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## **Laddningsbara celler och batterier med alkalisk eller annan icke syrabaserad elektrolyt – Laddningsbara litiumceller och litiumbatterier för bärbara tillämpningar – Del 4: Knappceller**

*Secondary cells and batteries containing alkaline or other non-acid electrolytes –  
Secondary lithium cells and batteries for portable applications –  
Part 4: Coin secondary lithium cells, and batteries made from them*

Som svensk standard gäller europastandarden EN IEC 61960-4:2020. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 61960-4:2020.

### **Nationellt förord**

Europastandarden EN IEC 61960-4:2020

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 61960-4, First edition, 2020 - Secondary cells and batteries containing alkaline or other non-acid electrolytes - Secondary lithium cells and batteries for portable applications - Part 4: Coin secondary lithium cells, and batteries made from them**

utarbetad inom International Electrotechnical Commission, IEC.

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Denna standard är fastställd av SEK Svensk Elstandard,  
som också kan lämna upplysningar om **sakinnehållet** i standarden.  
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### *Standarder underlättar utvecklingen och höjer elsäkerheten*

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

Genom att utforma sådana standarder blir säkerhetsfordringar tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

### *SEK är Sveriges röst i standardiseringsarbetet inom elområdet*

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

### *Stora delar av arbetet sker internationellt*

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

### *Var med och påverka!*

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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English Version

**Secondary cells and batteries containing alkaline or other non-acid electrolytes - Secondary lithium cells and batteries for portable applications - Part 4: Coin secondary lithium cells, and batteries made from them  
(IEC 61960-4:2020)**

Accumulateurs alcalins et autres accumulateurs à électrolyte non acide - Accumulateurs au lithium pour applications portables - Partie 4: Éléments et batteries d'accumulateurs boutons au lithium  
(IEC 61960-4:2020)

Sekundärzellen und -batterien mit alkalischen oder anderen nichtsäurehaltigen Elektrolyten - Sekundäre Lithiumzellen und -batterien für tragbare Anwendungen - Teil 4: Sekundäre Lithiumknopfzellen und daraus hergestellte Batterien  
(IEC 61960-4:2020)

This European Standard was approved by CENELEC on 2020-05-25. 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**

## **European foreword**

The text of document 21A/725/FDIS, future edition 1 of IEC 61960-4, prepared by SC 21A "Secondary cells and batteries containing alkaline or other non-acid electrolytes" of IEC/TC 21 "Secondary cells and batteries" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61960-4:2020.

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) 2021-02-25
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-05-25

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.

## **Endorsement notice**

The text of the International Standard IEC 61960-4:2020 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 60051 (series)	NOTE	Harmonized as EN 60051 (series)
IEC 60086-1	NOTE	Harmonized as EN 60086-1
IEC 60086-2	NOTE	Harmonized as EN 60086-2
IEC 60086-3	NOTE	Harmonized as EN 60086-3
IEC 60086-4:2019	NOTE	Harmonized as EN IEC 60086-4:2019 (not modified)
IEC 61434	NOTE	Harmonized as EN 61434
IEC 61959	NOTE	Harmonized as EN 61959
IEC 61960-3	NOTE	Harmonized as EN 61960-3
IEC 62133 (series)	NOTE	Harmonized as EN 62133 (series)
IEC 62281	NOTE	Harmonized as EN IEC 62281
IEC 62368-1	NOTE	Harmonized as EN IEC 62368-1

## 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](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-482	2004	International Electrotechnical Vocabulary - Part 482: Primary and secondary cells and batteries	-	-
IEC 62133-2	2017	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary lithium cells, and for batteries made from them, for use in portable applications - Part 2: Lithium systems	EN 62133-2	2017

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SECONDARY CELLS AND BATTERIES CONTAINING ALKALINE OR  
OTHER NON-ACID ELECTROLYTES – SECONDARY LITHIUM CELLS  
AND BATTERIES FOR PORTABLE APPLICATIONS –****Part 4: Coin secondary lithium cells, and batteries made from them**

## 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 61960-4 has been prepared by subcommittee 21A: Secondary cells and batteries containing alkaline or other non-acid electrolytes, of IEC technical committee 21: Secondary cells and batteries.

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

FDIS	Report on voting
21A/725/FDIS	21A/726/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.

A list of all parts in the IEC 61960 series, published under the general title *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Secondary lithium cells and batteries for portable applications*, 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.



## **SECONDARY CELLS AND BATTERIES CONTAINING ALKALINE OR OTHER NON-ACID ELECTROLYTES – SECONDARY LITHIUM CELLS AND BATTERIES FOR PORTABLE APPLICATIONS –**

### **Part 4: Coin secondary lithium cells, and batteries made from them**

#### **1 Scope**

This part of IEC 61960 specifies performance tests, designations, markings, dimensions and other requirements for coin secondary lithium cells and batteries for portable applications and backup power supply such as memory backup applications.

The objective of this document is to provide the purchasers and users of coin secondary lithium cells and batteries with a set of criteria with which they can assess the performance of coin secondary lithium cells and batteries offered by various manufacturers.

This document defines a minimum required level of performance and a standardized methodology by which testing is performed and the results of this testing reported to the user. Hence, users will be able to establish the viability of commercially available cells and batteries via the declared specification and thus be able to select the cell or battery best suited for their intended application.

This document covers coin secondary lithium cells and batteries with a range of chemistries. Each electrochemical couple has a characteristic voltage range over which, during discharge, it releases its electrical capacity, a characteristic nominal voltage and a characteristic end-of-discharge voltage. Users of coin secondary lithium cells and batteries are requested to consult the manufacturer for advice.

This document also provides guidelines for designers of equipment using lithium batteries (see Annex A).

#### **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 60050-482:2004, *International Electrotechnical Vocabulary (IEV) – Part 482: Primary and secondary cells and batteries*

IEC 62133-2:2017, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications – Part 2: Lithium systems*