

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

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 60352-4:2002 sisaldab Euroopa standardi EN 60352-4:1994+A1:2000 ingliskeelset teksti.

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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)

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

The text of document 48B(CO)251, as prepared by Subcommittee 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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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".

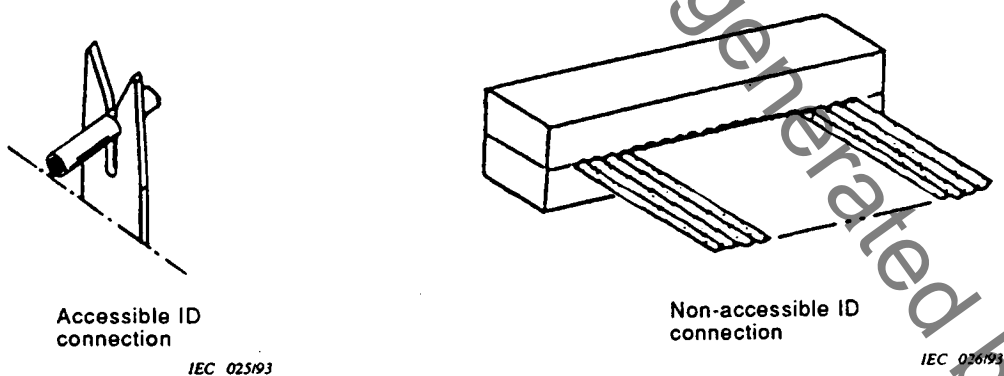


Figure 1 – Examples of accessible and non-accessible insulation displacement connections

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.

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*

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*