Low-voltage electrical installations - Part 8-82: Functional aspects - Prosumer's low-voltage electrical installations (IEC 60364-8-82:2022)

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
ESTONIAN CENTRE FOR STANDARDISATION AND ACCREDITATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-HD 60364-8-82:2025 +A11:2025 sisaldab Euroopa standardi HD 60364-8-82:2025 ja selle muudatuse A11:2025 ingliskeelset teksti.	This Estonian standard EVS-HD 60364-8-82:2025+A11:2025 consists of the English text of the European standard HD 60364-8-82:2025 and its amendment A11:2025.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas. Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 11.07.2025, muudatus A11 11.07.2025.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation. Date of Availability of the European standard is 11.07.2025, for A11 11.07.2025.
Muudatusega A11 lisatud või muudetud teksti algus ja lõpp on tekstis tähistatud sümbolitega [A11] [A11]. Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The start and finish of text introduced or altered by amendment A11 is indicated in the text by tags [A11] [A11]. The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 91.140.50

HARMONIZATION DOCUMENT

DOCUMENT D'HARMONISATION

HARMONISIERUNGSDOKUMENT

HD 60364-8-82 + A11

July 2025, July 2025

ICS 91.140.50

Supersedes HD 60364-8-2:2018; HD 60364-8-2:2018/A11:2019; HD 60364-8-2:2018/A12:2021

English Version

Low-voltage electrical installations - Part 8-82: Functional aspects - Prosumer's low-voltage electrical installations (IEC 60364-8-82:2022)

Installations électriques à basse tension - Partie 8-82: Aspects fonctionnels - Installations électriques à basse tension du prosommateur (IEC 60364-8-82:2022)

Errichten von Niederspannungsanlagen - Teil 8-82: Funktionale Aspekte - Kombinierte Erzeugungs-/Verbrauchsanlagen (IEC 60364-8-82:2022)

This Harmonization Document was approved by CENELEC on 2022-11-24. Amendment A11 was approved by CENELEC on 2025-03-17. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for implementation of this Harmonization Document and its amendment at national level.

Up-to-date lists and bibliographical references concerning such national implementations may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This Harmonization Document and its Amendment A11 exist in three official versions (English, French, German).

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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. HD 60364-8-82:2025 E +
HD 60364-8-82:2025/A11:2025 E

European foreword

The text of document 64/2559/FDIS, future edition 1 of IEC 60364-8-82, prepared by IEC/TC 64 "Electrical installations and protection against electric shock" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as HD 60364-8-82:2025.

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) 2026-07-31
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2028-07-31

This document supersedes HD 60364-8-2:2018 and all of its amendments and corrigenda (if any).

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Endorsement notice

The text of the International Standard IEC 60364-8-82:2022 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 60364-1:2005	NOTE	Approved as HD 60364-1:2008 + A11:2017
IEC 60364-4-44:2007	NOTE	Approved as HD 60364-4-442:2012
IEC 60364-8-1:2019	NOTE	Approved as HD 60364-8-1:2019 (not modified)
IEC 60947-3	NOTE	Approved as EN IEC 60947-3
IEC 60947-6-1	NOTE	Approved as EN 60947-6-1
IEC 62933-1:2018	NOTE	Approved as EN IEC 62933-1:2018 (not modified)

A11 Amendment A11 European foreword

This document (HD 60364-8-82:2025/A11:2025) has been prepared by CLC/TC 64 "Electrical installations and protection against electric shock".

The following dates are fixed:

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IEC 60364-8-82

Edition 1.0 2022-10

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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Low-voltage electrical installations –
Part 8-82: Functional aspects – Prosumer's low-voltage electrical installations

Installations électriques à basse tension –
Partie 8-82: Aspects fonctionnels – Installations électriques à basse tension du prosommateur

IEC 60364-8-82:2022-10(en-fr)

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IEC 60364-8-82

Edition 1.0 2022-10

INTERNATIONAL STANDARD

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Installations électriques à basse tension –
Partie 8-82: Aspects fonctionnels – Installations électriques à basse tension du prosommateur

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LOW-VOLTAGE ELECTRICAL INSTALLATIONS –

Part 8-82: Functional aspects – Prosumer's low-voltage electrical installations

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 60364-8-82 has been prepared by IEC technical committee 64: Electrical installations and protection against electrical shock, IEC technical committee 8: System aspects of electrical energy supply and its subcommittee 8B: Decentralized electrical energy systems. It is an International Standard.

This first edition cancels and replaces IEC 60364-8-2 published in 2018. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to IEC 60364-8-2:2018:

a) the vocabulary and concepts have been aligned as much as possible with those used by TC 8 and SC 8B, taking notably into account the IEC 62898 series and IEC TS 62786, still respecting the installers mindset (installers being the first users of the IEC 60364 series and being used to only refer to the IEC 60364 series);
b) the type of system earthing and the change of type of system earthing (sequencing) when there is a change of mode of the prosuming installation, have been clarified;

c) the conditions of connection and disconnection from the DSO network have also been described, both from the safety point of view and the proper functioning point of view;

d) additional requirements have been introduced;

e) the figures have been updated;

f) a new normative Annex D on single dwelling or similar application islandable PEIs has been added;

g) the numbering has also been reviewed to follow the updated numbering system of the IEC 60364 series, in line with the IEC Directives and compatible with Parts 7.

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

Draft	Report on voting
64/2559/FDIS	64/2562/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/standardsdev/publications.

A list of all parts in the IEC 60364 series, published under the general title *Low-voltage electrical installations*, can be found on the IEC website.

The reader's attention is drawn to the fact that Annex E lists all of the "in-some-country" clauses on differing practices of a less permanent nature relating to the subject of this document.

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.

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

Historically, utilities were managing the public transmission and distribution network from the point of view of having a central production adapted to demand variation, a top-down energy flow, a production/consumption balance done by integrated utility companies and with rather passive users.

The following key factors are pushing the distribution network to change:

– the increasing number of electronic devices used daily and the growing needs as well as future needs (e.g. charging electric vehicles) will result in the structural growing of electricity consumption;

– the mediated pressure on climate change results in pressure on CO_2 emissions reduction;

– the electricity market is also quickly changing due mainly to its unbundling and deregulation, and to the greater number of intermittent renewable energy sources (global and local);

– users' expectations are also evolving as a result of an increasing need for better distribution networks reliability and quality, the search for better economic performance and the willingness to pro-actively manage their energy;

– technological evolution should also be considered as information and communication technology (ICT) is affordable and new energy storage solutions are emerging.

All stakeholders directly involved in the electricity generation, transmission, distribution and consumption have new expectations:

– customers are willing to reduce electrical energy costs in order to meet environment targets (renewable energy, energy efficiency) but also wish to benefit from the quality of electricity supply;

– suppliers wish to limit customer churn rate with price and service management;

– producers expect to maximize their yield of assets, to optimize their investments and to take profit from energy trading;

– the aggregator wants to create conditions suitable for new market emergence;

– the transmission system operator (TSO) aspires to a robust transmission network and to meet regulation objectives (price and level of services), while the distribution system operator (DSO) wants to meet regulation objectives (price and level of services), to reduce costs by productivity (including meter) and to have a flexible network;

– finally, governments and regulators are willing to create a competitive and sustainable energy market.

The objective of this document is to ensure that the low-voltage electrical installation is compatible with the current and future ways to deliver safely and functionally the electrical energy to current-using equipment wherever the electrical energy comes from the DSO or local generation. This document is not intended to influence all stakeholders of electricity supply on how the electrical energy should be sold and delivered.

LOW-VOLTAGE ELECTRICAL INSTALLATIONS –

Part 8-82: Functional aspects – Prosumer's low-voltage electrical installations

82.1 Scope

This part of IEC 60364 provides requirements and recommendations that apply to low-voltage electrical installations connected or not to a distribution network able to operate:

– with local power supplies, and/or
– with local storage units,

and that monitors and controls the energy from the locally connected sources delivering it to:

– current-using equipment, and/or
– local storage units, and/or
– distribution networks.

Such electrical installations are designated as prosumer's electrical installations (PEIs).

These requirements and recommendations apply to new installations and modifications of existing installations.

This document also provides requirements and recommendations for the safe, efficient and correct behaviour of these installations when integrated into a smart grid.

NOTE Requirements for electrical sources for safety services are given in IEC 60364-5-56.

Information related to grid interaction to ensure the stability of the electrical system for grid connected PEIs is given in Annex B.

This document covers the requirements related to stability of islanded and stand-alone PEIs.

82.2 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 60038, *IEC standard voltages*

IEC 60364 (all parts), *Low-voltage electrical installations*

IEC 60364-4-41:2005, *Low-voltage electrical installations – Part 4-41: Protection for safety – Protection against electric shock*
IEC 60364-4-41/AMD1:2017

IEC 60364-4-42:2010, *Low-voltage electrical installations – Part 4-42: Protection for safety – Protection against thermal effects*

IEC 60364-4-43:2008, *Low-voltage electrical installations – Part 4-43: Protection for safety – Protection against overcurrent*

IEC 60364-5-51:2005, *Electrical installations of buildings – Part 5-51: Selection and erection of electrical equipment – Common rules*

IEC 60364-5-53:2019, *Low-voltage electrical installations – Part 5-53: Selection and erection of electrical equipment – Devices for protection for safety, isolation, switching, control and monitoring*
IEC 60364-5-53:2019/AMD1:2020

IEC 60364-5-54:2011, *Low-voltage electrical installations – Part 5-54: Selection and erection of electrical equipment – Earthing arrangements and protective conductors*

IEC 60364-5-55:2011, *Electrical installations of buildings – Part 5-55: Selection and erection of electrical equipment – Other equipment*
IEC 60364-5-55:2011/AMD1:2012
IEC 60364-5-55:2011/AMD2:2016

IEC 60364-5-57, *Low-voltage electrical installations – Part 5-57: Selection and erection of electrical equipment – Erection of stationary secondary batteries*

IEC 60364-6, *Low voltage electrical installations – Part 6: Verification*

IEC 60364-7-722, *Low-voltage electrical installations – Part 7-722: Requirements for special installations or locations – Supplies for electric vehicles*

IEC 60947-2:2016, *Low-voltage switchgear and controlgear – Part 2: Circuit-breakers*
IEC 60947-2:2016/AMD1:2019

IEC 61557-12:2018, *Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC – Equipment for testing, measuring or monitoring of protective measures – Part 12: Power metering and monitoring devices (PMD)*

IEC 62423, *Type F and type B residual current operated circuit-breakers with and without integral overcurrent protection for household and similar uses*

IEC TS 62749, *Assessment of power quality – Characteristics of electricity supplied by public networks*

82.3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

82.3.1
smart grid
intelligent grid
electric power system that utilizes information exchange and control technologies, distributed computing and associated sensors and actuators, for purposes such as: