SVENSK STANDARD

SS-EN IEC 61340-5-3, utg 3:2022

Fastställd	Sida	Ansvarig kommitté
2022-10-19	1 (1+25)	SEK TK 101

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Elektrostatiska urladdningar (ESD) – Del 5-3: Skydd av elektronik – Klassning av egenskaper och fordringar för förpackningar för ESD-känsliga komponenter

Electrostatics –
Part 5-3: Protection of electronic devices from electrostatic phenomena –
Properties and requirements classification for packaging intended for electrostatic discharge sensitive devices

Som svensk standard gäller europastandarden EN IEC 61340-5-3:2022. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 61340-5-3:2022.

Nationellt förord

Europastandarden EN IEC 61340-5-3:2022

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 61340-5-3, Third edition, 2022 - Electrostatics - Part 5-3: Protection of electronic devices from electrostatic phenomena - Properties and requirements classification for packaging intended for electrostatic discharge sensitive devices**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 61340-5-3, utg 2:2015, gäller ej fr o m 2025-06-01.

ICS 17.220.99; 29.020.00

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Telefon: 08 - 444 14 00.
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SEK Svensk Elstandard
Box 1284
164 29 Kista
Tel 08-444 14 00
www.elstandard.se

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61340-5-3

June 2022

ICS 17.220.99; 29.020

Supersedes EN 61340-5-3:2015

English Version

Electrostatics - Part 5-3: Protection of electronic devices from electrostatic phenomena - Properties and requirements classification for packaging intended for electrostatic discharge sensitive devices (IEC 61340-5-3:2022)

Electrostatique - Partie 5-3: Protection des dispositifs électroniques contre les phénomènes électrostatiques - Classification des propriétés et des exigences relatives à l'emballage destiné aux dispositifs sensibles aux décharges électrostatiques (IEC 61340-5-3:2022)

Elektrostatik - Teil 5-3: Schutz von elektronischen Bauelementen gegen elektrostatische Phänomene - Eigenschaften und Anforderungen für die Klassifizierung von Verpackungen, welche für Bauelemente verwendet werden, die gegen elektrostatische Entladungen empfindlich sind (IEC 61340-5-3:2022)

This European Standard was approved by CENELEC on 2022-06-01. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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Ref. No. EN IEC 61340-5-3:2022 E

European foreword

The text of document 101/649/FDIS, future edition 3 of IEC 61340-5-3, prepared by IEC/TC 101 "Electrostatics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61340-5-3:2022.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2023-03-01
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2025-06-01

This document supersedes EN 61340-5-3:2015 and all of its amendments and corrigenda (if any).

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

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 61340-5-3:2022 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 61340-5-1 NOTE Harmonized as EN 61340-5-1

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 61340-2-3	-	Electrostatics - Part 2-3: Methods of test for determining the resistance and resistivity of solid materials used to avoid electrostatic charge accumulation	EN 61340-2-3	-
IEC 61340-4-8	-	Electrostatics - Part 4-8: Standard test methods for specific applications - Electrostatic discharge shielding - Bags	EN 61340-4-8	-

IEC 61340-5-3

Edition 3.0 2022-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Electrostatics – Part 5-3: Protection of electronic devices from electrostatic phenomena – Properties and requirements classification for packaging intended for electrostatic discharge sensitive devices

Électrostatique – Partie 5-3: Protection des dispositifs électroniques contre les phénomènes électrostatiques – Classification des propriétés et des exigences relatives à l'emballage destiné aux dispositifs sensibles aux décharges électrostatiques

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ELECTROSTATICS –

Part 5-3: Protection of electronic devices from electrostatic phenomena – Properties and requirements classification for packaging intended for electrostatic discharge sensitive devices

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). 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. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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IEC 61340-5-3 has been prepared by IEC technical committee 101: Electrostatics. It is an International Standard.

This third edition cancels and replaces the second edition published in 2015. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) reference to IEC 61340-4-10[1] [1][2] was removed;
b) material resistance property "electrostatic field shielding" was removed;

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1 Withdrawn.

2 Numbers in square brackets refer to the bibliography.

c) the requirement for electrostatic discharge shielding was changed from 50 nJ to 20 nJ;
d) Table 1 – footnote "b" was changed to mention the two-point probe in IEC 61340-2-3;
e) "shall be marked" was changed to "should be marked" in 7.2.2 and 7.2.3;
f) Table 3 – the classification symbol and the primary function code F was removed;
g) Table A.2 – references to IEC TS 61340-5-4 [2] and IEC TR 61340-5-5 [3] were added;
h) Annex C – guidance regarding electric field shielding was added;
i) Annex D – low charging material property was added.

The text of this International Standard is based on the following documents:

Draft	Report on voting
101/649/FDIS	101/660/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

A list of all parts in the IEC 61340 series, published under the general title *Electrostatics*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

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

INTRODUCTION

Packaging is necessary to protect electrostatic discharge sensitive devices (ESDSs) from static electricity and electrostatic discharge (ESD) damage as well as physical and environmental damage during manufacture, transportation and storage.

ELECTROSTATICS –

Part 5-3: Protection of electronic devices from electrostatic phenomena – Properties and requirements classification for packaging intended for electrostatic discharge sensitive devices

1 Scope

This part of IEC 61340 defines the ESD protective packaging properties required to protect ESD sensitive devices (ESDSs) through all phases of production, rework and maintenance, transport and storage. Test methods are referenced to evaluate packaging and packaging materials for these product and material properties. Performance limits are provided.

This document does not address protection from electromagnetic interference (EMI), electromagnetic pulsing (EMP) or protection of electrically initiated explosive materials or devices.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 61340-2-3, *Electrostatics – Part 2-3: Methods of test for determining the resistance and resistivity of solid materials used to avoid electrostatic charge accumulation*

IEC 61340-4-8, *Electrostatics – Part 4-8: Standard test methods for specific applications – Electrostatic discharge shielding – Bags*