

SLOVENSKI STANDARD

SIST EN 60352-4:2002

01-september-2002

Solderless connections - Part 4: Solderless non-accessible insulation displacement connections - General requirements, test methods and practical guidance (IEC 60352-4:1994)

Solderless connections -- Part 4: Solderless non-accessible insulation displacement connections - General requirements, test methods and practical guidance

Lötfreie elektrische Verbindungen -- Teil 4: Lötfreie nicht zugängliche Schneidklemmverbindungen - Allgemeine Anforderungen, Prüfverfahren und Anwendungshinweise

Connexions sans soudure -- Partie 4: Connexions autodénudantes, non accessibles sans soudure - Règles générales, méthodes d'essai et guide pratique

Ta slovenski standard je istoveten z: EN 60352-4:1994

ICS:

29.120.20 Spojni elementi Connecting devices

SIST EN 60352-4:2002

en

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EUROPEAN STANDARD

EN 60352-4

NORME EUROPEENNE

EUROPÄISCHE NORM

October 1994

ICS 29.120.20

Descriptors: Solderless connections, insulation displacement, not accessible

ENGLISH VERSION

Solderless connections

Part 4: Solderless non-accessible insulation
displacement connections - General requirements,
test methods and practical guidance
(IEC 352-4:1994)

Connexions sans soudure
Partie 4: Connexions
autodénudantes, non accessibles
sans soudure - Règles générales,
méthodes d'essai et guide
pratique

(CEI 352-4:1994)

Lötfreie elektrische
Verbindungen
Teil 4: Lötfreie
nichtzugängliche
Schneidklemmverbindungen
Allgemeine Anforderungen,
Prüfverfahren und
Anwendungshinweise
(IEC 352-4:1994)

iTeh STANDARD PREVIEW

This European Standard was approved by CENELEC on 1994-10-04.
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,
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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 document 48B(CO)251, as prepared by Sub-Committee 48B: Connectors, of IEC Technical Committee 48: Electromechanical components and mechanical structures for electronic equipment, was submitted to the IEC-CENELEC parallel vote in February 1994.

The reference document was approved by CENELEC as EN 60352-4 on 4 October 1994.

The following dates were fixed:

- latest date of publication of
an identical national standard (dop) 1995-10-01
- latest date of withdrawal of
conflicting national standards (dow) 1995-10-01

Annexes designated "normative" are part of the body of the standard. In this standard, annex ZA is normative.

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The text of the International Standard IEC 352-4:1994 was approved by CENELEC as a European Standard without any modification.

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ANNEX ZA (normative)

OTHER INTERNATIONAL PUBLICATIONS QUOTED IN THIS STANDARD
WITH THE REFERENCES OF THE RELEVANT 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.

NOTE : When the international publication has been modified by CENELEC common modifications, indicated by (mod), the relevant EN/HD applies.

IEC Publication	Date	Title	EN/HD	Date
-----	----	-----	-----	----
50(581)	1978	International Electrotechnical Vocabulary (IEV) - Chapter 581: Electromechanical components for electronic equipment	-	-
68-1	1988	Environmental testing - Part 1: General and guidance (corrigendum October 1988)	EN 60068-1*	1994
68-2-60	1990	Part 2: Tests - Test Ke: Corrosion tests in artificial atmosphere at very low concentration of polluting gas(es)	-	-
189-3 A1	1988 1989	Low-frequency cables and wires with PVC insulation and PVC sheath - Part 3: Equipment wires with solid or stranded conductor, PVC insulated, in singles, pairs and triples	-	-
326-2 A1	1990 1992	Printed boards - Part 2: Test methods	-	-
352-3	1993	Solderless connections - Part 3: Solderless accessible insulation displacement connections - General requirements, test methods and practical guidance	EN 60352-3	1994
512-1 A1	1984 1988	Electromechanical components for electronic equipment; basic testing procedures and measuring methods Part 1: General	EN 60512-1	1994

* EN 60068-1:1994 includes A1:1992 to IEC 68-1

IEC Publication -----	Date -----	Title -----	EN/HD -----	Date -----
512-2	1985	Part 2: General examination, electrical continuity and contact resistance tests, insulation tests and voltage stress tests	-	-
512-4	1976	Part 4: Dynamic stress tests	-	-
512-5	1992	Part 5: Impact tests (free components), static load tests (fixed components), endurance tests and overload test	-	-
512-6	1984	Part 6: Climatic tests and soldering tests	-	-
673 A3	1980 1989	Low-frequency miniature equipment wires with solid or stranded conductor, fluorinated polyhydrocarbon type insulation, single	-	-
918	1987	PVC insulated ribbon cable with a pitch of 1.27 mm suitable for insulation displacement termination.	-	-

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Other publication:

ISO 1463:1982 - Metallic and oxide coatings - Measurement of coating thickness
Microscopical method

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NORME INTERNATIONALE INTERNATIONAL STANDARD

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Première édition
First edition
1994-08

Connexions sans soudure –

Partie 4:

Connexions autodénudantes, non accessibles
sans soudure –

Règles générales, méthodes d'essai et
guide pratique

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Solderless connections –

Part 4:

Solderless non-accessible insulation
displacement connections –

General requirements, test methods
and practical guidance

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International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SOLDERLESS CONNECTIONS –

**Part 4: Solderless non-accessible insulation
displacement connections –
General requirements, test methods and practical guidance**

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.

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International Standard IEC 352-4 has been prepared by IEC 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)251	48B(CO)256

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

IEC 352 consists of the following parts, under the general title: *Solderless connections*:

- Part 1: 1983, *Solderless wrapped connections – General requirements, test methods and practical guidance*
- Part 2: 1990, *Solderless crimped connections – General requirements, test methods and practical guidance*

- Part 3: 1993, *Solderless accessible insulation displacement connections – General requirements, test methods and practical guidance*
- Part 4: 1994, *Solderless non-accessible insulation displacement connections – General requirements, test methods and practical guidance*

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INTRODUCTION

The two following parts of IEC 352 are available on solderless insulation displacement connections:

- Part 3: Solderless accessible insulation displacement connections – General requirements, test methods and practical guidance;
- Part 4: Solderless non-accessible insulation displacement connections – General requirements, test methods and practical guidance.

These parts include requirements, tests and practical guidance information.

Two test schedules are provided:

- the *basic test schedule* which applies to insulation displacement connections which conform to all requirements of section 2 of this standard;

These requirements are derived from experience with successful applications of such connections.

- the *full test schedule* which applies to insulation displacement connections which do not fully conform to all requirements of section 2, for example which are manufactured using materials or finishes not included in section 2.

This philosophy permits cost and time effective performance verification using a limited basic test schedule for established insulation displacement connections and an expanded full test schedule for connections requiring more extensive performance validation.

NOTE – In this standard the term "insulation displacement" is abbreviated to "ID", for example "ID connection", "ID termination".

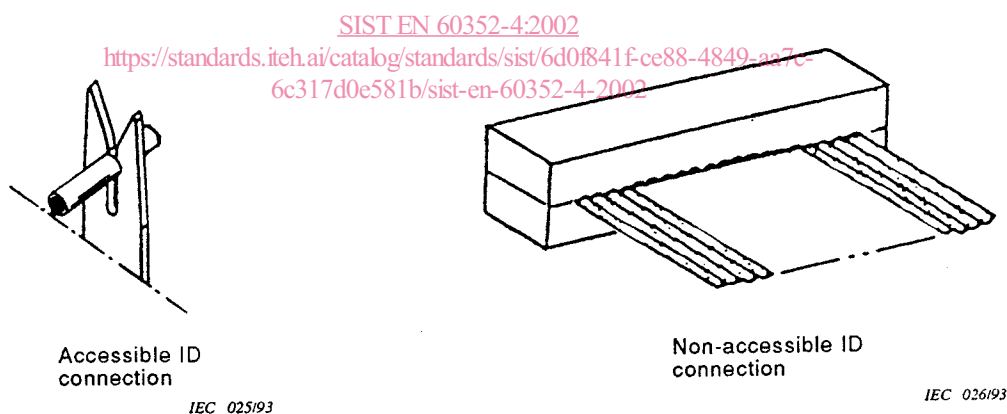


Figure 1 – Examples of accessible and non-accessible insulation displacement connections

SOLDERLESS CONNECTIONS –

Part 4: Solderless non-accessible insulation displacement connections – General requirements, test methods and practical guidance

Section 1: General

1 Scope

This part of IEC 352 is applicable to non-accessible ID connections for which the tests and measurements of section 3 are suitable and which are made with:

- appropriately designed ID terminations;
- wires having solid round conductors of 0,25 mm to 3,6 mm nominal diameter;
- wires having stranded conductors of 0,05 mm² to 10 mm² cross-section;

for use in telecommunication equipment and in electronic devices employing similar techniques.

Information on materials and data from industrial experience is included in addition to the test procedures to provide electrically stable connections under prescribed environmental conditions.

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<https://standards.iteh.ai/catalog/standards/sist/6d0f841f-ce88-4849-aa7c-6c317d0e581b/sist-en-60352-4-2002>

2 Object

The object of this part of IEC 352 is to:

- determine the suitability of non-accessible ID connections under specified mechanical, electrical and atmospheric conditions;
- provide a means of comparing test results when the tools used to make the connections are of different designs or manufacture.

There are different designs and materials for ID terminations in use. For this reason only fundamental parameters of the termination are specified while the performance requirements of the wire and the complete connection are specified in full detail.

3 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 352. 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 352 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 50 (581): 1978, *International Electrotechnical Vocabulary (IEV) – Chapter 581: Electro-mechanical components for electronic equipment*

IEC 68-1: 1988, *Environmental testing – Part 1: General and guidance*

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

IEC 189-3: 1988, *Low-frequency cables and wires with PVC insulation and PVC sheath – Part 3: Equipment wires with solid or stranded conductor, PVC insulated, in singles, pairs and triples*
Amendment 1 (1989)

IEC 326-2: 1990, *Printed boards – Part 2: Test methods*
Amendment 1 (1992)

IEC 352-3: 1993, *Solderless connections – Part 3: Solderless accessible insulation displacement connections – General requirements, tests methods and practical guidance*

IEC 512-1: 1984, *Electromechanical components for electronic equipment; basic testing procedures and measuring methods – Part 1: General*
Amendment 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*

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

IEC 673: 1980, *Low-frequency miniature equipment wires with solid or stranded conductor, fluorinated polyhydrocarbon type insulation, single*
Amendment 3 (1989)

IEC 918: 1987, *PVC insulated ribbon cable with a pitch of 1,27 mm suitable for insulation displacement termination*

ISO 1463: 1982, *Metallic and oxide coatings – Measurement of coating thickness – Microscopical method*