SLOVENSKI STANDARD
SIST EN IEC 62984-2:2021

01-februar-2021

Visokotemperaturne sekundarne baterije - 2. del: Varnostne zahteve in preskusi

High Temperature secondary Batteries - Part 2: Safety requirements and tests

Batteries d'accumulateur à haute temperature - Partie 2: Prescriptions de sécurité et essais

Ta slovenski standard je istoveten z: **EN IEC 62984-2:2020**

ICS:

29.220.20	Kislinski sekundarni členi in baterije	Acid secondary cells and batteries

SIST EN IEC 62984-2:2021 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 62984-2

May 2020

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English Version

High-temperature secondary batteries - Part 2: Safety requirements and tests (IEC 62984-2:2020)

Batteries d'accumulateurs à haute température - Partie 2: Exigences de sécurité et essais (IEC 62984-2:2020)

Hochtemperatur-Sekundärbatterien - Teil 2: Sicherheitsanforderungen und Prüfungen von Zellen und Batterien (IEC 62984-2:2020)

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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

Ref. No. EN IEC 62984-2:2020 E

European foreword

The text of document 21/1032/FDIS, future edition 1 of IEC 62984-2, prepared by IEC/TC 21 "Secondary cells and batteries" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62984-2:2020.

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) 2021-01-15
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-04-15

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Endorsement notice

The text of the International Standard IEC 62984-2:2020 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60068-2-64	NOTE	Harmonized as EN 60068-2-64
IEC 60068-2-75	NOTE	Harmonized as EN 60068-2-75
IEC 60721-3-2	NOTE	Harmonized as EN IEC 60721-3-2
IEC 60952 (series)	NOTE	Harmonized as EN 60952 (series)
IEC 61982 (series)	NOTE	Harmonized as EN 61982 (series)
IEC 62262	NOTE	Harmonized as EN 62262
IEC 61373	NOTE	Harmonized as EN 61373

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 60068-2-18	2017	Environmental testing - Part 2-18: Tests - Test R and guidance: Water	EN 60068-2-18	2017
IEC 60112	-	Method for the determination of the proof and the comparative tracking indices of solid insulating materials	EN 60112	-
IEC 60204-1	-	Safety of machinery - Electrical equipment of machines - Part 1: General requirements	EN 60204-1	-
IEC 60529	-	Degrees of protection provided by enclosures (IP Code)	-	-
IEC 60664-1	2007	Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests	EN 60664-1	2007
IEC 61140	2016	Protection against electric shock - Common aspects for installation and equipment	EN 61140	2016
IEC 61508	series	Functional safety of electrical/electronic/programmable electronic safety-related systems	EN 61508	series
IEC 62984-1	2020	High-temperature secondary batteries - Part 1: General requirements	-	-

IEC 62984-2

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colour inside

High-temperature secondary batteries – Part 2: Safety requirements and tests

Batteries d'accumulateurs à haute température – Partie 2: Exigences de sécurité et essais

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COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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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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International Standard IEC 62984-2 has been prepared by IEC technical committee 21: Secondary cells and batteries.

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

FDIS	Report on voting
21/1032/FDIS	21/1042/RVD

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

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

This document is to be read in conjunction with IEC 62984-1:2020.

A list of all parts in the IEC 62984 series, published under the general title *High-temperature secondary batteries*, 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 "http://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.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

HIGH-TEMPERATURE SECONDARY BATTERIES –

Part 2: Safety requirements and tests

1 Scope

This part of IEC 62984 specifies safety requirements and test procedures for high-temperature batteries for mobile and/or stationary use and whose rated voltage does not exceed 1 500 V.

This document does not cover aircraft batteries, which are covered by IEC 60952 (all parts), and batteries for the propulsion of electric road vehicles, covered by IEC 61982 (all parts).

NOTE High-temperature batteries are electrochemical systems whose cells' internal minimum operating temperature is above 100 °C.

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 60068-2-18:2017, *Environmental testing – Part 2-18: Tests – Test R and guidance: Water*

IEC 60112, *Method for the determination of the proof and the comparative tracking indices of solid insulating materials*

IEC 60204-1, *Safety of machinery – Electrical equipment of machines – Part 1: General requirements*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 60664-1:2007, *Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests*

IEC 61140:2016, *Protection against electric shock – Common aspects for installation and equipment*

IEC 61508 (all parts), *Functional safety of electrical/electronic/programmable electronic safety-related systems*

IEC 62984-1:2020, *High-temperature secondary batteries – Part 1: General requirements*

3 Terms, definitions, symbols and abbreviated terms

For the purposes of this document, the terms and definitions given in IEC 62984-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/

- ISO Online browsing platform: available at http://www.iso.org/obp

3.1 Battery safety

3.1.1
rated insulation voltage
rated value of the RMS withstand voltage assigned by the manufacturer to the equipment or to a part of it, characterizing the specified (long-term) withstand capability of its insulation

Note 1 to entry: The rated insulation voltage is not necessarily equal to the rated voltage of equipment which is primarily related to functional performance.

[SOURCE: IEC 60050-312:2014, 312-06-02]

3.1.2
functional insulation
insulation between conductive parts, necessary for the proper functioning of the equipment

[SOURCE: IEC 60050-195:1998, 195-02-41]

3.1.3
supplementary insulation
independent insulation applied in addition to basic insulation in order to provide protection against electric shock in the event of a failure of basic insulation

[SOURCE: IEC 60050-195:1998, 195-06-07, modified – "for fault protection" has been replaced by "in order to provide protection against electric shock in the event of a failure of basic insulation".]

3.1.4
reinforced insulation

insulation of hazardous-live-parts which provides a degree of protection against electric shock equivalent to double insulation

[SOURCE: IEC 60050-195:1998, 195-06-09, modified – The note has been omitted.]

3.1.5
double insulation
insulation comprising both basic insulation and supplementary insulation

Note 1 to entry: Basic and supplementary insulation are separate, each designed for basic protection against electric shock.

[SOURCE: IEC 60050-195:1998, 195-06-08, modified – The note to entry has been added.]

3.1.6
extra-low voltage
ELV
voltage not exceeding the maximum value of the prospective touch voltage which is permitted to be maintained indefinitely under specified conditions of external influences

[SOURCE: IEC 61140:2016, 3.26]

3.1.7
SELV system
electric system in which the voltage cannot exceed the value of extra-low voltage:

– under normal conditions and