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**Electromechanical components for electronic equipment - Basic testing procedure and measuring methods - Part 11: Climatic tests - Section 1: Test 11a - Climatic sequence (IEC 60512-11-1:1995)**

Electromechanical components for electronic equipment - Basic testing procedures and measuring methods -- Part 11: Climatic tests -- Section 1: Test 11a - Climatic sequence

Elektrisch-mechanische Bauelemente für elektronische Einrichtungen -- Meß- und Prüfverfahren -- Teil 11: Klimatische Prüfungen -- Hauptabschnitt 1: Prüfung 11a - Klimafolge

Composants électromécaniques pour équipements électroniques - Procédures d'essai de base et méthodes de mesure -- Partie 11: Essais climatiques -- Section 1: Essai 11a - Séquence climatique

**Ta slovenski standard je istoveten z: EN 60512-11-1:1999**

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**ICS:**

31.220.01	Elektromehanske komponente (sestavni deli, gradniki) na splošno	Electromechanical components in general
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**SIST EN 60512-11-1:2002****en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 60512-11-1**

January 1999

ICS 31.220.01

Descriptors: Electromechanical components, electronic equipment, measuring methods, climatic tests, climatic sequence

English version

**Electromechanical components for electronic equipment**  
**Basic testing procedures and measuring methods**  
**Part 11: Climatic tests**  
**Section 1: Test 11a - Climatic sequence**  
**(IEC 60512-11-1:1995)**

Composants électromécaniques pour  
équipements électroniques - Procédures  
d'essai de base et méthodes de mesure  
Partie 11: Essais climatiques  
Section 1: Essai 11a - Séquence  
climatique  
(CEI 60512-11-1:1995)

Elektrisch-mechanische Bauelemente für  
elektronische Einrichtungen  
Meß- und Prüfverfahren  
Teil 11: Klimatische Prüfungen  
Hauptabschnitt 1: Prüfung 11a  
Klimafolge  
(IEC 60512-11-1:1995)

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This European Standard was approved by CENELEC on 1999-01-01. 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 60512-11-1:1995, 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 60512-11-1 on 1999-01-01 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) 2000-01-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2000-01-01

This standard is to be used in conjunction with EN 60512-1:1994.

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.

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Endorsement notice

The text of the International Standard IEC 60512-11-1:1995 was approved by CENELEC as a European Standard without any modification.

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**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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-61	1991	Environmental testing Part 2: Test methods - Test Z/ABDM: Climatic sequence	EN 60068-2-61	1993
IEC 60512-2	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 60512-7	1993	Part 7: Mechanical operating tests and sealing tests	-	-
IEC 60512-9	1992	Part 9: Miscellaneous tests	-	-

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**Composants électromécaniques  
pour équipements électroniques –  
Procédures d'essai de base et méthodes  
de mesure**

iTeh STANDARD PREVIEW

**Partie 11:**  
Essais climatiques –  
Section 1: Essai 11a – Séquence climatique

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**Electromechanical components for electronic  
equipment – Basic testing procedures and  
measuring methods**

**Part 11:**  
Climatic tests –  
Section 1: Test 11a – Climatic sequence

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International Electrotechnical Commission  
Международная Электротехническая Комиссия

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTROMECHANICAL COMPONENTS FOR ELECTRONIC  
EQUIPMENT – BASIC TESTING PROCEDURES AND  
MEASURING METHODS –**

**Part 11: Climatic tests –**

**Section 1: Test 11a – Climatic sequence**

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.

International Standard IEC 512-11-1 has been prepared by 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:

FDIS	Report on voting
48B/415/FDIS	48B/447/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 standard cancels and replaces clause 1 of IEC 512-6 (test 11a). It should be used in conjunction with Part 1: General, issued as IEC 512-1.

The complete publication will include other tests which will be issued as they become available.



# ELECTROMECHANICAL COMPONENTS FOR ELECTRONIC EQUIPMENT – BASIC TESTING PROCEDURES AND MEASURING METHODS –

## Part 11: Climatic tests –

### Section 1: Test 11a – Climatic sequence

#### 1 Scope and object

This section of IEC 512-11 defines a standard test method to assess the ability of a component to function in a specified manner, in a specified environment which might be encountered during normal use, including storage.

NOTE – This series of documents is in the process of being revised; the future numbering is given in brackets.

#### 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this section of IEC 512-11. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this section of IEC 512-11 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.

[SIST EN 60512-11-1:2002](https://standards.iteh.ai/catalog/standards/sist/0e22c5b5-8e5c-463d-bf46-60d41ackd411/sist-en-60512-11-1-2002)

IEC 68-2-61: 1991, *Environmental testing – Part 2: Tests – Test Z/ABDM: Climatic sequence*

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 512-7: 1993, *Electromechanical components for electronic equipment; basic testing procedures and measuring methods – Part 7: Mechanical operating tests and sealing tests*

IEC 512-9: 1992, *Electromechanical components for electronic equipment; basic testing procedures and measuring methods – Part 9: Miscellaneous tests*

#### 3 Preparation of the specimen

##### 3.1 Mechanical preparation

The specimen, equipped with any accessories normally supplied with the component, shall be mounted and wired in accordance with the detail specification (if appropriate).

When required by the detail specification, the specimen shall be operated the number of times specified prior to test.