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

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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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)

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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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 (dop) 2026-07-31 level by publication of an identical national standard or by endorsement
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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)

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**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**



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INTERNATIONAL STANDARD

NORME INTERNATIONALE



**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**

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ICS 91.140.50

ISBN 978-2-8322-3942-1

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CONTENTS

FOREWORD.....	5
INTRODUCTION.....	7
82.1 Scope	8
82.2 Normative references.....	8
82.3 Terms and definitions.....	9
82.4 Integration of PEI in its environment	12
82.4.1 Main objectives.....	12
82.4.2 Safety.....	12
82.4.3 Proper functioning	12
82.5 PEI concept	13
82.6 Types of PEI	16
82.6.1 General	16
82.6.2 Operating modes.....	16
82.6.3 Interaction with the distribution network.....	17
82.7 Control and monitoring.....	24
82.7.1 General	24
82.7.2 Architecture of control and monitoring system	25
82.8 Protection of prosumer electrical installation	25
82.8.1 General	25
82.8.2 Protection against electric shock	25
82.8.3 Protection against thermal effect	41
82.8.4 Protection against overcurrent.....	41
82.8.5 Protection against transient overvoltages	45
82.9 Isolation and switching.....	46
82.9.1 Isolation	46
82.9.2 Emergency switching-off.....	46
82.10 Load and source management	46
82.10.1 Energy storage	46
82.10.2 Design for flexibility of load and generators (demand/response)	46
82.10.3 Electric vehicle	46
Annex A (informative) Operating modes of PEI	47
A.1 Direct feeding mode	47
A.2 Island mode.....	47
A.3 Reverse feeding mode.....	48
Annex B (informative) Interaction with the supply system.....	50
B.1 General	50
B.2 Active power and frequency control	50
B.3 Reactive power and voltage control	50
B.4 Load shedding programme	50
Annex C (informative) Architectures of PEI	51
C.1 General	51
C.2 Architecture of individual PEI.....	51
C.3 Architecture of collective PEI	52
C.4 Architecture of shared PEI.....	57
Annex D (normative) Single dwelling or similar application islandable PEI	61

D.1	General	61
D.2	Type of system earthing	61
D.3	Connection of the local source.....	64
D.4	Fire switching-off.....	64
D.5	Switching device for islanding and system referencing conductor switching device	64
D.6	Labelling.....	64
D.7	Upgrading an existing single dwelling installation in islandable PEI	65
D.8	Initial verification	68
Annex E (informative) List of notes concerning certain countries.....		69
Bibliography.....		70
Figure 1 – Example of prosumer's low-voltage electrical installation with AC electrical distribution within the PEI		14
Figure 2 – Example of prosumer's low-voltage electrical installation with AC and DC electrical distribution within the PEI		15
Figure 3 – Example of grid connected PEI architecture		18
Figure 4 – Example of islandable PEI architecture		19
Figure 5 – Example of architecture of PEI connected to LV DSO operating in TN-C-S in connected mode and becoming TN-S in island mode		28
Figure 6 – Example of architecture of PEI connected to LV DSO operating in TNC-S in connected mode and in island mode		29
Figure 7 – Example of architecture of PEI connected to LV DSO with disconnection of the neutral, operating in TT in connected mode and becoming TN in island mode.....		30
Figure 8 – Example of PEI installation with neutral earthing on the HV/LV transformer side: TT in connected mode, TN in island mode (as one unique earthing arrangement in the installation)		32
Figure 9 – Example of PEI installation in TN-S with neutral permanently earthed on PEI side.....		34
Figure 10 – Example of PEI installation in TN-S with neutral permanently earthed on PEI side with RCD on the system referencing conductor.....		37
Figure 11 – Example of PEI in IT system in island mode		39
Figure 12 – Example of PEI in IT system in island mode with automatic disconnection of supply.....		40
Figure 13 – Example of double short-circuit protection for the same circuit.....		43
Figure 14 – Example of selectivity with various power supplies		44
Figure 15 – Potential selectivity issue with overcurrent protections		45
Figure A.1 – Example of electrical design of PEI operating in direct feeding mode.....		47
Figure A.2 – Example of electrical design of PEI operating in island mode.....		48
Figure A.3 – Example of electrical design of individual PEI operating in reverse feeding mode.....		49
Figure C.1 – Example of electrical design of individual PEI		51
Figure C.2 – Example of type of architecture of individual PEI		52
Figure C.3 – Example of electrical design of collective PEI using DSO distribution system.....		53
Figure C.4 – Example of electrical design of collective PEI using a distribution system within PEI		54
Figure C.5 – Example of electrical design of collective PEI with distribution system within PEI in parallel with DSO distribution system.....		55

Figure C.6 – Example of type of architecture for collective PEI 56

Figure C.7 – Example of electrical design of shared PEI using DSO distribution system 57

Figure C.8 – Example of electrical design of shared PEI with distribution system within PEI 58

Figure C.9 – Example of electrical design of shared PEI with distribution system within PEI in parallel with DSO distribution system..... 59

Figure C.10 – Example of type of architecture for shared PEI 60

Figure D.1 – Example of single dwelling islandable PEI architecture in TN in connected mode and in island mode (with disconnection of the neutral – TN-S)..... 62

Figure D.2 – Example of single dwelling islandable PEI architecture in TT in connected mode becoming TN in island mode 63

Figure D.3 – Example of label..... 65

Figure D.4 – Example of single dwelling electrical installation before being upgraded to islandable PEI..... 66

Figure D.5 – Example of single dwelling electrical installation upgraded to islandable PEI..... 67

Table 1 – Combinations of possible types of system earthing in connected mode and island mode for PEIs and associated requirements for system referencing conductor switching device 27

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE ELECTRICAL INSTALLATIONS –**Part 8-82: Functional aspects –
Prosumer's low-voltage electrical installations**

FOREWORD

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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

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- withdrawn,
- replaced by a revised edition, or
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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 CO₂ 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:

- to integrate the behaviour and actions of the network users and other stakeholders,