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Safety requirements for secondary batteries and battery installations - Part 2: Stationary batteries

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 12/18

Obsahuje: EN IEC 62485-2:2018, IEC 62485-2:2010

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English Version

**Safety requirements for secondary batteries and battery installations - Part 2: Stationary batteries
(IEC 62485-2:2010)**

Exigences de sécurité pour les batteries d'accumulateurs et les installations de batteries - Partie 2: Batteries stationnaires
(IEC 62485-2:2010)

Sicherheitsanforderungen an Sekundär-Batterien und Batterieanlagen - Teil 2: Stationäre Batterien
(IEC 62485-2:2010)

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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

EN IEC 62485-2:2018 (E)**European foreword**

This document (EN IEC 62485-2:2018) consists of the text of IEC 62485-2:2010 prepared by IEC/TC 21 "Secondary cells and batteries".

The following dates are fixed:

- latest date by which this document has to be implemented (dop) 2019-04-09
at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2021-04-09

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Endorsement notice

The text of the International Standard IEC 62485-2:2010 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 60065	NOTE	Harmonized as EN 60065.
IEC 60079-10-1:2008	NOTE	Harmonized as EN 60079-10-1:2009 (not modified).
IEC 60364-1	NOTE	Harmonized as HD 60364-1.
IEC 60364-4-42	NOTE	Harmonized as HD 60364-4-42.
IEC 60364-5-54	NOTE	Harmonized as HD 60364-5-54.
IEC 60364-7-706	NOTE	Harmonized as EN 60364-7-706.
IEC 60950-1	NOTE	Harmonized as EN 60950-1.
IEC 60990	NOTE	Harmonized as EN 60990.

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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60364-4-41	-	Low-voltage electrical installations -- Part 4-41: Protection for safety - Protection against electric shock	HD 60364-4-41	-
IEC 60364-4-43	-	Low voltage electrical installations -- Part 4-43: Protection for safety - Protection against overcurrent	HD 60364-4-43	-
IEC 60364-5-53	-	Electrical installations of buildings -- Part 5-53: Selection and erection of electrical equipment - Isolation, switching and control		-
IEC 60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529	1991
-	-		+ corrigendum May	1993
IEC 60622	2002	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Sealed nickel-cadmium prismatic rechargeable single cells	EN 60622	2003
IEC 60623	2001	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Vented nickel-cadmium prismatic rechargeable single cells	EN 60623	2001
IEC 60664-1	-	Insulation coordination for equipment within low-voltage systems -- Part 1: Principles, requirements and tests	EN 60664-1	-
IEC 60896-11	2002	Stationary lead-acid batteries -- Part 11: Vented types - General requirements and methods of tests	EN 60896-11	2003
IEC 60896-21	2004	Stationary lead-acid batteries -- Part 21: Valve regulated types - Methods of test	EN 60896-21	2004
IEC 60896-22	2004	Stationary lead-acid batteries -- Part 22: Valve regulated types - Requirements	EN 60896-22	2004
IEC 60900	-	Live working - Hand tools for use up to 1 000 V a.c. and 1 500 V d.c.	EN 60900	-
IEC 61140	-	Protection against electric shock - Common aspects for installation and equipment	EN 61140	-
IEC 61340-4-1	-	Electrostatics -- Part 4-1: Standard test methods for specific applications - Electrical resistance of floor coverings and installed floors	EN 61340-4-1	-

EN IEC 62485-2:2018 (E)

IEC 61660-1	-	Short-circuit currents in d.c. auxiliary installations in power plants and substations -- Part 1: Calculation of short-circuit currents	EN 61660-1	-
IEC 61660-2	-	Short-circuit currents in d.c. auxiliary installations in power plants and substations -- Part 2: Calculation of effects	EN 61660-2	-
IEC 62259	2003	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Nickel-cadmium prismatic secondary single cells with partial gas recombination	EN 62259	2004
ISO 3864	series	Graphical symbols - Safety colours and safety signs	-	-
IEC/TR 60755	-	General requirements for residual current operated protective devices	-	-



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INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Safety requirements for secondary batteries and battery installations –
Part 2: Stationary batteries**

**Exigences de sécurité pour les batteries d'accumulateurs et les installations
de batteries –
Partie 2: Batteries stationnaires**



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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland
Email: inmail@iec.ch
Web: www.iec.ch

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INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Safety requirements for secondary batteries and battery installations –
Part 2: Stationary batteries**

**Exigences de sécurité pour les batteries d'accumulateurs et les installations
de batteries –
Partie 2: Batteries stationnaires**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SAFETY REQUIREMENTS FOR SECONDARY BATTERIES
AND BATTERY INSTALLATIONS –**
Part 2: Stationary batteries

FOREWORD

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International Standard IEC 62485-2 has been prepared by IEC technical committee 21: Secondary cells and batteries.

The text of this standard is based on the following documents:

FDIS	Report on voting
21/711/FDIS	21/718/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 publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 62485 series can be found, under the general title *Safety requirements for secondary batteries and battery installations*, on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication 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.

INTRODUCTION

The described safety requirements comprise the protective measures to protect from hazards generated by the electricity, the electrolyte, and the explosive gases when using secondary batteries. In addition measures are described to maintain the functional safety of batteries and battery installations.

For the electrical safety (protection against electric shock) under Clause 4, this standard refers to IEC 60364-4-41. The pilot function of this standard is fully observed by indication of cross-reference numbers of the relevant clauses, but interpretation is given where adoption to direct current (DC) circuits is required.

This safety standard comes into force with the date of publication and applies to all new batteries and battery installations. Previous installations are intended to conform to the existing national standards at the time of installation. In case of redesign of old installations this standard applies.

Valve-regulated lead-acid batteries used in stationary battery installations are intended to fulfil safety requirements in accordance to IEC 60896-21 and IEC 60896-22.

SAFETY REQUIREMENTS FOR SECONDARY BATTERIES AND BATTERY INSTALLATIONS –

Part 2: Stationary batteries

1 Scope

This part of the IEC 62485 applies to stationary secondary batteries and battery installations with a maximum voltage of DC 1 500 V (nominal) and describes the principal measures for protections against hazards generated from:

- electricity,
- gas emission,
- electrolyte.

This International Standard provides requirements on safety aspects associated with the erection, use, inspection, maintenance and disposal.

It covers lead-acid and NiCd / NiMH batteries.

Examples for the main applications are:

- telecommunications,
- power station operation,
- central emergency lighting and alarm systems,
- uninterruptible power supplies,
- stationary engine starting,
- photovoltaic systems.

2 Normative references

The following referenced documents are indispensable for the application 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 60364-4-41, *Low-voltage electrical installations – Part 4-41: Protection for safety – Protection against electric shock*

IEC 60364-4-43, *Low-voltage electrical installations – Part 4-43: Protection for safety – Protection against overcurrent*

IEC 60364-5-53, *Electrical installations of buildings – Part 5-53: Selection and erection of electrical equipment – Isolation, switching and control*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 60622:2002, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Sealed nickel cadmium prismatic rechargeable single cells*

IEC 60623:2001, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Vented nickel-cadmium prismatic rechargeable single cells*

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

IEC/TR 60755, *General requirements for residual current operated protective devices*

IEC 60896-11:2002, *Stationary lead-acid batteries – Part 11: Vented types – General requirements and methods of tests*

IEC 60896-21:2004, *Stationary lead-acid batteries – Part 21: Valve regulated types – Methods of test*

IEC 60896-22:2004, *Stationary lead-acid batteries – Part 22: Valve regulated types – Requirements*

IEC 60900, *Live working – Hand tools for use up to 1 000 V a.c. and 1 500 V d.c.*

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

IEC 61340-4-1, *Electrostatics – Part 4-1: Standard test methods for specific applications – Electrical resistance of floor coverings and installed floors*

IEC 61660-1, *Short-circuit currents in d.c. auxiliary installations in power plants and substations – Part 1: Calculation of short-circuit currents*

IEC 61660-2, *Short-circuit currents in d.c. auxiliary installations in power plants and substations – Part 2: Calculation of effects*

IEC 62259:2003, *Secondary cells and batteries containing alkaline and other non-acid electrolytes – Nickel cadmium prismatic secondary single cells with partial gas recombination*

ISO 3864 (all parts), *Graphical symbols – Safety colours and safety signs*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN