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Project No. 2024/02055

Responsible committee: JPEL/64 Electrical Installations of Buildings - Joint Committee

Interested committees:

Title: BS EN IEC 60364-8-82/AMD1 Amendment 1 - Low-voltage electrical installations

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

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

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- ii) affects other national standard(s)
- iii) requires additional national guidance or information

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



64/2682/CD

COMMITTEE DRAFT (CD)

PROJECT NUMBER:
IEC 60364-8-82/AMD1 ED1

DATE OF CIRCULATION:
2024-07-12

CLOSING DATE FOR COMMENTS:
2024-10-04

SUPERSEDES DOCUMENTS:
64/2680/RR

IEC TC 64 : ELECTRICAL INSTALLATIONS AND PROTECTION AGAINST ELECTRIC SHOCK	
SECRETARIAT: Germany	SECRETARY: Mr Wolfgang Niedenzu
OF INTEREST TO THE FOLLOWING COMMITTEES: TC 8,SC 8A,SC 8B,TC 22,SC 22E,SC 23E,SC 23K,SC 32B,TC 57,TC 59,TC 69,TC 82,TC 85,TC 120,SC 121A,SC 121B,PC 128,SyC LVDC	HORIZONTAL FUNCTION(S):
ASPECTS CONCERNED: Safety	

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Recipients of this document are invited to submit, with their comments, notification of any local regulations or technical reasons that may exist and should be considered should this proposal proceed, recognizing that failure to address such requirements could result in the need for new or existing "In Some Countries" clauses. (SEE [AC/22/2007](#) OR [NEW GUIDANCE DOC](#)).

TITLE:

Amendment 1 - Low-voltage electrical installations - Part 8-82: Functional aspects - Prosumer's low-voltage electrical installations

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW VOLTAGE ELECTRICAL INSTALLATIONS –

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

AMENDMENT 1

FOREWORD

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Amendment 1 to IEC 60364-8-82:2022 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 amendment includes the following significant technical changes with respect to the current edition:

- Adding of a dedicated annex for PEIs with a DC system and distributed sources with isolated interlink converter.

52 The text of this Amendment is based on the following documents:

Draft	Report on voting
XX/XX/XXXX	XX/XX/XXX

53
54 Full information on the voting for its approval can be found in the report on voting indicated in the
55 above table.

56 The language used for the development of this Amendment is English.

57 This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in
58 accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at
59 www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in
60 greater detail at www.iec.ch/publications/.

61 The committee has decided that the contents of this document will remain unchanged until the stability
62 date indicated on the IEC website under webstore.iec.ch in the data related to the specific document.
63 At this date, the document will be

- 64
- 65 • reconfirmed,
 - 66 • withdrawn,
 - 67 • replaced by a revised edition, or
 - 68 • amended.
- 69

70 **82.3 Terms and definitions**

71 *Add the following terms and definitions to the list:*

72 **82.3.20**
73 **Isolated Interlink converter¹**
74 PECS (Power Electronic Converter System) interconnecting two different power systems, independent
75 in voltage, frequency and system earthing allowing transfer of energy, without energy storage
76 capability

77 Note 1 to entry: PECS is defined in the group safety publication IEC 62477-1.

78 **82.3.21**
79 **Pre-charging**
80 energizing a DC circuit with limited currents in capacitances

81 **82.3.22**
82 **Intertripping**
83 tripping of protective devices initiated from tripping of another protective device

84 **82.8.2.2.1 General**

85 *Add the following at the end of the third paragraph:*

86 (See Annex F: PEIs with a DC system and distributed sources with isolated interlink converter)

¹ IEC 63532 ED1 InterLink Converters (ILC) - Safety and Performance Requirements

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Annex F

(normative)

PEIs with a DC system and distributed sources with isolated interlink converter

F.1 General

Introduction of local power supplies based on renewable energy sources and local Energy Storage System (ESS) is usually carried out using a DC system and a Power Electronic Converter. Loads may also be controlled by power electronic converters and operate in DC e.g. information technology, LED lighting, electrical vehicle etc. Using DC distribution can provide optimization for such systems.

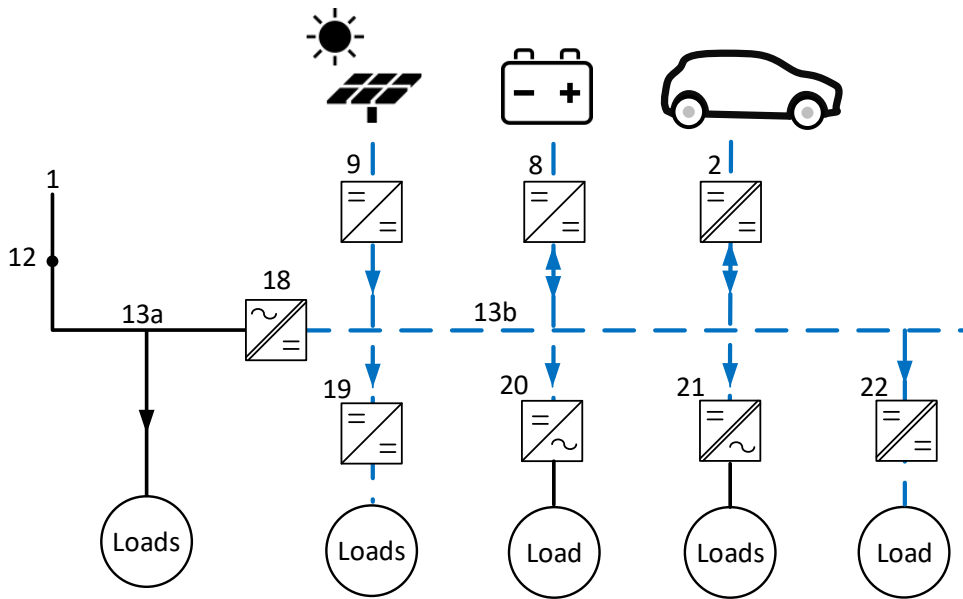
NOTE 1 An electrical vehicle can also be a non-permanently connected source.

An important aspect of prosumer electrical installations is that sources may be decentralized. Clause 82.8 describes PEIs with local supplies connected to the main distribution board. Alternate architectures, e.g. based on a DC backbone interconnecting sources and loads, with specific protective measures to comply with clause 82.8.2.2.1, may be used.

This annex is dedicated to PEIs with a DC system connected to the Distribution Network through an isolated interlink converter with local sources interconnected through converters to a DC distribution system, e.g. see Figure F.1.

NOTE 2 Annex F can apply also to stand-alone PEI.

NOTE 3 The isolated interlink converter can be made of several units in parallel.



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- Key
- 1: Distribution network
- 2: Bidirectional isolated DC Electric Vehicle Supply Equipment (EVSE)
- 8: DC/DC bidirectional converter for Electrical Energy Storage Systems (EES)
- 9: PV converter
- 12: Point of Connection (POC)
- 13 (13a+13b): PEI
- 13a: AC side of the PEI (solid line), see an example in Figure 2
- 13b: DC side of the PEI (dotted line in blue)
- 18: Isolated interlink converter (unidirectional or bidirectional)
- 19: DC/DC unidirectional converter
- 20: DC/AC unidirectional non-isolated inverter
- 21: DC/AC unidirectional isolated inverter
- 22: DC/DC unidirectional isolated converter

NOTE 4 Arrows indicate power flow in normal operating mode.

Figure F.1 – Example of a PEI with a DC system