
Sekundarni členi in baterije za fotovoltaične energijske sisteme – Splošne zahteve in metode preskušanja (IEC 61427:2005)

(istoveten EN 61427:2005)

Secondary cells and batteries for photovoltaic energy systems (PVES) - General requirements and methods of test (IEC 61427:2005)

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EUROPEAN STANDARD

EN 61427

NORME EUROPÉENNE

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English version

**Secondary cells and batteries for photovoltaic energy systems (PVES) -
General requirements and methods of test
(IEC 61427:2005)**

Accumulateurs pour les systèmes
photovoltaïques (SPV) –
Exigences générales et méthodes
d'essais
(CEI 61427:2005)

Solarzellen und -batterien für
photovoltaische Energiesysteme -
Allgemeine Anforderungen und
Prüfverfahren
(IEC 61427:2005)

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This European Standard was approved by CENELEC on 2005-07-01. 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, 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 document 21/621/FDIS, future edition 2 of IEC 61427, prepared by IEC TC 21, Secondary cells and batteries, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61427 on 2005-07-01.

This European Standard supersedes EN 61427:2001.

This European Standard is a restructuring of EN 61427:2001, clarifying the different clauses with regard to conditions of use, general requirements, functional characteristics, general tests conditions, test method and recommended use of tests, the aim being to ensure a better understanding by the end user. The test method is clearly explained in detail for both technologies: lead-acid and nickel-cadmium.

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) 2006-04-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2008-07-01

Annex ZA has been added by CENELEC.

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Endorsement notice

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The text of the International Standard IEC 61427:2005 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE Where 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 60050-482	- ¹⁾	International Electrotechnical Vocabulary Part 482: Primary and secondary cells and batteries	-	-
IEC 60622	- ¹⁾	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Sealed nickel-cadmium prismatic rechargeable single cells	EN 60622	2003 ²⁾
IEC 60623	- ¹⁾	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Vented nickel-cadmium prismatic rechargeable single cells	EN 60623	2001 ²⁾
IEC 60721-1	- ¹⁾	Classification of environmental conditions Part 1: Environmental parameters and their severities	EN 60721-1	1995 ²⁾
IEC 60896-11	- ¹⁾	Stationary lead-acid batteries Part 11: Vented types - General requirements and methods of tests	EN 60896-11	2003 ²⁾
IEC 60896-21	- ¹⁾	Part 21: Valve regulated types - Methods of test	EN 60896-21	2004 ²⁾
IEC 61056-1	- ¹⁾	General purpose lead-acid batteries (valve regulated types) Part 1: General requirements, functional characteristics - Methods of test	EN 61056-1	2003 ²⁾
IEC 61836	- ¹⁾	Solar photovoltaic energy systems - Terms and symbols	-	-
IEC 62259	- ¹⁾	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Nickel-cadmium prismatic secondary single cells with partial gas recombination	EN 62259	2004 ²⁾

1) Undated reference.

2) Valid edition at date of issue.

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Deuxième édition
Second edition
2005-05

**Accumulateurs pour les systèmes
photovoltaïques (SPV) –
Exigences générales et méthodes d'essais**

**Secondary cells and batteries
for photovoltaic energy systems (PVES) –
General requirements and methods of test**

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International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SECONDARY CELLS AND BATTERIES
FOR PHOTOVOLTAIC ENERGY SYSTEMS (PVES)–
GENERAL REQUIREMENTS AND METHODS OF TEST**

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 61427 has been prepared by IEC technical committee 21: Secondary cells and batteries.

This second edition cancels and replaces the first edition published in 1999. This edition constitutes a technical revision.

This second edition is a restructuring of the previous edition of the document, clarifying the different clauses with regard to conditions of use, general requirements, functional characteristics, general tests conditions, test method and recommended use of tests, the aim being to ensure a better understanding by the end user. The test method is clearly explained in detail for both technologies: lead-acid and nickel-cadmium.

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

FDIS	Report on voting
21/621/FDIS	21/624/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.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result 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.

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SECONDARY CELLS AND BATTERIES FOR PHOTOVOLTAIC ENERGY SYSTEMS (PVES) – GENERAL REQUIREMENTS AND METHODS OF TEST

1 Scope

This International Standard gives general information relating to the requirements of the secondary batteries used in photovoltaic energy systems (PVES) and to the typical methods of test used for the verification of battery performances.

This International Standard does not include specific information relating to battery sizing, method of charge or PVES design.

NOTE This standard is applicable to lead-acid and nickel-cadmium cells and batteries. It is intended to amend this standard to include other electrochemical systems when they become available.

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

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

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

IEC 60721-1, *Classification of environmental conditions – Part 1: Environmental parameters and their severities*

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

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

IEC 61056-1, *General purpose lead-acid batteries (valve-regulated types) – Part 1: General requirements, functional characteristics – Methods of test*

IEC 61836, *Solar photovoltaic energy systems – Terms and symbols*

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