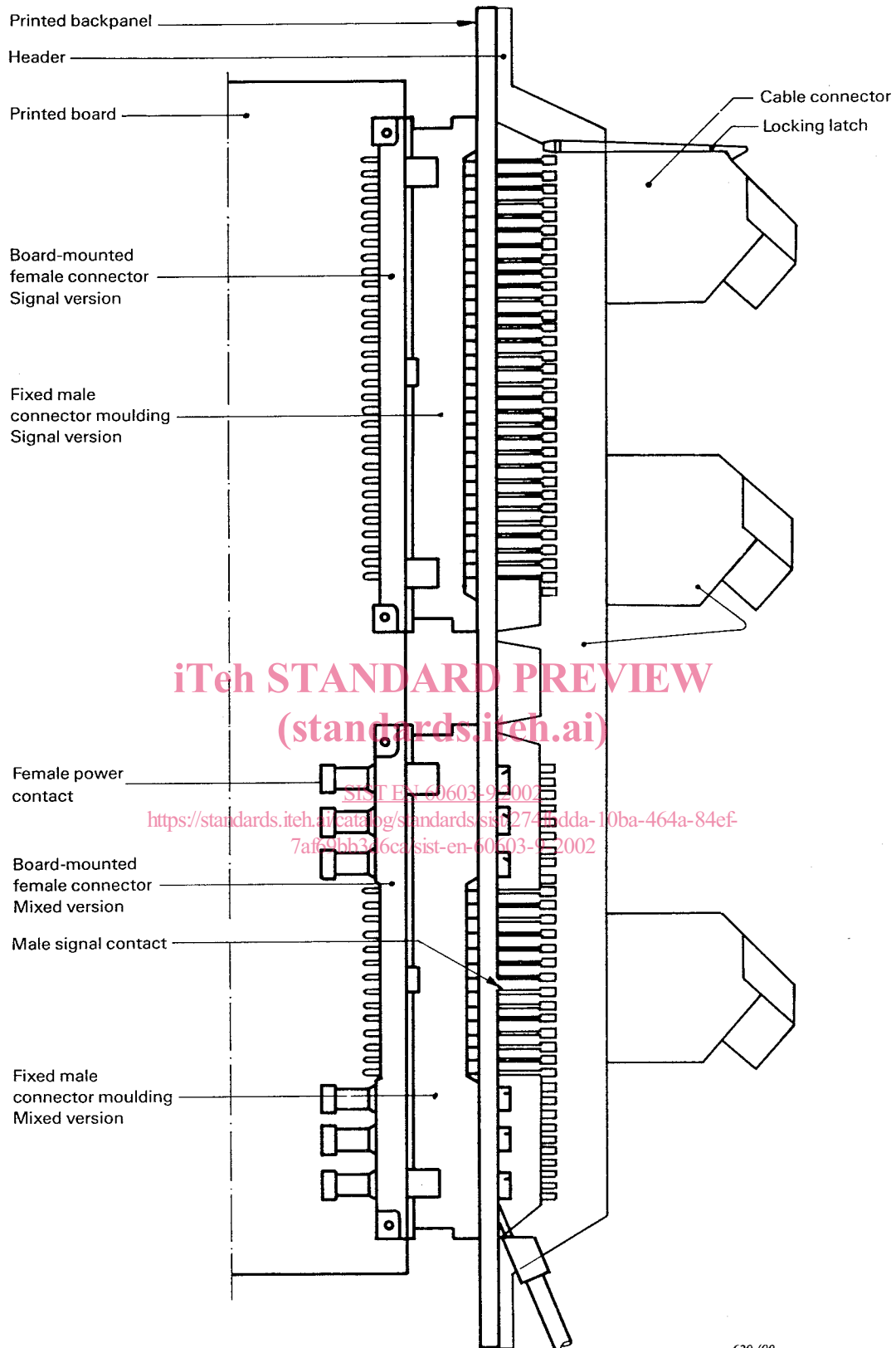
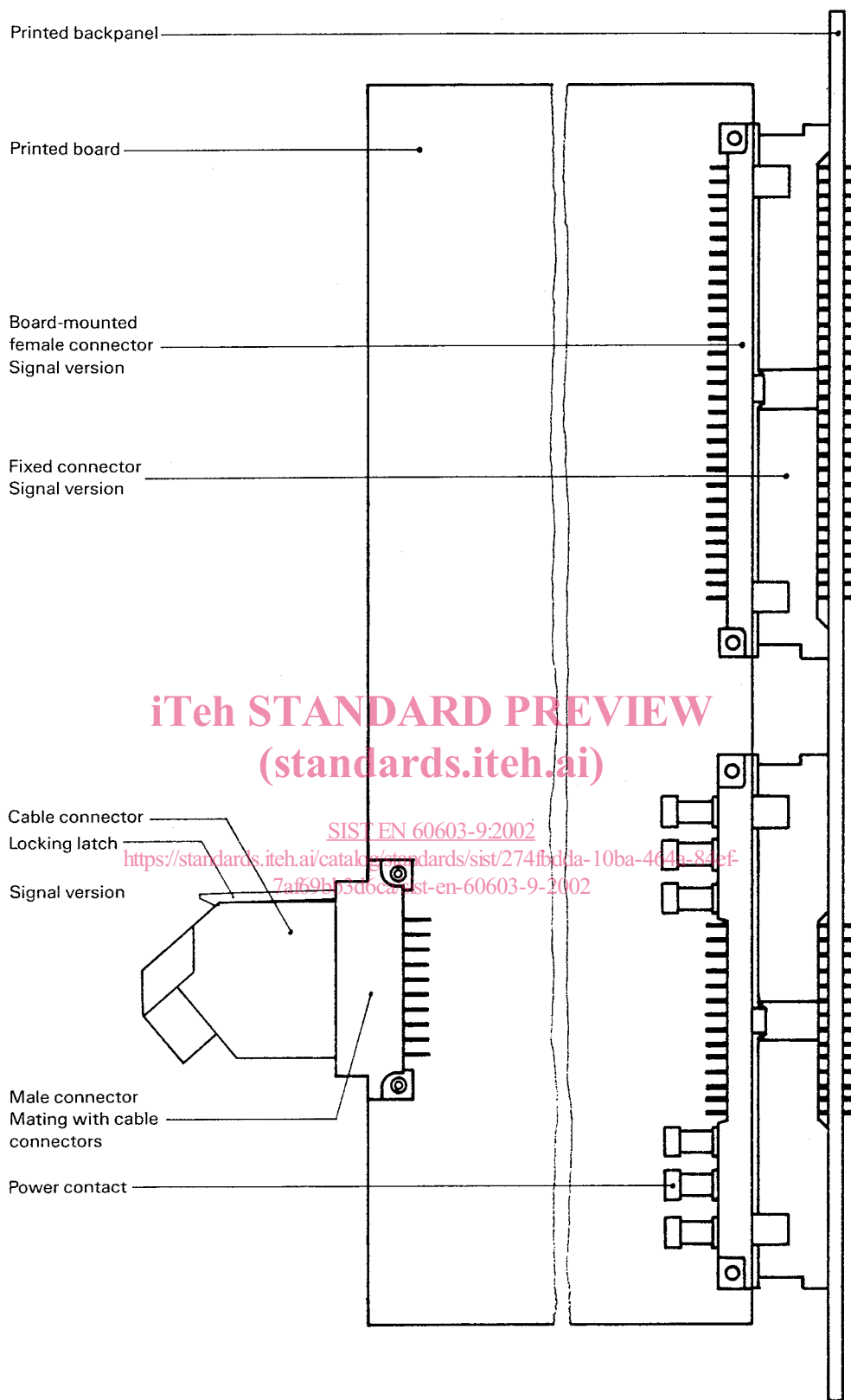


Figure 1 — General view of the connection system; male connectors, range 1 (press-in technique)

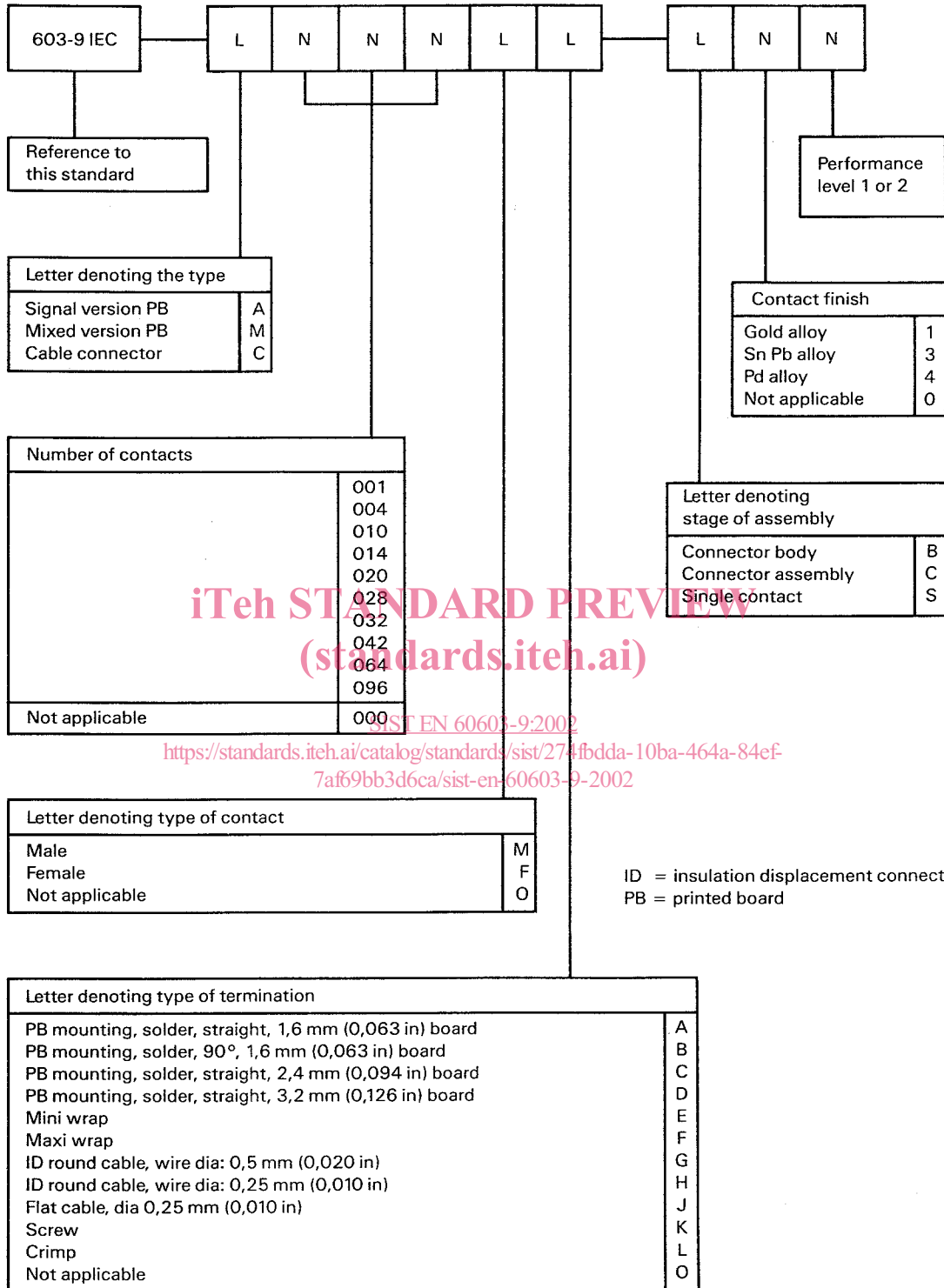


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Figure 2 — General view of the connection system; male connectors, range 2 (soldered)

2. IEC type designation

Connectors, connector bodies and contacts according to this standard shall be designated by the following system:



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Note. — “L” stands for letter; “N” stands for number.

Example: Connector type A having 96 female contacts gold finished with solder terminations bent 90° for 1,6 mm (0,063 in) nominal thickness boards, performance level 1: 603-9 IEC-A096 FB-C1-1.

Note. — In Clause 4, type designations show an “X”. This means that the feature is variable.

3. Common features

3.1 Mounting dimensions

3.1.1 Reference system

A line in the mounting plane of the fixed connector and passing through the nominal position of the centres of row “b” male contacts is used as datum line, Figures 3 and 4, pages 17 and 19. The dimensions in Sub-clauses 3.1.2 and 3.1.3 are defined with respect to this datum.

3.1.2 Fixed connector

a) General

For the basic concept of the fixed connector, the male signal contacts have compliant centre-sections for insertion into a backpanel of thickness 3,2 mm (0,126 in). There is the option of using the solderless press-in technique or soldering the contact to the backpanel. The choice depends upon the backpanel hole dimensions and finish, and upon the preference of the user. The male power contacts are inserted in the male contact housing and fixed to the backpanel by screws which also secure appropriate termination devices. The moulded housing has no fixing holes but is retained by an interference fit on the male signal contacts.

Additionally, an independent male connector with straight solder terminations for backpanels 2,4 mm (0,094 in) thick is included.

b) Position of the contacts and terminations

The distances between centres of the contacts are 2,54 mm (0,100 in) or multiples thereof in the X and Y axes. The terminations of the press-in contacts shall be located so as to permit automatic wiring techniques.

3.1.3 Printed board assembly

The following positions are shown in Figure 3 (connector system range 1) and Figure 4 (connector system range 2) and described in Table 1:

- positions of the board-mounted female connectors;
- positions of the mounting holes of the board-mounted female connectors, see also Figures 30 and 31, page 85;
- position of the printed board;
- position of the grid of the printed board.

The terminations of the signal contacts of the board-mounted connectors shall fit into holes of printed boards according to IEC Publication 326 and shall be located on a grid of 2,54 mm (0,100 in) according to IEC Publication 97.

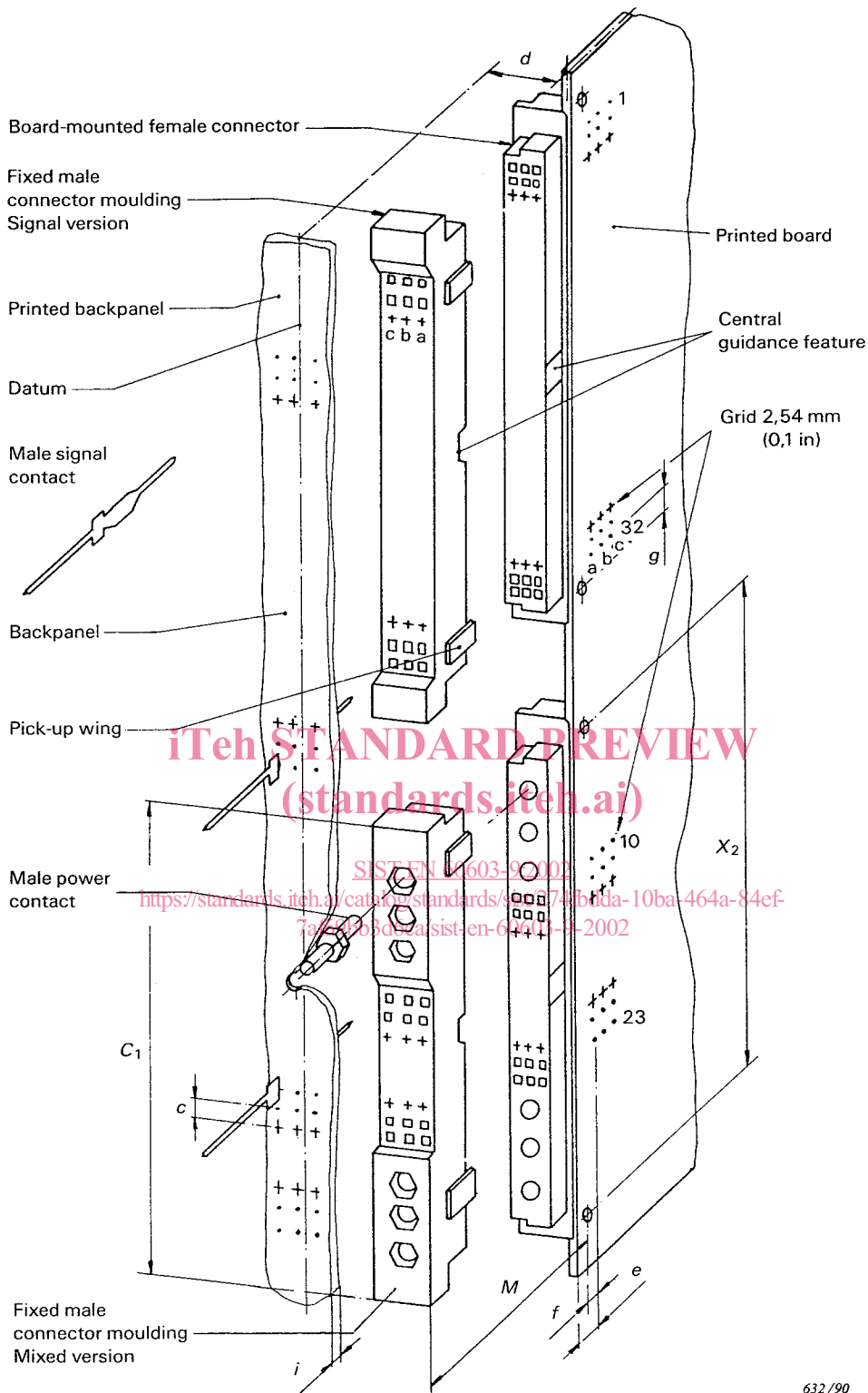


Figure 3 — Isometric view and basic dimensions for connector system, range 1