

SLOVENSKI STANDARD

SIST EN 60603-12:2002

01-september-2002

**Connectors for frequencies below 3 MHz for use with printed boards - Part 12:
Detail specification for dimensions, general requirements and tests for a range of
sockets designed for use with integrated circuits (IEC 60603-12:1992)**

Connectors for frequencies below 3 MHz for use with printed boards -- Part 12: Detail
specification for dimensions, general requirements and tests for a range of sockets
designed for use with integrated circuits

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Steckverbinder für gedruckte Schaltungen für Frequenzen unter 3 MHz -- Teil 12:
Bauartspezifikation für Maße, allgemeine Anforderungen und Prüfungen für eine Reihe
von Fassungen zur Aufnahme von integrierten Schaltungen

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Connecteurs pour fréquences inférieures à 3 MHz pour utilisation avec cartes imprimées
-- Partie 12: Spécification particulière pour les dimensions, les prescriptions générales et
les essais pour une gamme de socles conçus pour emploi avec circuits intégrés

Ta slovenski standard je istoveten z: EN 60603-12:1998

ICS:

31.220.10	Vtil' i in vtil' nice, konektorji	Plug-and-socket devices. Connectors
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en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60603-12

February 1998

ICS 31.220.10

Descriptors: Electronic components, electric connectors, printed-circuit cards, detail specifications, dimensions, general conditions tests, integrated circuits

English version

**Connectors for frequencies below 3 MHz for use with printed boards
Part 12: Detail specification for dimensions, general requirements and tests
for a range of sockets designed for use with integrated circuits
(IEC 60603-12:1992)**

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

Partie 12: Spécification particulière pour
les dimensions, les prescriptions
générales et les essais pour une gamme
de socles conçus pour emploi avec
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(CEI 60603-12:1992)

Steckverbinder für gedruckte
Schaltungen für Frequenzen unter
3 MHz

Teil 12: Bauartspezifikation für Maße,
allgemeine Anforderungen und
Prüfungen für eine Reihe von Fassungen
zur Aufnahme von integrierten
Schaltungen

(IEC 60603-12:1992)

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 60603-12:1992, 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 60603-12 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 60603-12:1992 was approved by CENELEC as a European Standard without any modification.

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CONNECTORS FOR FREQUENCIES BELOW 3 MHz FOR USE WITH PRINTED BOARDS

Part 12: Detail specification for dimensions, general requirements and tests for a range of sockets designed for use with integrated circuits

1 Scope

This part of IEC 603 covers dimensions, general requirements and tests for a range of sockets designed for use with integrated circuits in dual-in-line format (see IEC 191-2 specified outlines, e.g. A-50).

Sockets include standard type (see figures 6 and 7) and low-profile type (see figures 8 and 9).

Sockets with terminations for through-board insertion are intended for use with printed boards using a basic grid of 2,54 mm (0,1 in) as laid down in IEC 97.

Low-profile type sockets can be mounted side-by-side and end-to-end on a grid of 2,54 mm (0,1 in).

This detail specification does not cover test/burn-in sockets.

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

IEC 191-2: 1966, *Mechanical standardization of semiconductor devices – Part 2: Dimensions*.

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: 1977, *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 512-6: 1984, *Electromechanical components for electronic equipment; basic testing procedures and measuring methods – Part 6: Climatic tests and soldering tests.*

IEC 512-7: 1988, *Electromechanical components for electronic equipment; basic testing procedures and measuring methods – Part 7: Mechanical operating tests and sealing tests.*

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

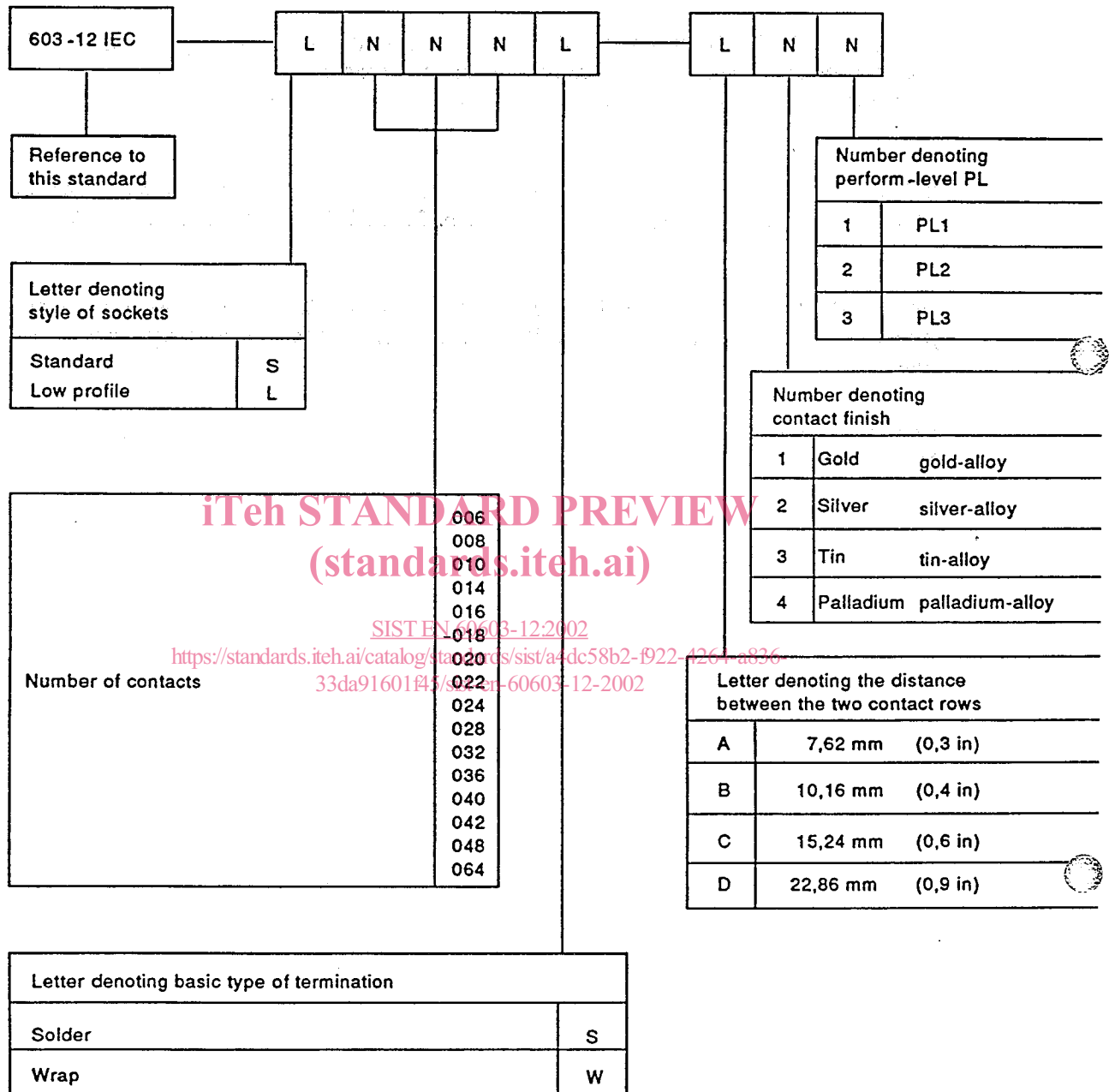
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3 IEC type designation

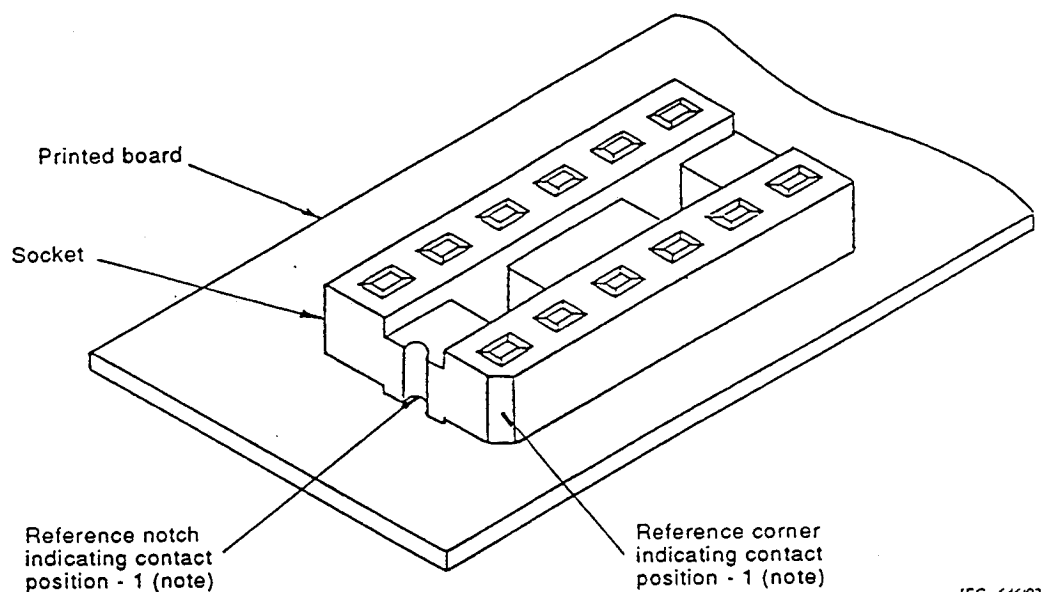
Sockets according to this part shall be designated by the following system:



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

4 Common features

4.1 Isometric view



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NOTE – Either notch or corner may be omitted.
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Figure 1

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4.2 Survey of types

Table 1

Number of contacts	06/08/10/14/16/18/20/22/24/28/32/36/40/42/48/64	
Current-carrying capacity	See 6.2.3	
Minimum creepage and clearance distance	Between contacts and chassis	See 6.2.1
	Between adjacent contacts	See 6.2.1

5 Dimensions

5.1 General

Dimensions are given in millimeters with inch equivalents. Dimensions in inches are original. Drawings are third angle projection. The shape of the connectors may deviate from that shown in the drawings so long as the specified dimensions are not influenced.

In cases where the tolerance is unspecified, $\pm 0,3$ mm (0,012 in) is the tolerance required for millimeter dimensions stated to one decimal place and $\pm 0,13$ mm (0,005 in) is the tolerance required for millimeter dimensions stated to two decimal places.

5.2 *Dual-in-line sockets*

5.2.1 *Solder termination*

Construction and dimensions should be in accordance with figures 6 and 8.

5.2.2 *Wrap post*

Construction and dimensions should be in accordance with figures 7 and 9.

5.2.3 *Contact retention force gauge*

Construction and dimensions should be in accordance with figure 10.

5.2.4 *Insertion force, withdrawal force and contact resistance gauges*

Construction and dimensions should be in accordance with figure 11.

6 *Characteristics*

6.1 *Climatic category*

Climatic categories are shown in table 2.

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Performance level	Category	Temperature range	Damp heat, steady state
PL1	55/100/56	– 55 °C to + 100 °C	56 days
PL2	55/100/21	– 55 °C to + 100 °C	21 days
PL3	40/085/21	– 40 °C to + 85 °C	21 days

6.2 *Electrical*

6.2.1 *Clearance and creepage distances*

The permissible operating voltages depend on the application and on the applicable or specified safety requirements. Therefore the clearance and creepage distances are given as operating characteristics.

The minimum clearance and creepage distance should be in accordance with table 3.

Table 3

Minimum distance		
Between contacts and chassis	Creepage	0,5 mm (0,02 in)
	Clearance	0,5 mm (0,02 in)
Between adjacent contacts	Creepage	0,5 mm (0,02 in)
	Clearance	0,5 mm (0,02 in)

6.2.2 Voltage proof

Conditions: IEC 512-2, test 4a, method B.
Standard atmospheric conditions.

Contact/contact: 500 V r.m.s.

The values are the same for performance levels PL1, PL2 and PL3.

6.2.3 Current-carrying capacity

Conditions: IEC 512-3, test 5a.

Current-carrying capacity: 0,5 A

Temperature rise Δt not to exceed 30 °C

6.2.4 Initial contact resistance

Conditions: IEC 512-2, test 2a.
Standard atmospheric conditions.

Connection points: according to 7.1.1.

Performance levels PL1 and PL2: 20 mΩ maximum.

Performance level PL3: 30 mΩ maximum.

6.2.5 Initial insulation resistance

Conditions: IEC 512-2, test 3a, method B.
Standard atmospheric conditions.

Test voltage: 500 V ± 50 V d.c.

All performance levels: 1 000 MΩ minimum.