

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)**

The European Standard EN 60603-13:1998 has the status of a
British Standard

ICS 31.220.10

National foreword

This British Standard is the English language version of EN 60603-13:1998. It is identical with IEC 60603-13:1995.

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

From 1 January 1997, all IEC publications have the number 60000 added to the old number. For instance, IEC 27-1 has been renumbered as IEC 60027-1. For a period of time during the change over from one numbering system to the other, publications may contain identifiers from both systems.

Cross-references

Attention is drawn to the fact that CEN and CENELEC Standards normally include an annex which lists normative references to international publications with their corresponding European publications. The British Standards which implement these international or European publications may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their 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, pages i and ii, the EN title page, pages 2 to 39 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

This British Standard, having been prepared under the direction of the Electrotechnical Sector Board, was published under the authority of the Standards Board and comes into effect on 15 May 1998

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Amendments issued since publication

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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 60603-1 3:1995)

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.

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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

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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, Annex A and Annex 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.

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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)

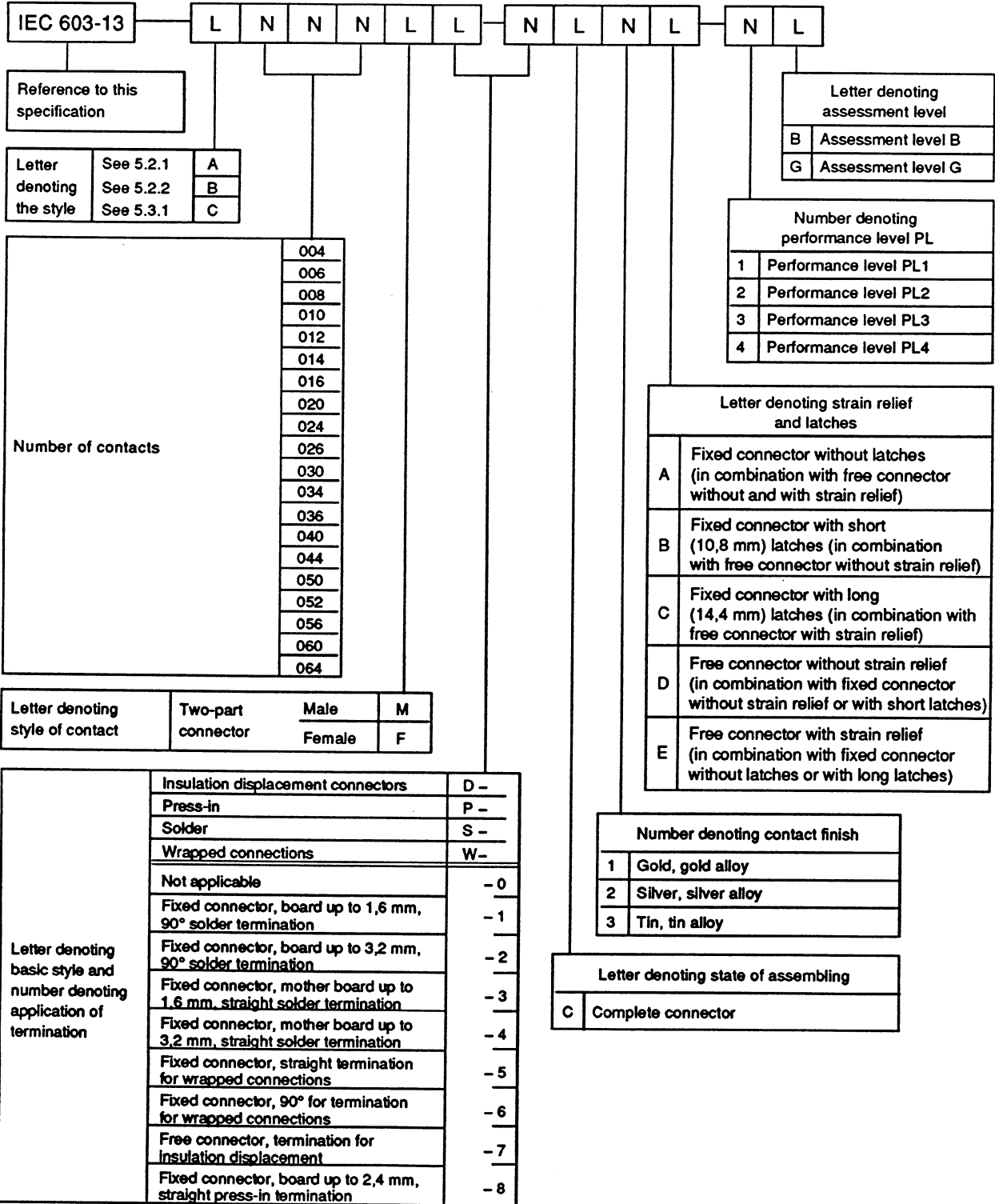
IEC QC 001002:1986, *Rules of procedure of the IEC quality assessment system for electronic components (IECQ)*.

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.



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

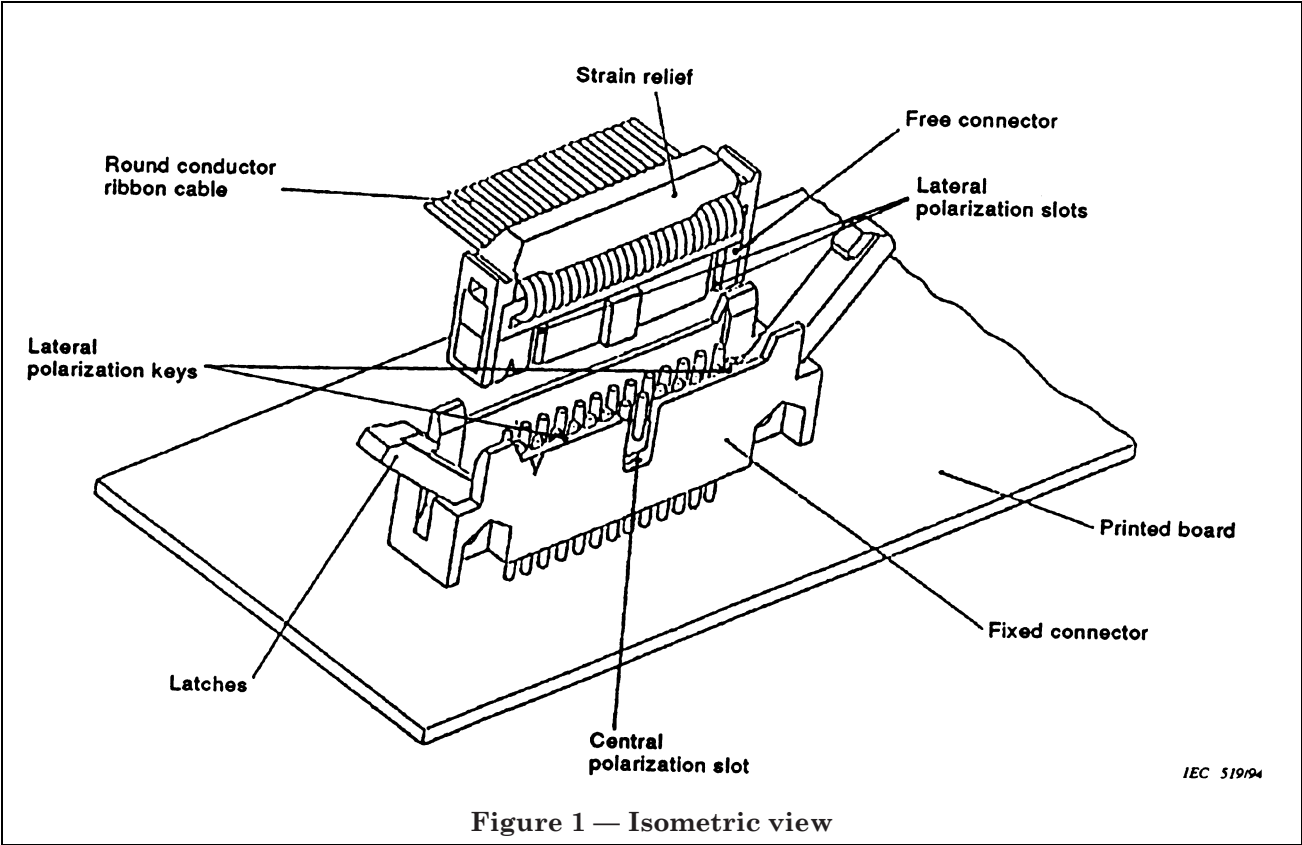


Figure 1 — Isometric view

4.2 Survey of styles

Table 1 — Survey of styles

Style		Number of contacts		
		4/6/8	10/12/14	16/20/24/26/30/34/36 40/44/50/52/56/60/64
A	Fixed connector; press-in/solder/wrap post	Without lateral polarization keys		
B	Fixed connector; press-in/solder/wrap post	Without lateral polarization keys	With one lateral polarization key	With two lateral polarization keys
C	Free connector; insulation displacement termination	Without lateral polarization slots	With one lateral polarization slot	With two lateral polarization slots
NOTE Style C (free connector) can be mated either with style A or style B (fixed connectors).				

5 Dimensions

5.1 General

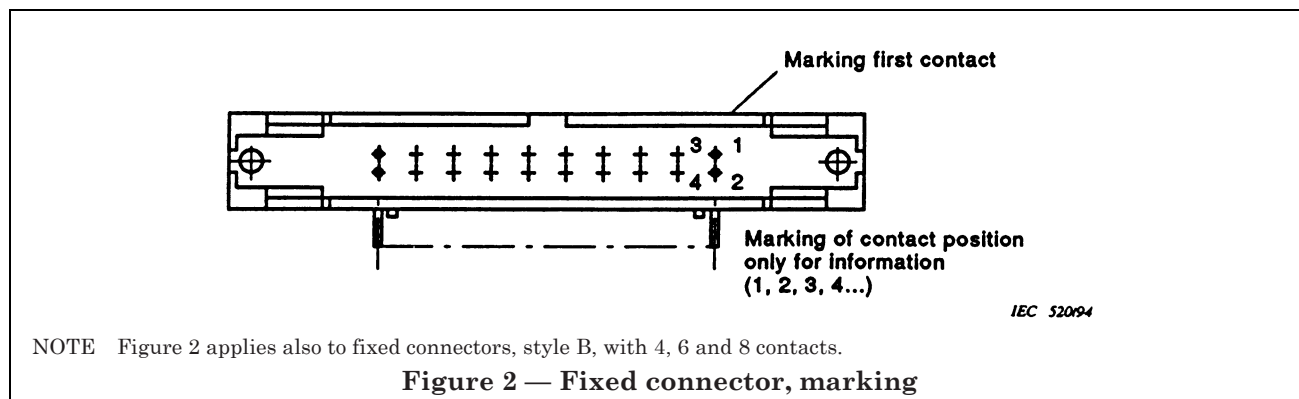
Dimensions in millimetres are the original dimensions.¹⁾

Drawings are shown in third-angle projection. The shape of the connectors may deviate from those given in the following drawings as long as the specified dimensions are not influenced.

5.2 Fixed connectors

5.2.1 Fixed connector, style A (central polarization slot only)

Same as style B, but without the lateral polarization keys.



5.2.1.1 Dimensions

See Figure 3.

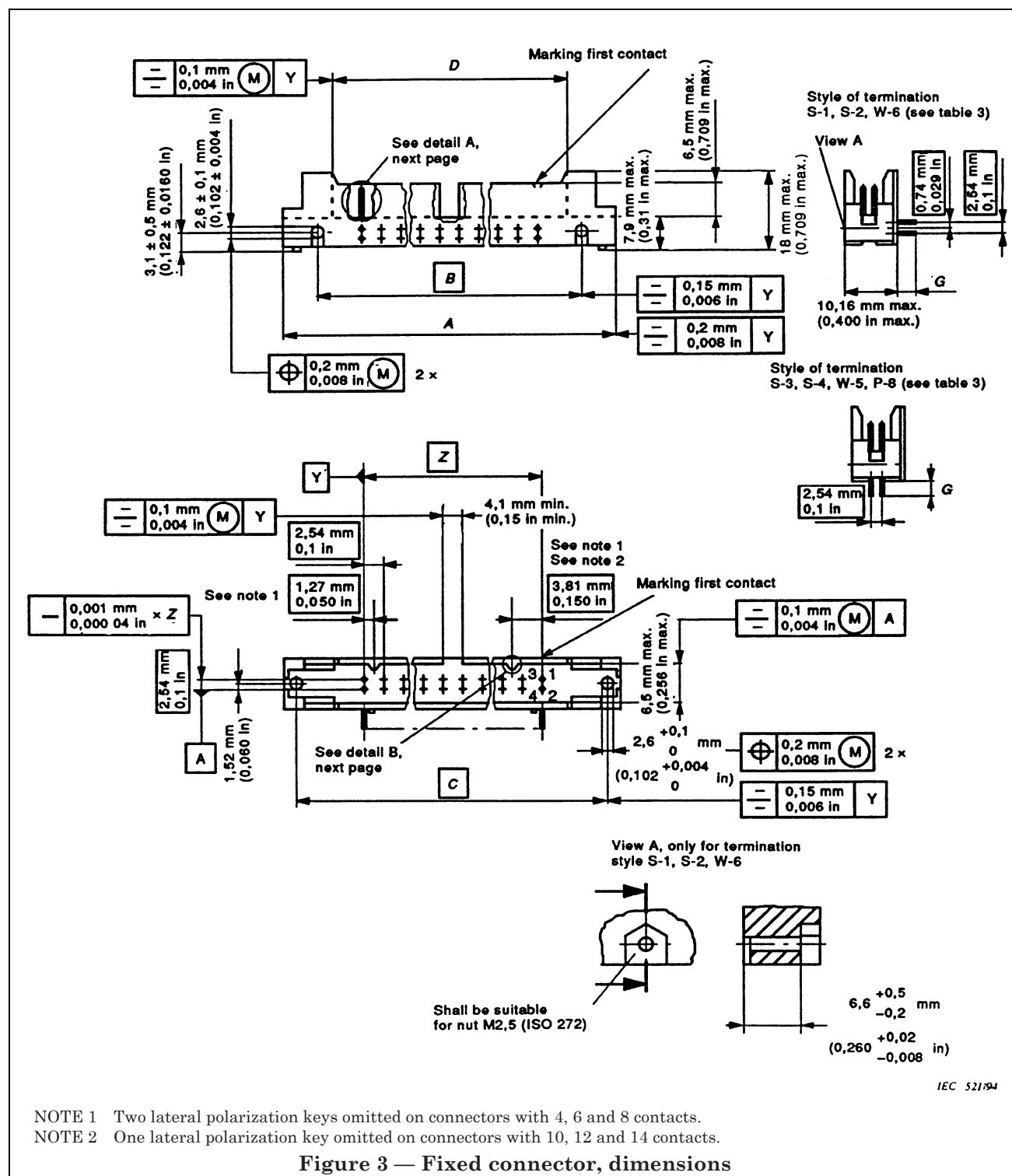
5.2.1.2 Terminations

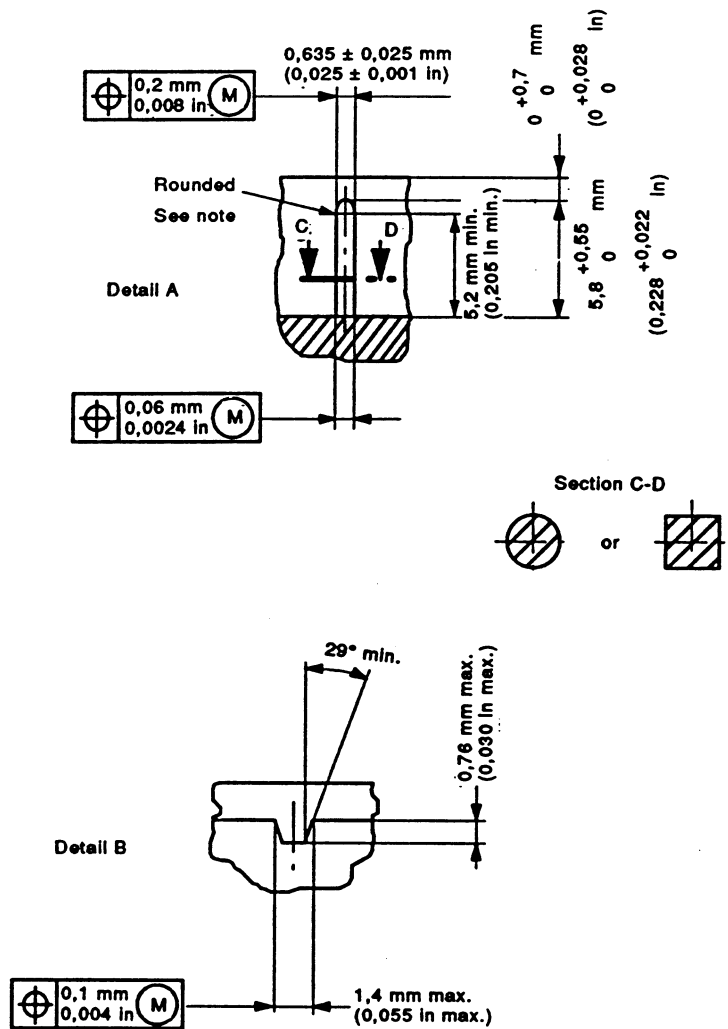
See Table 3.

¹⁾ The inch dimensions of this detail specification are based on a German national standard and are calculated by mathematic conversion. Differences of dimensions, if any, are caused by double mathematic conversion.

5.2.2 Fixed connector, style B (two lateral polarization keys in the connector and a central polarization slot)

5.2.2.1 Dimensions





NOTE Male contact all-over plated to ensure interchangeability.

Figure 4 — Fixed connector, details A and B