SVENSK STANDARD

SS-EN IEC 62933-1, utg 2:2025

Fastställd	Sida	Ansvarig kommitté
2025-03-05	1 (55)	SEK TK 120

Elektriska energilagringssystem (EES) – Del 1: Terminologi

Electrical energy storage (EES) systems – Part 1: Vocabulary

Som svensk standard gäller europastandarden EN IEC 62933-1:2024. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 62933-1:2024.

Nationellt förord

Europastandarden EN IEC 62933-1:2024

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 62933-1, Second edition, 2024 - Electrical energy storage (EES) systems – Part 1: Vocabulary**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN IEC 62933-1, utg 1:2018 med eventuella tillägg, ändringar och rättelser gäller ej fr o m 2027-06-19.

ICS 01.040.17

Denna standard är fastställd av SEK Svensk Elstandard,
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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.

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Var med och påverka!

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 62933-1

June 2024

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Supersedes EN IEC 62933-1:2018

English Version

Electrical energy storage (EES) systems - Part 1: Vocabulary (IEC 62933-1:2024)

Systèmes de stockage de l'énergie électrique (EES) - Partie 1 : Vocabulaire (IEC 62933-1:2024)

Elektrische Energiespeichersysteme (EES-Systeme) - Teil 1: Terminologie (IEC 62933-1:2024)

This European Standard was approved by CENELEC on 2024-06-19. 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.

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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.

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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 62933-1:2024 E

SEK Svensk Elstandard

SS-EN IEC 62933-1, utg 2:2025

European foreword

The text of document 120/358/FDIS, future edition 2 of IEC 62933-1, prepared by IEC/TC 120 "Electrical Energy Storage (EES) systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62933-1:2024.

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) 2025-03-19
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2027-06-19

This document supersedes EN IEC 62933-1:2018 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 62933-1:2024 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 standard indicated:

IEC 60027 series	NOTE	Approved as EN 60027 series
IEC 61165:2006	NOTE	Approved as EN 61165:2006 (not modified)
IEC 61427-2:2015	NOTE	Approved as EN 61427-2:2015 (not modified)
IEC 61850-4:2011	NOTE	Approved as EN 61850-4:2011 (not modified)
IEC 61850-4:2011/A1:2020	NOTE	Approved as EN 61850-4:2011/A1:2020 (not modified)
IEC 61987-1:2006	NOTE	Approved as EN 61987-1:2007 (not modified)
IEC 62381:2012	NOTE	Approved as EN 62381:2012 (not modified)
IEC 62443-3-3:2013	NOTE	Approved as EN IEC 62443-3-3:2019 (not modified)
IEC 62477-1:2012	NOTE	Approved as EN 62477-1:2012 (not modified) +A11:2014
IEC 62668-1:2019	NOTE	Approved as EN IEC 62668-1:2019 (not modified)
IEC 62680 series	NOTE	Approved as EN IEC 62680 series
IEC 62928:2017	NOTE	Approved as EN IEC 62928:2018 (not modified)
IEC 62932-1:2020	NOTE	Approved as EN IEC 62932-1:2020 (not modified)
IEC 62934:2021	NOTE	Approved as EN IEC 62934:2021 (not modified)
ISO 14050:2020	NOTE	Approved as EN ISO 14050:2020 (not modified)

IEC 62933-1

Edition 2.0 2024-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Electrical energy storage (EES) systems – Part 1: Vocabulary

Systèmes de stockage de l'énergie électrique (EES) – Partie 1 : Vocabulaire

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ELECTRICAL ENERGY STORAGE (EES) SYSTEMS –

Part 1: Vocabulary

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 62933-1 has been prepared by IEC technical committee 120: Electrical Energy Storage (EES) systems. It is an International Standard.

This second edition cancels and replaces the first edition published in 2018. This edition constitutes a technical revision.

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

a) addition (with revision) of the entries developed during the edition 1 stability period and, therefore, included only in other IEC 62933 parts;
b) addition of the entries developed during the edition 1 stability period and published in this document for the first time;
c) complete revision of the entries already present in edition 1.

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

Draft	Report on voting
120/358/FDIS	120/367/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/publications.

A list of all parts in the IEC 62933 series, published under the general title *Electrical energy storage (EES) systems*, 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, or
- revised.

IMPORTANT – The "colour inside" logo on the cover page of this document 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 purpose of this terminology document is to provide terms and definitions for all the publications under the responsibility of TC 120, that standardize electrical energy storage systems (EES systems) including unit parameters, test methods, planning, installation, operation, safety and environmental issues. An EES system includes any type of grid-connected energy storages which can both store electrical energy and provide electrical energy (from electricity to electricity).

All TC 120 normative documents are subject to revision; this part of IEC 62933 will be revised together with other TC 120 publications in order to avoid mismatches.

From the technical point of view, an EES system can be a complex multi-stage system with several possible energy conversions. Each stage is made by well standardized components (e.g. transformers, power conversion systems) or innovative components (e.g. new types of batteries). Several IEC product standards give definitions necessary for the understanding of certain terms used for these components. The International Electrotechnical Vocabulary (IEV, http://www.electropedia.org), the IEC Glossary (http://std.iec.ch/glossary) and the ISO Online Browsing Platform (OBP, http://www.iso.org/obp) allow online access to this information. This document completes the need for precise terminology by giving definitions necessary at the system level.

Without a strong standardization of EES system terminology, focal terms can have a different meaning in EES systems related to different storage technologies. This aspect is critical also from the market point of view. It impacts economics and this can become a barrier for tender processes. The correct comparison among different options is fundamental, therefore basic terms and definitions impact economic decisions.

Terms and definitions have been harmonized with the IEV, the OBP, the IEC Glossary and relevant IEC documents as far as possible. Definitions not included in this terminology document can be found elsewhere in other IEC documents.

The use of abbreviated terms has been optimized: on the one hand to avoid tedious repetition and on the other hand to avoid confusion. A minimum set of abbreviated terms was identified and used in the definitions, the other terms are written out in full spelling when needed. The widely accepted abbreviated terms are:

EESS – EES system – Electrical energy storage system

EES – Electrical energy storage

POC – Point of connection

In order to facilitate document usage, Clause A.1 offers a term index and Clause A.2 offers an abbreviated term index.

ELECTRICAL ENERGY STORAGE (EES) SYSTEMS –

Part 1: Vocabulary

1 Scope

This part of IEC 62933 defines terms applicable to electrical energy storage (EES) systems including terms necessary for the definition of unit parameters, test methods, planning, installation, operation, environmental and safety issues.

This terminology document is applicable to grid-connected systems able to extract electrical energy from an electric power system, store energy internally, and provide electrical energy to an electric power system. The step for charging and discharging an EES system can comprise an energy conversion.

2 Normative references

There are no normative references in this document.