SVENSK STANDARD

SS-EN IEC 63402-1, utg 1:2026

Fastställd	Sida	Ansvarig kommitté
2026-09-23	1 (36)	SEK TK 23

Energieffektivitet – Kund-EMS – Del 1: Allmänna fordringar och arkitektur

Energy Efficiency – Customer Energy Management Systems – Part 1: General Requirements and Architecture

Som svensk standard gäller europastandarden EN IEC 63402-1:2025. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 63402-1:2025.

Nationellt förord

Europastandarden EN IEC 63402-1:2025

består av:

- **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
- **IEC 63402-1, First edition, 2025 - Energy Efficiency - Customer Energy Management Systems - Part 1: General Requirements and Architecture**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 50491-12-1, utg 1:2019 med eventuella tillägg, ändringar och rättelser gäller ej fr o m 2028-08-31.

ICS 03.100.70; 27.015; 29.020.00

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 63402-1

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Supersedes EN 50491-12-1:2018

English Version

Energy efficiency - Customer energy management systems - Part 1: General requirements and architecture (IEC 63402-1:2025)

Efficacité énergétique - Système de gestion d'énergie client - Part 1: Exigences générales et architecture (IEC 63402-1:2025)

Energieeffizienz - Energiemanagementsysteme für Kunden - Teil 1: Allgemeine Anforderungen und Architektur (IEC 63402-1:2025)

This European Standard was approved by CENELEC on 2025-07-31. 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.

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, Türkiye 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

Ref. No. EN IEC 63402-1:2025 E

SEK Svensk Elstandard

SS-EN IEC 63402-1, utg 1:2026

European foreword

The text of document 23K/120/FDIS, future edition 1 of IEC 63402-1, prepared by SC 23K "Electrical Energy Efficiency products" of IEC/TC 23 "Electrical accessories" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 63402-1:2025.

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) 2026-08-31
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2028-08-31

This document supersedes EN 50491-12-1:2018 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.

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Endorsement notice

The text of the International Standard IEC 63402-1:2025 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 61850-7-3	NOTE	Approved as EN 61850-7-3
IEC 61968 (series)	NOTE	Approved as EN IEC 61968 (series)
IEC 61970 (series)	NOTE	Approved as EN IEC 61970 (series)
IEC 62056 (series)	NOTE	Approved as EN 62056 (series)
IEC 62325 (series)	NOTE	Approved as EN IEC 62325 (series)
IEC 62443 (series)	NOTE	Approved as EN IEC 62443 (series)
IEC 63110 (series)	NOTE	Approved as EN IEC 63110 (series)
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PUBLICATION GROUPÉE SUR L'EFFICACITÉ ÉNERGÉTIQUE

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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Energy efficiency - Customer energy management systems - Part 1: General requirements and architecture

FOREWORD

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IEC 63402-1 has been prepared by subcommittee 23K: Electrical energy efficiency products, of IEC technical committee 23: Electrical accessories. It is an International Standard.

It has the status of a group energy efficiency publication in accordance with IEC Guide 118.

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

Draft	Report on voting
23K/120/FDIS	23K/126/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 63402 series, published under the general title *Energy efficiency – Customer energy management 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.

INTRODUCTION

In traditional electricity networks, energy flows in one direction and communications from the generator to the consumer is generally done via the transmission and distribution systems.

Although there is some monitoring and control of equipment in the transmission and distribution systems, there is no communication with, or control of, consumer equipment. In particular, there is no means of requesting short-term control of consumer equipment to match either the prevailing generation, or transmission and distribution grid conditions, or both. Generation equipment is controlled to match the open-ended (uncontrolled) demand of the consumer.

Today the world is faced with an increase of energy consumption, which is directly linked to an increase of CO_2 production. The increased CO_2 density in the atmosphere supports the climate warming of the earth.

One significant way to cope with the increased energy consumption without increasing the CO_2 production is to use more renewable energy resources.

Unfortunately, the available renewable energy supply is not aligned with the energy demand. To increase efficiency, the energy demand should be aligned as much as possible with the available energy supply. The future grid will become generation led rather than demand led as it is today. In order to reach this goal, communications between the various equipment and systems of the stakeholders within the energy field is necessary. This new form of grid which exchanges information and energy between producers, consumers, distributors and metering is known as the "Smart Grid".

The IEC 63402 series describes aspects of this Smart Grid that relate specifically to the premises (home or building) part of the Smart Grid, including the common interface between equipment in the premises and the Smart Grid.

1 Scope

This part of IEC 63402 specifies general requirements and the architecture between the Point of Common Coupling (PCC) and smart devices (SD) operating within the Smart Grid premises-side system (i.e. residential or commercial but not industrial premises).

This document does not include requirements for:

– safety

– electromagnetic compatibility (EMC);

– data security, as it is assumed that the underlying protocols will take the data security aspect into account

NOTE Although data security is not within the scope of this document, Clause 4 provides some high-level design guidelines for data security.

– special equipment (e.g. legacy heat pumps) with a direct physical connection to the grid, as such equipment bypasses the customer energy manager (CEM) and is not HBES/BACS enabled (covered by other standards than the IEC 63402 series).

This group EE publication is primarily intended to be used as an EE standard for the products mentioned in the scope, but is also intended to be used by TCs in the preparation of publications for products which are included in the boundary mentioned in the scope of this document.

2 Normative references

There are no normative references in this document.