



SLOVENSKI STANDARD

SIST EN 61340-5-1:2002

01-maj-2002

Electrostatics - Part 5-1: Protection of electronic devices from electrostatic phenomena - General requirements

Electrostatics -- Part 5-1: Protection of electronic devices from electrostatic phenomena - General requirements

Elektrostatik -- Teil 5-1: Schutz von elektronischen Bauelementen gegen elektrostatische Phänomene - Allgemeine Anforderungen

Electrostatique -- Partie 5-1: Protection des dispositifs électroniques contre les phénomènes électrostatiques - Prescriptions générales

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Ta slovenski standard je istoveten z: EN 61340-5-1:2001

ICS:

17.220.99	Drugi standardi v zvezi z elektriko in magnetizmom	Other standards related to electricity and magnetism
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EUROPEAN STANDARD

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Electrostatics
Part 5-1: Protection of electronic devices
from electrostatic phenomena -
General requirements
 (IEC 61340-5-1:1998 + corrigendum 1999)

Electrostatique
 Partie 5-1: Protection des dispositifs
 électroniques contre les phénomènes
 électrostatiques -

Prescriptions générales
 (CEI 61340-5-1:1998 + corrigendum 1999)

Elektrostatik

Teil 5-1: Schutz von elektronischen
 Bauelementen gegen elektrostatische
 Phänomene -

Allgemeine Anforderungen

(IEC 61340-5-1:1998 + corrigendum 1999)

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This European Standard was approved by CENELEC on 2000-08-01. 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 Technical Report IEC 61340-5-1:1998 + corrigendum February 1999, prepared by IEC TC 101, Electrostatics, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 61340-5-1 on 2000-08-01 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) 2001-10-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2003-08-01

Annexes designated "normative" are part of the body of the standard.
Annexes designated "informative" are given for information only.
In this standard, annexes A and ZA are normative and annexes B and C are informative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the Technical Report IEC 61340-5-1:1998 + corrigendum February 1999 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 60093	1980	Methods of test for volume resistivity and surface resistivity of solid electrical insulating materials	HD 429 S1	1983
IEC 60167	1964	Methods of test for the determination of the insulation resistance of solid insulating materials	HD 568 S1	1990
IEC 60364 (mod)	Series	Electrical installations of buildings Part 1: Scope, object and fundamental principles	HD 384	Series
IEC 60417	1973	Graphical symbols for use on equipment Index, survey and compilation of the single sheets	HD 243 S12 ¹⁾	1995
IEC 60479-1	1994	Effects of current on human beings and livestock Part 1: General aspects	-	-
IEC 60479-2	1987	Part 2: Special aspects	-	-
IEC 60536	1976	Classification of electrical and electronic equipment with regard to protection against electric shock	HD 366 S1 ²⁾	1977
IEC 61010-1 (mod)	1990	Safety requirements for electrical equipment for measurement, control and laboratory use Part 1: General requirements	EN 61010-1 ³⁾	1993

¹⁾ HD 243 is superseded by EN 60417-1:1999 and EN 60417-2:1999, which are based on IEC 60417-1:1998 and IEC 60417-2:1998.

²⁾ HD 366 is superseded by EN 61140:2001, which is based on IEC 61140:1997.

³⁾ EN 61010-1 is superseded by EN 61010-1:2001, which is based on IEC 61010-1:2001.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61340-4-1	1995	Electrostatics Part 4-1: Standard test methods for specific applications - Electrostatic behaviour of floor coverings and installed floors	-	-
IEC 61340-5-2	1999	Part 5-2: Protection of electronic devices from electrostatic phenomena - User guide	EN 61340-5-2	2001
ISO 14644-1	1999	Cleanrooms and associated controlled environments Part 1: Classification of air cleanliness	EN ISO 14644-1	1999

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61340-5-1

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Electrostatique –

Partie 5-1:

Protection des dispositifs électroniques contre les phénomènes électrostatiques –

Prescriptions générales

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Electrostatics –

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Part 5-1:

Protection of electronic devices from electrostatic phenomena –

General requirements

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTROSTATICS –

Part 5-1: Protection of electronic devices from
electrostatic phenomena – General requirements

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 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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- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 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.

The main task of IEC technical committees is to prepare International Standards. In exceptional circumstances, a technical committee may propose the publication of a technical report of one of the following types:

- type 1, when the required support cannot be obtained for the publication of an International Standard, despite repeated efforts;
- type 2, when the subject is still under technical development or where for any other reason there is the future but no immediate possibility of an agreement on an International Standard;
- type 3, when a technical committee has collected data of a different kind from that which is normally published as an International Standard, for example "state of the art".

Technical reports of types 1 and 2 are subject to review within three years of publication to decide whether they can be transformed into International Standards. Technical reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

IEC 61340-5-1, which is a technical report of type 2, has been prepared by IEC technical committee 101: Electrostatics.

The text of this technical report is based on the following documents:

Committee draft	Report on voting
101/18/CDV	101/38/RVC

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

This document is issued in the type 2 technical report series of publications (according to G.3.2.2 of part 1 of the IEC/ISO Directives) as a "prospective standard for provisional application in the field of protection of electronic devices from electrostatic phenomena" because there is an urgent requirement for guidance on how standards in this field should be used to meet an identified need.

This document is not to be regarded as an "International Standard". It is proposed for provisional application so that information and experience of its use in practice may be gathered. Comments on the content of this document should be sent to the IEC Central Office.

A review of this type 2 technical report will be carried out not later than three years after its publication, with the options of either extension for a further three years or conversion into an International Standard or withdrawal.

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Annex A forms an integral part of this technical report.

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Annexes B and C are for information only. [standards/sist/8b7607ed-84a2-48f6-838d-aa41f5830b7a/sist-en-61340-5-1-2002](#)

IEC 61340 consists of the following parts, under the general title: *Electrostatics*

- Part 1: General
- Part 2-1: Measurement methods in electrostatics – Chargeability
- Part 2-2: Measurement methods in electrostatics – Resistances and resistivities
- Part 3-1: Methods for simulating electrostatic effects – Electrostatic discharge simulation – Human Body Model (HBM)
- Part 3-2: Methods for simulating electrostatic effects – Electrostatic discharge simulation – Machine Model (MM)
- Part 3-3: Methods for simulating electrostatic effects – Electrostatic discharge simulation – Charged Device Model (CDM)
- Part 4-1: Standard test methods for specific applications – Electrostatic behaviour of floor coverings and installed floors
- Part 4-2: Under consideration
- Part 4-3: Standard test methods for specific applications – Test methods for the characterisation of electrostatic protective footwear
- Part 5-1: Protection of electronic devices from electrostatic phenomena – General requirements
- Part 5-2: Protection of electronic devices from electrostatic phenomena – User guide

The contents of the corrigendum of February 1999 have been included in this copy.