

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

**Part 6: Edge-socket connectors and
printed board connectors
with 2,54 mm (0,1 in) contact spacing
for single or double-sided printed
boards of 1,6 mm (0,063 in) nominal
thickness**

The European Standard EN 60603-6:1998 has the status of a
British Standard

ICS 31.220.10

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National foreword

This British Standard is the English language version of EN 60603-6:1998. It is identical with IEC 60603-6:1987.

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 international or European publications referred to in this document 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 38 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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ISBN 0 580 29299 1

Amendments issued since publication

Amd. No.	Date	Comments

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English version

Connectors for frequencies below 3 MHz for use with
printed boards Part 6: Edge-socket connectors and
printed-board connectors with 2,54 mm (0,1 in)
contact spacing for single or double-sided printed
boards of 1,6 mm (0,063 in) nominal thickness

(IEC 60603-6:1987)

Connecteurs pour fréquences inférieures
à 3 MHz pour utilisation avec cartes imprimées
Partie 6: Connecteurs encartables et pour
cartes imprimées à écartement des contacts
de 2,54 mm (0,1 in) pour cartes imprimées
simple ou double face, ayant une épaisseur
nominale de 1,6 mm (0,063 in)
(CEI 60603-6:1987)

Steckverbinder für gedruckte Schaltungen für
Frequenzen unter 3 MHz
Teil 6: Direkte Steckverbinder und
Steckverbinder für gedruckte Schaltungen
mit 2,54 mm (0,1 in) Kontaktabstand für
ein- oder beidseitig beschichtete Leiterplatten
mit 1,6 mm (0,063 in) Nenndicke
(IEC 60603-6:1987)

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

Foreword

The text of the International Standard IEC 60603-6:1987, 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 60603-6 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.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60603-6:1987 was approved by CENELEC as a European Standard without any modification.

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1 Scope

This standard covers a range of connectors with 2.54 mm (0.1 in) contact spacing intended to connect a single or double-sided printed board to another printed board or wires.

Two kinds are available:

Edge-socket connector

A connector with female contacts intended to mate with edge-board contacts and with printed-board connectors having male contacts.

Edge-socket connectors are available with:

- solder terminations for wire;
- solder terminations for board mounting;
- wrap terminations.

Printed-board connector

A connector having male contacts which when mounted on a printed board replaces the edge-board contacts.

Printed-board connectors are provided with solder terminations for single or double-sided boards of 1.6 mm (0.063 in) nominal thickness.

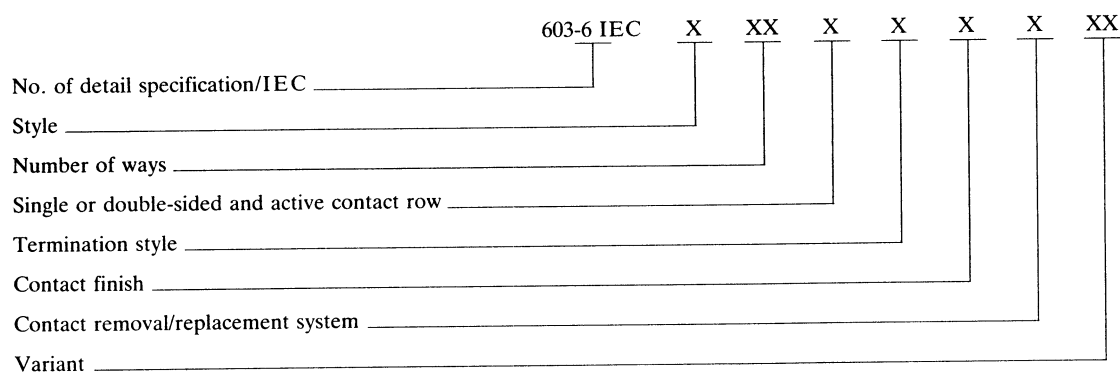
An edge-socket connector mated with a printed-board connector is referred to as a two-part connector in this standard.

The mandatory method of locating is by means of a guide key which replaces an opposite pair of contacts, and one such key is provided per connector (see also Sub-clause 4.5)

This standard shall be used in conjunction with the following IEC publications:

- Nos. 50 (581)(1978): International Electrotechnical Vocabulary, Chapter 581: Electromechanical Components for Electronic Equipment
- 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.
- 512-2 (1976): 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.
- 512-3 (1976): Part 3: Current-carrying Capacity Tests.
- 512-6 (1984): Part 6: Climatic Tests and Soldering Tests.
- 512-7 (1978): Part 7: Mechanical Operating Tests and Sealing Tests. Amendment No. 1 (1983).

2 IEC type designation



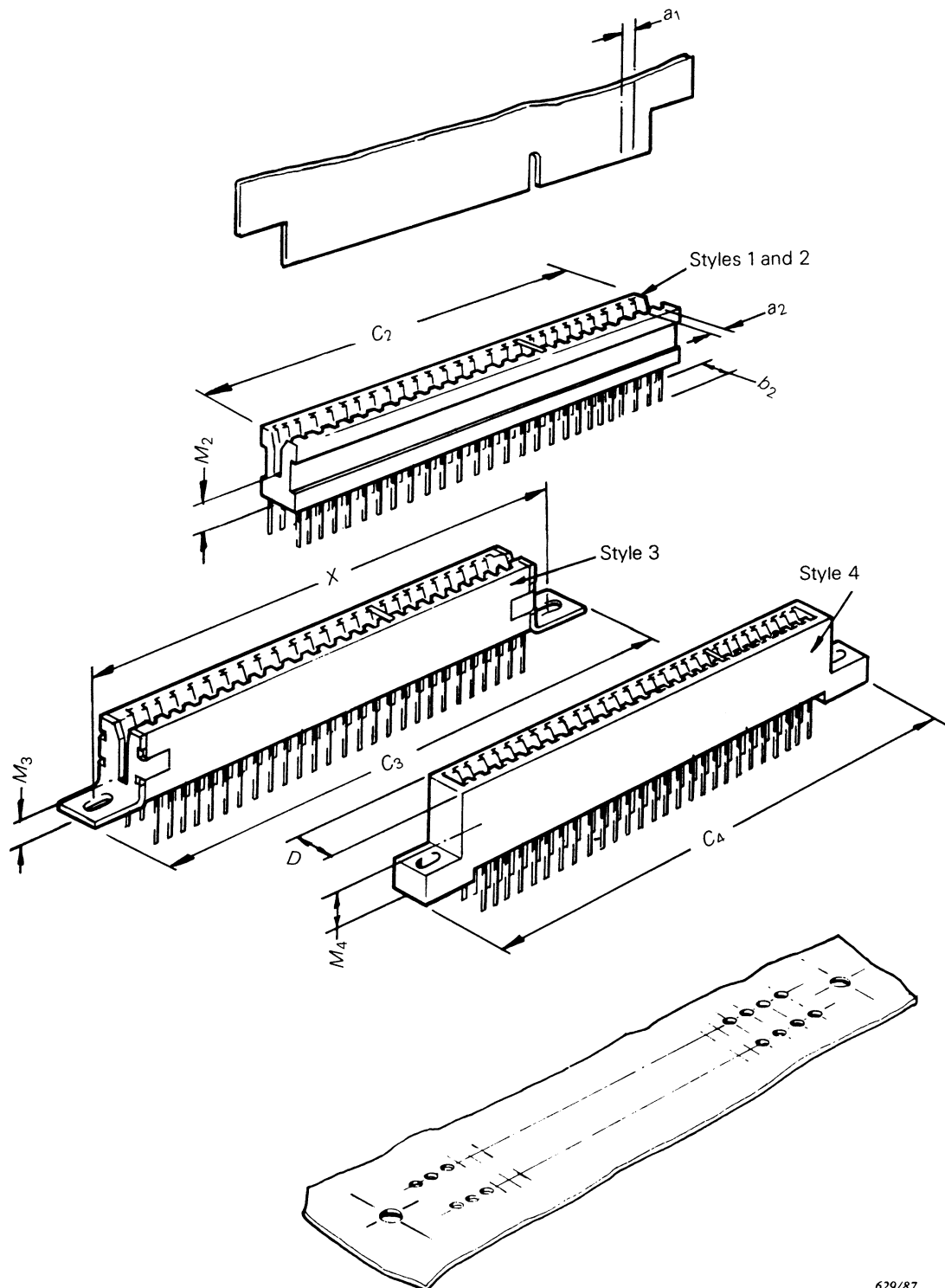
No. of detail specification/IEC: 603-6 IEC

Style:	As shown in Clauses 3 and 4 of this standard.
Number of ways:	Digits denoting the number of contact locations along one side of the connector. Maximum 85 for Styles 1, 2, 3 and 5, and 80 for Style 4.
Single or double-sided and active contact row:	A = single-sided, side A active, single row of terminations B = single-sided, side B active, single row of terminations E = single-sided, side A active, double row of terminations F = single-sided, side B active, double row of terminations D = double-sided, both sides active
Termination style:	S = solder terminations for wire B = solder terminations for printed board W = wrap terminations T = through-board solder, short termination L = through-board solder, long termination X = through-board solder, extra long termination
Contact finish:	A = gold alloy
Contact removal/replacement system:	A = rear release/front removable/replaceable contacts B = rear release/rear removable/replaceable contacts C = front release/front removable/replaceable contacts D = front release/rear removable/replaceable contacts
Variant:	Digits identifying individual connector, parts and associated tools for replacement purposes.
Example of type designation:	603-6 IEC A 80 B W A C XX

3 Common features

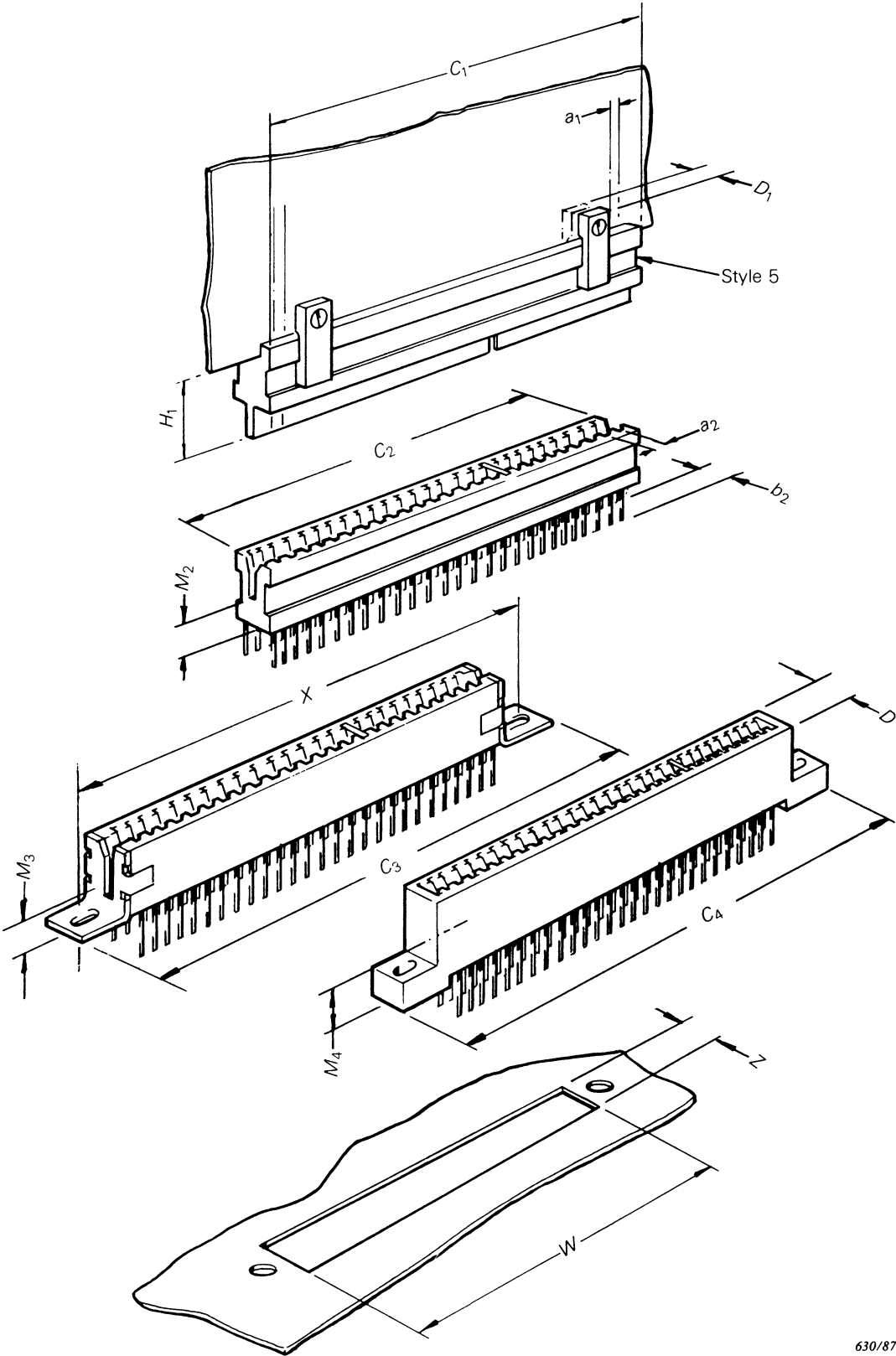
3.1 Perspective views

3.1.1 Edge-socket connector



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3.1.2 Printed-board connector



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3.1.3 Values

Reference letter	Legend
a_1	Pitch of terminations of printed-board connector
a_2	Pitch of contacts of edge-socket connector
b_2	Distance between two rows
C_1	Maximum overall length of printed-board connector
C_2	Maximum overall length of edge-socket connector
C_3	
C_4	
D	Maximum overall width of edge-socket connector
H_1	Distance between mating face of printed-board connector and board
M_2	Distance between mounting plane of edge-socket connector and bottom of board slot
M_3	
M_4	
W	Minimum length of mounting cut-out
X	Distance between fixing holes of edge-socket connector
Z	Minimum width of mounting cut-out

Reference letter	Printed-board connector Style 5	Edge-socket connector Styles 1 and 2	Edge-socket connector metal feet Style 3	Edge-socket connector closed ends Style 4
C_1 max.	$2.54 n + 0.43$ ($0.1 n + 0.017$)	—	—	—
C_2 max.	—	$2.54 n + 6$ ($0.1 n + 0.236$)	—	—
C_3 max.	—	—	$2.54 n + 30$ ($0.1 n + 1.18$)	—
C_4 max.	—	—	—	$2.54 n + 29.8$ ($0.1 n + 1.17$)
D max.	10 (0.394)	10,4 (0.41)	10,4 (0.41)	10,4 (0.41)
H_1	13.9/14.5 (0.55/0.57)	—	—	—
M_2 Style 1	—	4.24/6.0 (0.167/0.236)	—	—
M_2 Style 2	—	6.0/7.5 (0.236/0.295)	—	—
M_3, M_4	—	—	7.3/8.3 (0.29/0.33)	—
W	See page 20			
X	—	—	$25.4 n + 16.2$ ($0.1 n + 0.64$)	$25.4 n + 16.2$ ($0.1 n + 0.64$)
Z min.	—	11 (0.433)	11 (0.433)	11 (0.433)
a_1	2.54 (0.1)	2.54 (0.1)	2.54 (0.1)	2.54 (0.1)
a_2	2.54 (0.1)	2.54 (0.1)	2.54 (0.1)	2.54 (0.1)
b_2	5.08 (0.2)	5.08 (0.2)	5.08 (0.2)	5.08 (0.2)

NOTE 1 n = number of contact positions along one side of connector.

NOTE 2 Dimensions in millimetres (inch dimensions in parentheses).

4 Dimensions

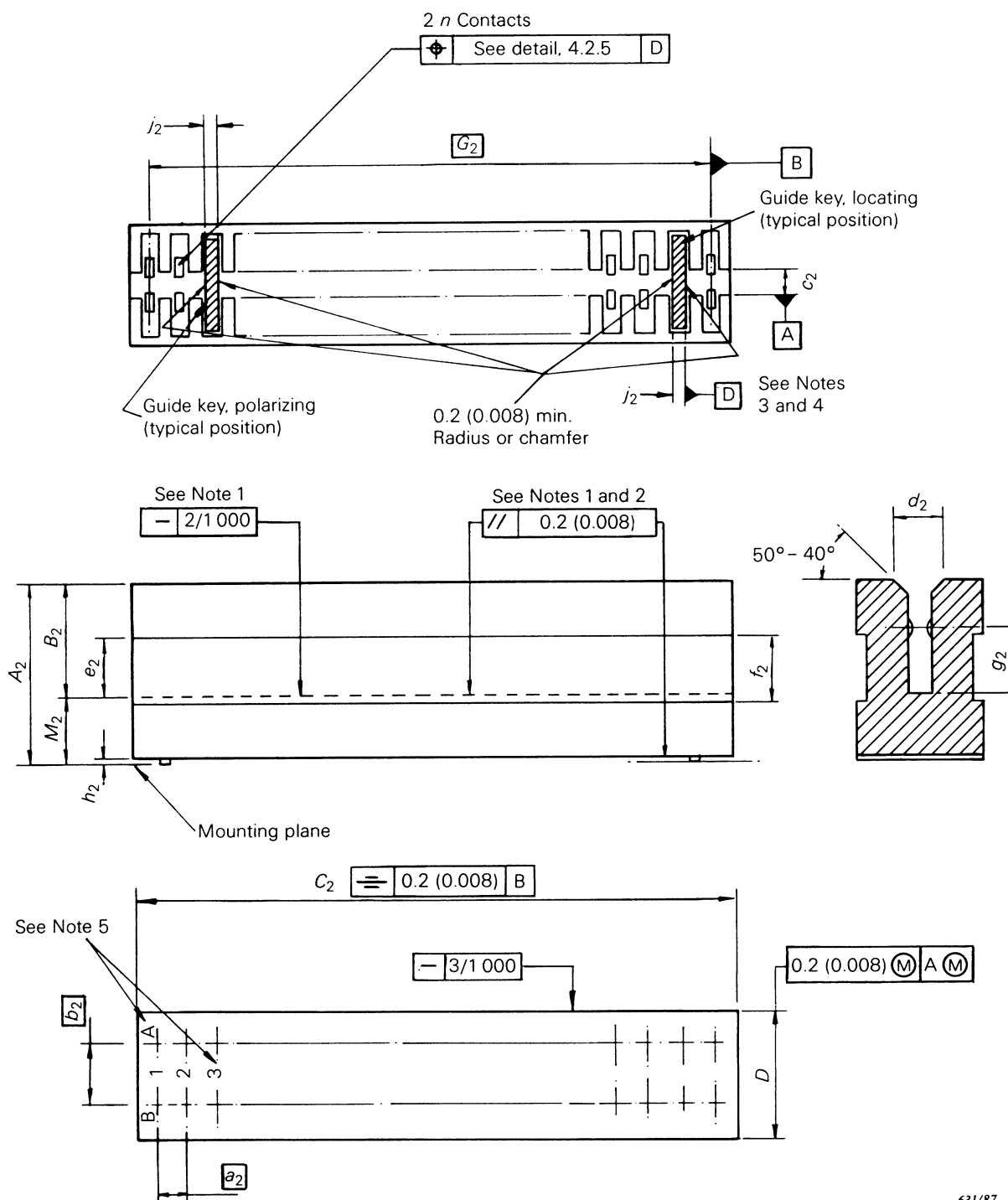
4.1 General

Dimensions in millimetres are original. 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.

4.2 Connectors

4.2.1 Edge-socket connector

Styles 1 and 2, open-ended.



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NOTE 1 This tolerance should lie within dimensions e_2 .

NOTE 2 This measurement should be made with the component mounted in the normal manner.

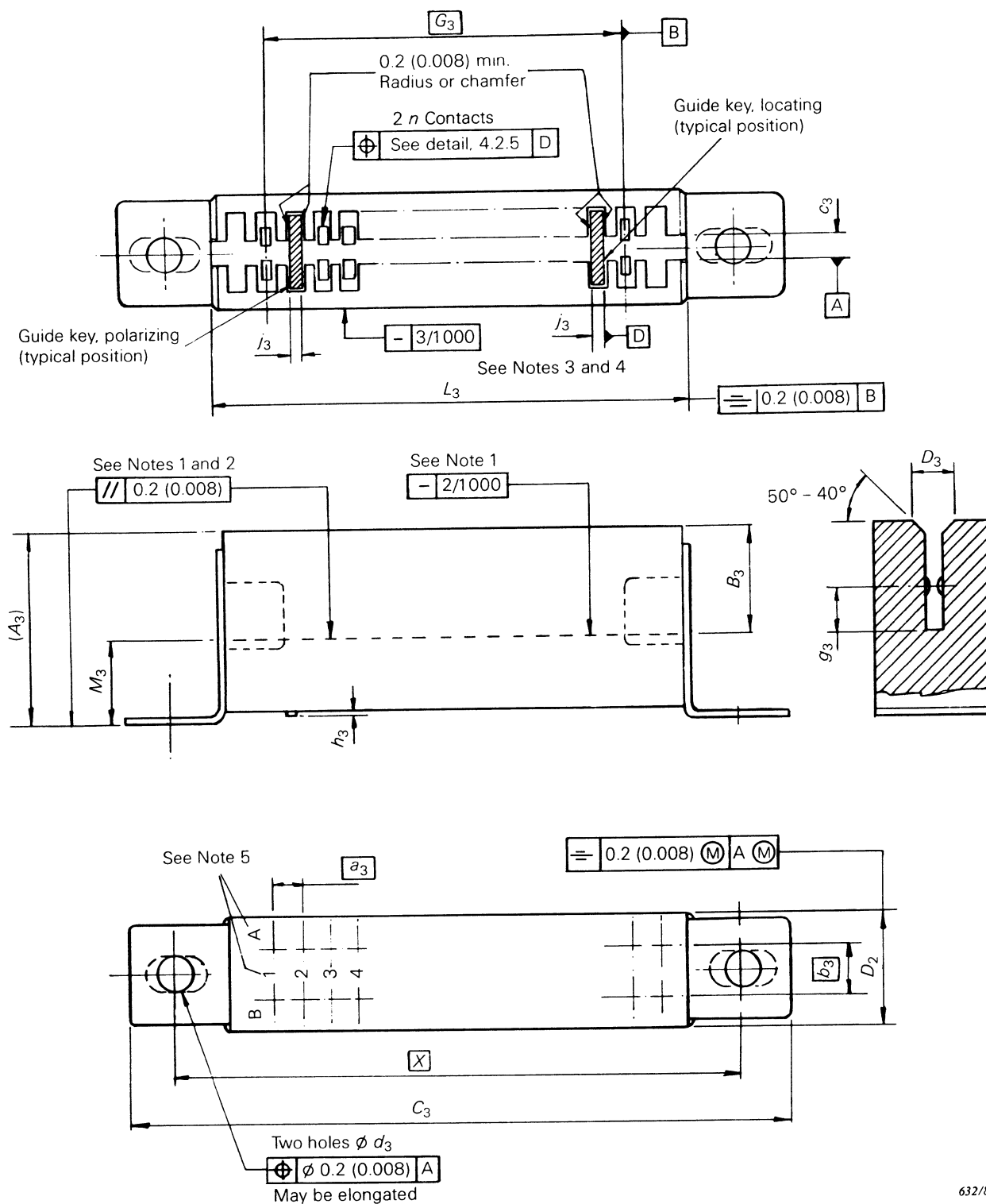
NOTE 3 Dimensions j_2 should be effective within card slot engagement area.

NOTE 4 Replacement guide keys and contacts should be identical to the originals.

NOTE 5 Row identification A and B is mandatory. Numerical marking is typical.

Dimension	mm	in
A_2 max.	16.3	0.642
B_2	9.3/7.8	0.37/0.31
C_2 max.	$2.54 n + 6$	$0.1 n + 0.236$
F_2 max.	10.4	0.41
G_2	$(n - 1) \times 2.54$	$(n - 1) \times 0.1$
M_2 style 1	4.24/6.0	0.167/0.236
M_2 style 2	6.0/7.5	0.236/0.295
a_2	2.54	0.1
b_2	5.08	0.2
c_2 min.	1.85	0.07
d_2 min.	3.10	0.12
e_2	4.3/5.0	0.17/0.20
f_2	5.05/5.20	0.199/0.205
g_2	See page 8	
h_2 min.	0.5	0.02
j_2	1.58/1.52	0.062/0.060
NOTE n = number of contact positions along one side of connector (maximum permissible = 85).		

4.2.2 Edge-socket connector, open-ended with metal mounting feet, Style 3



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- NOTE 1 This tolerance zone should lie within dimension M_3 .
- NOTE 2 These measurements should be made with the components mounted in the normal manner.
- NOTE 3 This dimension should be effective within card slot engagement area.
- NOTE 4 Replacement contacts and guide keys should be identical to the originals.
- NOTE 5 Row identification A and B is mandatory. Numerical marking is typical.