SLOVENSKI STANDARD

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Connectors for electronic equipment - Tests and measurements - Part 2-3: Electrical continuity and contact resistance tests - Test 2c: Contact resistance variation (IEC 60512-2-3:2002)

ICS 31.220.10

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EUROPEAN STANDARD **EN 60512-2-3**

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English version

Connectors for electronic equipment – Tests and measurements Part 2-3: Electrical continuity and contact resistance tests – Test 2c: Contact resistance variation

(IEC 60512-2-3:2002)

Connecteurs pour équipements électroniques – Essais et mesures Partie 2-3: Essais de continuité électrique et de résistance de contact – Essai 2c: Variation de la résistance de contact (CEI 60512-2-3:2002)

Steckverbinder für elektronische Einrichtungen – Mess- und Prüfverfahren Teil 2-3: Prüfungen des elektrischen Durchgangs und Durchgangswiderstands - Prüfung 2c: Schwankung des Durchgangswiderstands (IEC 60512-2-3:2002)

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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 document 48B/1131/FDIS, future edition 1 of IEC 60512-2-3, prepared by SC 48B, Connectors, of IEC TC 48, Electromechanical components and mechanical structures for electronic equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60512-2-3 on 2002-04-01.

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) 2003-01-01

– latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2005-04-01

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 60512-2-3:2002 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding 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 (including amendments).

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

Publication	Year	Title	EN/HD	Year
IEC 60512-2-1	- [1)]	Connectors for electronic equipment - Tests and measurements Part 2-1: Electrical continuity and contact resistance tests - Test 2a: Contact resistance - Millivolt level method	EN 60512-2-1	2002 [2)]

1) Undated reference.

2) Valid edition at date of issue.

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Connectors for electronic equipment – Tests and measurements –

Part 2-3: Electrical continuity and contact resistance tests – Test 2c: Contact resistance variation

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONNECTORS FOR ELECTRONIC EQUIPMENT – TESTS AND MEASUREMENTS –

Part 2-3: Electrical continuity and contact resistance tests – Test 2c: Contact resistance variation

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 co-operation 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 express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, 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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6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60512-2-3 has been prepared by subcommittee 48B: Connectors, of IEC technical committee 48: Electromechanical components and mechanical structures for electronic equipment.

This standard cancels and replaces test 2c of IEC 60512-2, issued in 1985, and constitutes a technical revision.

The text of this standard is based on the following documents:

FDIS	Report on voting
48B/1131/FDIS	48B/1182/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

The committee has decided that the contents of this publication will remain unchanged until 2007. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

CONNECTORS FOR ELECTRONIC EQUIPMENT – TESTS AND MEASUREMENTS –

Part 2-3: Electrical continuity and contact resistance tests – Test 2c: Contact resistance variation

1 General

1.1 Scope and object

This part of IEC 60512, when required by the detail specification, is used for testing electromechanical components within the scope of IEC technical committee 48. This test may also be used for similar devices when specified in a detail specification.

The object of this test is to define a standard test method to determine the variation of contact resistance of electromechanical components under specified dynamic conditions. This test should be carried out only on components the contact resistance of which is measured by test 2a.

1.2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 60512. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 60512 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60512-2-1: *Connectors for electronic equipment – Tests and measurements – Part 2-1: Electrical continuity and contact resistance tests – Test 2a: Contact resistance – Millivolt level method*

2 Preparations

2.1 Resources (equipment)

The variation of contact resistance shall be determined by means of an apparatus displaying the voltage drop measured between points specified in the detail specification.

This apparatus shall be adapted to the level of requirement in frequency bandwidth and sensitivity as specified in the detail specification, such as an oscilloscope or a recorder for low to high speed transient phenomena.

NOTE A frequency bandwidth from d.c. to 20 kHz and a sensitivity of 50 μV for a contact resistance variation of 1 mΩ should be appropriate for most cases.