IEC 60364-8-2

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Low-voltage electrical installations –
Part 8-2: Prosumer's low-voltage electrical installations

Installations électriques à basse tension -
Partie 8-2: Installations électriques à basse tension du prosommateur

IEC 60364-8-2:2018-10 (en-fr)

IEC Central Office
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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CONTENTS

FOREWORD 5
INTRODUCTION 7
1 Scope 8
2 Normative references 8
3 Terms and definitions 9
4 Interaction of smart grid and PEI 11
4.1 Main objectives 11
4.2 Safety 11
4.3 Proper functioning 11
4.4 Implementation of PEI 11
5 PEI concept 11
6 Types of PEI 13
6.1 General 13
6.2 Operating modes 13
6.3 Individual PEI 13
6.4 Collective PEI 14
6.5 Shared PEI 17
7 Electrical energy management system (EEMS) 20
7.1 General 20
7.2 Architecture of EEMS 20
8 Technical issues 21
8.1 Safety issues 21
8.1.1 Protection against electric shock 21
8.1.2 Protection against overcurrent 25
8.1.3 Outage of the public network 26
8.1.4 Protection against transient overvoltages 27
8.2 Interaction with the public network 27
8.3 Energy storage 27
8.4 Design for flexibility of load and generators (demand/response) 27
8.5 Electric vehicle charging 27
8.6 Selectivity between current protective devices 27
Annex A (informative) Objectives and concept of PEI 29
Annex B (informative) Operating modes 30
B.1 Operating modes for individual PEI 30
B.1.1 Direct feeding mode 30
B.1.2 Island mode 30
B.1.3 Reverse feeding mode 31
B.2 Operating modes for collective PEI 32
B.2.1 Direct feeding mode 32
B.2.2 Island mode 34
B.2.3 Reverse feeding mode 36
B.3 Operating modes for shared PEI 37
B.3.1 Direct feeding mode 37
B.3.2 Island mode 39
B.3.3 Reverse feeding mode 41

Annex C (informative) Interaction with the public network 43
C.1 General 43
C.2 National grid codes compliance with active and reactive power control 43
C.3 Voltage control 43
C.4 Frequency control 43
C.5 Load shedding programme 43
Annex D (informative) Architecture of PEI 44
D.1 Architecture of individual PEI 44
D.2 Architecture of collective PEI 44
D.3 Architecture of shared PEI 46
Annex E (informative) List of notes concerning certain countries 47
Bibliography 48

Figure 1 – Example of prosumer's low-voltage electrical installation 12
Figure 2 – Example of electrical design of individual PEI 14
Figure 3 – Example of electrical design of collective PEI using DSO distribution system 14
Figure 4 – Example of electrical design of collective PEI with distribution system within PEI 15
Figure 5 – Example of electrical design of collective PEI with distribution system within PEI in parallel with DSO distribution system 16
Figure 6 – Example of electrical design of shared PEI using DSO distribution system 17
Figure 7 – Example of electrical design of shared PEI with distribution system within PEI 18
Figure 8 – Example of electrical design of shared PEI with distribution system within PEI in parallel with DSO distribution system 19
Figure 9 – Connection to the local earthing arrangement (TN, TT and IT system) 23
Figure 10 – Estimation of the minimum earth fault current according to the operating mode (connected and island) 24
Figure 11 – Example of double short circuit protection for the same circuit 26
Figure 12 – Example of selectivity with various power supplies 28
Figure B.1 – Example of electrical design of individual PEI operating in direct feeding mode 30
Figure B.2 – Example of electrical design of individual PEI operating in island mode 31
Figure B.3 – Example of electrical design of individual PEI operating in reverse feeding mode 32
Figure B.4 – Example of electrical design of collective PEI operating in direct feeding mode with one single electrical installation 33
Figure B.5 – Example of electrical design of collective PEI operating in direct feeding mode with several electrical installations 34
Figure B.6 – Example of electrical design of collective PEI operating in island mode with one single electrical installation 35
Figure B.7 – Example of electrical design of collective PEI operating in island mode with several electrical installations 35
Figure B.8 – Example of electrical design of collective PEI operating in reverse feeding mode with one single electrical installation 36
Figure B.9 – Example of electrical design of collective PEI operating in reverse feeding mode with several electrical installations 37
Figure B.10 – Example of electrical design of shared PEI operating in direct feeding mode with one single electrical installation 38

Figure B.11 – Example of electrical design of shared PEI operating in direct feeding mode with several electrical installations 39
Figure B.12 – Example of electrical design of shared PEI operating in island mode with one single electrical installation 40
Figure B.13 – Example of electrical design of shared PEI operating in island mode with several electrical installations 41
Figure B.14 – Example of electrical design of shared PEI operating in reverse feeding mode 42
Figure D.1 – Example of type of architecture of individual PEI 44
Figure D.2 – Example of type of architecture of collective PEI 45
Figure D.3 – Example of type of architecture of shared PEI 46

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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LOW-VOLTAGE ELECTRICAL INSTALLATIONS –

Part 8-2: Prosumer's low-voltage electrical installations

FOREWORD

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International Standard IEC 60364-8-2 has been prepared by IEC technical committee 64: Electrical installations and protection against electric shock.

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

FDIS	Report on voting
64/2298/FDIS	64/2335/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

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 standard.

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.

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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 public electricity 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 public 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 public 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 either from the public network or from other local sources. 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 8-2: Prosumer's low-voltage electrical installations

1 Scope

This part of IEC 60364 provides additional requirements, measures and recommendations for design, erection and verification of all types of low-voltage electrical installation according to IEC 60364-1:2005, Clause 11, including local production and/or storage of energy in order to ensure compatibility with the existing and future ways to deliver electrical energy to current-using equipment or to the public network by means of local sources. Such electrical installations are designated as prosumer's electrical installations (PEIs).

This document also provides requirements for proper behaviour and actions of PEIs in order to efficiently obtain sustainable and safe operations of these installations when integrated into smart grids.

These requirements and recommendations apply, within the scope of IEC 60364 (all parts), for new installations and modification of existing installations.

NOTE Electrical sources for safety services including associated electrical installations and standby electrical supply systems for a secure continuity of supply, which are operated only occasionally and for short periods (e.g. monthly one hour) in parallel with the distribution grid for testing purposes are outside the scope of this document.

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

IEC 60364-5-53:2001, *Electrical installations of buildings – Part 5-53: Selection and erection of electrical equipment – Isolation, switching and control*
IEC 60364-5-53:2001/AMD1:2002
IEC 60364-5-53:2001/AMD2:2015

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 60364-7-712, *Low-voltage electrical installations – Part 7-712: Requirements for special installations or locations – Solar photovoltaic (PV) power supply systems*

IEC 60364-8-1:2014, *Low-voltage electrical installations – Part 8-1: Energy efficiency*