

Connectors for electronic equipment - Tests and measurements Part 9-3: Endurance tests - Test 9c: Mechanical operation (engaging/separating) with electrical load

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 60512-9-3:2011 sisaldab Euroopa standardi EN 60512-9-3:2011 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 31.08.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 29.07.2011.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 60512-9-3:2011 consists of the English text of the European standard EN 60512-9-3:2011.

This standard is ratified with the order of Estonian Centre for Standardisation dated 31.08.2011 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 29.07.2011.

The standard is available from Estonian standardisation organisation.

ICS 31.220.10

Standardite reprodutseerimis- ja levitamise õigus kuulub Eesti Standardikeskusele

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English version

**Connectors for electronic equipment -
Tests and measurements -
Part 9-3: Endurance tests -
Test 9c: Mechanical operation (engaging/separating) with electrical load
(IEC 60512-9-3:2011)**

Connecteurs pour équipements
électroniques -
Essais et mesures -
Partie 9-3: Essais d'endurance -
Essai 9c: Fonctionnement mécanique
(d'accouplement et de désaccouplement)
avec charge électrique
(CEI 60512-9-3:2011)

Steckverbinder für elektronische
Einrichtungen – Mess- und Prüfverfahren -
Teil 9-3: Dauerprüfungen -
Prüfung 9c: Mechanische Lebensdauer
(Stecken und Ziehen) mit elektrischer
Belastung
(IEC 60512-9-3:2011)

This European Standard was approved by CENELEC on 2011-07-27. 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, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document (48B/2238/FDIS), future edition 2 of IEC 60512-9-3, 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 60512-9-3 on 2011-07-27.

This European Standard supersedes EN 60512-9-3:2006 + corr. Dec.2006.

The main technical changes with regard to EN 60512-9-3:2006 + corr. Dec.2006 are as follows:

- An additional requirement to 4.1 stating that if more than one electrical circuit is wired for testing, the wiring shall be carried out in a parallel electrical circuit.
- Subclauses 4.3 through 4.7 were removed and replaced by 4.2 through 4.4.

This standard is to be read in conjunction with EN 60512-1 and EN 60512-1-100, which explains the structure of the EN 60512 series.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

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) | 2012-04-27 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2014-07-27 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60512-9-3:2011 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-1	-	Environmental testing - Part 1: General and guidance	EN 60068-1	-
IEC 60068-2-13	-	Environmental testing - Part 2: Tests - Test M: Low air pressure	EN 60068-2-13	-
IEC 60512-1	-	Connectors for electronic equipment - Tests and measurements - Part 1: General	EN 60512-1	-
IEC 60512-1-1	-	Connectors for electronic equipment - Tests and measurements - Part 1-1: General examination - Test 1a: Visual examination	EN 60512-1-1	-
IEC 60512-1-100	-	Connectors for electronic equipment - Tests and measurements - Part 1-100: General - Applicable publications	EN 60512-1-100	-
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	EN 60512-2-1	-
IEC 60512-2-2	-	Connectors for electronic equipment - Tests and measurements - Part 2-2: Electrical continuity and contact resistance tests - Test 2b: Contact resistance - Specified test current method	EN 60512-2-2	-
IEC 60512-3-1	-	Connectors for electronic equipment - Tests and measurements - Part 3-1: Insulation tests - Test 3a: Insulation resistance	EN 60512-3-1	-
IEC 60512-4-1	-	Connectors for electronic equipment - Tests and measurements - Part 4-1: Voltage stress tests - Test 4a: Voltage proof	EN 60512-4-1	-

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CONNECTORS FOR ELECTRONIC EQUIPMENT – TESTS AND MEASUREMENTS –

Part 9-3: Endurance tests – Test 9c: Mechanical operation (engaging and separating) with electrical load

1 Scope and object

This part of IEC 60512, when required by the detail specification, is used for testing connectors 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 standard is to define a standard test method to assess the mechanical and electrical operational endurance, i.e. engaging and separating cycles, of a connector in an operating mode which includes a specified electrical load.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60068-1, *Environmental testing – Part 1: General and guidance*

IEC 60068-2-13, *Environmental testing – Part 2-13: Tests – Test M: Low air pressure*

IEC 60512-1, *Connectors for electronic equipment – Tests and measurements – Part 1: General*

IEC 60512-1-1, *Connectors for electronic equipment – Tests and measurements – Part 1-1: General examination – Test 1a: Visual examination*

IEC 60512-1-100, *Connectors for electronic equipment – Tests and measurements – Part 1-100: General – Applicable publications*

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*

IEC 60512-2-2, *Connectors for electronic equipment – Tests and measurements – Part 2-2: Electrical continuity and contact resistance tests – Test 2b: Contact resistance – Specified current method*

IEC 60512-3-1, *Connectors for electronic equipment – Tests and measurements – Part 3-1: Insulation tests – Test 3a: Insulation resistance*

IEC 60512-4-1, *Connectors for electronic equipment – Tests and measurements – Part 4-1: Voltage stress tests – Test 4a: Voltage proof*